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GROWTH, DEVELOPMENT AND EQUITY: INDIA'S TRYST WITH ECONOMIC REFORMS

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ABSTRACT

India took a definitive step towards market reforms in 1991 by dismantling the License-Permit Quota (LPQ) Raj. This brought in significant spurt in Gross Domestic Product (GDP) growth rates, exports, Foreign Exchange (FE) reserves and reduced percentage people Below Poverty Line (BPL) considerably. However, the human development story, in terms of Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR), malnutrition of children, mean year of schooling have been quite dismal. The picture on containing income inequality is also quite disappointing in the urban segment as it shows an upward trajectory. The paper makes a strong case for opting for balanced growth where right priority is accorded to merit goods like quality primary education and health as public remit. A balanced growth strategy between economic infrastructure and social overheads would be the right cocktail for India's policy makers. The recommendations include introducing General Anti-Avoidance Rule (GAAR) at the earliest to pre-empt illegal parking of funds in tax havens, privatisation of Public Sector Banks (PSB) to promote better financial intermediation. It also supports strongly the case for introducing a Universal Basic Income (UBI) scheme, in lieu of plethora of subsidies to guarantee a minimum standard of living for every Indian citizen. It draws comparison with China, whose growth and development story have walked hand, in hand after liberalization in the 1980s.

INTRODUCTION

Our Constitution makers tried to strike a fine balance between individual liberty with Socio, Economic and Political Justice for all its citizens, 67 years back. Article 325 provides universal adult franchise; thereby ensuring political justice to all its citizens. Social justice has, however, eluded India as it is inextricably linked with a moribund the caste system, where your social position is determined by accident of birth. It is only through economic justice that there can be vertical mobility in the social ladder. Prof. M.N. Srinivas in his seminal concept "Sanskritization" brought out how improvement in economic status can be a potent factor in facilitating social vertical

mobility in India. However, the real game changer for social justice can be through promotion of economic justice through state intervention. Accordingly the Directive Principle of State Policy while reiterating the commitment of socio economic justice provides for provisions like early childhood care, raising level of nutrition, promoting economic interests of SC/ST, maternity relief, special provisions for women etc. The Right to Education (2009) has been the most talismanic moment to promote economic justice, as access to education could be the "swiftest elevator to modern Indian power". Article 38(2) specifically calls upon the state to minimize acute inequality of income. In this backdrop we examine the various ideological alternatives that the fledgling democracy after independence had, to promote economic justice, the path they chose. It takes a panoramic view of the impact of major economic reforms which were introduced in 1990 and in particular, disconnect between India's journey through the trajectory growth & human development and our abject failure to bring down inequality. It also compares experience of China, which adapted the economic liberalisation path, a decade earlier than India's, with India in various growth and development parameters.

India after Independence

After independence India had the choice of adopting the British model of capitalism canvassed by Adam Smith, communism as practiced in Russia through state planning or the liberal ideas of Keynes which promoted a welfare state. It was Adam Smith who said that "Private pursuit of self interest would lead, as if by an invisible hand, to the well being of all". For Smith the critical impetus for wealth creation would be free market and division of labour. For Karl Mark the primordial concern was equity, as exploitation of labour was the rampant in post industrial revolution western society. A socialist state would be a catalyst for bringing down income inequality and "Das Kapital" documented the innards of exploitation, prognosticating how "capitalism contains the seeds of its own destruction". In sharp contrast John Maynard Keynes, writing in the backdrop of the great depression of the 1930's, was a strong votary for the state to generate employment through massive public investment. The New Deal Policy of Franklin D. Roosevelt encapsulated these ideas.

Pandit Jawaharlal Nehru had a distinct predilection for the Soviet economic model of state planning and heavy industry was considered as the temples of modern India. Prof. P.C. Mahalanobis provided the architecture for industrialisation through massive public sector intervention and foreign borrowing. Sadly the public sector undertaking, nationalisation of banks and coal mines that followed, ensured that India the "animal spirits" of the private sector was hardly roused. And India remained

struck at what is popularly called the "Hindu rate of growth" of 3.5%. 1990 became a watershed moment, when a combination of high inflation, low foreign exchange reserves, and unacceptably high level of fiscal deficit forced India to seek the help of International Monetary Fund which imposed conditionalities such as devaluation the rupee by 22%, reducing import tariff from 130% to 30%, containing subsidy. In his famous budget speech Dr. Manmohan Singh in 1991 quoted Victor Hugo "No one can stop an idea whose time has come", to underlining that economic liberalisation in India was not a matter of choice but a preferred path for India's future economic journey. Twenty seven years thereafter it's time to take stock of the multi-dimension impact of these market reforms on growth, development and inequality in India.

First Generation Reforms (1991-2000)

The baby steps at reforms aimed at promoting industrial activities, boosting exports and encouraging foreign direct investment into our country. De-licensing of industry and abolition of Monopolies & Restrictive Trade Practices (MRTP) limit were the main stimulants for the private sector industries. In case of public sector, disinvestment became the big ticket reform, where the Public Sector Undertakings (PSUs) were becoming a drag on the economy. On the external sector, significant custom duty reduction, and

having a managed float system became our predominant policy mosaic. Foreign Exchange Regulation Act (FERA) was replaced with Foreign Exchange Management Act (FEMA), with foreign currency limit violation being subject to fines rather than being criminally culpable. The foreign Direct Investment (FDI) norms were significantly liberalised to encourage technology transfer and long term foreign collaboration with OEMs.

Second Generation Reforms (2001-2014)

The earlier reforms where steps to align India with the conditionalities of International Monetary Fund (IMF). The next generation reforms were aimed at taking advantage of globalisation which was sweeping across the developing countries and had been one of the major reasons for the growth of emerging market economies of East Asia tigers. The reforms during this period were essentially to dismantle the administered price mechanism for scarce commodities like cement, sugar, fertilizer, drugs and petroleum. The public sector undertaking were categorised as Maharatnas and Miniratnas to facilitate international tie-ups, joint ventures and green field investment. On the legal side the reforms in the Company Act 1956 was essentially to bring in Corporate Social Responsibility to the centre stage. The Information Technology Act 2000 was another

significant addition to ensure that the digital interface conforms to the agreed protocols and deviances suitably penalised. Post US economic financial crisis a committee chaired by Justice Srikrishna gave far reaching recommendations for bringing up an independent public debt management authority in lieu of Reserve Bank of India (RBI), merging Securities & Exchange Board of India (SEBI) with FMC, and provide the consumers with greater protection for the financial products.

One of its significant recommendations was to supplant repo rate determination by the RBI Governor with a broad based monetary policy committee which has since been put in place. While public debt management continues to be done by RBI, the Financial Sector Legislative Reforms Commission (FSLRC) is a welcome initiative to sensitize policy makers with the cross currents of fiscal instability.

Reforms Post 2014

The most significant reform post 2014 has been to replace a Centralised Planning Commission devolving nearly 30% of government expenditure to both centrally sponsored and state sponsored schemes by a mechanism called Niti Aayog. This is a bottom top development approach and looks at planning from the grass-root village level which can be aggregated progressively at higher level. It's an advisory body instead of allocating plan

fund and will provide directional and strategic inputs to the centre and the states. The other significant reform has been the Goods and Services Tax which is a major indirect tax return to promote the concept of One India, One Market. This should eventually do away with the price distortion than exists between different states for many commodities; and thereby boost our economic activity and GDP by 1 – 1.5%.

Overall Impact of Reforms

As would be seen from the figure below, the growth rate has increased from a very low 1% (1990) to about 7% now, and the share of service sector has significantly increased and that of agricultural sector slumping. The reforms have also reduced the percent below poverty line significantly; and we have a comfortable FE reserves to take care of 7 months' import requirements as against 7 days in 1990.

India's Growth Story

India's growth story during the last 56 years, decade wise, clearly show how the Hindu rate of growth, has been supplanted by 7 – 7.5% growth. Savings as percentage to GDP has doubled and export has nearly increased by five times. The change in thrust from "import substitution" to export promotion, enabling trade policy, creation of Special Economic Zones (SEZs) has contributed most significantly to our export growth.

Table 1: GDP, Saving and Export: Trends

Year	GDP Growth	Savings %	Export as % GDP
1960-80	3.5	17	4.6
1980-90	5.6	19.4	6.1
1990-2001	6.0	24	13
2001-2010	7.8	33	20
2010-2015	7	31	25

Source: Economic Survey 2016-2017

India's Development Story

The real lament is the trend progress in mean years of schooling, high infant and maternal mortality rates and very high total fertility for women (2.4); as against global average of (1.5) for developed countries.

Table 2: Trends of Development in India

Sl. No.	Parameter	1988-89	2014-15
1.	Literacy Rate	51	67
2.	Life Expectancy	51	66
3.	Mean Years of Schooling	3.5	4.4
4.	IMR (1000)	53	44
5.	MMR (1 lakh)	260	200
6.	Total Fertility Rate	2.5	2.4

Source: Economic Survey 2016-2017

India & China: A Comparison

In this backdrop, it will be of interest to compare the growth and development story of India. More so since China they chose the liberalisation both in 1980 and India in 1990.

It's quite clear that China's robust growth is due to significantly high growth rate in agricultural sector and its booming manufacturing hubs. They have performed significantly better in every development parameter, be it schooling, child malnutrition, infant and maternal mortality compared to India.

Table 3: Comparative Growth & Development Trends: India & China

Sl. No.	Parameter	China	India
1.	Real GDP in 1950 in $	448	619
2.	GNI at PPP in 2015 $	12547	5497
3.	Agricultural Growth	6.7	2.5
4.	Manufacturing: Share in GDP	30	16
5.	HDI	0.727	0.608
6.	Mean Years of Schooling	7.5	5.4
7.	IMR (1000)	12.7	52.7
8.	Child Malnutrition	9.4	47.9
9.	MMR (1 lakh)	32	190
10.	% Below Poverty Line ($1.25 per day)	6.3	23.6

Source: An Uncertain Glory: India & its Contradictions: Jean Dreze & Amartya Sen

Income Inequality

Sadly reducing income inequality has not been a strong agenda in most of the developed countries irrespective of their ideology as the following graph would show. Interestingly China has higher gini coefficient than India.

Figure 1: Gini Coefficient of Select Countries
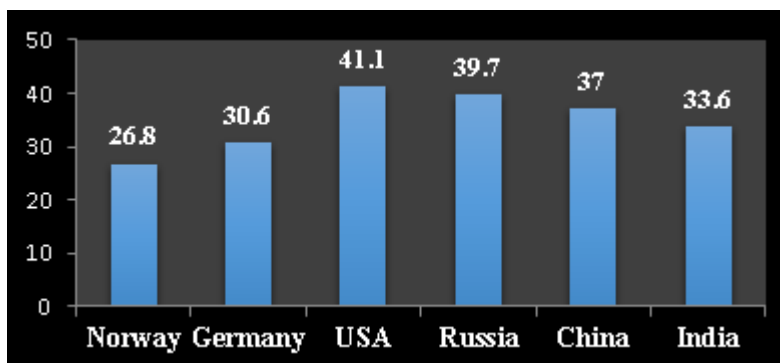
Source: Human Development Report 2015

Trend of Inequality after Liberalization in India

The following table shows trend of income inequality in rural and urban sector in India, post economic liberalisation.

Table 4: Trends of Income Inequality in Rural & Urban Sector

Year	Rural	Urban	Total
1993-94	25.8	31.9	30.1
2004-05	28.1	36.4	34.6
2009-10	28.8	38.4	36.2

Source: National Sample Survey Office Ministry of Statistics & Programme Office

What is more worrying is the rising trend of inequality, particularly in the urban segment of India. The rural sector has been stagnant; and therefore does not exhibit such a trend. Increasing urbanisation and opportunity in the service sector has contributed to the spurt in income inequality in the urban areas in India.

Millennium Development Goals

189 nations made a pledge in 2000 to free people from extreme poverty and multiple deprivations. This pledge is encapsulated in eight MDG goals to be achieved by 2015.

Table 5: Millennium Development Goals

	Goals	India's Achievement
	Goal 1: Eradicate Extreme Hunger and Poverty	23.6% (BPL)
	Goal 2: Achieve Universal Primary Education	Achieved
	Goal 3: Promote Gender Equality and Empower Women	Achieved
	Goal 4: Reduce Child Mortality by 2/3rd	1/3rd
	Goal 5: Improve Maternal Health by 3/4th	1/3rd

Source: UN Millennium Project Goals & Human Development Report 2015

It would seen from the above that while Right to Education and Sarva Shiksha Abhiyan (SSA) as a flagship programme has ensured universal access to education, cutting across gender, our progress in terms of child mortality and improvement of maternal health is far short of MDG targets. Prof. Jean Dreze has brought out

how poor allocation of Rs.2700 crore in 2017-18 budget for maternity benefit is far short of the promise to give Rs.6000/- to every pregnant women in the informal sector.

The Rural Distress

Close to 60% live in India's villages and more than 50% depend on agriculture for their livelihood. The percentage contribution of agriculture to GDP has declined from 45% (1947) to 16% now; clearly reflecting disguised employment, low productivity and farmer distress. The following table will highlight the concerns.

Reforms Awaited

The major reforms awaited are in financial intermediation like banking, where the PSBs are saddled with 9% of gross non-performing assets (NPA). There is a strong case for privatising the nationalised banks, as it would ensure whittling down of priority sector lending and make banking more profitable and resilient. General Anti-Avoidance Rule (GARR) is long awaited, as this could cut down on malpractices like "round tripping" and parking of illegal money in tax havens. A Direct Tax Code, keeping the IT Act 1961 would make India's direct tax provisions in sync with best global practices.

But the real paradigm shift could be if we can bring in Universal of Basic Income Scheme to usher a just society, where every individual is guaranteed a minimum income. This idea has been mooted in our recent Economic Survey, which has assessed that the cost of UBI would be a little over 1% of all existing subsidies which is around 5% of the GDP. This will cut down all leakages and pre-empt non targeted beneficiaries. It will ensure that every Indian has the right to live with dignity, which is part of "Right to Life" as per the UN Human Rights Declaration in which India is a signatory.

For manufacturing to really kick-start, the labour laws would need to be streamlined to provide flexibility in production while protecting interests of the labourers. While the Rajasthan government has taken a pioneering step in this regard, the other states are yet to replicate such best practices. The National Manufacturing Zone (NMZ) vision by the Krishnamurthy Committee needs to see the light of the day. To succeed India needs to have better Centre-State synergy beyond the rhetoric of cooperative federalism.

The Road Ahead

The foregoing clearly reveal disconnect between India's growth record and human development initiatives, post economic liberalisation. India has not achieved the two crucial targets of reducing child mortality by $2/3^{rd}$ and maternal health by $3/4^{th}$, as mandated by the millennium development goals (2000-2015). Child malnutrition continues to remind an unacceptably high level of 48%. India's real challenge would be how to achieve balanced growth of different sectors, particularly a balance between economic infrastructure and social overheads. Quality

primary education and reasonable health care at affordable cost, as merit goods, must be the predominant remit of the state. The present tendency to abdicate this responsibility to the private sector with their oppressive commercial orientation, runs contrary to the concept of welfare state. Universal Basic Income, as a concept, must receive serious public attention and debate, as it would guarantee 312 million, who live below poverty line, a chance to live a life of dignity which is guaranteed as a fundamental right. As Jeffrey Sachs rightly observes "Our greatest illusion is that a healthy society can be built on mindless pursuit of wealth". Growth and development can go hand in hand, as China has shown, post their liberalisation in the 1980s.

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PATH ANALYTIC STUDY ON RELATIONSHIP BETWEEN SHOPPING ORIENTATION, STORE ATTRIBUTES AND PATRONAGE BEHAVIOUR OF RETAIL SHOPPERS IN SELECTED CITIES OF GUJARAT STATE

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ABSTRACT

This paper aims to examine influences of shopping orientation and store attributes on store patronage behaviour of selected shoppers who were conveniently drawn from amongst selected shopping malls of the selected cities of the Gujarat State, India.

This empirical descriptive research study is based on responses of 1500 Shoppers who were conveniently drawn to collect primary data with the help of structured questionnaire aimed at identification and evaluation of crucial dimensions relating to shoppers' patronage behaviour. An attempt is made to develop a Path Analysis Model to study and showcase the linkages between shopping orientation, store attributes and store patronage behaviour of selected shoppers who were conveniently drawn from amongst selected shopping malls of the selected cities of the Gujarat State, India.

This research study in light of its findings suggests that the retailers need to effectively offer and maintain the store attributes to drive store traffic and enhance patronage intention.

Key words: Retailing, Shopping Orientation, Store Attributes, Patronage Behaviour, Customer Satisfaction

PROLOGUE:

The growth of organized retail industry in India is likely to entail large number of new jobs; income generation resultant into improved standard of living. The growing middle class is an important factor contributing to the growth of retail in India. According to estimate, 91 Million households will become part of 'Middle Class' by the year 2030, the 570 Million people are expected to live in cities, nearly twice the current population of the United States. India's consumption level is set to reach figure of US$ 1.5 Trillion from the current level of US$ 750 Billion by the year 2020 (Deloitte Indian Retail Market Report, 2013, Lynch, 2005). India has the youngest population profile in the whole world and this global Indian households is expected to reach level of 9.5 Million with their spending power of 14.1 Trillion rupees by the year 2025 (Farrell and Beinhocker, 2007). There exists a relationship between shoppers' beliefs about the physical attractiveness of a store and a patronage intention which suggests that the store attributes play a significant role in influencing the shoppers' choice of a store and patronage behaviour (ibid).

The chief objective of this research study is to identify the linkages between shopping orientations and store attributes and its influences on Patronage Behaviour of Selected Shoppers with the help of path analytical model in the selected cities of the State of Gujarat.

About Retail Sector in India:

The Indian retail market was estimated at US$ 470 Billion in the year 2011 which accounted for approximately 35 per cent of Gross Domestic Production (GDP), and is expected to reach US$ 675 Billion by the year 2016 at the rate of Compounded Annual Growth Rate [CAGR] of 7.5 per cent. (Technopak Retail Research Report-2011). The overall retail market of India is estimated to reach figure of Rs. 47 Trillion (US$ 792.84 Billion) by the year 2017 showing a strong potential for foreign retailers planning to enter India. In terms of the product category, 60 percent of the retail market of India is dominated by Food & Grocery whereas the figures for the Apparel segment is 8 percent followed by Mobile & Telecom Retail operating under new modern formats. These are namely, Departmental Stores; Hypermarkets; Supermarkets, and Specialty Stores across a range of categories fuelled by the liberalization of Foreign Direct Investment [FDI] Policy which is expected to propel foray of global retailers resultant into further fuelling of the growth of organized retail in India (Ernst & Young Retail Association of India Report, March 2014).

REVIEW OF LITERATURE:

An attempt has been made to outline in brief key aspects of earlier research studies concerning store attributes in retailing, shopping orientations & store patronage behaviour of retail shoppers given as follows.

Store Attributes in Retailing:

Herpen and Pieters (2000) had identified that the attribute-approach captures customers' perception of assortment variety better than the product-based approach. Popkowski et al. (2001) had concluded the importance of various store attributes varies by store format and customer base. Store attributes refers to the underlying components of a store image dimensions viz., merchandise; physical facilities; services; atmospherics etc. (Assael, 1992; Wong and Yu, 2003). Erdem et al. (1999) had examined the linkages between consumer values and the importance of some salient store attributes viewed as important by the retail shoppers and concluded that branding is an important marketing tool in retailing.

Rajagopal and Srivastava (2008) have supported the view that customers' choice of shopping malls over traditional market stores is influenced by various factors viz., ambience; assortment; sales promotion schemes and in-store services respectively.

Store Patronage Behaviour:

According to Engel, Blackwell and Miniard (1995), environmental dimensions viz., air quality; lighting; layout; carpeting; and aisle width and placement are physical store attributes that are used to project store image and influence store choice respectively. According to Bitner (1992), the physical environment creates an image and influences individual behaviour of retail shopper in retail stores. The patronage behaviour encompasses the decision process related to where customers shop; how they shop, and what they purchase respectively. (Moschis, 1992; Stafford & Stafford, 1986). The driving force behind shopping decision process is patronage motives which are the reasons why retail shoppers shop and make shopping from certain retail stores (Michman, 1991). Paulins and Geistfeld (2003) as well as Shim and Kotsiopulos (1992) had supported the relationship between store image attributes and patronage behaviour of retail shoppers.

The behaviour of shoppers differs according to the place where they are shopping from and also their involvement level too differs with the act of shopping (Berman and Evans, 2005). There is a growing need to evaluate the true drivers of shopping behaviour in the Indian retailing context (Sinha and Banerjee, 2004).

Shopping Orientation:

Darden and Dorsch had stated that orientations are based on past shopping experiences and the personal value system. To illustrate, with respect to values, orientations may reflect consumers' appreciation for environmentally friendly textiles and apparel products. Additionally, shopper orientations may be used to represent consumers' personal, economic, recreational and social motivations for shopping (Darden and Dorsch, 1990). These orientations vary from consumer to

consumer (Luomala 2003) and they represent rather "enduring characteristics of individuals" (Westbrook and Black 1985). Other studies had emphasized the individual character of central perception dimensions, whose importance weightings may be different for different consumers due to their shopping orientations (Birtwistle et al. 1999; Doyle and Fenwick (1974-75). Jarratt (1996) had attempted to cluster or classify shoppers. Such shopper taxonomies are often based on shopping orientations (Jarratt, 1996). He had identified "have to" shoppers, "moderate" shoppers, "experiential" shoppers, "product-focused" shoppers, "service" shoppers, and "practical" shoppers based on the importance the shoppers put on certain store features (Jarratt, 1996). A similar study was conducted by Brown and Reid (1955) using in-depth interviews of women shoppers had found that shoppers could be classified as dependent, compulsive, and individualistic (Brown and Reid, 1955).

Concepts, constructs:

The researchers have defined the basic terms used in this research paper as follows.

Patronage Behaviour:

Patronage behaviour is defined as how individuals choose an outlet for shopping, store choice and patronage patterns are based on consumer's perceptions, images, and attitudes formed from experiences, information, and need. (Haynes, Pipkin, Black, and Cloud, 1994).

Store Attributes:

Store attributes refers to specific attributes grouped under each specific store image dimensions viz., atmosphere; convenience; facilities; institutional; merchandise promotion; sales personnel, and service respectively (Janse van Noordwyk, 2002).

Shopping Orientation:

Shopping orientation is defined as a shopper's style that places particular emphasis on a shopping-specific lifestyle encompassing shopping activities, interests and opinions, and reflecting a view of shopping as a complex social, recreational and economic phenomenon (Visser and Preez, 2001).

RESEARCH PROBLEM:

The researchers sought to study and examine the relationship between shopping orientations and store attributes and its influences on Patronage Behaviour of Selected Shoppers with the help of path analytic model in the selected cities of the State of Gujarat viz., Vadodara, Ahmedabad, Surat and Rajkot respectively.

RESEARCH METHODOLGY:

An empirical research study based on descriptive research design was

conducted to study influences of shopping orientation and selected store attributes on store patronage behaviour of selected shoppers that were from amongst different shopping malls located in the selected cities of the State of Gujarat. The primary data were collected using structured questionnaire from 1500 shoppers who were conveniently drawn using non-probability sampling design from different retail stores located from the selected cities of the Gujarat State viz; 280 shoppers from Vadodara, 475 from Ahmedabad, 400 from , and 250 shoppers were drawn from the Rajkot City respectively. The reliability test was administered and data analysis had been carried out. The researchers have also applied Confirmatory Factor Analysis [CFA] and the Path Analysis Model was developed to study the linkages between shopping orientations, store attributes and the patronage behaviour of selected retail shoppers. The study offers useful findings and implications which shall be useful in formulating customized retail marketing strategies by retailers.

OBJECTIVE

The key objective of this research study was to identify the linkages between shopping orientations and store attributes and its influences on Patronage Behaviour of Selected Shoppers with the help of path analytic model in the selected cities of the State of Gujarat.

RELIABILITY

The result of reliability test showed the Cronbach's Alpha value ranging from 0.700 to 0.870 which showed the internal reliability of the scale, and reflected the degree of cohesiveness amongst the selected items (Naresh K. Malhotra, 2007 and Jum C. Nunnally, 1981).

DATA ANALYSIS AND INTERPRETATION:

Demographic Profile of Selected Shoppers':

The data analysis of age groups of shoppers revealed that in age group of 16 to 40 years the 53 percent shoppers were from Baroda, 43 percent from Surat, 36 percent from Rajkot and 80 percent from Ahmedabad city. Similarly, in the age group of 41 to 59 years 36 percent were from Baroda City, 42 percent were from Surat City, 48 percent were from Rajkot and 2 percent were from Ahmedabad City. Further, male shoppers were found around 70 percent whereas nearly 30 percent of them were females. Overall, 33 percent shoppers were found as unmarried and remaining 67 percent were married. So far as Educational Qualifications is concerned 43 per cent in Baroda and Ahmedabad Cities, 38 percent in case of Surat and 30 percent in Rajkot Cities were found having Post-Graduation as their Educational Qualifications respectively. Considering the annual family income in various cities, it was found that 32 percent of shoppers' in Baroda City were having annual family income of less than Rs 4 lakhs, followed by almost similar trend that is 36 percent in Surat City followed by 47 percent in Rajkot City, and 19 percent in Ahmedabad City respectively.

Table 01: Summary of Indicators (Experience) and Reliability Alpha Score for Measuring Store Attributes

Sr. No	Name of the Grouping Variable	Constructs	Vadodara City	Surat City	Rajkot City	Ahmeda-bad City	Total Sample Size (1500)
			Number of Shoppers'				
			(280)	(280)	(275)	(475)	
		Number of Items (65)	**CRONBACH'S ALPHA SCORE**				**Overall Reliability**
01	Accessibility of the Retail Store	05	0.663	0.787	0.818	0.649	0.737
02	Range of the Products	04	0.773	0.861	0.890	0.686	0.794

Sr. No	Name of the Grouping Variable	Construct	Vadodara City	Surat City	Rajkot City	Ahmeda bad City	Sample Size(1500)
			Number of Shoppers'				
			(280)	(280)	(275)	(475)	
		Items (65)	**CRONBACH'S ALPHA SCORE**				**Overall Reliability**
03	Sales Promotion Schemes offered in the Retail Store	05	0.679	0.697	0.736	0.601	0.692
04	Behaviour of Staff of the Retail Store	09	0.773	0.825	0.854	0.737	0.796
05	Store Layout/Ambience of the Retail Store	12	0.712	0.714	0.754	0.639	0.700
06	Physical Facilities in the Retail Store	17	0.795	0.894	0.922	0.727	0.870
07	Atmosphere in the Retail Store	08	0.717	0.792	0.814	0.636	0.742
08	Institutional Factors	05	0.713	0.744	0.762	0.632	0.715

The Selected Retail Shoppers' Overall Satisfaction/Dissatisfaction from Store Attributes.

Table 02 represent the perceived importance of the Store Attributes and the Retail stores' ability in meeting these expectations of the shoppers'. It clearly indicates that the ratio of the Attribute of 'Institutional Factors' of the retail store is 0.98 was found as the highest. It means that the Institutional factors such as clientele, overall impression, store reputation, store association was found as having high perceived importance to the retail shoppers' in the retail store, and the retailers were able to successfully meet these expectations of the shoppers' which is reflected in terms of the shoppers' overall satisfaction with these factors.

The other important store attribute is 'Accessibility' was found as having the ratio 0.94 followed by 'Store Layout/ Ambience' having the ratio of 0.91 and 'Range of the Products in the Retail Store' which had the ratio of 0.90 respectively.

Table 02: Table showing the Ratio of perceived importance and overall satisfaction with the selected criteria of store attributes

Sr. No.	Selected Store Attributes	Mean Score	Selected Store Attributes	Mean Score	Ratio
01	Perceived Importance of Accessibility of the Retail Store	3.57	Overall Satisfaction with Accessibility of the Retail Store	3.34	0.94
02	Perceived Importance of Range of the Products in the Retail Store	3.81	Overall Satisfaction with Range of the Products in the Retail Store	3.44	0.90
03	Perceived Importance of Sales Promotion Schemes offered in the Retail Store	3.93	Overall Satisfaction with Sales Promotion Schemes offered in the Retail Store	3.30	0.84
04	Perceived Importance of Behaviour of Staff of the Retail Store	3.70	Overall Satisfaction with Behaviour of Staff of the Retail Store	3.19	0.86
05	Perceived Importance of Store Layout/Ambience of the Retail Store	3.66	Overall Satisfaction with Store Layout/Ambience of the Retail Store	3.34	0.91
06	Perceived Importance of Physical Facilities in the Retail Store	3.70	Overall Satisfaction with Physical Facilities in the Retail Store	3.23	0.87
07	Perceived Importance of Atmosphere in the Retail Store	3.84	Overall Satisfaction with Atmosphere in the Retail Store	3.26	0.85
08	Perceived Importance of Institutional Factors	3.52	Overall Satisfaction with Institutional Factors	3.44	0.98

PROPOSED STRUCTURAL MODEL OF THE RESEARCH STUDY:

In order to evaluate how well a proposed conceptual model consists of observed indicators and the hypothesized constructs explains or fits the data the Structural Equation Model is designed and has been shown as given below as per the Figure Number: 01.

In order to achieve the objectives of the study, an attempt was made to carry out comprehensive review of the existing relevant literature was undertaken, and subsequently, a Theoretical Structural Model was developed as shown in the Figure Number 01 that incorporates concepts from the subject domain of consumer behaviour in retail stores. The retail shopper is presumed to be influenced by the store attributes that are used by the retailers to influence retail shoppers' behaviour while shopping. The researchers have considered to include 08 selected variables of the store attributes viz., accessibility, sales promotional schemes, ambience of the retail store, store

**Figure No 01: Proposed Structural Model of Shopping Orientations and
Store Attributes on Patronage Behaviour and Overall Satisfaction
of the Retail Shopper**
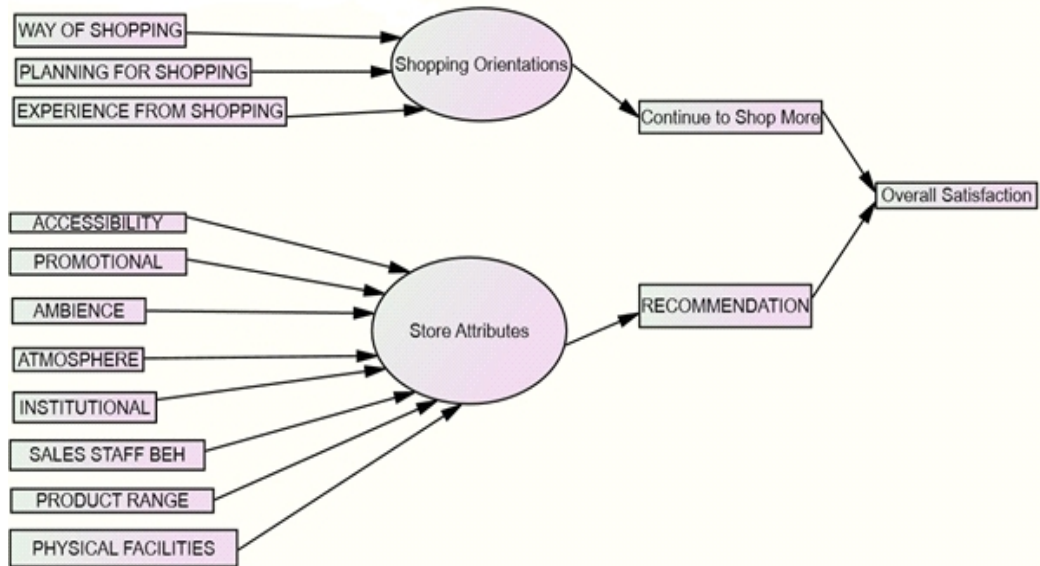
atmosphere, institutional factors of the retail store, the sales staff behaviour, the range of products in the store, and the physical infrastructure facilities of the store respectively. The shopping orientations of the retail shoppers that can be described as his or her own pre-dispositions towards the act of shopping. The retail shoppers' tend to have their individualistic style and preferences for shopping while visiting the retail store. Some retail shoppers' tend to have an economic orientation where they try to maximize on the economic value of shopping whereas others might seek recreation while they visit the retail store.

There are some retail shoppers' who want a personalised shopping experience by the retailers. This will influence their intentions to visit a particular retail store which in turn leads to store loyalty and repurchase intention of the retail shoppers.

The retail shopper will spread a positive word of mouth as he or she is satisfied from the retail store derived from his or her overall satisfaction from the retail store.

This research study has attempted to develop and empirically test a theoretical model describes a logical flow among the constructs by indicating the directions of the causes and effects of the interplay of

the factors relating to the shopping orientations and store attributes on patronage behaviour and overall satisfaction of the retail shopper.

Each arrow at the end of a line depicts a progressive linkage between constructs of the research study. The direction of the arrows in the model specifies the relationship as well as the linkages between the constructs which is empirically tested as per the degree of the relationship between the constructs in this study.

Another two important constructs that is 'I would continue to shop from the same retail store' and 'I shall recommend the store to others' has been regarded as the mediating endogenous construct that also plays the role of dependent variable in these relationships. This construct also includes and intervenes between the two exogenous constructs that is store attributes and shopping orientations that are considered to explain the intention of the retail shopper to continue to shop more from the retail store and recommendation of the same retail store to other retail shoppers and the overall satisfaction of the retail shoppers. The arrows lead from the exogenous constructs to the mediating construct, which is thought to be partially explained by the preceding (Exogenous) constructs.

KMO MEASURE OF SAMPLING ADEQUACY:

The result of KMO measure of sampling adequacy was closer to 0.60 which indicated that the present data were suitable for application of the factor analysis. Similarly, Bartlett's Test of Spehericity (0.00) was found as significant (p<.05) reflective of the fact that sufficient correlation exists between the criteria for application of the factor analysis.

SUMMARY OF CONFIRMATORY FACTOR ANALYSIS [CFA]:

The researchers have attempted to empirically test by applying the Confirmatory Factor Analysis amongst on the selected dimensions of shopping orientations that is 'Way of Shopping', 'Planning for shopping', and 'Experience of shopping' respectively. The Figure Number: 02 to 08 depicts the Hypothesized Measurement Models for confirmatory factor as well as revised model fit. Further, the Table Number: 03 to 05 offers information on the store attributes taken into consideration for the Confirmatory Factor Analysis in this research study.

Figure: 02: Hypothesized Measurement Model for Confirmatory Factor Analysis of Way of Shopping
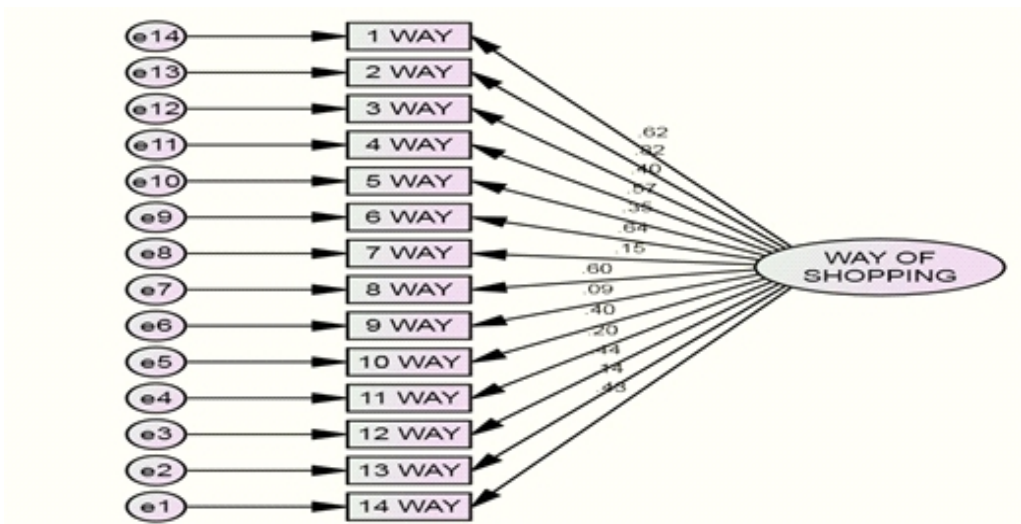
Table 3: Detailed List of Items for Shopping Orientation Attributes of Way of Shopping

Sr. No.	Item Code	List of the Items
01	1 WAY	I like to go for shopping to pass leisure time
02	2 WAY	I go for shopping to reduce my stress
03	3 WAY	I feel tired after shopping
04	4 WAY	The sales people add enjoyment to my shopping
05	5 WAY	I do not like to spend too much time for shopping
06	6 WAY	Shopping is full of joy and fun for me
07	7 WAY	I dislike presence of crowd while shopping
08	8 WAY	Shopping provides me social experiences
09	9 WAY	I like to go for shopping alone
10	10 WAY	I like to buy from a particular retail store only

In the above measurement model for confirmatory factor analysis of shopping orientation in which the selected fourteen statements were about way of shopping of the shoppers' in the retail store were adapted. A five-point Likert scale was used as the response format with assigned values ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Figure 03: Revised Model Fit for Confirmatory Factor Analysis of Shopping Orientation of Way of Shopping
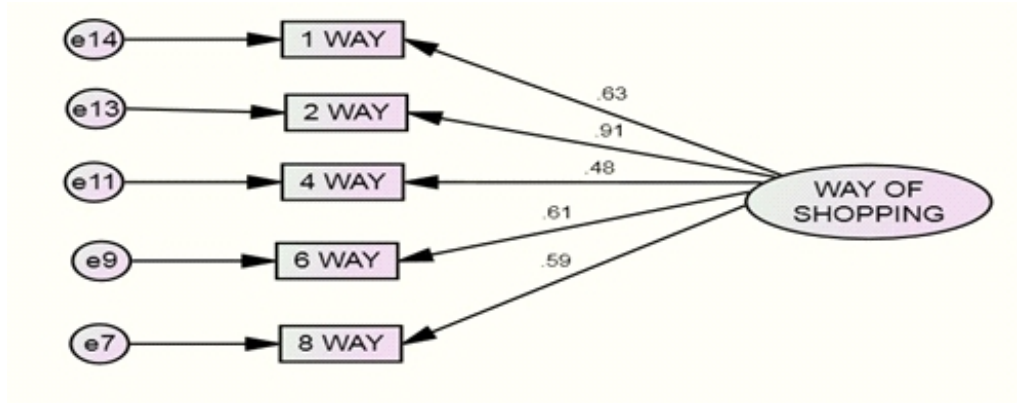
The Confirmatory Factor Analysis on the measurement model was conducted and the less influencing variables were eliminated from the model. The revised model fit was developed as given in the Figure Number: 03 that has identified the key influencing variables i.e. five variables for way of shopping viz; 'I like to go for shopping to pass leisure time (1 WAY)', 'I go for shopping to reduce my stress (2 WAY)', 'The sales people add enjoyment to my shopping (4 WAY)', 'Shopping is full of joy and fun for me (6 WAY)', and 'Shopping provides me social experiences (8 WAY)' respectively.

Figure: 04: Hypothesized Measurement Model for Confirmatory Factor Analysis of Planning for Shopping
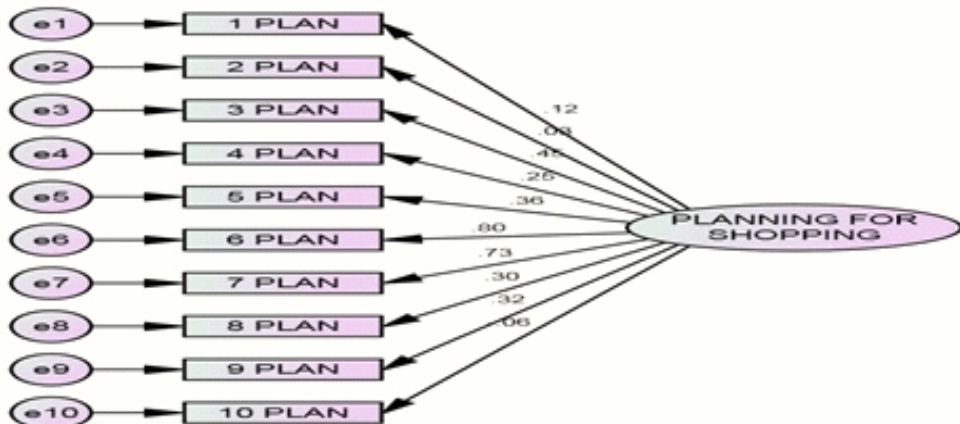
Table: 04: Detailed List of Items for Shopping Orientation Attributes of Planning for Shopping

Sr. No.	Item Code	List of the Items
01	1PLAN	I prefer to check price tag before buying a particular product
02	2 PLAN	I prefer to touch and inspect the products before buying
03	3 PLAN	I seek help from sales staff while buying a product
04	4 PLAN	I like to buy from new retail stores
05	5 PLAN	I like to compare different products before buying a product
06	6 PLAN	I like to spend less time while shopping
07	7 PLAN	I prepare a shopping list before actual shopping
08	8 PLAN	I often end up shopping more products than I actually need
09	9 PLAN	The retail stores offers me better services
10	10 PLAN	I make unplanned visits to retail stores

In the above measurement model (Figure Number: 04) for confirmatory factor analysis of shopping orientation in which the selected ten statements were about 'Planning for Shopping by the shoppers' in the retail store were adapted. A five-point Likert scale was used as the response format with assigned values ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Figure 05: Revised Model Fit for Confirmatory Factor Analysis of Shopping Orientation of Planning for Shopping
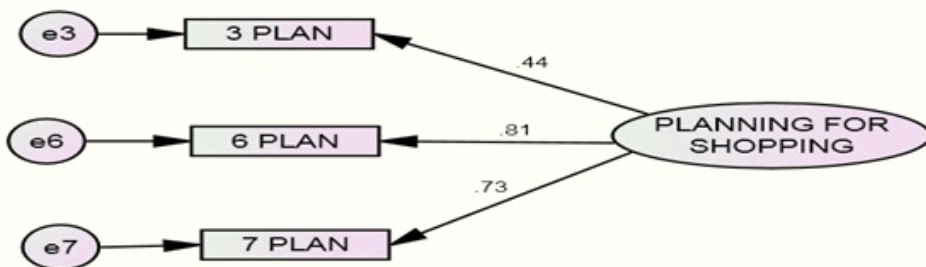
The Confirmatory Factor Analysis on the measurement model was conducted and the less influencing variables were eliminated from the model. The revised model fit was developed as given in the Figure Number: 05 that has identified the key influencing variables that is three variables for planning for shopping viz; 'I seek help from sales staff while buying a product (3 PLAN', 'I like to spend less time while shopping (6 PLAN)', and 'I prepare a shopping list before actual shopping (7 PLAN)' respectively.

Figure: 06: Hypothesized Measurement Model for Confirmatory Factor Analysis of Shopping Orientation of Sharing Experiences
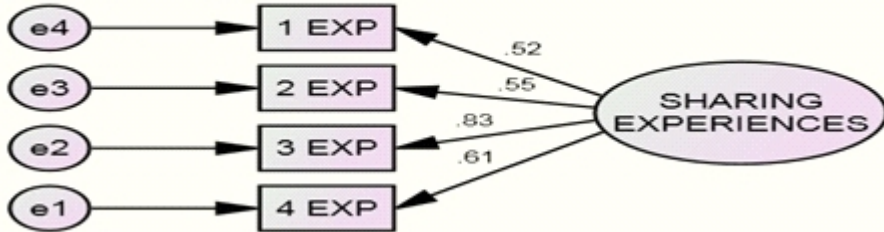
Table: 05: Detailed List of the Items for the Shopping Orientation of Experience of Shopping

Sr. No.	Item Code	List of the Items
01	1EXP	I discuss with family members about products to be purchased by me
02	2 EXP	I discuss with others about products in the retail stores
03	3 EXP	I share bad shopping experiences with others
04	4 EXP	I share information about various sales promotion schemes with others

In the above measurement model (Figure Number 06) for Confirmatory Factor Analysis of shopping orientation in which the selected four statements were about 'Experience of Retail shoppers in the retail store' were adapted. A five-point Likert scale was used as the response format with assigned values ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Figure: 07: Revised Model Fit for Confirmatory Factor Analysis of Shopping Orientation of Sharing Experiences of Shopping

Confirmatory Factor Analysis on the measurement model was conducted and the less influencing variables were eliminated from the model. The revised model fit was developed as given in the Figure Number: 07 that has identified the key influencing variables i.e. three variables for shopping experience of shoppers' viz; 'I discuss with others about products in the retail stores (2 EXP)', 'I share bad shopping experiences with others (3 EXP)', and 'I share information about various sales promotion schemes with others (4 EXP)' respectively.

SUMMARY OF CONFIRMATORY FACTOR ANALYSIS [CFA] OF STORE ATTRIBUTES USING ANALYSIS OF MOMENTS STRUCTURE [AMOS]:

The researchers have attempted to empirically test the Confirmatory Factor Analysis amongst selected 08 store attributes constructs i.e. accessibility, sales promotion schemes, store ambience, store atmosphere, physical facilities in the store, institutional factors, range of products and behaviour of the sales staff in the retail store respectively.

The Figure Number 07 to 14 depicts the Hypothesized Measurement Models for Confirmatory Factor as well as revised model fit. Further, the Table Number: 06 to 09 offers details about the store attributes taken into consideration for the Confirmatory Factor Analysis of this research study.

Figure: 08: Hypothesized Measurement Model for Confirmatory Factor Analysis of Accessibility, Sales Promotion Schemes and Store Ambience
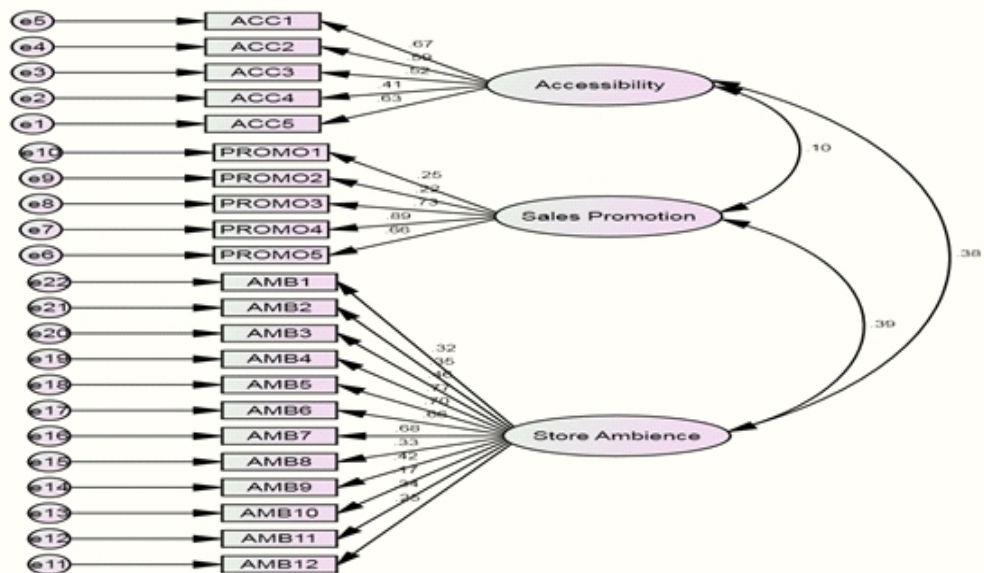
Table 06: Detailed List of the Items for the Store Attributes of Accessibility, Sales Promotion Schemes and Store Ambience

Sr. No.	Item Code	List of The Items For The Store Attributes
01	ACC 1	I like a retail store for shopping which is located near to my residence
02	ACC 2	I like a retail store for shopping which is located near to my office
03	ACC 3	It is convenient for me to go for shopping at any time in the store
04	ACC 4	I get required information about the retail store
05	ACC 5	The opening hours of the retail store are convenient to me

06	PROMO 1	The products offered with lower prices makes me feel less burden of making the payment
07	PROMO 2	The retail store gives me discount schemes
08	PROMO 3	The colour(s) and symbols used in promotions (e.g. advertisements) are attractive
09	PROMO 4	I like to buy products offered to me by retail store on promotional, discounted schemes
10	PROMO 5	I like to buy products at special events (e.g. Wednesday bazaar at big bazaar)
11	AMB 1	I feel at ease while shopping at the retail store
12	AMB 2	The infrastructure of the retail store is properly maintained
13	AMB 3	The retail store has an attractive look
14	AMB 4	The retail store has an attractive interior
15	AMB 5	The placement of aisles in the retail store is appropriate which makes easy for me to get what I want
16	AMB 6	There is plenty of room to walk around in the retail store
17	AMB 7	The sufficient information on signboards is displayed in the retail store
18	AMB 8	The décor of the retail store is attractive
19	AMB 9	I like clearly visible store advertisements in the retail store
20	AMB 10	Striking window displays of products increases my desire to buy in that retail store
21	AMB 11	The entry to the retail store is comfortable
22	AMB 12	The retail store has enough checkout points

In the above measurement model (Figure 08) for Confirmatory Factor Analysis of accessibility, sales promotion schemes and store ambience in which the selected 05 statements were about 'accessibility of the retail store', five statements related to the 'sales promotion schemes in the retail store', and the 12 statements related to the 'ambience of the retail store' were adapted. The statements and hypothesized measurement model contains the selected store attributes of viz., accessibility, sales promotion schemes and store ambience are shown in Figure number one. A five-point Likert scale was used as the response format with assigned values ranging from 1 = strongly disagree to 5 = strongly agree. The model shows the positive correlation between accessibility, sales promotion schemes and store ambience.

The Confirmatory Factor Analysis on the measurement model (Figure 09) was conducted and the less influencing variables were eliminated from the model. The revised model fit was developed as given in the Figure 08 had identified the key influencing variables that is 03 variables for accessibility viz; 'I like a retail store for shopping which is located near to my residence (ACC 1)', 'I like a retail store

for shopping which is located near to my office (ACC 2)', and; It is convenient for me to go for shopping at any time in the retail store (ACC 3)' respectively.

Figure 09: Revised Model Fit for Confirmatory Factor Analysis of Accessibility, Sales Promotion Schemes and Store Ambience
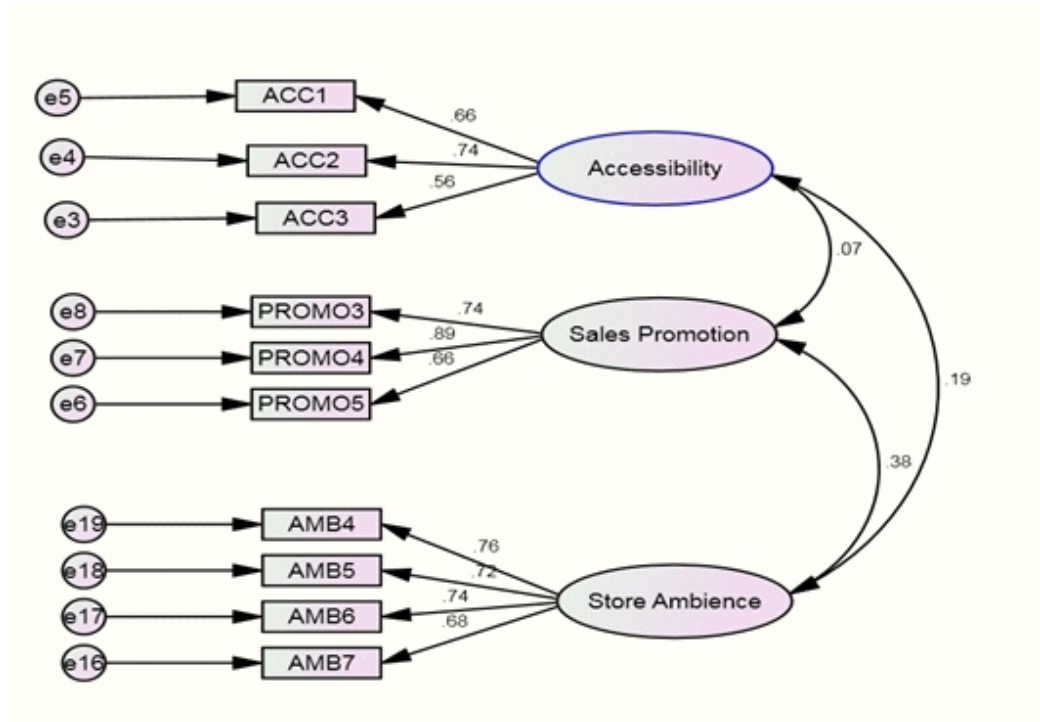
In case of the store attribute of sales promotion schemes in the retail store the 03 key influencing variables viz; 'The colour(s) and symbols used in promotions are attractive (PROMO 3)', 'I like to buy products offered to me by retail store on promotional discounted schemes (PROMO 4)', and 'I like to buy products at special events (PROMO 5)' were identified respectively.

In case of the store attribute of ambience in the retail store the 04 key influencing variables viz; 'The retail store has an attractive interior (AMB 4)', 'The placement of aisles in the retail store is appropriate which makes easy for me to get what I want (AMB 5)', 'There is plenty of room to walk around in the retail store (AMB 6)', and 'The sufficient information on signboards is displayed in the retail store (AMB 7)' were identified respectively.

Table 07: Detailed List of Items for Store Attribute of Physical Facilities in Retail Store

Sr. No.	Item Code	List of The Items For The Store Attributes
01	FAC 1	A trolley and/or shopping basket for carrying products is available in the retail store
02	FAC 2	The retail store exchanges products returned by me
03	FAC 3	The retail store refunds price of products once sold
04	FAC 4	The retail store accepts a credit card
05	FAC 5	The retail store accepts a debit card
06	FAC 6	The retail store provides membership cards
07	FAC 7	The retail store provides discount on membership cards
08	FAC 8	The retail store provides after sales services
09	FAC 9	The retail store has an escalator facilities
10	FAC 10	The retail store has an elevator facilities
11	FAC 11	The retail store has clean washroom/toilets
12	FAC 12	The retail store has a resting area
13	FAC 13	The retail store has a provision for physically challenged people
14	FAC 14	The retail store has spacious fitting and dressing rooms
15	FAC 15	The retail store has adequate security arrangements for the safety of vehicles in the parking area
16	FAC 16	The availability of parking area in retail store is sufficient
17	FAC 17	There are restaurants and other shops in the vicinity of the retail store

In the above measurement model shown (Figure 10) for confirmatory factor analysis of physical facilities in the retail store in which the 17 statements related to the physical facilities of the retail store were adapted. The statements and hypothesized measurement model contains the selected store attributes of physical facilities in the retail store and the same were measured on a five-point Likert scale as the response format with assigned values ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Figure 11: Revised Model Fit for Confirmatory Factor Analysis of Physical Facilities in the Retail Store
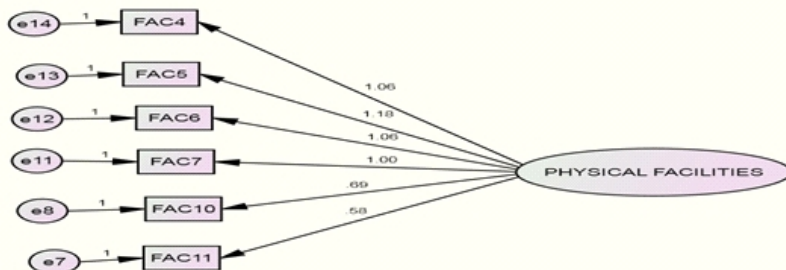
The Confirmatory Factor Analysis on the measurement model was conducted and the less influencing variables were eliminated from the model. The revised model fit was developed as given (Figure Number:11) that has identified the key influencing variables of physical facilities in the retail store viz; 'The retail store accepts a credit card (FAC 4)', 'The retail store accepts a debit card (FAC 5)', 'The retail store provides membership cards (FAC 6)', 'The retail store provides discount on membership cards (FAC 7)', 'The retail store has an elevator facilities (FAC 10)', and 'The retail store has clean washroom/toilets (FAC 11) respectively.

Figure 12: Hypothesized Measurement Model for Confirmatory Factor Analysis of Institutional Factors and Behaviour of the Sales Staff
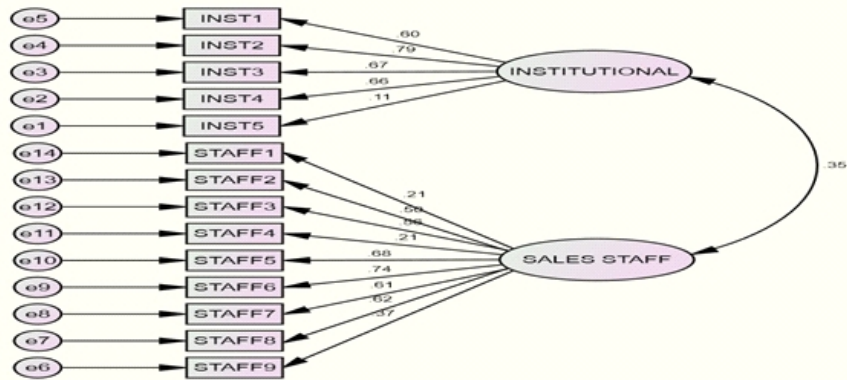
Table 08: Table Showing Detailed List of the Items for the Store Attributes of Institutional Factors and Sales Staff in the Retail Store

Sr. No.	Item Code	List of The Items For The Store Attributes
01	INST 1	I receive birthday wishes on mobile from the retail store
02	INST 2	I receive birthday wishes on email from the retail store
03	INST 3	I receive anniversary wishes on mobile from the retail store
04	INST 4	I receive anniversary wishes on email from the retail store
05	INST 5	The retail stores are crowded
06	STAFF 1	The sales staff of the retail store has required information of the products
07	STAFF 2	The sales staff of the retail store has required information of the availability of the products
08	STAFF 3	The sales staff of the retail store has the required information of the price of the products
09	STAFF 4	The sales staff of the retail store has the required information of the display of the products
10	STAFF 5	The sales staff of the retail store responds to my queries
11	STAFF 6	The sales staff of the retail store responds to my problems
12	STAFF 7	The sales staff of retail store are friendly with me
13	STAFF 8	The sales staff of retail store are polite and courteous
14	STAFF 9	The sales staff of retail store are well trained

In the above measurement model shown (Figure : 12) for Confirmatory Factor Analysis of institutional factors and behaviour of the sales staff in the retail store in which the 05 statements related to the Institutional factors and 09 statements related to the Behaviour of the sales staff in the retail store were considered. The statements and hypothesized measurement model contains the selected store attributes of Institutional factors of the retail store and the behaviour of the sales staff in the retail store and the same were measured on a five-point Likert scale as the response format with assigned values ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The model assumes the positive correlation between institutional factors and the behaviour of the sales staff in the retail store.

Figure 13: Revised Model Fit for Confirmatory Factor Analysis of Institutional Factors and Behaviour of the Sales Staff
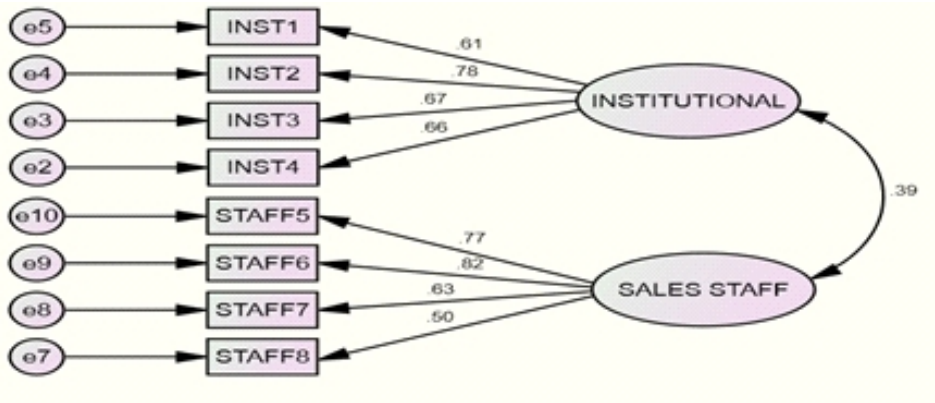
The Confirmatory Factor Analysis on the measurement model was conducted and the less influencing variables were eliminated from the model.

The revised model fit was developed as given in the Figure : 13 that has identified only the key influencing variables i.e. four variables for Institutional Factors viz; 'I receive birthday wishes on mobile from the retail store (INST 1)', I receive birthday wishes on email from the retail store (INST 2)', 'I receive anniversary wishes on mobile from the retail store (INST 3)', and 'The retail store keeps me updated by sending regular information about various offers and schemes (INST 4) respectively.

In case of the store attribute of sales staff behaviour in the retail store the 04 key influencing variables that were identified were viz., 'The sales staff of the retail store responds to my queries (STAFF 5)', 'The sales staff of the retail store responds to my problems (STAFF 6)', 'The sales staff of retail store are friendly with me (STAFF 7)', 'The sales staff of retail store are polite and courteous (STAFF 8) respectively.

Figure 14: Hypothesized Measurement Model for Confirmatory Factor Analysis of Range of Products and Store Atmosphere in the Retail Store
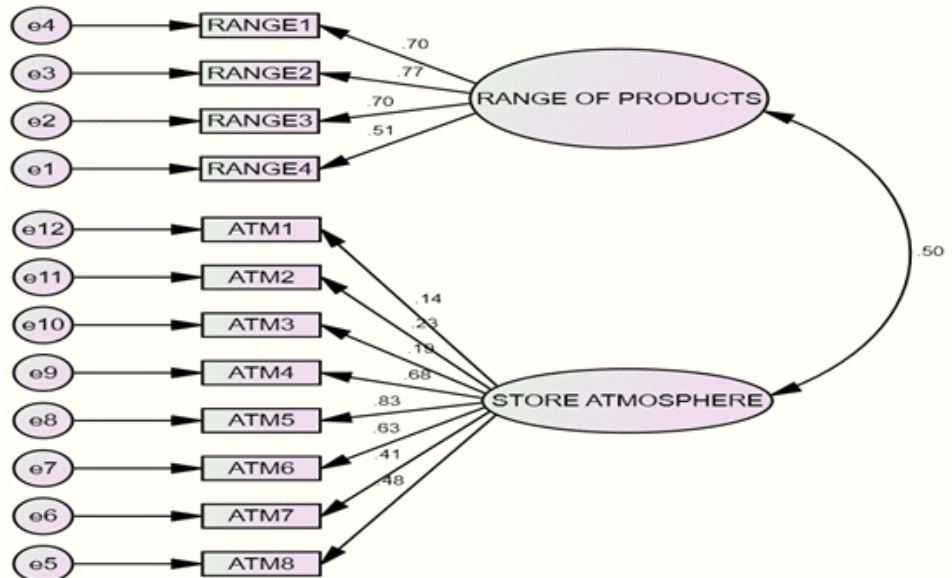
Table 09 : Detailed List of Items for Store Attributes of Range of Products and Store Atmosphere

Sr. No.	Item Code	Detailed Name of The Items For The Store Attributes of Range of Products and Store Atmosphere
01	RANGE 1	The retail store provides me a wide variety of products
02	RANGE 2	The retail store provides me a variety in different categories of products
03	RANGE 3	The products are available in different sizes in the retail store
04	RANGE 4	I get products of good quality in the retail store
05	ATM 1	There are sufficient lights in the retail store
06	ATM 2	The retail store has sufficient air conditioning
07	ATM 3	The house keeping of retail store is good
08	ATM 4	I feel pleased and comfortable due to the presence of the other shoppers in the retail store
09	ATM 5	I feel safe due to the presence of other shoppers in the retail store
10	ATM 6	I feel comfortable because of light music being played in the retail store
11	ATM 7	The environment of the retail store motivates me for shopping
12	ATM 8	I get pleasant smells inside the retail store

In the above measurement model shown (Figure : 14) for Confirmatory Factor Analysis of range of products in the retail store and the retail store atmosphere in which the 04 statements related to the range of products, and 08 statements related to the retail store atmosphere were considered. The statements and hypothesized measurement model contains the selected store attributes of range of products of the retail store and the retail store atmosphere and the same were measured on a five-point Likert scale as the response format with assigned values ranging from 1= Strongly Disagree to 5 = Strongly Agree.

This model assumes the positive correlation between range of products in the retail store and the retail store atmosphere.

Figure 15: Revised Model Fit for Confirmatory Factor Analysis of Range of Products and Store Atmosphere in the Retail Store
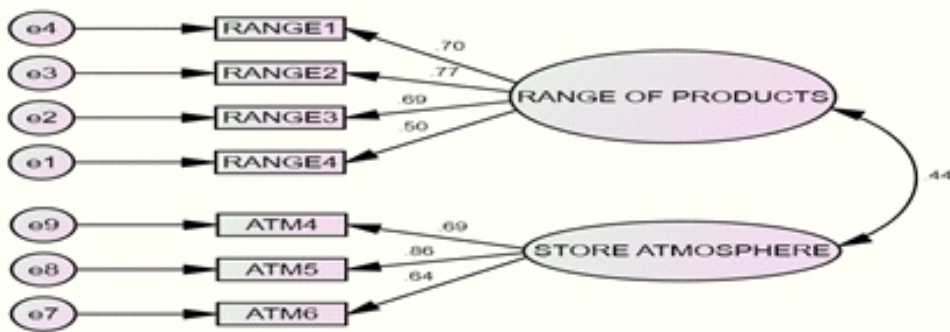
Confirmatory Factor Analysis on the measurement model was conducted and the less influencing variables were eliminated from the model. The revised model fit was developed as given in the Figure Number: 15 that has identified only the key influencing variables that is 04 variables for range of products viz; 'the retail store provides me a wide variety of products (RANGE 1), 'The retail store provides me a variety in different categories of products (RANGE 2)', 'The products are available in different sizes in the retail store (RANGE 3)', and 'I get products of good quality in the retail store (RANGE 4).

In case of the store attribute of Store Atmosphere in the retail store only the three key influencing variables that were identified were viz.,'I feel pleased and comfortable due to the presence of the other shoppers in the retail store (ATM 4), I feel safe due to the presence of other shoppers in the retail store (ATM 5) and I feel comfortable because of light music being played in the retail store (ATM 6) respectively.

STRUCTURAL EQUATION MODELING [SEM] USING PATH ANALYSIS CONSIDERING SHOPPING ORIENTATIONS AND STORE ATRRIBUTES:

Figure 16: Structural Equation Modelling [SEM] Using Path Analysis Showing Relationship between Shopping Orientations and Store Attributes with Overall Satisfaction through Mediating Variable
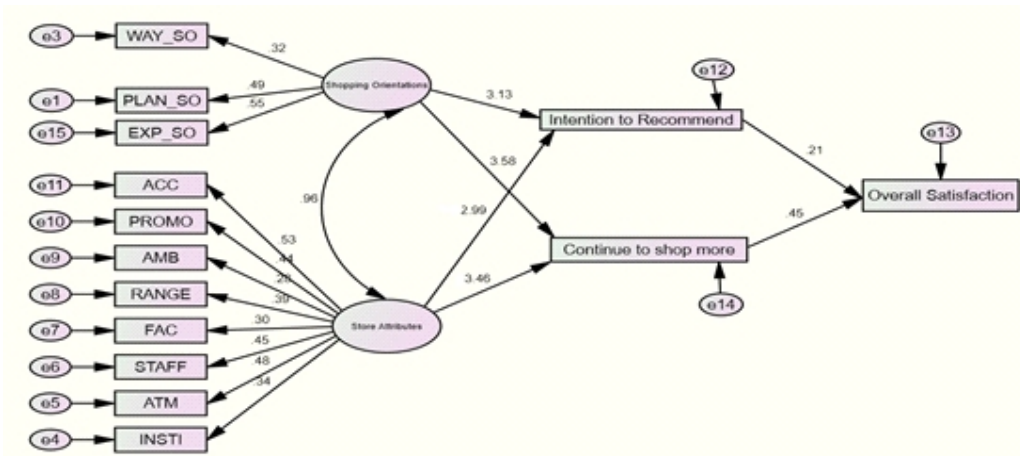
The above given Figure Number 16 depict relationship between shopping orientations and store attributes with overall satisfaction through mediating variables viz., 'I would continue to shop more", and "'I shall recommendation to others'. In the above mode the relationships between the constructs were examined based on chi-square associated with path coefficients between the constructs. The Chi-square value (2188.207) was on higher side than a certain critical value i.e. p < .05 which indicated that there exists a significant relationship between constructs.

The major determinants of shopping orientations included all the 03 variables depicted in the model that is 'The style or way of shopping', 'His planned effort for shopping', and 'His actual experience from shopping' respectively. The major determinants of store attributes included the 05 variables that is 'Promotional Schemes', 'Range of Products', 'Atmosphere of the Store', 'Accessibility of the Retail Store', 'Sales Staff of the Retail Store', and Store Atmosphere of the Retail Store out of 08 depicted in the model that is 'Accessibility, 'Promotional Schemes', 'Ambience of the Store', 'Range of Products', 'Facilities in the Store', Staff Behaviour in the Retail Store, Atmosphere of the Store, and 'The Institutional factors of the Retail Store. The shopping orientation of shoppers' that reflected shoppers' way of shopping and the store attributes used by the retailers in order to attract shoppers' are the major determinants of the shoppers' overall satisfaction through the mediating effects of "I would continue to shop more" and "Recommendation to others" respectively.

The result of SEM Analysis indicated that the path from the construct of shopping orientations as well as the construct of store attributes was significant and positively related with overall satisfaction of shoppers through mediating variables. Thus, it can be inferred that shopping orientations and store attributes both play a vital role in determining the shoppers' own decision to shop and his recommendation to others to shop from the same retail store that is the positive word of mouth spread to others. The influence of the selected retail store attributes used by the retailers also plays an important role while shoppers are inside the retail store for actual shopping. The retailers must focus on understanding the shopping orientations of the shoppers' so as to effectively create an atmosphere and align the store attributes that matches with the shoppers' own style and predisposition of shopping.

Table 10: Fit Indices of Measurement Model
[Model as Given in Figure: 16]

The below given table provides the model fit Indices for the Structural Equation Model [SEM] Using Path Analysis Showing Relationship between Shopping Orientations and Store Attributes with Overall Satisfaction through Mediating Variable.

Name of the Index	Model fit Indices
CMIN (Chi-square or Minimum Discrepancy Chi-square)	27.01
GFI (Goodness of Fit Index)	0.829
NFI (Normed-Fit Index)	0.648
RFI (Relative Fit Index)	0.604
CFI (Comparative Fit Index)	0.656
AGFI (Adjusted Goodness of Fit Index)	0.779
RMR (Root Mean Square Residual)	1.049
RMSEA (Root Mean Square Error of Approximation)	0.132

MANAGERIAL IMPLICATIONS OF THE RESEARCH STUDY:

The researchers have attempted to provide implications based on the selected criteria of shopping orientations that is 'The way of shopping', 'The planned activities that shoppers' undertake before their shopping journey', and 'Their experiences of shopping which plays an important role in shaping the overall predispositions of the shoppers' respectively.

The shoppers' do shopping with these pre-defined philosophies that they have before they undertake the task of shopping. For some shoppers, the act of shopping is merely a pass time activity in their leisure time, some feel that shopping is fun and enjoyment, and they tend to seek

recreation, and fun while they are in the retail store. It is also evident that some shoppers are meticulous and they do prepare a shopping list, discuss with family members and others and also pay attention to all the sales promotional schemes of the retailers.

The results of the research study pertaining to the store attribute of accessibility had revealed that shoppers feel comfortable, and find the store easily accessible considering is location that is nearby residence or office or acquiring the information about the retail stores opening hours.

The data analysis considering the different groups of different shoppers from different cities had revealed that their criterion for determining accessibility as a store attribute is different for each group of shopper as well as the preference of kind of information need and convenient opening hours of the retail store.

The retailers must ensure specific area wise segmentation strategies to attract and lure shoppers by communicating them about the accessibility in terms of nearness, hours of operation of store. The retailers need to focus on identifying the accessibility factor of their retail store in city by knowing the store traffic in the different locations so as to track the movement in the area where people can move comfortably and easily. The retailers should ensure that they open more branches in the most convenient location considering the different areas of the given city.

The retailers should also make sure that their retail stores are situated in the areas where the road connectivity, transportation facilities and other infrastructural facilities are available so as to facilitate more number of shoppers to visit the retail store. It can be inferred from the data analysis that the promotional schemes play a major role in stimulating the shoppers' to buy more. The sales promotion schemes viz., bundling offers, charging less price, offering discount schemes, special discount period during festive season and special promotion schemes can influence the shoppers' buying motives. The variety of sales promotion schemes will not only increase the sales volume of the retail store but also create a Unique Selling Proposition in a competitive organized retail market.

The special discount events like the "Wednesday bazaar at Big Bazaar" and "Sabse Sasta Din" will make shoppers' visit regularly with an anticipation of discount on even regular days.

The sales promotion schemes will lead to impulse buying and the retail shoppers' will end up buying more products which in turn helps to increase the sales volume and also stock clearance of old as well as non-moving, out of fashion trends products which facilitates working capital management by converting stocks into sales proceeds. The retailers must emphasis on proper display of merchandise and Mannequins by proper window dressing for promotion of the particular

product. The aim of the retailer should be to create differentiation to grab maximum eye-balls and in-store promotional signage, and floor merchandising in a creative manner may lead higher level of impact on consumers' impulse buying behaviour. The findings of this research study provided sufficient evidence that retailers can effectively utilize promotional campaigns to increase desirability of products, and to help customers become aware of the products as well as to create favourable attitudes.

It can be analysed from the data that the shopping facilities in the retail store viz., availability of adequate number of trolleys for shopping, refund and exchange offers, accepting all Debit cards and credit cards, discount schemes on membership or privilege cards, after sales services, escalator and elevator facilities, clean washrooms, provision of resting area for the differently able people, spacious dressing rooms, adequate parking space and security arrangements and availability of restaurants and other shops in the vicinity of the retail store can serve as major factor in making a selection of the retail store by the shoppers. The retail store must have a proper policy for refund and replacement of various goods purchased by the retail shopper so as to facilitate the shopper while making the purchase transaction. The retail store should accept all types of credit cards and debit cards to give the shopper the ease and convenience of transactions while shopping. The retail

stores need to give flexible payment terms thereby creating a unique image.

The data analysis indicated that the institutional factors have a focal area of Customer Relationship Management [CRM] in a competitive market. The retail store can occupy a distinct image in the minds of the retail shoppers' by keeping a close connect with the shoppers' by sending birthday wishes through SMS, e-mail etc. The retailers can create top of the mind awareness which results into possibilities of getting more business as the retail shopper is always well informed regarding all activities of the retail store. The retail store can position their stores as popular destinations for shopping along with fun and recreation. This will generate curiosity amongst infrequent visitors to visit and shop in the retail outlet. This will increase the footfalls in the retail store by drawing more people to visit the retail store. The sales personnel should be trained in terms of understanding the shoppers' information need as well as willing to share the information to the shoppers'. The sales staff should have the up to date information regarding the products availability, the product display, product location, product assortments and when the product is expected to arrive in case of stock out situation of the particular products. The sales staff should approach the shoppers' in the convincing yet friendly manner so as aid the shopper in his shopping journey.

The retailers should focus on proper training and induction of the sales staff so

that they will deliver the best possible services to the shoppers 'as well as build long term customer relations which will helpful in creating loyalty intentions towards the store amongst the shoppers'. The availability of customised products suiting the individual requirements of the shoppers' will create repurchase intentions amongst shoppers for the store. The availability of different assortments in terms of size of the products will enable the shoppers' to buy the enough quantity according to their family consumption patterns.

The retailers by providing wide range of products will not only help the shoppers' to chooses from the wide variety of alternatives but also to remain competitive in the organised retail market and positioning themselves differently by attracting large number of shoppers'. The overall environment of the outlet will create a feeling of pleasure of shopping in a given context which leads to satisfaction from the retail store and memorable shopping experiences. The appropriate illumination will enable the shoppers to identify, verify and choose various products in different locations in the shopping space along with the illumination the housekeeping and cleanliness of the store will help the shoppers' to stay long and take their own time to choose and purchase the products. The positivity in the retail store atmosphere will play a crucial role as it uplifts the spirit of the shoppers' to shop from the retail store. The background music in the retail store helps to the shoppers' to reduce the boredom and at the same time making the shopping task interesting. The soft music that is played in the store will help shoppers' to feel active and upbeat so that they can carry out the task of shopping with zeal and enthusiasm.

CONCLUSION:

The contribution of retail sector can be seen to a great extent in the emergence of shopping culture of Gujarat. Retailing in India is receiving global appreciation and attention and this emerging market is witnessing a significant change in its growth and investment pattern. Urban Gujarati shoppers prefer retail stores that give them value for money and "self service" options in the retail store. This beckons the era of "Serviced Retailing," where the shopper approaches the retailer and asks for specific items, which the retailer fetches from behind the counter. In order to devise appropriate plans and strategies and take advantage of these opportunities of growth to its fullest extent the retailers need to give the best shopping experience in such kind of malls and organized stores. It is imperative to understand the consumer behaviour in different formats of organized retailing will help the different stakeholders of this industry. Factually thousands of firms are spending millions of rupees to sway consumers in every market place through the medium of advertisements, packaging, product features, sales pitches and store environment. But it is evident that every strategy formulated for attracting customers may have different implications. Hence this research has made it possible

to understand the consumer behaviour in terms of shopping orientations at greater depth specifically with reference to the selected retail stores in the state of Gujarat.

In terms of store attributes the shoppers in the selected cities of Vadodara, Surat, Ahmedabad and Rajkot gave more importance to the promotional schemes, ambience of the store, range of products, atmosphere of the store and the overall image of the retail store. These attributes of the retail store should be given due consideration by the retailers in the State of Gujarat by seamless integration of all of them in order to portray a unique image of the store.

In this research study, we have found that the orientation of the shoppers in the State of Gujarat is based largely on entertainment value derived out of shopping. The data analyses have indicated that the retail shoppers sought emotional value more than the functional value of shopping. Although, there is a belief that shopping being considered a task and should be finished as soon as possible, this orientation is overshadowed by the entertainment value derived by the retail shoppers. The tendency of the retail shoppers to talk about their shopping experience has implications for building the reputation of the store. It is imperative that every retail shopper visiting a store needs to be handled carefully because whether the shoppers buy or not, they would discuss about their visit with others,

showed an inclination to patronize stores, and attached importance to referrals. A positive opinion would surely help build store traffic as well as loyalty to the store. The retail shoppers in the State of Gujarat have a very limited choice of retail formats, an important variable in shaping orientation.

Due to the lack of a varied experience, the retail shoppers do not seem to expect distinctive characteristics from different stores which usually shoppers in developed western countries usually expect. From the research study it was also clearly identified that the retail stores were chosen based on the products that they handle and hence the products became the primary consideration and subdued the importance of other store variables. Retailers in the State of Gujarat need to take up the task of demonstrating the value added by a store. The format of the store could be the prime driver.

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FEASIBILITY OF COSTING MODEL VARIANTS: AN INVESTIGATION OF SMALL SCALE INDUSTRY

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ABSTRACT

Activity-based costing as a technique has proved an innovative practice in the area of management accounting. ABC has facilitated companies to classify the true costs of not only product and services but also processes. This empowered management to make sound decisions related to profitability and the effectiveness of their production process. Many scholars have proved the advantage of activity-based costing over traditional costing system; this paper explores the benefits of ABC to the Small & Medium Enterprises (SMEs) population. Also, the challenges faced by SMEs. The paper demonstrates the framework for ABC implementation with the support of real-time case of an Indian SME.

Key word: Costing model, SSI, Strategy

INTRODUCTION

The development that was orchestrated with technological advancement, witnessed experimentation and innovation galore in the mid-1980s which further lead to the development of innovative practices in the management world. These practices embrace innovative costing techniques initiated through Activity Based Costing. Literary evidences related with innovation in accounting practices, highlights, technological advancement in manufacturing practices have been around those primary persuasive elements answerable for criticizing the performance of traditional management accounting techniques (Askaramy & Smith 2004, 2003; Benet et al 1994,Bork & Morgan 1993, Chenhall 2003, Gosselin 1997, Hartnett & Lowry 1994, Lefebrre & Lefebvre 1993, Spicer 1992).

Amid most recent two decades, traditional cost and management accounting techniques have been under academic radar for its alleged inability to give itemized and convenient data and to content the users of such data (Askaramy 2005 & 2003, Baines & Langfield Smith 2003). This paper demonstrates the benefits bestowed to an Indian SME and its impact on the profitability of the company.

LITERATURE REVIEW

Harvard Business Review and numerous different literature and journals have published about ABC, execution of ABC and its effect on manufacturing process vis a vis organization performance. literature dating around the 1980s, impulses ABC as a device for exactness of product cost utilizing cost pools and cost drivers. This helped management to recognize gainfulness of products. They watched the many-sided quality off executing the ABC framework. Mid 1990s forms exhibit basic viewpoint of ABC, where on one hand; practitioners saw with the execution of ABC management could oversee cost and exercises prompting the development of Activity-Based Management. Then again, commentators were contending the irregularity of ABC with the standards of nonstop change, add up to quality management, the absence of customer center, conflicting with the theory of constraints. In the nutshell, ABC was confronting the moving impacts.

In justification of the proclamations made against ABC, Kaplan averred that ABC framework gave profitable monetary data in regards to process change and consumer loyalty. It was too soon to assess the execution. Or maybe ABC framework produces data to be incorporated with other data, for example, customer profitability, process quality, and revenue and process duration.

Notwithstanding the basic editorial, low attention, and disappointment in ABC framework usage, ABC proceeded on its expectation to absorb information. With its persistent advancement, ABC materialness expanded to zones outside the extent of cost accounting. Academicians and practitioners were applying ABC framework in the regions of marketing, logistics, and supply chain. It likewise began to apply in spaces like banking, healthcare, energy and different enterprises. ABC points of interest prompt the rise of ABM yet, in addition, led scholastics and managers to look at how ABC could communicate with other management advancements and change initiatives, for example, TQM, EVA or TOC.

Industry	Title	Authors	Years
Manufacturing	A generalised cost-estimation model for job shop	Aderoba, A.	1997
Logistics	Application of activity-based costing to a land transportation company: a case study	Baykaso☐ Lu, A.; Kaplano☐ lu, V.	2008
Postal service	Applying activity-based costing model on cost accounting of provider of universal postal services in developing countries	Blagojević, M.; Marković, D.; Kujačić, M.; Dobrodolac, M.	2010
Healthcare	Improving hospital cost accounting with activity-based costing	Chan, Y. C.	1993
Police	Costing police services: the politicization of accounting	Collier, P. M.	2006

Hotel	Customer profitability analysis with time-driven activity-based costing: a case study in a hotel	Dalci, I.; Tanis, V.; Kosan, L.	2010
Health care	Health-care financial management in a changing environment	Devine, K.; O'clock, P.; Lyons, D.	2000
Health care: Physician	Development of an activity-based costing model to evaluate physician office practice profitability	Dugel, P. U.; Tong, K. B.	2011
Health care: Intensive care	A new method of accurately identifying costs of individual patients in intensive care: the initial results	Edbrooke, D. L. Stevens, V. G.; Hibbert, C. L.;	1997
Library	Activity-based costing in user services of an academic library	Ellis-Newman, J.	2003
Library	The cost of library services: Activity-based costing in an Australian academic library	Ellis-Newman, J.; Robinson, P.	1998
Healthcare: Mammography	Providing professional mammography services: financial analysis	Enzmann, D. R.; Anglada, P. M.; Haviley, C.; Venta, L. A.	2001
Health care	Building an activity-based costing hospital model using quality function deployment and benchmarking	González, M. E.; Quesada, G.; Mack, R.; Urritia, I.	2005
Service	Management accounting systems in Finnish service firms	Hussain, M. M.; Gunasekaran, A.; Laitinen, E. K.	1998
Financial institution	The application of activity-based costing in the United Kingdom's largest financial institutions	Innes, J.; Mitchell, F.	1997
Library	Time-driven activity-based costing for inter-library services: a case study in a university	Pernot, E.; Roodhooft, F.; Van den Abbeele, A.	2007
Health care	Activity-based costs of blood transfusions in surgical patients at four hospitals	Shander, A.; Hofmann, A.; Ozawa, S.; Theusinger, O. M.; Gombotz, H; Spahn, D R	2010
Health care	Costs and effects in lumbar spinal fusion: a follow-up study in 136 consecutive patients with chronic low back pain	Soegaard, R.; Christensen, F. B.; Christiansen, T.; Bünger, C.	2007
Logistic	Logistic costs case study: an ABC approach	Themido, I.; Arantes, A.; Fernandes C;. Guedes A P.	2000
Tourism	Activity-based management and traditional costing in tourist enterprises (a hotel implementation model)	Vazakidis, A.; Karagiannis, I.	2011
Health care	Application of activity-based costing (ABC) for a Peruvian NGO healthcare provider	Waters, H.; Abdallah, H.; Santillán, D.	2001
Education	Adoption of Activity-based costing: A survey of the education sector of Greece	John Sorros; Alkiviadis Karagiorgos; Nikos Mpelesis	2017

Source: Stefano and Filho (2013)

BENEFITS		
Accurate cost information for product costing	Qian & Bin-Arich	2008
	Charles & Hansa	2008
	Ozbayrak et al	2004
	Tayles &Drury	2001
	Clarke et al	1999
	Hussain et al	1998
	Kingsman & De Souza	1997
	Pirttila & Sandstrom	1996
	Friedman & Lynne	1995; 1999
Improve performance measurement system	Gunasekaran & Sarhadi	1998
	Kim et al	1997
Facilitating optimal joint product mix decisions	Tsai et al	2008
	Kee	2008
Improved cost control	Clarke et al	1999
	Hussain et al	1998
	Friedman & Lynne	1995; 1999
Cost reduction	Bescos et al	2001
	Andrade et al	1999
	Gunasekaran & Sarhadi	1998
	Hussain et al	1998
	Innes & Mitchell	1995
Accurate allocation of indirect costs	Hussain et al	1998
Improved insight into cost causation	Clarke et al	1999
	Hussain et al	1998
	Friedman & Lynne	1995; 1999
Identification of activity costs	Hussain et al	1998
Improvement of operational efficiency	Kee	2008
	Tayles & Drury	2001
Improve customer profitability analysis	Bescos et al	2001
	Tayles & Drury	2001
	Clarke et al	1999
	Innes & Mitchell	1995
Accurate cost information for pricing	Kee	2008
	Bescos et al	2001
	Tayles & Drury	2001
	Kocakulah et al	2000
	Clarke et al	1999
	Innes & Mitchell	1995
Prepare relevant budgets	Bescos et al	2001
	Tayles & Drury	2001
	Innes & Mitchell	1995

Modernize cost accounting system for better depicts costs or to improve their business processes	Satoghi et al	2006
	Tatsiopoulos & Panayiotou	2000
	Hussain et al	1998
	Malmi	1999
	Spedding & Sun	1999
	Salafatinos	1996
Supply chain tactical production planning	Comelli et al	2008
	Whicker et al	2006
Supporting decision making	Thyssen et al	2006
	Seneschal & Tahon	1998
Designing & development of activities	Ben-Arieh & Qiar	2003
	Tornberg et al	2002
	Gunasekaran & Sarhadi	1998

Source: Authors' compilation

DIFFICULTIES		
Reservations from employees or managers regarding the usefulness of the new system	Tayles & Drury	2001
	Clarke et al	1999
	Gunasekaran et al	1999
	Hussain et al	1998
	Innes & Mitchell	1995
Difficulties in identifying & selecting activities or cost drivers	Clarke et al	1999
	Hussain et al	1998
Problems in accumulating cost data for new system or lack of resources	Tayles &Drury	2001
	Clarke et al	1999
	Hussain et al	1998
Time-consuming	Gunasekaran et al	1999
Excessive cost budget	Tayles &Drury	2001
	Hussain et al	1998
Inadequate computer software	Clarke et al	1999

Source: Authors' compilation

REJECTION		
Satisfaction with the existing costing system	Bescos et al	2001
	Innes et al	2000
	Innes & Mitchell	1995
Implementation associate high cost	Bescos et al	2001
Lack of assessment time	Innes & Mitchell	1995
Perceive inadequate accurate cost information	Bescos et al	2001
Lack of management support	Innes et al	2000
	Innes & Mitchell	1995
	Friedman & Lynne	1995; 1999

Source: Authors' compilation

SMEs which aspires to be a business visionary and ready for imaginative flight, accept fortitudes of these factors and further more have a penchant as the main adopters the of new systems in the market. Likewise Shieldsa and Young (1994) contended that firms-which are small-sized in operations- progressively achieve aggressive edge through creative action by adopting an innovation.

In an exhaustive survey of 60 large and medium-sized manufacturing companies in India, Joshi (2001) thesis that adoption rate of 20% for ABC, 13% for ABM and 7% for activity-based budgeting. Adoption of these contemporary management accounting techniques has been highly contributed by factors like the magnitude of total assets. Owing to higher perceived benefits, practitioners put much weight on the traditional management accounting techniques against contemporary techniques.

Through a case study of two branches of a large Indian private sector bank, Narasimhan & Thampy (2002) promulgated ABC system for establishing service cost for customers with multifaceted operations. Scholars have profusely talked about the utility of ABC information in business process outsourcing and identification of value added and non-value added activities and benchmarking branch network restructuring. Ahmad et al (2017) investigated the implementation of ABC in SMEs in Malaysia with a response rate of 108, 17% of respondents have adopted ABC. The indicators like the degree of intricacies in a manufacturing environment and top management unflinching support stand as testimony to successful implementation. Reasons for rejection include lack of resources, expertise and cost factor.

Bromwich and Bhimani (1989) concurred that the product cost distortions could be easily rectified though ABC while. Hubbell (1996) laid stress on forging ABC management systems vis a vis shareholder value such as EVA. Advocating a comprehensive relation between ABC implementation and shareholder value, Kennedy & Affleck Graves (2001) strongly voted for ABC analysis.

Dini and Guerginal (1994) have distinguished some imperative elements impacting the success of small and medium-sized firm's (SME's) system. The essential achievement factors for the usage of activity-based costing (ABC) in SMEs are deciphered with mettle in making quality products and services and effective vigil on the capital intensity and debt levels. Another vital potential lies in owning and translating the capacity to actualize a successful approach. Accordingly, any authoritative process that decreases the cash surges for an SME undertaking is prone to have a positive effect as far as a lessening of obligation, and the significant investment funds transformed into benefits. Besides, the viable control of income may decrease long-term capital prerequisites and lighten the normal SMEs issue of under-capitalization.

As identified by Gunasekaran et al (1999), following criteria to justify the application of ABC in SMEs undertaking as per their characteristics:
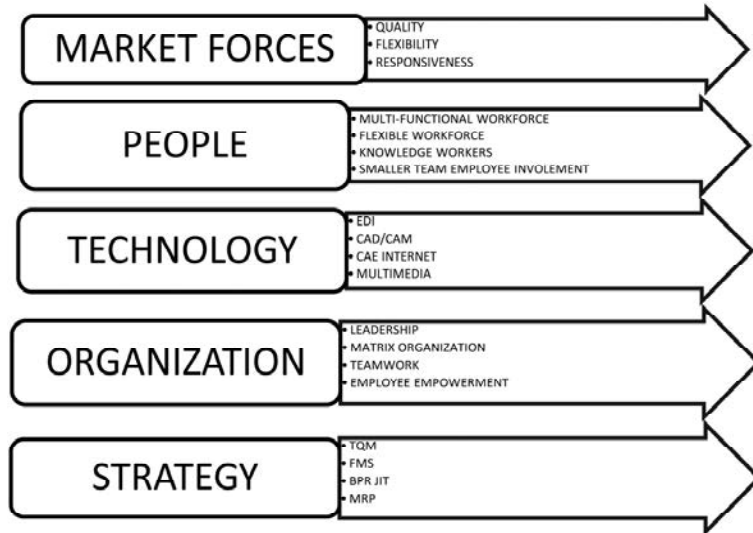
Source: Gunasekaran et al (1999)

The present period of worldwide competition is driving all SMEs towards a reestablished sense of duty regarding magnificence in manufacturing. The conventional costing frameworks do not give sufficient non-financial data about SMEs. The customary cost frameworks give little data about what makes a difference to the customers (which is the primary prerequisite of any world-class organization). Factors, for example, quality and administration are out of their domain. They report just financial related data. Non-financial related data, for example, defect rates and throughput rates in every movement are past the extent of the conventional costing framework. As of late, SMEs have decreased their reliance on customary costing frameworks by creating ABC frameworks. At first,

managers observed the ABC approach as a more exact method for computing product costs. In any case, ABC has developed as a hugely helpful manual for managerial actions that can make an interpretation of higher benefits (Cooper and Kaplan, 1991). Understanding the significance of ABC in SMEs to remain aggressive, an endeavour has been made in this paper to build up a structure for the usage of ABC in SMEs which is demonstrated with the help of a real-time case in the following section.

CASE STUDY

The researcher was approached by an Indian SME located in the outskirts of Delhi. The firm was engaged in the production of lenses for the taillights of automobiles. They got a contract of

manufacturing lenses, L1 and L2, from an automobile company. The production process of L1 was more complex as compared to L2 because of its special features including multicolour moulding. The firm was running at capacity and had good competition for L1 lenses. With the competition faced by the firm, the customer informs them competitive price by another competitor for L1 lenses at Rs 450 as compared to their price of Rs 650. Such competition was not faced by L2 lenses which were priced at Rs 1200 each.

For such competition, the management had two options in front of them, first, to forgo the order of L1 lenses to their competitor. Thus, not supplying L1 lenses to the customer. Second, reduce the price of lenses by either lowering the margin or by reducing cost. To study such situation, the researcher tried to understand their costing system particularly manufacturing overhead. They found the company used to allocate indirect costs using a single indirect cost rate based on labour hours, 38,550 hours. The company managers budgeted 30,000 hours to manufacture 60,000 L1 lenses and 8,550 hours for 15,000 L2 lenses. Thus, bringing the cost of L1 at Rs 594.16 and L2 at Rs 960; this made the firm to earn a profit margin of 8.6% for L1 and 20% for L2.
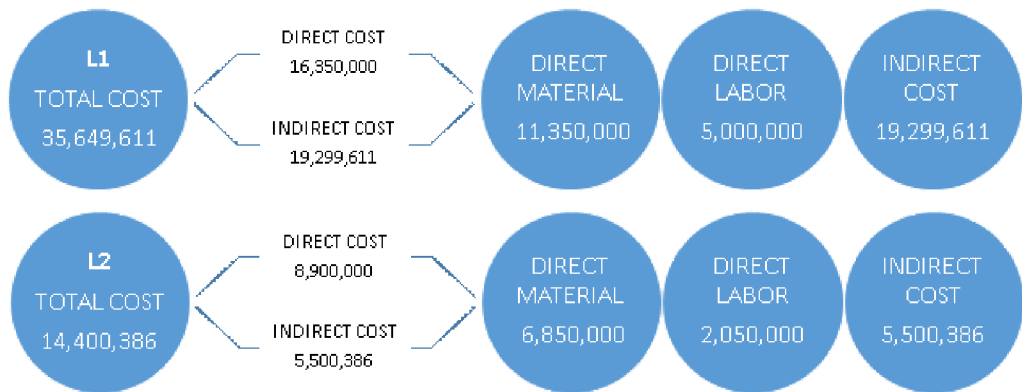
It made management to take a tough call on L1 lenses as their design team has already evaluated and analyzed L1 operations comparing to their competitor, is a competitive product in the market.

The researcher observed, after reviewing firm's costing system, the complexity of firm's costing environment in term of allocation of overhead towards both the product, L1, and L2. They identified miscasting of product costs as management was confident about the direct material and labour as it was easily traceable but were concerned about the accuracy of the system to measure overhead used by each product. To resolve

the challenge faced by the firm, researcher introduced an Activity-based system to the management and convinced them to implement ABC system for cost allocation.

The researcher along with the management made a team for identifying the activities to break down its current single indirect pool to improved pools of cost related to various activities.

Indirect cost pool	Design products and processes	4,000,000	100 parts square feet
	Setting up machine	3,500,000	2,000 set up hours
	Operate machine	6,580,000	12,750 machine hours
	Administration of processes	800,000	39,550 admin hours
	Batches of finished lenses for shipment	3,500,000	200 shipments
	Distribution	2,500,000	67,500 cubic feet delivered
Direct cost pool	Clean and maintenance of machines	3,920,000	

It was observed that maintenance activity was easily traceable to a particular product, thus, considered as direct cost pool and included in the direct cost. This made the direct cost as Rs 29,170,000. After computing rate per unit of each cost allocation base, total indirect cost based on activities defined was calculated for each product.

		Single Cost Pool system	Activity Cost Pool system (ABC)	Difference
Direct cost items		Direct Material + Direct labor	Direct Material + Direct labor + Maintenance	
Direct cost		25,250,000	29,170,000	3,920,000
Indirect cost items		Single indirect cost pool	Design + Setting up + Operation + Administration + Shipment + Distribution	
Indirect cost pool		24,800,000	20,880,000	(3,920,000)
Total cost:	L1	35,649,611	24,465,920	
	L2	14,400,386	25,584,080	
Cost per unit	L1	594.16	407.76	(186.4)
	L2	960	1705.6	745.6

With the help of ABC system, management was able to trace more cost as a direct cost, created uniform cost pools related to different activities and for each cost pool, ABC system identified appropriate cost allocation base that has a cause-effect relationship with costs in the cost pool. Uniformity in cost pool and allocation base, linked to the cost hierarchy, gave management a confidence in the cost numbers for the products and identified L1 was overcost by Rs 186.40. Thus, management can match its competitor's price and make a profit by considering the order below competitor's price.

Also, management was able to identify how and where to reduce costs. The target of cost reduction was foreseen as per the cost per unit of the cost allocation base in distribution activity by decreasing distribution cost per cubic foot of product delivered from Rs 60 to Rs 58 by reducing the rental costs. The motive was to reduce the cost by improving the process without comprising customer service. Thus, management attempted to take out only those costs that are non-value added. It was also observed when single cost pool allocation based on direct labour hours was used, gave a wrong signal that the firm was choosing those designs that most reduce direct labour hours, in fact, there was a weak cause-effect relationship between direct labour hours and indirect costs. They also used the system in their budgeting process to compare their actuals with a budgeted number for adjusting under-allocated or overallocated indirect costs for each activity.

CHALLENGES

While implementing the ABC system, researcher faced few challenges including implementation of ABC which brings a significant change in the system. It requires management to decide on activities and its level copiously. It is not only the support of top management to implement the system but also managers' cooperation is required as they have the knowledge about activities and cost drivers. It was essential to bring them into the system for their expertise, proper credibility, coordination and the required leadership.

CONCLUSION

The case findings suggest that single cost pool system is unable to mirror the activities and assets expired at some stage in the production process with the intention to distort cost numbers. The ABC system gives correct cost data with a couple of activity cost drivers and casual relationships among resource consumption and costs all through manufacturing. The cost records are the crucial references that help SME firms set approach to price properly. The studies framework, implementation procedure of ABC system and research findings of this paper can provide beneficial reference and contribution to the SME firms which are going through the competitive global environment.

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NUDGE APPLICATIONS IN CONSUMER SOCIALIZATION OF CHILDREN

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ABSTRACT

A child's thought process is sculptured by the factors that are found typically in the environment; where he/she grows up. Hence the efforts of marketers are directionally focused on creating an environment in order to facilitate the consumer socialization of children. Recently nudge strategies have also attracted the attention of researchers and policymakers because of their potential in influencing the behavior of individuals. By adopting and utilizing review of existing literature, this perusal attempts to analyze the socialization process through facets of behavioral economics, to "nudge" children towards a consumer-specific behavior. The study also intends to facilitate marketers in framing the right strategy, while deciding on the content of their promotions. It facilitates advertisers to have a better understanding of a child's cognitive abilities, the perception of advertisements and their progression as consumers.

Keywords: Nudge, Perception, Consumer Socialization, Advertising, Cognition, Attitude

INTRODUCTION

Child customers are heavily influenced by the various commercial messages that lure and excite through the various media promotions. Evidently, children are a vital target segment for advertisers around the world. They are thought to be capable of influencing their parent's purchase decisions. Hence promoting to them is viewed as an exceptionally effective approach in order to create a pool of prospective customers. In order to make an alluring picture in the brains of the children, advertisers wish to secure a lifetime shopping experience in their minds and heart. They are being focused on child consumers with enormous proportions and doses. There are numerous ways that organizations promote to children and contextually television has turned out to be a vital impact in the child's life.

Research based on advertisements have reliably attempted to distinguish and deliver vital issues relating to kids' demeanors

towards television commercials. It is crucial for marketers to recognize whether children understand the intent of advertising. For marketers, the major area of concern is whether children are able to differentiate between advertisements and programs while watching television. Three categories of specific impact of television commercials have been identified by Rossiter (1979), namely: *cognitive effects*, concentrating on child's potential to comprehend promotions, *attitudinal effects*, focusing on children's feelings towards television advertising and *behavioral effects*, uniting on the level to which kids are induced to want and request the brands being promoted.

Interest in the area of consumer socialization of children is growing rapidly among public policy makers, marketers, consumer educators, and researchers. According to Schiffman and Kanuk (2007), consumer socialization can be defined as "the process by which children acquire the skills, knowledge, attitudes, and experiences necessary to function as consumers". The socialization process revolves around, the socialization agent and the type of learning actually operating. A number of studies have concentrated on how youngsters form skills related to consumption. Researchers have also additionally revealed that children primarily respond to advertisements emphatically. For their choice of products, they try to utilize the celebrity/ representative in the endorsement, who appears to satisfy a parental part.

The concept of nudging was first introduced by American authors Richard H. Thaler and Cass R. Sunstein (2008) in their book "Nudge: improving decisions about health, richness, and happiness". In a general sense, nudging refers to a different aspect of choosing the architecture which alters the behavior of individuals in a prognostic manner, without excluding other options (Thaler, Sunstein, 2008). The nudge theory aims at improving, changing and administrating the process of heuristic influences on the human behavior, which is targeted at changing people. These days, expanding consideration is being paid to nudging as a sort of mediation to make little, recognizable or unnoticeable changes in the environment to make the alternatives more ideal. As indicated by Thaler and Sunstein "it is conceivable to nudge people into a specific behaviour by utilization of the heuristics, emotions, habits and biases we have". Nudging intercessions intend to encourage buyer's choice by altering the environment in which such choices are made. In that capacity, nudging alludes to "any aspect of the choice architecture that adjusts individuals' conduct in a predictable way without forbidding any options or significantly changing their economic incentives" (Marteau, Ogilvie, Roland, Suhrcke, & Kelly, 2011).

Theoretical Background

According to John (1999), there are three stages of consumer socialization in children, classified by their ages. First is the perceptual stage which is related to

three to seven years of age, wherein kids can differentiate advertisements from a program based on perceptual features, holding positive attitudes towards commercials and believe that they are truthful, funny and interesting. The second stage, known as the analytical stage, related to seven to eleven years of age, kids can differentiate commercials from programmes through a persuasive intent, holding negative attitudes and understand that advertisements may contain bias and deception. In the last stage, the reflective stage, including kid's between eleven to sixteen years of age, kids understand the persuasive intent, tactics, and appeals involved in the advertisement. An illustration of the same has been given in the below figure (Figure 1).

Characteristics	Perceptual stage: 3–7 yrs.	Analytical stage: 7–11 yrs.	Reflective stage: 11–16 yrs.
Knowledge structures:			
Orientation	Concrete	Abstract	Abstract
Focus	Perceptual features	Functional/underlying features	Functional/underlying features
		Two or more dimensions	Multidimensional
Complexity	Unidimensional/Simple	Contingent ("if–then")	Contingent ("if–then")
		Dual perspectives	Dual perspectives in social
Perspective	Egocentric (own perspective)	(own & others)	context
Decision-making & influence strategies:			
Orientation	Expedient	Thoughtful	Strategic
Focus	Perceptual & Salient features	Functional/underlying features	Functional/underlying features
		Relevant features	Relevant features
Complexity	Single attributes	Two or more attributes	Multiple attributes
		Expanded repertoire of strategies	Complete repertoire of strategies
Adaptivity	Emerging	Moderate	Fully developed
Perspective	Egocentric	Dual perspectives	Dual perspectives in social context

Figure 1 – Stages of Consumer Socialization. Source: John (1999)

Perceptual Stage: This stage (ages 3–7) is described by a general introduction towards the prompt and readily noticeable perceptual components of the market-place. The consumer knowledge of children is portrayed by perceptual elements and refinements, regularly centered on a single element or feature, and meant by real subtle elements from their own perceptions.

Analytical Stage: Huge changes happen, both socially and psychologically, as children progress into this stage (ages 7–11). This phase includes the most essential advancements as far as consumer information and aptitudes are concerned. Cognition takes place at a more dynamic level, creating a ground for learning organizations that incorporate statistics regarding unique ideas, e.g. advertiser's

thought processes and also the thought of possibilities.

Reflective Stage: This phase (age 11–16 yrs.) is portrayed by further improvement in various proportions of reasoning and societal advancement. Gaining insights into the ideas related the marketplace like branding and pricing turns out to be much more mind-boggling as kids cultivate abilities related to the processing of information and socialization.

Objectives of the study

1. To examine and compare the influence of television commercials and siblings on the child's product-specific consumption preferences

2. To correlate the nudge principles of priming and framing with the consumer socialization process

3. To help marketers modify their strategies in order to create maximum impact in the children's consumption patterns through an understanding of their cognitive abilities.

Research Gap

Over the last few years, research in the area of behavioral economics and nudging has attempted to provide insights into how people actually make decisions based on their judgment of the stimulus they are exposed to. From the consumer socialization perspective, children often acquire social skills by modeling parents, peers, siblings and mass media (Bandura, 2002). These agents of socialization also

create an environment where children learn to behave as consumers (John, 1999). According to Moschis and Churchill (1978) taking a closer look at the relative influence of these agents of socialization will enable policymakers to evaluate commercial stimuli. Although there has been extensive research on the agents of consumer socialization and their relative impact, no previous studies have attempted to apply nudge principles to the process of socialization. This conceptual article aims at addressing that gap by building a hybrid framework encompassing both traditional and nudges tools for the socialization to occur. This paper argues that the two agents of socialization namely television and siblings actually aim at shaping the consumer skills of a child through nudging.

Review of Literature

Children as Potential Consumers

The study by McNeal (1998) featured that children comprise three distinctive consumer markets: "primary, influence and future". Significance of children as an essential target market for items like toys, snacks, garments and so forth, has for quite some time been recognized and tended to by advertisers. Anyway the power and size of this market has now gone up significantly. According to Gram (2007), advertisers of adult product-classes are likewise escalating endeavors to charm children for their part as key influencers and future shoppers. The explorations by Howard and Madrigal (1990) & Gram and

Therkelsen (2003) reveal that children have a strong impact in family decision making and they may initiate the buy, gather data about available alternatives, propose retail outlets, and have a say in the final product choice. Bridges and Briesch (2006), suggest that while devising marketing strategies focusing on children, it is critical to consider whether the product category is one in which children may have impact. As per Beatty and Talpade (1994), the extent and nature of children's impact is dependent on, who uses the product and the apparent significance of the product to the user.

Consumer Socialization

In the words of Ward & Wackman (1972), consumer socialization can be defined as "the process by which young people acquire skills, knowledge and attitudes relevant to their functioning in the market place". The most common socialization agents for children are family, siblings, television, in which parental style and media communication patterns are pivotal in children's purchase behavior. According to McNeal and Yeh (2003), the consumer socialization process of children begins when they start accompanying their parents to various stores for purchases. Children initially make purchase requests for the products they prefer, but as they grow they start visiting the stores and make purchases of their choice. A number of studies have been carried out in order to understand how children develop consumption habits and act as consumers. According to John (1999), children

develop their consumer behavior norms by observing their parents and siblings, who often act as role models and potential sources for consumption related cues. A study by Rummel et al. (2000), shows that children react positively to commercials involving a spokesperson, who fulfills the role of a parent.

Agents of Consumer socialization

In his study John (1999), combined the findings from Piaget's (1970) theory of intellectual development and Selman's (1980) theory of social development and proposed a consumer socialization model where children transform into consumers by passing through a series of developmental processes. In their research Ward et al. (1977) have put the learning theory into practice, in order to elaborate on the concept of consumer socialization and assumed that: understanding of product-related information is a primary element of children's learning of the marketplace. According to McLeod and O'Keefe (1972), agents of socialization are those persuasive sources that express norms, attitudes, motivations, and behavior to the learner. Further research conducted by Ward (1974), has provided with substantial evidence to prove that brands, products, packaging, parents, peers, mass media, and retail outlets are considered to be sources of information and have been identified as agents of socialization. The sources of influence upon the socialization of children are personal and situational factors, namely: attitude towards the product, brand and store experiences,

advice in the marketplace and the buying culture adopted from parents, peers and mass-media (Mascarenhas and Higby, 1993).

Television as an Agent of Socialization

In the words of Moschis (1987), as compared with other agents, mass media has received the most attention, as an agent of consumer socialization. Specifically, television among all forms of media plays the role of a pervasive agent of socialization for children. According to O'Guinn and Shrum (1997), the two primary dimensions of media, namely – advertising and content, are the key influencers and have maximum impact on children. A study by Moschis and Churchill (1978), reveals that in the context of consumer socialization, higher exposure and interaction with mass media leads to increased learning of consumer behavior among children. The research conducted by McNeal and Ji (1999), revealed that on an average, children are exposed to around four hours of television every day, which is considered to be a vital source of information for learning about new products.

Distinguishing Advertisements from Television Programs

Children's ability to distinguish a television program from a commercial is an area that has been subject to a lot of disagreement. In the study of children aged between two to seven years by Rubin (1974) and a perusal of children less than five years of age by Kunkel and Robert's (1991), it was evident that children were incapable of distinguishing between television advertisements and programmes. On the other hand, a study of children under five years of age by Gaines and Esserman (1981), followed by Petros and Petrella (1982), advocated that children are very much capable of distinguishing between both. These contradicting views can be substantiated by taking into account the relevant age-group under scrutiny and the method of research adopted, namely; verbal, non-verbal or observational. In their respective studies, Preston (2000), Young (1990) and Dorr (1986) argue that five years is the defining moment when children cultivate the ability for the advertisement/programme differentiation bu the help of cues. As examined by Goldberg (1990), in a study of four and five-year-olds, it was evident that children were able to point out how an advertisement is different from a programme but could not explain why they were different.

Childs Understanding of Advertising Intent

According to Martin (1997), advertising intent can be defined with regard to the child's comprehension of an advertisement and additionally their understanding of the advertiser's primary motive behind the same. In this regard, children's understanding of the advertising intent is considered to be either assistive/ informative or persuasive/selling. In the words of Preston (2000), delivering product related information to the intended target audience is facilitated by the

informative role, whereas the persuasive role denotes the motive of an advertisement aiming at the development of a purchase intention. Blosser and Roberts (1985) are of the view that, advertising intent in a broader scope includes – information, teaching, entertainment, selling, and persuasion. Further study by Lawlor and Prothero (2000), suggests that the schema of the advertiser can be represented by two primary intentions, namely; persuasive and informational.

Effects of Advertising on Children

As the essential goal of promoting is to impact the consumer perceptions about a brand (Romaniuk and Nicholls, 2006) which are ultimately related to the final purchase (Nedungadi 1990; Keller, 2003; Tipps, Berger, and Weinberg 2006), it is normal that many studies in advertising have attempted to think of more effective approaches to persuade buyers (Romaniuk and Nicholls, 2006). As of late, discourses of advertising impacts from the point of view of purchasers have gotten more consideration (Gould and Gupta, 2006). Research concentrating on the conceivable negative effect of advertising on particular groups of consumers, for example, children, has expanded (Livingstone and Helsper, 2006). Not quite the same as the discourses about how advertising can persuade target groups all the more proficiently, the real reasons for the examinations managing conceivable negative impacts of advertising

talk about stricter directions on the content of commercials (Henderson et. al., 2004).

Siblings as Agents of Socialization

Siblings are considered to have a profound impact on the emotional, cognitive and social development of children (Dunn, 2002; Karos et al., 2007; Pike et al., 2005), and for some people, the sibling relationship is their most persevering association. Relationship among siblings is a crucial aspect of children's social universes and is implanted in a progression of pro-social and negative interactions (Karos et al., 2007), with it portrayed as a fluctuating relationship (Edwards et al., 2005; Punch, 2008) that regularly includes both co-operation and strife (Punch, 2008). In accordance with fundamental ways to deal with family life, the nature of parent-child relationship can also affect sibling relations (Minuchin, 1988; Pike et al., 2005), with parental differential treatment (PDT) of kids offering to ascend to sibling contention (Suitor et al., 2008; Tucker et al., 2005).

Nudging and its effectiveness

The effectiveness of nudging in altering the behavior and value structure of individuals is considered to be of high practical significance. The critics of nudging seek an explanation to whether designing choice architecture facilitates sustainable changes in the behavior of individuals (Goodwin, 2012). They claim that considerable behavioral effect prompting long-term sustainable practices requires consumer's acknowledgment of the criticalness to

change ways of life and consequent behavioral modifications. Additionally, in their effort to increase revenues, marketers can neutralize uninformed behavior which as a resultant of nudges. Therefore, these contradicting forces could prompt a framework in which huge investments in the form of public finance can be utilized to nudge behaviors. These nudges can benefit the individuals and the society at large, simultaneously being counteracted by marketing strategies (Wilkinson, 2013).

Nudging as a behavioral mediation

Nudging is derived from concepts developed in the field of behavioral economics, which is the science of behavior choice or "choice architecture" (Desai 2011; Hargreaves Heap 2013). Nudges have been also widely applied in consumer and competition policies, especially when it comes to providing default options in situations with complex information or simplifying complex information for users. In the words of Thaler and Sunstein (2008), there exists an automatic mental system, which they refer to as "mindless choosing". The nudge tactics are aimed at influencing this aspect of "mindless choosing". They are of the view that consumers know about the decisions they make and the results in spite of the fact that the choices may not be to their best advantage. Nudging can be viewed as the 'libertarian paternalism', development, where "libertarian" alludes to an opportunity of a decision. Whereas, "paternalism", suggests a methodology where it is authentic to impact the settings

to build one specific decision (Bonell, McKee, Fletcher, Wilkinson, and Haines, 2011; Thaler and Sunstein, 2008).

Nudging and Consumer decision making

The varied choices made by consumers make are grounded on direct gratification and receiving an immediate favorable outcome which is widely preferred (Ainslie, 2001). Individuals tend to favor delights of a shorter duration and get over the long-term impact of a buying decision. In contrast, they will agree to take a phase of non-pleasantness if the culmination is worthy (Kahneman, 2012). Individual practices are primarily decisions that are taken in a subconscious way and they represent non-reflective repetitive behavior (Verplanken & Wood, 2006). In the words of Wood & Neal, (2007) people acquire habits by those series of actions which have been repeated earlier through gratifying outcomes and the environment acts as a trigger to produce that behavior. According to (Aarts & Dijksterhuis, (2000), as a functional tool habits are aimed at obtaining specific goals and they tend to strengthen over time through repetitive behavior.

Developing Conceptual Frameworks utilizing Framing and Priming

Framing and Consumer Socialization

Nudging expands on the knowledge that availability of information to individual matters but also the way it is presented is equally crucial. Simplifying information and a proper understanding of its context of

the presentation, often leads a change in an individual's choice of products. According to John et al (2013), nudging is all about providing information and meaningful gestures in order to enable individuals to make positive choices for themselves. The *framing* of an issue is also additionally imperative, it can be explained as the phrasing of information in a manner that essentially facilitates and initiates certain values and attitudes of people. *Framing* basically includes choice and prominence. It involves choosing some aspects of a perceived reality and making them more noteworthy in the context of communication. As explored by Entman (1993), *framing* facilitates the promotion and definition of specific issues, causal understanding, moral assessment and treatment suggestions for the object being portrayed. A conceptual framework portraying the concept of *framing* is given as below (Figure 2).

As depicted in the above model (Figure 2) primarily comprises of four sections, namely- antecedents, framing, mental outcomes and behavioural outcomes. Section one of the model represents those elements that pre-exist the framing process. The second part of the framework includes the typical roles played by siblings in the passing on and framing the information for their younger brother/sister. They play the role of simplifying the information through regular interactions, further facilitated by sharing of products. The penultimate segment portrays the child's understanding

Figure 2: A Conceptual Model of Sibling Relationship, Framing and Consumer Socialization of Children.
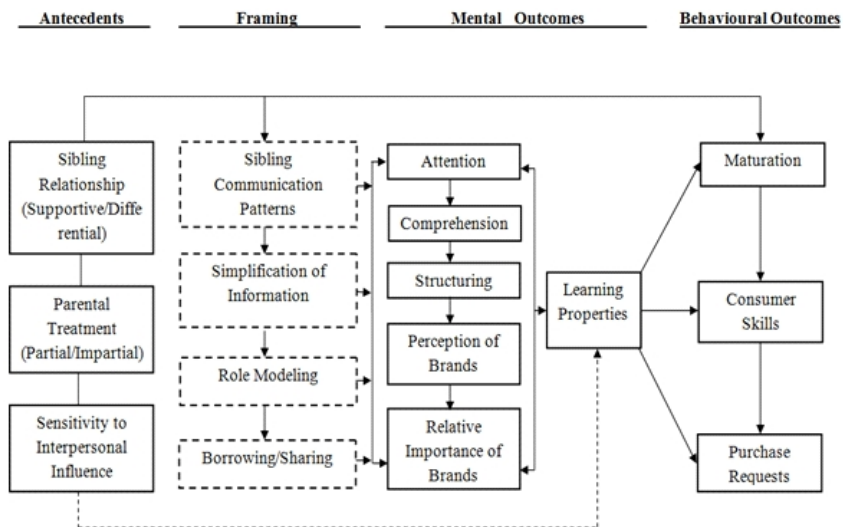
Source: Adapted from Daniel B. Wackman & Scott Ward (1976) and Danny N. Bellenger & George P. Moschis (1982).

of the information thereby leading to learning. The child pays attention to the information received based on his/her level of cognitive development. Then the sequence of the structuring of information directionally leads to brand perception. The final phase of the figure denotes the behavioural outcomes of framing in the form of purchase requests by the child.

Consumer Socialization through Priming

Having already discussed on the children's attention and thought to the behavior of their siblings, this framework focuses on the power of *priming*. Research in social sciences has uncovered that individuals can be *primed* into specific behavior by offering straightforward and evidently irrelevant cues (Thaler and Sunstein, 2008). William J. Cusick (2009), in his book, elaborates on the concept of priming. According to him, priming describes a phenomenon wherein a person is subconsciously reacting to a stimulus that is inherently positive/negative. Priming here might be seen as an idea that portrays how external forces influence our emotions, decision and action in a random manner. In the words of David Halpern (2015), priming sometimes is with the intent, such as through the thousands of advertisements we are exposed to.

A conceptual model on priming is depicted below (Figure 3). The framework illustrates the four core phases of stimuli, priming, processing of information and the

Figure 3: Television Commercials, Priming, and Consumer Socialization.
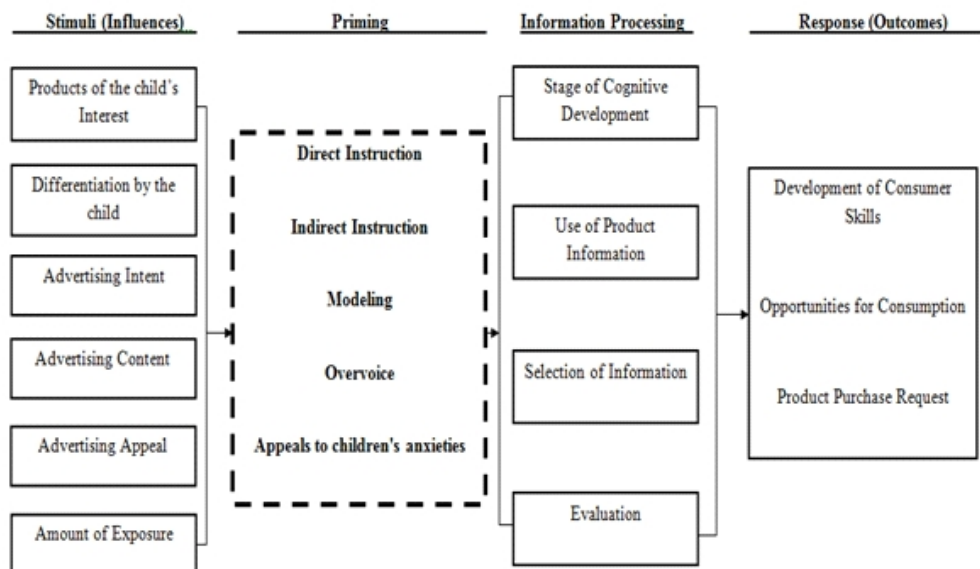
Source: Adapted from Scott Ward, Donna M. Klees and Thomas S. Robertson (1987).

outcomes. It is an elaboration of the S-O-R (Stimuli Organism Response) model of consumer behavior. The initial phase of the model represents the various aspects of the stimuli (television advertisements), which include elements like advertising content, the intent of the advertiser, the appeal created through advertisements and the degree of the child's exposure to the medium, often regulated by the parents. A crucial element of this phase being, the ability of the child to differentiate between television programs and adverts.

The second section of the model highlights the priming concept, which includes the following celebrity endorser/commercial content elements: *Direct/Indirect instructions* – where the child viewer is told what to do and what not to. The *Modeling* element approaches the child viewer by depicting good things happening to children because of something they do. *Overvoice*, a cultural way of adding authority to the commercial message, normally by using a male voice, ultimately appealing to the anxieties of the child. The last two sections of the model include the *Information Processing* phase and the *Outcomes* of the same.

Limitations and Scope for Future Research

This conceptual article is not devoid of limitations. The perusal and the conceptual models have been developed using review of existing literature only, research in future can aim at validating the same through empirical evidence. This study has taken into consideration only two agents of socialization, namely – television and siblings. Future explorations can make an exhaustive comparison of all the other forms of socialization agents in children. The concept of nudging incorporates many other strategies, this paper has utilized only two of them i.e. priming and framing. The other nudges can also be delved into in the future.

Implications

This study raises interesting implications as to how companies would want to design the child consumers experience in order to encourage purchase. If companies could really understand the impact of priming and framing on their child customers, it would encourage introspection regarding their overall customer experience. This paper focuses on the lessons that can be drawn from behavioral economics and the nudge approach in overcoming global marketing challenges which shall help global practices in marketing.

Conclusion and Discussions

This study was designed to have a deeper understanding of the role of television advertisements and the siblings' psychology, leading to the shaping of children psyche as consumers. Designing a schematic plan to nudge the child customer and effectively impacting their consumption preferences requires a thorough understanding of their cognitive abilities. The conceptual models developed in the study shall facilitate a

better understanding of nudging and application of the same in the field of global marketing practices. The effect of parental differential treatment, coupled with the nature of sibling realtionships, can act as potential cues for marketers in creating better nudges in the form of their marketing communications.

The conceptual foundations developed in this paper can be of specific significance in the context of current scholarly debates on the relevance of nudging. Apart from that, this study revealed a lacking acquaintance with the idea of nudging and perhaps inadequate significant impressions of these strategies on child consumers. Considering the possible theoretical implications and relevance of this article in imbibing nudge aspects in the area of consumer behavior, it should not be considered as a ground for deciding for or against the implementation of nudges. Rather, this paper argues that the cognitive and behavioral aspects of the child should be considered as a basis for strategy design and implementation. At the same time, the ethical need of involving consumers into the judging of nudge elements requires enhanced information levels and consumer involvement. For the meantime, no direct rationalization can be identified to reject nudging, yet this conclusion cannot be drawn across all purviews of behavior.

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FACTORS DETERMINING BUYER BEHAVIOUR IN SHOPPING GOODS WITH REFERENCE TO BRANDED PRODUCTS

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ABSTRCT

The consumers market now, turning into more complex and competitive in post LPG era. As customer is the focal point for any marketer, studying their behaviour becoming vital. Now-a-days consumers are very much conscious about their choices and preferences and attracted towards those products which can give them maximum value with social recognition So, it is obvious that the consumers purchasing decision will be influenced by a lot of factors like buyers personal factors, cultural factors, psychological differences, product related factors etc. Today consumers have handful of alternatives to chose among. So it is becoming difficult for marketers to understand consumers' black box and formulate strategy according to that. This study focuses on investigating the awareness of consumers on various brands and to examine their behaviour in market. This is an empirical study aim to analyse the consumer behaviour in the state capital of Odisha. Primary data collected from 100 samples through a structured questionnaire. Hypotheses are formulated and tested applying various statistical tests. The result derived by testing of hypothesis is very useful which says that the buyers are basically affected by their demographic characteristics like age, gender, family structure, income, occupation and other brand related benefits.

Key Words: competitive, black box, strategy, choices and preferences

INTRODUCTION

Indian market today categorized as ever increasing market for consumption of goods and services as essential which are considered as luxury until yesterday. The demand is growing at high pace for every kind of product, whether it is FMCG or fashionable. It is not only people who are changing but all factors related to demographics and psychographics contributing a lot towards consumption trend. Today, we can find co-existence of at least three generations in a single family and shifts in lifestyle. For understanding consumer behaviour, mind of all consumers to be studied differently on the basis their age group, income group etc. for example: a marketer should not treat two individuals in same way where one belongs to post independence era and another born after liberalization. The marketer needs to do one thing i.e. he has to diagnose the consumers mind to study how and why consumers having all experience with the productsandservices. He needs to study

it from every aspect. Studying only few aspects may not be helpful for building a complete strategy.

The buyer is remained as an enigma although marketers focusing on understanding buyer behaviour. The marketers provide stimuli but he is not certain about the buyer's response. This is why the buyer's mind is termed as a black box. Consumers decision influenced by hundred of reasons and today, consumers are mostly influenced by technological advancements, media i.e. news media as well as social media and consumer choices also affected by acute competition among various products and services. So, in this competitive & complex market situation, it is very difficult and sometimes impossible to predict their behavior.

It is even more difficult to understand buyer behaviour towards branded products in consumer durable segment as there are a handful of national and multinational brands are available. Most of the urban customers are aware about brands where rural market is in emerging trend. Today, Information technology helping consumers extensively in comparing Prices of brands and their features. In India consumers are greatly influenced by the suggestions and reviews of their near and dear ones for taking purchasing decision.. So, it is important to examine consumers perception towards a particular brand or product. Moreover, the choice and decision of consumers about a specific brand over the time is determined on the basis of the benefits sought i.e. quality,

guarantee and price especially from branded products. And it becomes the important factor when it comes to the durable and shopping goods.

Literature Review

A number of research studies on this area has been reviewed which have been carried out for examining various factors and stimuli affecting the consumers. Some of the important research studies are presented here.

Miss Rupali Khanna (2015) has made a study entitled "Customer Perception towards Brands: A study on Patanjali". The study was conducted with objectives to study the perception of customers about the brand 'Patanjali', to find out the perceived benefit in the minds of customers at the time of buying the particular brand and to analyse the satisfaction level of customers and past purchasing experience. The study conducted by examining 100 samples in the area of Punjab through questionnaire method. The study revealed that out of total sample 2/3rd are in between the age group of 20-40 and female users are more interested to buy 'Patanjali' products than male users. There are various factors like Income, Price, advertisement etc. are affecting the brand choice. Income has a negative but insignificant effect on the purchase decision where as it is positively correlated with the quality. Quality of the product trusted not by advertising but after using only.

Syed Tabrez Hassan, Bilal H Hurrah and Amit Lanja (2014) were made a study

entitled "A Study of Customer Perception of Youth towards Branded Fashion Apparels in Jalandhar City**".** The main objective was to study the youth of Jalandhar city and find out their brand preferences for apparels. Another aim was identifying the factors determining the buying behaviour of that particular group. A sample of 200 respondents was selected by random sampling technique. The survey reveals that most of the people choose to wear branded apparels just for maintaining status and they mainly influenced by trend of fashion, price offers, suggestions of friends and family. For this gropu of customers price is not a big deal as they are determined to wear branded clothes and believe costly products means brands providing high quality products. But, in this case people change their brand preferences time to time and not loyal to a particular brand.

Manish Kumar Rai & Dr.R.Gopal studied 'The Consumer buying behavior on branded ethnic apparel' by collecting data from 100 respondents from Navi Mumbai. The main objectives of the study were to identify the target consumers having high value towards ethnic wear and analyse to what extent they are affected by their demographic characteristics and economic condition. They found that the buying behavior of consumers has no association with gender, income level and region to which they belong. But the occupation and age affect the buying of ethnic apparel. According to the findings of the study the perception and preference of customers for ethnic apparel do not vary on the basis of income level but on the basis of occupation. Professionals and job holders liking it more while students are less interested.

Research Objectives

The study has been conducted to identify the customers awareness, preferences and attitudes towards buying of shopping goods in the capital city of Odisha. The main objectives are:

· To examine consumer awareness about various brands in shopping goods

· To identify various factors influencing buyer behaviour

· To study the buyer behaviour on the basis of their demographic differences

Research Methodology

Data have been collected both from primary and secondary sources. A research survey was conducted for primary data in the capital city Bhubaneswar, Odisha. The survey based on primary data which was obtained through a structured questionnaire. The questionnaire was administered to the consumers purchasing shopping goods of various brands to the sampling unit classified on the basis of age, gender, income, occupation, educational qualification and monthly income. Stratified simple random sampling techniques are used in the study comprising 100 samples. Various statistical tools and t test analysis are used to study the significance of demographic factors of age, income, occupation and status towards the

perception of respondent on shopping goods.

Hypothesis

For studying buyer behaviour some hypotheses are formulated and tested. Those hypotheses are as below:

H_0: There is no difference between the gender of the respondents and repurchase of the brand which the respondents are using

H_0 – There is no significant difference between the family structure and repurchase of the brand which the respondents are using.

H0: There is no significant difference between male and female to prefer buying of branded goods in terms of guaranteed after sales services

H0: There is no significant difference between Nuclear and Joint family in buying the branded goods in terms of guaranteed after sales services

Concept of Buyer Behaviour

The field of consumer behavior is definitely not a narrow concept. It covers a lot of ground to be studied. Consumer behavior is the process and activities people engage in at the time of searching, selecting, purchasing and using for the fulfillment of their wants and desires. Buyer behavior is defined as "all psychological, social and physical behavior of potential customers as they become aware of, evaluate, purchase, consume and tell others about products and services. According to

marketing theories a customer goes through various stages or has a life cycle for a particular product or firm.

- First stage is that time period when the buyer has not yet bought a firms product brand. At this stage customer seek awareness and marketer try to induce purchase. These customers are called prospects means potential customer in target market.

- Once the customer decides to purchase, he enters into second stage and try out the product. After using for the first time, buyer evaluates the firm, product and whole total experience he got. Here marketer needs to promote to retain the customer not affecting the brand image.

- Some customers who are satisfied enter into third stage and make a repeat purchase. But they cannot be called as loyal customers because they may shift brand by getting superior service from competitor firms.

- Those customers do not shift to other brands become core customers and they are very precious to the firms. Generally there are about 2-3% of these type customers exist in most companies.

- There are some customers who have rejected the firm's offerings called defectors. The cause of such defection is to be analysed and corrective steps should be taken.

Determinants of Buyer Behaviour

People choose a product to buy after going through a process of identifying needs and

preferences, selecting out of various alternatives and analyzing the utility in comparison to price. Customers can be various types who purchase different types of goods for them like: Shopping goods, consumable goods, specialty goods or industrial goods. A person's buying decision related to what should he buy, how should he buy, when and from where should he buy etc. backed by many factors like his perception, self concept, his social and cultural environment, peer groups, his age and personality, his family and many other. Further the selection and purchase of any branded product by a customer probably influenced by several factors including his perception towards that particular brand, all total information and experience he has with the brand and his attitude which determines the repeat buying behaviour. Some of the factors are discussed below:

Cultural background of a person can be treated as the basic factor which determines a buyer's wants and preferences. Generally different set of values of different cultures, their traditions, beliefs influence the customers' preferences and behaviours. Some of the behaviours have been learned by individuals throughout the life. Further People belong to different culture, sub-culture and social class have different characteristics which lead to distinct product and brand preferences. Culture influences communication and language, dress and appearance, food and eating habits, work habits and practices of customers.

In addition to cultural factors, a consumer's society has the broadest influence on consumer's choice. Those societal factors constitute all the people around him who are called as reference groups include his family, friends, relatives, neighbors, colleagues and his class in the society. These people have a direct as well as indirect effect on consumers thinking and decision and ultimately affect the buying behaviour. This factor can have more influence because of regular interaction and meeting.

The buyer's decision is also determined by his personal characteristics. These include the particular buyer's age, gender, stage in the life cycle i.e. childhood, youth stage and old age, his occupation, financial background, lifestyle. In this point of view, we have child market, youth market, adult market etc. In spite of these factors physiological differences between men and women create different demand of health and beauty products and their needs backed by their distinct roles played by them. Instead of gender differences, age has the great influence of purchase decision. People choose clothes, furniture and recreation etc. according to their stages in the life cycle. Moreover, the personality difference affects the buying decision between persons.

There are four major psychological factors that affect the purchasing behaviour of consumers i.e. motivation, perception, attitudes and beliefs. First thing is the level of motivation. Generally different needs of different consumers and the nature of

requirement motivated towards shopping a selected product with specific features. However there are some perceptual processes. Moreover the marketers can also change the beliefs and attitudes of customers with special campaigns.

Buyer not only behaves differently according to product differences and determinants but sometimes the situation differs. In the absence of some factors, differentiation in two buying situation occurs. Those are: (a) awareness about competing brands in a product group (b) customer has a decision criteria (c) customer is able to evaluate and decide on his choice.

Analysis and Interpretation

In this study, an attempt has been made to study the consumer characteristics such as demographics and behavioural variables in the purchase of shopping goods by using the data collected from the respondents through administrating the questionnaire. The demographical characteristics of the sample respondents and behavioural variables in the purchase of shopping goods have been analysed by using popular statistical tools and statistical tests like Chi square Test and t test for testing of the hypothesis.

Analysis of Profile of the respondents: The profile of the respondents includes all the demographic details like gender, age, income, occupation, family structure etc. In this study Respondentsare studied on the basis of gender, income and family structure.

Frequency and percentage of respondents w.r.t gender

TABLE-1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	67	67.0	67.0	67.0
	Female	33	33.0	33.0	100.0
	Total	100	100.0	100.0	

Source: self compiled

Out of 100 respondents 67 % of male respondents, 33% of female respondents have participated in this study.

Frequency and percentage of respondents w.r.t family structure

TABLE – 2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nuclear	66	66.0	66.0	66.0
	Joint	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

Source: self compiled

The above table show the Type of Family distribution. It shows that 66% of respondents were Nuclear whereas 34% of respondents were from Joint family.

Frequency and percentage of respondents w.r.t Income

TABLE- 3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Up to 10000	14	14.0	14.0	14.0
	10000 to 50000	59	59.0	59.0	73.0
	50000 to 75000	15	15.0	15.0	88.0
	75000 to 100000	6	6.0	6.0	94.0
	above 100000	6	6.0	6.0	100.0
	Total	100	100.0	100.0	

Source: selfcompiled
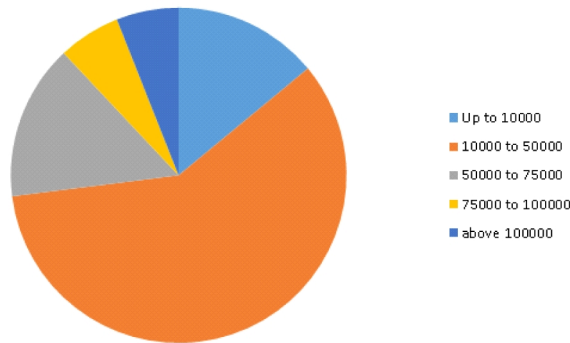
Fig 2 Graphical Presentation of respondents w.r.t Income

The table no.3 shows the income distributions of respondents, 14% respondents were Rs. Upto-10,000, 59% respondents were Rs.10,000-50,000 and 15% respondents were Rs. 50,000-75,000 income group. The maximum participated in the research study from the income group were between Rs. 10,000 to 50,000.

Frequency and percentage of respondents Aware about various brands

TABLE – 4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	93	93.0	93.0	93.0
	No	7	7.0	7.0	100.0
	Total	100	100.0	100.0	

Source: self compiled

The table 4 shows the distribution of the respondents about their awareness on the different brands of shopping goods. It shows that 93% of respondents were known about the different brands available in the market whereas only 7% of respondents were unknown about it.

Purchase behaviour of the respondents: This analysis depicts the buyer behaviour at the market place i.e their frequency of shopping, their choice of brands, the benefits they aspire from any brand and the how is the behaviour differs gender to gender, one income group to another and one family structure to another.

Frequency of Shopping made by respondents

TABLE – 5		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Once	10	10.0	10.0	10.0
	Twice	13	13.0	13.0	23.0
	three times	9	9.0	9.0	32.0
	four times	10	10.0	10.0	42.0
	more than four times	58	58.0	58.0	100.0
	Total	100	100.0	100.0	

The table no 5 presents the frequency of shopping. It is revealed that maximum participated in the research study had visited more than four times for shopping which is around 68 percent of the total respondents of the study.

Factors given emphasis for the purchase of a shopping product

TABLE – 6	Price as factor	Quality as factor	Fashion as factor	Influence of family	Advertisement	Technology as factor	Promotion schemes
Yes	57	75	18	12	35	16	09
No	43	25	82	88	65	84	91

The above table presents the distribution of various factors that was given emphasis at the time of purchasing shopping goods. The respondents were given emphasis to price and quality and were not given emphasis to technology, influence of family, advertisement, sales promotion schemes and fashion.

H₀: There is no difference between the gender of the respondents and repurchase of the brand which the respondents are using-

TABLE - 7: STATISTICAL COMPARISON between Male and Female on repurchase of the brand which the respondents are using						
GENDER	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Male	66	1.3939	.49237	-6.946	99	.000
Female	34	1.2059	.41043			

Source: Self Compiled

According to the table, which indicates that Mean & S.D of Male Vs Female on repurchase of the brand which the respondents are using i.e. Male group are 1.39±0.49, Female group are 1.20±0.41. As per the table the p value is less than significant level at .05. Hence null hypothesis is rejected. It means alternative hypothesis is accepted. There is some difference between male and female on repurchasing the brands they are using.

H₀ – There is no significant difference between the family structure and repurchase of the brand which the respondents are using.

TABLE NO – 8: STATISTICAL COMPARISON between Nuclear and Joint family on repurchase of the brand which the respondents are using						
Type of family	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Nuclear	66	1.3333	.47502	-6.865	99	.000
Joint	34	1.3824	.49327			

Source: Self Compiled

According to table No.8 , which indicates that Mean & S.D of Nuclear Vs Joint family on repurchase of the brand which the respondents are using i.e. Nuclear group are 1.33±0.47, Joint group are 1.38±0.49. As per the table the p value was statistically significant at .05 level of confidence. Hence null hypothesis is rejected. It reveals that alternative hypothesis is accepted. There are some difference exist between nuclear and joint family for the repurchase decision.

H0: There is no significant difference between male and female to prefer buying of branded goods in terms of guaranteed after sales services

TABLE –9 STATISTICAL COMPARISON between Male and Female on buying branded goods in terms of guaranteed after sales services				
GENDER	N	Mean	Std. Deviation	t-test value
Male	67	3.3284	1.15978	638
Female	33	3.4848	1.14895	

According to table No.9 which indicates that Mean & S.D of Male vs Female on the brand that is preferred to buy in terms of guaranteed after sales services i.e. Male group are 3.32±1.15, Female group are 3.48±1.15. As per the table the t-test were statistically insignificant as the obtained value (1.03) is less than the tabulated value (1.97) required for t-test to be significant at .05 level of confidence. Hence null hypothesis is accepted.

H0: There is no significant difference between Nuclear and Joint family in buying the branded goods in terms of guaranteed after sales services

TABLE – 10 STATISTICAL COMPARISON between Nuclear and Joint family on buying in terms of guaranteed after sales services				
Type of family	N	Mean	Std. Deviation	T-test value
Nuclear	35	3.5714	1.14496	1.22
Joint	65	3.2769	1.15255	

Source: Self Compiled

According to the above table, which indicates that Mean & S.D of Nuclear Vs Joint family on the brand that is preferred to buy in terms of guaranteed after sales services i.e. nuclear group are 3.57±1.14, Joint group are 3.27±1.15. As per the table the t-test were statistically insignificant as the obtained value (1.22) is less than the tabulated value (1.97) required for t-test to be significant at .05 level of confidence. Hence null hypothesis is accepted.

Findings and Conclusion

The present study is an empirical study on consumer buying behaviour regarding shopping goods. The customers' decision is influenced by personal factors as well as environmental factors. In this study the behaviour of consumers is analysed according to their demographic characteristics. The hypothesis are tested and the result can be concluded that decision towards repeat purchasing of a brand differs among male and female whereas there is no difference in perception exist towards guaranteed after sales services. The behaviour of buyers on the basis of family structure also been studied and the result showing that there is some difference exist among nuclear and joint family in repurchasing a product. The null hypothesis formed for studying the perception on after sales services holds true and there is no difference between nuclear and joint family in taking decision considering the after sales services provided by various brands. The branding is not the only influencer on the buying decision of the customers. There are many other determinants of buyer behaviour. Buyer selects a product through a process. He searches for various alternative products which can fulfill his need, and then he compares them and chooses the best product for him. Therefore, proper

formulation of marketing strategy requires an overall study and understanding of psychological factors that influences behavioral pattern of consumers. Thus, the marketer who understands consumers mind and make strategy for fulfilling their need will definitely have advantage over other competitors.

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ROLE OF INFORMATION- SOURCE AND APPLICANTS' DISCONFIRMATION SENSITIVITY IN JOB APPLICATION DECISIONS

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ABSTRACT

Every recruitment exercise, designed to get the right people, involves assimilations of factors that could positively influence and/or convert a job seeker's organisational attraction to a decision to apply. These factors could be varied in nature from being internal and/or external. This article takes a discursive route to state the importance of studying the role of disconfirmation sensitivity and information quality; factors, vital to the process of recruitment with tremendous impact on the perception of job expectations and intention to apply. Moderation to application decisions in the preliminary stages of recruitment are critical to the success of any recruitment exercise. Fast paced changes in the business processes, virtual job arrangements and changing nature of sources of recruitment along with dynamic employment objectives of job seekers render the subject of information quality and disconfirmation sensitivity worthy of discussion.

This article adopts a discursive analysis to present the latent importance of information quality and disconfirmation sensitivity in a recruitment process and intention to apply. High-quality information programmes contribute to employability and right career choices for a job seeker in the digital age. The relationship between job application decision, information quality and disconfirmation is one which holds a cohesive structural utility and is based on the functionality of the emerging demands and dynamics of the job market.

Keywords: Information quality, job expectations, dis confirmation sensitivity, HR

INTRODUCTION

Among the many objectives of an organisation, recruiting and selecting the right people to join and contribute towards achieving success in the ever competitive market, is one of the most important ones. Organisations create awareness about vacancies for the job seekers through various sources of recruitment, which are larger devices to help the organisations tap the employment market in constituting an applicant pool. A job seeker decides to be a part of the applicant pool, only after he or she receives favourable and convincing information about the job

attributes, work culture and work environment and creates a self-assuring preliminary recruitment image. Sources not only bear the responsibility of attracting as many applicants as possible (Rynes & Cable 2003) but also facilitate the selection process, by way of sustaining a job seeker's interest in the job vacancy. To do so and achieve an organisation's recruitment objective, the source's information needs to be as realistic as possible in nature, Breaugh (1983). Realistic information is supposed to create a close to -reality, job image for the job seeker. Realistic information has been a primal line of thought for establishing relationship between recruitment and employee turnover. It has been argued that organisations in order to improve the short-term recruitment outcome(high response rate to advertisements)convey information to glamourize job image, jeopardizing the long-term commitment of employees(case of unmet expectations) and therefore the need arises to understand how information affects a job applicant in the most initial phase of recruitment.

Recruitment research of the past states that realistic image has been one of the consistent features over the past fifty years. As per Ployhart, Tippins and Schimtt, (2017) there have been three main areas of focus in recruitment research. The first concentrated on the recruitment interview (i.e., interviews designed primarily to attract applicants to a firm) and the factors that influenced either applicant or interviewer responses to the interview (e.g.,

Alderfer & McCord, 1970; Cohen & Bunker, 1975; Schmitt & Coyle, 1976; Simas & McCarrey, 1979).The second evaluated the effectiveness of different recruiting methods and strategies (Decker & Cornelius, 1979; Rynes & Miller, 1983; Sands, 1973).The third explored realistic job previews (RJPs) and applicant-focused perceptions (Reilly, Tenopyr, & Sperling, 1979; Rynes & Lawler, 1983; Wanous, 1973). Recruitment research in the 1980s largely continued the research of the 1970s: recruitment interviews (Borman, Eaton, Bryan, & Rosse, 1983; Rynes & Miller, 1983); sourcing strategies (Swaroff, Barclay, & Bass, 1985); and RJPs (Premack & Wanous, 1985).

Job markets and its stakeholders-organisations, job seekers and educational institutions as well as mediatory bodies (staffing and recruiting agencies, job boards) are constantly affected by the macro and micro-level technical transformations, economic developments and the societal changes such as demographic shifts, migration, job values and expectations. These changes along with the over-arching dominance of Internet and globalisations to match geo political factors affect organisations and their processes and objectives. Recruitment managers perform under much uncertain conditions than ever before. Organisations and economies have no more singular dimensions of operation of earning profit and so do employees and job seekers. The present generation has a larger concept of employment, which has

more to do with employability in the long-term. This brings the focus on the importance of factors that affect job application intentions of job seekers.

Literature Review:

Sources, which are the primary carriers of job information and their effect on applicants carry high valence for achieving recruitment objectives for organisations. Recruitment managers choose sources for broadcasting a vacancy considering the outcome of utilising a particular source. Factors for a choice of source could be time, audience, cost, level of filter and sorting; they could help a manager decide the utility of a source for a vacancy (Chapter 4, Employee Recruitment Handbook 2001). Each source differs from others in terms of its access to suitable candidates and ability for an applicant pool creation for the organisation. Rynes (1991) put forth a hypothesis of individual difference stating that sources reach different segments of population and therefore shall impact the recruitment outcome differently. Another hypothesis proposed by Taylor and Schmidt (1983) stated that sources presented information differently to target population and thus asymmetric information creates irregular recruitment image and unrealistic job expectations for the job seeker. Ryan, Kriska and Horvath (2005)stated that organisation increase the flow of information towards those sources, which yield better response whereas for a long-term benefit, sources should provide

applicants with better understanding of the job and organisation. Standardised high-quality information by way of quantity, presentation and informativeness could change the perception of a job for a job seeker. Perception of information from a source is subject to moderation by traits of individuals receiving it and the dimensions of the source as well as the information itself leading to asymmetry.

Information Quality

Information here is considered in general management sense and unless specified should not be restricted to system design only. Any process of knowledge creation and transfer should carry a high degree of information quality. Knowledge creation, management and transfer in high information quality environment help in right decision-making by an individual and an organisation, Eppler (2006). Meaning of information quality lies in how information is presented, perceived and used. Dimensions of information are important but a user's perception of these dimensions matter foremost, (Miller& Holmes 1996). Some of these dimensions are accuracy, timeliness or currency, format, validity, security and so on. Studies so far in the area of recruitment have not mentioned the dimensions of information as such but they have concentrated on the nature of information specificity, (Barber & Roehling1993; Collins & Stevens, 2002). The amount of information available to applicants from different sources in terms of high and low

information (Gatewood, Gowan & Lautanschlager, 1993), source informativeness and familiarity of the source, (Ryan, Kriska & Howarth, 2005). Information credibility, Walker et al (2009) and information credibility and media richness, (Cable & Yu 2006).

In effect all these works have corroborated that information in varying sense matters to recruitment. Recruitment as a process should not be too predictable so that it continues to respect the difference between individuals' reaction to the changing nature of jobs, economy, education and level of critical thinking, availability of resource and its effective utilisation. These variables interact with the information that a job seeker seeks or receives through information projection mechanisms of recruitment sources used by organisations.

This article focuses on the way information is presented, which leads to asymmetry in perceiving expectations. Multitudinal factors causing perceptual disturbance need to be sorted so as to appropriate required action.

Information quality also deserves to be a subject of observation and study owing to the fact that the present economy, which is moving towards digitalization relies on complex extraction and utilisation of information for an organisation. Today's organisations hold information as key resource in the environment and virtually engaged individual teams contribute towards a common goal of a particular

assignment or product or service. Older full- time jobs have now given way to short-term, result oriented contracts and environmental set ups, which may not even have a physical presence. The changing nature of job has also bought about changes in the sources of recruitment as well. Newspapers and regional employment weeklys gave way to private job agencies. These were overshadowed by online job boards Naukri, Monster and the likes. By the 90s most of the organisations had their own website, which handled recruitment queries as well. In the middle of 2000 some of the organisations handled all recruitment- related activities through their official website only.

On the other hand technical and business schools have their own placement cells, which caters exclusively to the nature of the courses taught and skills development of the students. The past two decades have been of the indispensable Internet. Organisations, market and individuals helplessly depend upon it for varied kind of decision making. It is also the backbone of all the recruitment activities and a single platform for all the sources of recruitment to conduct their businesses. What could differentiate these players in terms of effectively enabling the organisations to complete their recruitment activities is the information they carry for the job seeker, so as to discern their position in the market.

The question is how do organisations create recruitment processes and map it to gain access to desired skills and individuals Breaugh stated in (1983) in a

highly complex environment. Recruitment processes essentially need recruitment objectives to guide usage of sources of recruitment. It may also be affected by the type of source available, the education level of the job seeker and the culture of his community and country. Greater usage of different sources of recruitment shall lead to larger set of information available but the culture of the community or country may offset the usage of a particular source, (Linnehan & Blau 2003).It is accepted that quality of information has major effects on the decision taken there upon (O'Reilly 1982).There are many studies on the importance of information quality for the information systems management and the direct access of information by various users increases the importance of quality of information (Lee et all, 2002) and to areas it serves.

Recruitment is one such area where applicants' access information about job & organisation freely from various sources and since information variable can be inferred to impact their application decisions. It is all the more relevant today with multitude of information sources emerging from the Internet services (company website, online job boards, social platforms such as Facebook and LinkedIn etc.) and the quality of the information available or accessible could be the source differentiator. Since it is not possible to consider all aspects of information quality, here a few of them have been discussed in a seeming proximity to recruitment and applicant

relationship - completeness, accuracy, format and currency. Completeness refers to the information being complete in terms of the need of the information seeker, here the applicant. Accuracy refers to the correctness of the information provided by the source about the job attribute, organisation, work environment and the process itself. Format is the way of information presentation across the media so as to convey a standard and set information without diluting the uniqueness of each source. Currency is the value of information in terms of whether it is current and valid (Sethia, and Venkatesh& Joglekar 2013; Wixom and Todd 2005). There are studies, which show information quality being used by organisations to improve their customer response system, digital media and to gain better access to customer choice issues and understanding its customer better. (Sethia, Venkatesh & Joglekar 2013, Lee, Strong, Kahn & Wang 2001). Use of information quality can lend much to recruitment process. If organisations & their sources exercise high information quality, it is expected to lead to individuals having reliable information, which shall in turn increase their trust on the organisation and create an attraction or fuel a latent one for the organisation. Information plays a crucial role in terms of the effect it has on the mind of the applicant, which is supposed to be all accepting, (YPC, Popovich & Wanous 1982). Source may be differentiated by the applicants based on source information quality rendering them asymmetric and

relatively more or less persuasive than others and creating diverse value in terms of expectations and perceptions of the job and organisation. Information quality is expected to work upon the expectation of the applicant and his/ her behavioural trait as well.

Proposition 1: Information quality of a source of recruitment helps create job expectations.

Proposition 2: Sources with high information quality help create realistic job expectations.

Proposition 3: Sources with low information quality create unrealistic job expectations.

Disconfirmation sensitivity:

An applicant is no less a consumer, who seeks information from varied sources to gain knowledge about the job and organisation in which he/she plans to invest a certain part of his life and career (YPC, Wanous, Popovich 1982). If information quality is an attribute of the source and is an external factor moderating the intention to apply of a jobseeker, disconfirmation sensitivity is an internal factor, which can interact with the information impacting the job expectations in the job application decision process.

Like marketing, recruitment is also an information driven process. If marketing is about attracting consumers towards a product, through a recruitment drive a firm competes to attract a typically skilled set of individuals to a job vacancy, (Cable &

Turban, 2001). Bringing together the marketing and recruitment literature could enable individuals and organisations to explore the possibilities of discovering factors active in marketing drives and which have not been explored in recruitment context so far. There are though few studies, which have brought to light the similarities of informational value in marketing as well as recruitment, (Collins& Bell 2010; Collins 2007; Kanar, Collins &Steven 2003). Besides informational value, based on individual's difference and attitudinal factor is disconfirmation sensitivity, a concept frequently used in customer satisfaction study; in fact it is similar to expectation lowering process(ELP), which has been used to explain how ELP facilitates an applicant in effective post hire management of expectations (Buckley et al.1998). Application of disconfirmation sensitivity concept to job application intentions may unfold a new perspective for the process of recruitment and effective utilisation of sources since it evaluates the effectiveness of the source information quality at a pre hire stage. Attraction, by way of realistic expectations is created and strengthened by the information, which is complete, accurate, has the right format across different platforms and has currency. Realistic expectation is assumed to act as a stimulus, which may result in the intention to apply (Fishben & Ajzen, 1972) and therefore the need to explore. This study opines that disconfirmation sensitivity of an individual job seeker could

be a moderator between quality of information and a job seeker's expectations from a job. This moderation of expectation affects his intentions to apply for a job.

Dis confirmation sensitivity is a concept of how much an individual confirms to the available information/product/concept or idea. It is a widely studied subject in marketing specially customer satisfaction. Oliver (1977) stated that individuals either confirm or dis confirm expectations. It has found its way from psychology and marketing to consumer research and information technology and it should make sense to include it in studies of acquisition, management and development of human resources for organisations.

Its interaction with individual's expectation is of our interest since disconfirmation-sensitive individuals are said to moderate their expectations in order to increase their long term satisfaction based on of the information available to them (Kopalle & Lehmann 2001). There is an overall implication here for the source effectiveness their importance furthered by the opinion that recruitment is a practice that alters the characteristics of the applicant to whom the selection procedures are ultimately applied (Bourdreau & Rynes 1995). Of particular importance to this study of recruitment process is effectiveness assessment of the sources in terms of their effect on applicant's expectation and the effect of individual's disconfirmation sensitivity on his intention in consideration of his need

for employment. An individual with high disconfirmation sensitivity may reduce his job expectation in order to derive more satisfaction and take decisions relatively.

This line of thought should help organisations and other job market stakeholders to understand how the expectations of applicant may get altered by quality of information accessible to him/her and individual's behavioural and attitudinally guided response. The idea is to bring forth the importance of realistic and quality information from sources of recruitment in the process of recruitment and behavioural traits that may moderate the ultimate actions of the applicant. Under high disconfirmation sensitivity an individual lowers his expectation from the information available and hence if the experience or outcome is more than expected it results in higher satisfaction and vice versa (Kopalle & Lehermann 2001). Studies by (Wanous & Premack 1985), Breaugh (1983) stressed on how information from different sources, which are more realistic and acceptable by the applicants lead to greater degree of satisfaction and corroborate the met expectation theory. The organisations use various media to create an attractive image and pursue the members of the applicant pool and on the other hand the applicants curate information from sources either to support the initial job and organisation image or acquire new knowledge. In both cases the objective is to maximise knowledge and benefit from the available information (Popovich & Wanous, 1982).

It can thus be assumed that disconfirmation sensitivity of applicants shall moderate their job expectations based on of information quality available to him or her. A high disconfirmation sensitive applicant is expected to lower expectations on the basis of source information quality, but if the source information quality is high, (available information in terms of frequency, accuracy and currency of information) the expectations are realistic and the intention to apply will improve. In case of individuals with lower disconfirmation sensitivity it is assumed that the expectation shall not get altered as the information quality shall be accepted as it is though in case the source information quality is low as well, the expectation may dip but shall not take a negative value in turn the expectation holds on. Applicants with low disconfirmation sensitivity will minimally lower their expectation with little or no effect on the intention to application. Their job expectation is expected to increase with high information quality. The information quality, when high would tend to render the information realistic and hence increasing the related job expectation for the applicant.

One of the most studied areas of recruitment has been of realistic expectations and relating information quality to realistic expectation should lead to a better understanding of the role information plays in effectiveness of a source of recruitment and shall enable organisations to analyse their strategies regarding usage of sources so as to leverage them best.

Proposition 4: Disconfirmation sensitivity of a job seeker will moderate relationship between information quality and expectations.

Proposition 5: High job expectations will encourage the intention to apply for a job vacancy.

Discussion:

Initial phase of recruitment, Breaugh et al (2003) refers to as the most critical phase because if the organisations fail to make the first contact and persuade the job seeker to be a part of the applicant pool then the organisations have lost the job seeker. It is a lost opportunity. If such is the role of recruitment then it is imperative to look at the existing factors affecting recruitment and the ones that could and have not been discussed so far. This article takes a step in that direction by choosing to encourage an observation of information quality of a source and disconfirmation sensitivity as factors that could have a moderating effect on a job seeker's intention to apply for a job based on information available to him or her. Implications of such observations may not make drastic change in recruitment approaches but it would carry substantial learning and knowledge creation for recruiting managers and scholars alike.

Conclusion: This study intends to add to the existing literature on recruitment

sources. It carries value for the organisations in selective utilisation of recruitment sources for achieving recruitment targets and the importance of information and its dimensions. In technology-driven economies the environment of business processes are contingent to even the smallest of change. Certain processes, which could be highly dependent on the environment are individual behavioral responses. Recruitment is one such process, being the most critical in organisation's success and competitive advantage, it needs continued introspection to so as to be most responsive to change. In light of these aspects and conclusions of the past hundred years of study on recruitment, sources of recruitment are epicenters, which can lead to discussions on newer ways of looking at recruitment processes methods, objectives and the means to achieve them.

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CASHLESS FINANCIAL TRANSACTION BEHAVIOUR OF URBAN MIDDLE CLASS IN BHUBANESWAR

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ABSTRACT

India is passing through a window of demographic transition, not only is it converting to a cashless economy but it is also witnessing a drastic makeover in the paradigm of banking sector. With a purpose to transform India into a digitally empowered society and knowledge economy, the "The Digital India Programme" was launched by Government of India, "Faceless, paperless, cashless" is one of the professed role of digital India. Digitalisation without financial inclusion was incomplete hence RBI, in August, 2015, issued banking licences to, 11 payment banks, 2 universal banks and 10 small finance banks. First time in the history of Indian economy, such differentiated banks were introduced. Despite such gigantic moves, the larger question here is how cashless are we? Therefore the main objective of the study is to determine how mobile payments options are associated with demographic factors thereby providing us with the sections of our society that have adopted cashless payments or have failed to do so.

Keywords: Mobile banking, mobile wallets, UPI, financial transaction behaviour

INTRODUCTION

In April, 2018, reports of currency shortages emerged from several parts of the country. This is not the first time that the country faced such a situation. Similar but more grave situation took place in the year 2016 when Prime Minister Narendra Modi announced that Rs 500 and Rs 1000 notes were not legal tender anymore and needed to be exchanged for new currency, thus withdrawing 86% of the cash in the Indian economy. A much worse cash crunch that followed had a significant adverse impact on the informal sector in particular, which predominantly uses cash for transactions and depends largely on informal cash credit.

The consequences can be far reaching for a country like India, as it uses cash extensively for almost all transactions. One way to look at it is by comparing cash in circulation to gross domestic product of the nation. It is one of the highest in the world at 12.42% in 2014, compared to 4% in Brazil or 9.47% in China. Electronic transactions account to less than 5% of all transaction. The number of currency notes

in circulation is also far greater than in other larger economies of the world. In 2012-13, currency notes in circulation in India were 76.47 billion while it was 34.5 billion in the US. Studies suggest that even in places like restaurants, hotels, malls and spas, frequented by people who are likely to own and use credit/debit cards, use cash predominantly. So, it is quite evident that cash will rule in other markets as well.

India is passing through a window of demographic transition, not only is it converting to a cashless economy but it is also witnessing a drastic makeover in the paradigm of banking sector. Demonetisation in 2016 was the landmark to introduce the cash habituated Indians to cashless transactions. But what is "cash less economy"? An economy in which all the transactions are done using cards or digital means is known as a cashless economy. The various modes of digital payments are banking cards, UPI, USSD, AEPS, mobile wallets, internet banking, AadharPay etc

Despite all these gigantic and bold moves, there is a question largely looming over the economy. Has there actually been a change in the financial transaction mode amongst the common people? In 2017, transactions through digital means rose 13.5% to Rs.124.69 trillion in September from Rs109.82 trillion in August, according to provisional data released on 4th of October by the Reserve Bank of India (RBI). As per NPCI data, UPI and BHIM (also using UPI) has recorded a stupendous growth of 56 times(value wise)

from October 2016 to may 2017. But RBI has also stated that UPI has replaced only 1% of cash transaction. Till May 2017, 14.54 million downloads of BHIM app has been recording; it is being used by only 0.88% of those people who have downloaded it. USSD is even negligible. Cash dominate all transaction and its importance has hardly made a shift.

The attempt to convert India to a cashless economy should ideally commence with digitalisation of urban India as 70% of India's GDP comes from urban areas. It will expedite the process and will help the government achieve its goal briskly. The process of migration will be comparatively easier as it comprises of mostly educated mass and benefit could be multifold. Hence, the study on payment behaviour of urban middle class in India is crucial as they constitute the major digitalised population through mobile phones and can bring about the ambitious makeover of the economy from cash to cashless through digitalisation.

LITERATURE REVIEW

Research has proved that majority of the Indian population that is without a bank account, use cash for almost all transactions while the high income population use non cash medium to pay for high value transactions (Balaji K,2017). "Cross Country Monetary Aggregate" is a useful tool for assessment to compare cash intensity. It is calculated by deriving the ratio of money held in bills and coins to the amount held in demand deposit/

saving account(Korenke et al., 2013).

The understanding of ICT(Information and Communication Technologies) among users and the fright of security breach are identified as the major concern amongst individuals, experts and organisations (Khairun & Yasmin, 2010). The adoption of electronic payment system is much less in government and public sector establishments (Hussein, Mohamed, Ahlan, & Mahmud 2010). Cashless economy is the one where the amount of cash transactions is kept at a bare minimum and not where there is absolutely no cash transaction. It is defined as "one in which there are assumed to be no transaction frictions that can be reduced through the use of money balances, and that accordingly provide a reason for holding such balances even when they earn rate of return" (Woodford, 2003).

The advantages of cashless transactions are many. Firstly, it reduces the fear of theft and botheration of carrying cash. It can be easily reloaded with plastic money and internet banking and at the same time helps in keeping a record of the transactions. Secondly, it reduces the printing cost for the government treasury, reduces counterfeit currency and black/ unaccounted money and in long run, minimises corruption. It also brings down considerably the cost of maintenance of ATM and cash handling for a bank. There is virtually no waiting time for receiving money in case of instant money transfer through cashless means (Rajadhyaksha & Jaiswal, 2017).

The definition of "Financial Inclusion" given in the report of the Committee on financial inclusion in India is "the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost" (Rangarajan, 2008). Studies suggest that the GDP of a nation is positively impacted by the proxies of financial inclusion such as number od bank branches and credit deposit ratio of banks. But ATM growth rate as an indicator has no statistical significant impact on GDP. Therefore the association of progress and development of an economy and the GDP of a nation is strong (Iqbal & Sami, 2017).

Review of papers on mobile banking worldwide

Branchless Banking Model in Africa has been studied by dividing into three categories -, Bank-Led, Nonbank-Led and Bank Focused (Andrew, 2009). Various independent variable such as attitude to technology, access to bank, organisation type and profile, business sector, profile of user, positively impacts the dependant variable which is the success of small scale business using mobile transactions(Andrew, 2009).

The principal reasons for Kenya's success in muster the power of mobile banking to propel its quantum leap over high hurdles to financial inclusion that can be explained from the demand and supply point of view.

Demand side includes demand among low-income households for a more accessible and affordable delivery channel for financial services, political and economic stability for an extended period of time and sufficient population density to exploit economies of scale. Supply side included market dominance of one telecommunications company – Safaricom's market, provision of a safe, reliable, accessible, convenient, and affordable product and extremely competitively priced (Kaffenberger et al., 2015).

Market Penetration and Business Edge of mobile banking companies.

Traditional banks may be hesitant to open branches in every village due to its uneconomic returns, but simple mobile phone coverage is all that is required now. India also serves as a big remittance market and with money transfers possible through mobile phones, workers and migrant labours could simply shift to mobile payments and send their money home. They can avail Government benefits, insurance, loans and interest on savings through mobile banking. PMJDY and IPPB can be accessible from any section of the society in remotest corner of the country {Srinivas2017}.

As only 5% of rural India has bank branches, mobile banking can plan their expansion in villages which should involve greater digitalisation and lower costs. If associated with govt social welfare schemes, more growth can be achieved.

Also if easiness, quickness, transparency and security could be ensured, it can easily compete with traditional banks. Simplicity of digital product, support for help and information will boost penetration and profit margins(Garg, Professor, & Kapoor, 2015). Challenges that these new age technology might ecounter include, awareness, competent staff, security and operational profit(Garg et al., 2015). Customers are looking for innovation and service because of which private banks flourished. Soon the shift from private banks to payment banks will be seen (Shivnani, 2017)

Amongst the newly setup payment banks, IPPB (India Post Payment Bank) is likely to achieve higher penetration due to its wide and deep network and diverse services (Srinivas, 2017).

Analysis of usage of Paytm in pre and post demonetisation era, purpose of usage, demographic distribution, comparative analysis to existing players reveals a sharp acceleration in the past 5 years (Dixit, Prakash, & Tiwari, 2017). Given below is a distribution of percentage of e-wallet user with respect to companies.

Research suggests ways by which mobile banking can be brought into the current banking ecosystem. Better technology coupled with security and awareness can boost mobile banking. Cashbacks, discounts, royalty points and bonuses can act as incentive to user to motivate them towards cashless transactions (Dixit et al., 2017).

RESEARCH METHODOLOGY

Objective of The Study

The objective was to study the association of cashless financial transaction behaviour by gender, age and employment status. Based on the objectives, the following hypothesis was formulated.

H_0: There is no difference in the cashless financial transaction behaviour between different gender, age group and employment status.

H_1: There is a difference in the cashless financial transaction between behaviour different gender, age group and employment status.

Scope of Study

The study primarily aimed at understanding the present payment behaviour of urban middle class of Bhubaneswar. It aims to understand preference of mode of cashless payment i.e. debit/credit cards (by providing CVV followed by Password or OTP), online wallets (Paytm, Ola money, Mobikwik, Freecharge, Buddy), bank apps, net banking(financial institution's website) and UPI(Unified Payment Interface) with respect to gender, age and employment status. Bhubaneswar has been selected because of convenience and also availability of the target group, i.e. middle class population.

Research design

The path of investigation has been designed keeping the objectives in mind and to derive at answers that can appropriately address the research questions. The approach is descriptive hence a cross sectional study is undertaken to meet the purpose of the research. The study among the urban middle class population in Bhubaneswar based upon the methodology that is most suitable for empirical analysis, has been undertaken.

Sampling procedure and design

The scope of the study has restricted the sample to Bhubaneswar only to fulfil the objective of the study. The sampling method followed has been designed to include urban middle class from all gender, age groups and employment status. Hence stratified convenience sampling method has been followed. The questionnaire was administered to 100 people of both gender in equal proportion i.e. 50male and 50 female. Respondants belong to different age groups and to different occupations *(Govt employee 15%, Private company employee 19%, Business and Self employed 17%, Student 17%, Home maker 16% and Retired/ Unemployed16%)* have been equally balanced for a fair analysis. All the responses were found fit to be used for analysis.

Figure 1: Gender distribution in sample
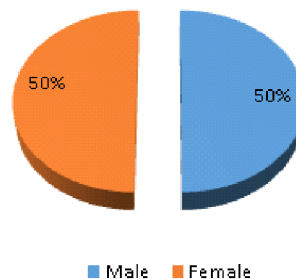
Figure 2: Employment Distribution in Sample
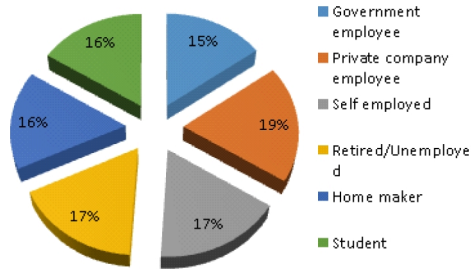
Data Collection, analysis and interpretation Data was collected from respondents in Google forms and hard copy. The data collected through hard copy was entered in Google form so that all the responses can be tabulated easily in excel sheet. The data analysis has been conducted with descriptive statistics and techniques like Chi Square which has been used to find out if there is a significant relationship between variables among the urban middleclass and their financial behaviour in terms of payment modes for multiple purposes. The registered software of 'SPSS-19' statistical software has been applied for analysis of the data and interpretation done based on the output of the software.

Limitations :

The study had been carried out with a limited sample size, a larger sample size can give a different result, which may be more useful. The study also has limited to one tier II city only. An inclusion of middle class population from different tiers of cities and towns across the state or nation can give more comprehensive and better analysis. It would help to understand the financial transaction behaviour over different region, economic status and culture.

DATA ANALYSIS

Data collected on a sample of 100 urban middle class populations was analysed using statistical tools and techniques as explained in the methodology and analysed along with the interpretation and are presented according to the objective of the study.

Profile of the sample
i. Age Distribution
The mean age of the sample was 40.56 ± 15.60 years. The median year was 37.5 with inter-quartile range 29 - 45 years. That means a quarter of our sample have age less than 29 years and a half of the sample are below the age 37.5 years. And another quarter of the sample subjects are above 45 years age. The sample has equal proportion of male and female.

Age group	Male		Female		Total	
	No.	%	No.	%	No.	%
18-29	15	30	13	26	28	28
30-39	12	24	20	40	32	32
40-50	14	28	7	14	21	21
>50	9	18	10	20	19	19
Total	50	100	50	100	100	100
Mean $\pm$ SD	41.06 ± 16.18		40.06 ± 15.15		40.56 ± 15.60	
Q_1	27.75		29		29	
Q_2	38		37		37.5	
Q_3	47.25		45		45	

Figure 3: Mean Age of Sample Subjects
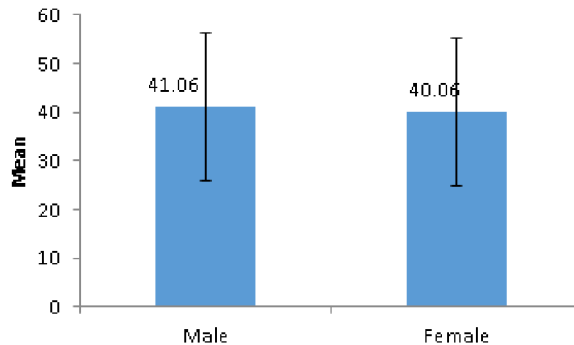
i. Employment Status

Table 2 and **Figure 4**, furnished the employment status of the sample subjects. The major chunk of the sample subjects was employed or self employed which was a little higher than 50%. Homemaker, students and retired/unemployed constituted the remaining half of the sample approximately in equal proportions. Employed and self employed were 68% among males while the corresponding proportion amongst females were 34%. The males have higher association with employment than females (P=0.000)

Table 2: Employment Status of Sample Subjects by gender

Employment status	Male		Female		Total		p .
	No.	%	No.	%	No.	%	
Homemaker	0	0	16	32	16	16	
Student	7	14	10	20	17	17	
Retired/unemployed	9	18	7	14	16	16	=22.446
Employed/Self employed	34	68	17	34	51	51	p=0.000
Total	50	100	50	100	100	100	

Figure 4: Employment Status of Study Subjects by Gender
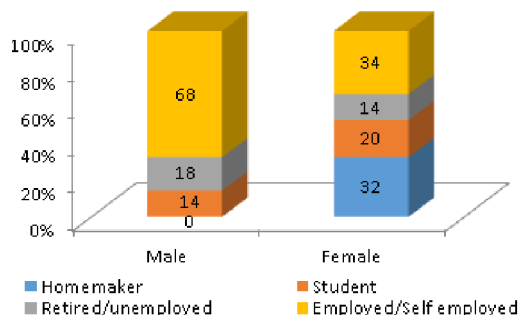
Mode of Cashless Financial Transaction By Gender, Employment Status And Age

Table 3: Preference of mode of cashless financial transaction by gender

Financial transaction of Mobile	Male		Female		Total		χ^2, p
	No.	%	No.	%	No.	%	
Debit/credit card by entering CVV/ OTP/PASSWORD							
Moderately preferred	18	41.9	11	32.4	29	37.7	
Least preferred	4	9.3	3	8.8	7	9.1	
Most preferred	18	41.9	18	52.9	36	46.8	χ^2=0.994
Never	3	7	2	5.9	5	6.5	p=0.803
Total	43	100	34	100	77	100	
Wallets like Paytm, Ola money, Mobikwik, Freecharge, Buddy							
Moderately preferred	18	47.4	12	35.3	30	41.7	
Least preferred	5	13.2	5	14.7	10	13.9	
Most preferred	8	21.1	9	26.5	17	23.6	χ^2=1.107
Never	7	18.4	8	23.5	15	20.8	p=0.775
Total	38	100	34	100	72	100	
Bank apps							
Moderately preferred	16	44.4	10	33.3	26	39.4	
Least preferred	4	11.1	9	30	13	19.7	
Most preferred	3	8.3	4	13.3	7	10.6	χ^2=4.744
Never	13	36.1	7	23.3	20	30.3	p=0.192
Total	36	100	30	100	66	100	
Net banking							
Moderately preferred	16	42.1	11	36.7	27	39.7	
Least preferred	5	13.2	6	20	11	16.2	
Most preferred	9	23.7	4	13.3	13	19.1	χ^2=2.086
Never	8	21.1	9	30	17	25	p=0.555
Total	38	100	30	100	68	100	
UPI (Unified Payment Interface) through Tez, BHIM, PhonePe							
Moderately preferred	5	13.9	4	12.9	9	13.4	
Least preferred	7	19.4	5	16.1	12	17.9	
Most preferred	4	11.1	2	6.5	6	9	χ^2=0.742
Never	20	55.6	20	64.5	40	59.7	p=0.863
Total	36	100	31	100	67	100	

Figure 5 : Graphical representation - Preference of mode of cashless financial transaction by gender

■ Male ■ Female
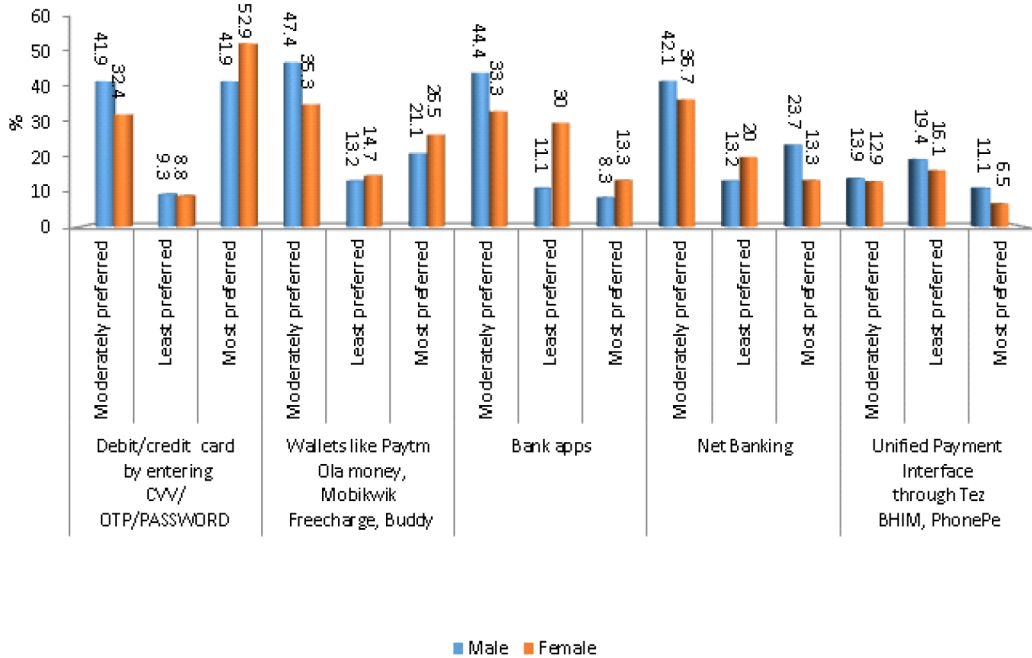
Table 3, Figure 5 illustrates the preference of cashless payment technology by different gender. Usage of Debit/credit cards (by providing CVV followed by Password or OTP) was preferred 'moderately' and 'mostly' together by 83.8% of males and 85.3% of females. There was no significant difference in their preference (p=0.803). Usage of online wallets (Paytm, Ola money, Mobikwik, Freecharge, Buddy) displayed similar association with both gender (p=0.775). While it was moderately preferred by 47.4% males, 35.3% females also did so. It was least preferred by 13.2% and 14.7% males and females respectively. Bank apps as a mobile banking tool was also not particularly associated with gender (p=0.192). It was most preferred by 8.3% males and 13.3% females and moderately preferred by 44.4% and 33.35 of males and females respectively. Net banking (financial institution's website) and UPI (BHIM, Tez, PhonePe etc) displayed no significant difference in preference. Net banking was moderately preferred by 42.1% males and 36.7% females (p=0.555) and UPI was never used by 55.6% males and 64.5% females (p=0.863).

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Table 4: Preference of mode of cashless financial transaction by age group

Financial transaction of Mobile	18-29		30-39		40-50		>50		Total		χ^2, p
	No.	%	No.	%	No.	%	No.	%	No.	%	
Debit/credit card by entering CVV/ OTP/PASSWORD											
Moderately preferred	13	48.1	8	26.7	8	47.1	0	0	29	37.7	
Least preferred	3	11.1	4	13.3	0	0	0	0	7	9.1	
Most preferred	9	33.3	16	53.3	9	52.9	2	66.7	36	46.8	χ^2=11.993
Never	2	7.4	2	6.7	0	0	1	33.3	5	6.5	p=0.214
Total	27	100	30	100	17	100	3	100	77	100	
Wallets like Paytm, Ola money, Mobikwik, Freecharge, Buddy											
Moderately preferred	13	50	11	37.9	5	35.7	1	33.3	30	41.7	
Least preferred	3	11.5	5	17.2	2	14.3	0	0	10	13.9	
Most preferred	10	38.5	6	20.7	1	7.1	0	0	17	23.6	χ^2=18.159
Never	0	0	7	24.1	6	42.9	2	66.7	15	20.8	p=0.033
Total	26	100	29	100	14	100	3	100	72	100	
Bank apps											
Moderately preferred	7	30.4	13	48.1	6	46.2	0	0	26	39.4	
Least preferred	7	30.4	3	11.1	3	23.1	0	0	13	19.7	
Most preferred	2	8.7	4	14.8	0	0	1	33.3	7	10.6	χ^2=10.2
Never	7	30.4	7	25.9	4	30.8	2	66.7	20	30.3	p=0.335
Total	23	100	27	100	13	100	3	100	66	100	
Net banking											
Moderately preferred	10	43.5	12	42.9	5	35.7	0	0	27	39.7	
Least preferred	5	21.7	3	10.7	2	14.3	1	33.3	11	16.2	
Most preferred	2	8.7	7	25	3	21.4	1	33.3	13	19.1	χ^2=5.411
Never	6	26.1	6	21.4	4	28.6	1	33.3	17	25	p=0.797
Total	23	100	28	100	14	100	3	100	68	100	
UPI (Unified Payment Interface) through Tez, BHIM, PhonePe											
Moderately preferred	3	12	4	15.4	2	15.4	0	0	9	13.4	
Least preferred	5	20	6	23.1	1	7.7	0	0	12	17.9	
Most preferred	6	24	0	0	0	0	0	0	6	9	χ^2=14.884
Never	11	44	16	61.5	10	76.9	3	100	40	59.7	p=0.094
Total	25	100	26	100	13	100	3	100	67	100	

Figure 6 : Graphical representation - Preference of wallets as a cashless mode of financial transaction by age group
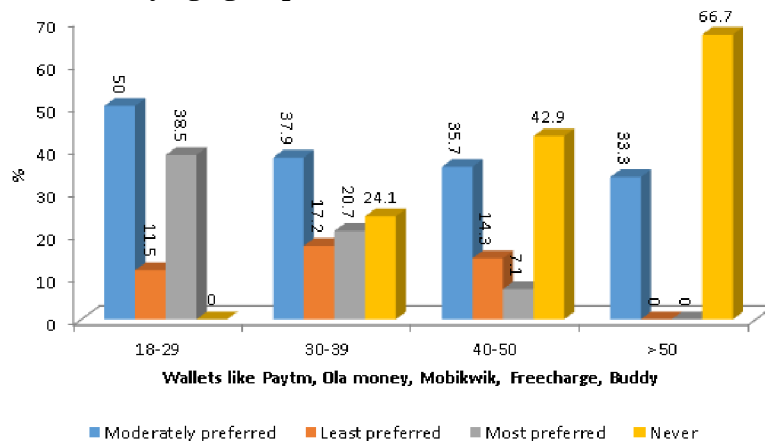
Table 4 depicts preference of cashless transaction modes by different age groups. Debit/credit cards (by providing CVV followed by Password or OTP) is the most preferred mode by all age groups and no significant difference exists (p=0.214). 66.7% in the age group of >50 years, 52.9% in the age group of 40-50 years and 53.3% in the age group of 30-39 years stated it as their most preferred mode of cashless payment technology. Wallets ((Paytm, Ola money, Mobikwik, Freecharge, Buddy) were associated with younger age group (p=0.033). 88.5% of 18-29 years age group preferred it as 'most' and 'moderate'. >50 years old did not prefer wallets as 66.7% have stated of never preferring it (refer to **Figure 6**). Bank apps as a mobile payment technology do not show any association to age group in particular. It was moderately preferred by 30.4%, 48.1%,

Table 5 : Preference of mode cashless financial transaction by employment status

Financial transaction of Mobile	Homemaker		Student		Retired/ unemployed		Employee/ Self employee		Total		χ^2, p
	No.	%	No.	%	No.	%	No.	%	No.	%	
Debit/credit card by entering CVV/ OTP/PASSWORD											
Moderately preferred	2	28.6	7	43.8	2	50	18	36	29	37.7	χ^2=5.975
Least preferred	0	0	1	6.2	0	0	6	12	7	9.1	
Most preferred	4	57.1	7	43.8	1	25	24	48	36	46.8	
Never	1	14.3	1	6.2	1	25	2	4	5	6.5	p=0.742
Total	7	100	16	100	4	100	50	100	77	100	
Wallets like Paytm, Ola money, Mobikwik, Freecharge, Buddy											
Moderately preferred	0	0	6	35.3	1	25	23	51.1	30	41.7	χ^2=26.24
Least preferred	2	33.3	2	11.8	0	0	6	13.3	10	13.9	
Most preferred	0	0	9	52.9	1	25	7	15.6	17	23.6	
Never	4	66.7	0	0	2	50	9	20	15	20.8	p=0.002
Total	6	100	17	100	4	100	45	100	72	100	
Bank apps											
Moderately preferred	1	16.7	5	38.5	0	0	20	46.5	26	39.4	χ^2=10.086
Least preferred	2	33.3	3	23.1	0	0	8	18.6	13	19.7	
Most preferred	0	0	2	15.4	1	25	4	9.3	7	10.6	
Never	3	50	3	23.1	3	75	11	25.6	20	30.3	p=0.344
Total	6	100	13	100	4	100	43	100	66	100	
Net banking											
Moderately preferred	1	16.7	8	57.1	0	0	18	40.9	27	39.7	χ^2=12.827
Least preferred	1	16.7	2	14.3	1	25	7	15.9	11	16.2	
Most preferred	0	0	1	7.1	1	25	11	25	13	19.1	
Never	4	66.7	3	21.4	2	50	8	18.2	17	25	p=0.171
Total	6	100	14	100	4	100	44	100	68	100	
UPI (Unified Payment Interface) through Tez, BHIM, PhonePe											
Moderately preferred	1	16.7	2	13.3	0	0	6	14.3	9	13.4	χ^2=7.246
Least preferred	1	16.7	4	26.7	0	0	7	16.7	12	17.9	
Most preferred	0	0	3	20	0	0	3	7.1	6	9	
Never	4	66.7	6	40	4	100	26	61.9	40	59.7	p=0.612
Total	6	100	15	100	4	100	42	100	67	100	

46.2% amongst 18-29, 30-39 and 40-49 age groups respectively(p=0.335). Net banking (financial institution's website) also did not display association with age (p=0.797). UPI (BHIM, Tez, PhonePe etc) was never preferred by 44% in 18-29 years age group, 61.5% in 30-39 years age group, 76.9% in 40-49 years age group and 100% in >50 years age group. Therefore there is no significant difference in the preference of UPI as a mobile payment technology with respect to age group (p=0.094).

Figure 7: Preference of mode of cashless financial transaction by employment status
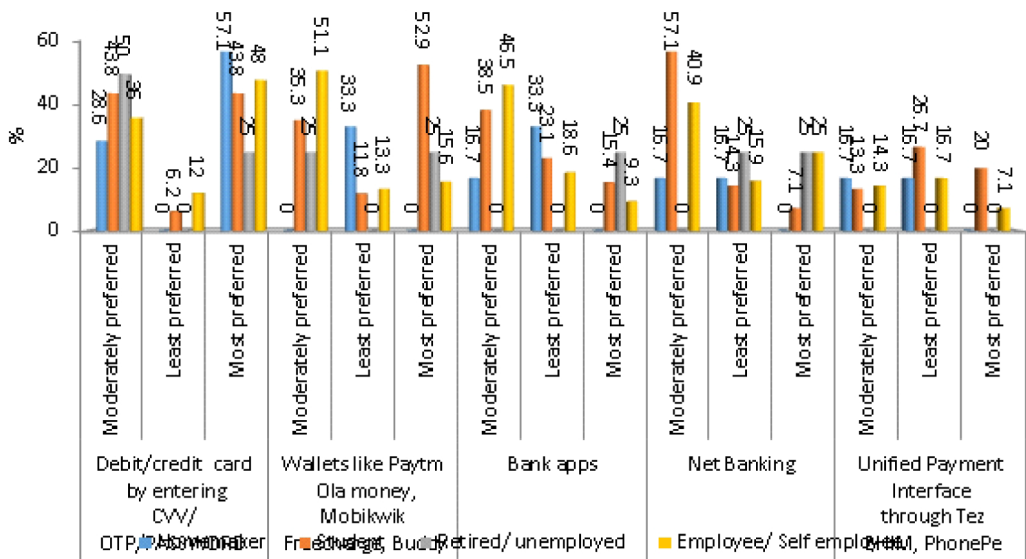
Table 5, Figure 7 depicts the preference of mode of cashless financial transactions on the basis of employment status. Debit/credit card is most preferred by 57.1% of homemakers, 43.8% students, 25% of retired/unemployed and 48% of employed. There is no significant difference in preference of debit/credit card by employment status (p=0.742). Wallets (Paytm, Ola money, Mobikwik, Freecharge, Buddy) are associated with students as 52.9% preferred it the most.

On the other hand, 66.7% homemakers and 50% of retired/unemployed never preferred it (p=0.002). Banks apps showed no particular association to employment status as it was most preferred by 15.4% of students, 25% of retired/unemployed and 9.3% employed population. Net banking (financial institution's website) with p value of 0.171 and UPI with p-value of 0.612, did not display any significant difference in preference amongst population of different employment status.

CONCLUSION

The purpose of the study was to identify the association of modes of cashless financial transactions with demographic factors of age, gender and employment status. Based on the findings, following conclusions are drawn.

1. It was observed that there was no significant difference in preference of cashless modes of financial transactions based on gender. UPI was least popular and debit/ credit card (by providing CVV followed by Password or OTP) was most preferred by both genders.

2. Debit card was most popular amongst all age groups and net banking, bank apps and UPI showed no significant difference in preference. Younger age group i.e. 18-29 years old and 30-39 years old, were more associated with wallets than the older age group. Hence, can be concluded that there is a difference in preference of mobile technology for financial transaction on the basis of age group.

3. Employment status also displayed varied association. Students associated with use of wallets but the rest were not. UPI was universally never popular with people of different employment status. Therefore, it can be deducted that there exists a difference in preference of mobile technology for financial transaction based on employment status.

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MOTIVATIONAL FACTORS AND IT'S IMPACT ON STUDENTS' PERFORMANCE IN HIGHER EDUCATION: A REVIEW

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ABSTRACT

The purpose of the paper is to study different motivational factors influencing students in their higher education. In this paper, the author tried to study the influence of motivation on a student in different perspectives like how the motivation of student is connected with their age, teacher's instruction style, teachers motivation. The Author also tried to examine the different motivation theories which are used in assessing student motivation by various authors. From the findings of different papers, it is evident that based on the discipline which he is studying the motivational approach need to be different. The AMS (Academic Motivation Scale) instrument to measure different sub theories of self-determination theory were also studied. The findings from this review paper will help teachers and students to know about different motivational factors involved in higher education which further helps them to understand each other in a continuous and better learning process.

Keywords: Motivation, Higher Education, Teacher's Instruction style, AMS.

INTRODUCTION

The stimuli are needed for a human being in any sector to work by using his at most capabilities. Motivation is defined as the energy or catalyst that triggers a person to make choices, pursue certain purposes, and to focus in a particular direction (Brophy,1983; Obade,2013). Motivation directs individual to attain one's goal. Motivational theories help us to understand what makes an individual gives his best. Akitson postulated that motivation explains three critical issues related to

human behavior. First motivation helps individual to select the best option among possible alternatives. Second motivation helps individual to pay a proper attention to a task in a given situation. Third Motivation determines the persistence of task. The purpose of this paper is to find out different factors of motivation which are influencing students in their higher education. In common there are two kinds of motivation one is intrinsic motivation and another is extrinsic motivation. Intrinsically motivated people don't expect any external stimuli as their self-goal is a motivating factor for them, whereas extrinsically motivated people need external stimuli and that external stimuli is different for different people based on the situation and their personal characteristics.

Motivation in education

Motivation helps a person to do the task with commitment. Motivating students both in an extrinsic and intrinsic way is important to raise their perceptions towards learning (Dahl & Smimou 2011). Extrinsic Motivation works as external stimuli to a student which helps him How to motivate student for learning is always a researchable topic in education and also in psychology (Dahl & Smimou 2011). Richardson, Abraham, and Bond (2012) conducted a meta-analysis in which they reviewed more than ten years of research on the antecedents of university students grades and percentages. Their findings demonstrated that motivational factors were some of the most substantive

correlates of students performance (Obade, 2013). From their findings, it is evident that students performance is directly affected by the way in which they are motivated.

A Relation between student motivation and their age

Leper, Corpus, and Iyengar (2005) have shown that intrinsic motivation diminishes as children progress through school (Hegarty,2010). Barron and Harackiewcz (2001) found that undergraduate students with high-performance goals, which are extrinsic in motivation, can also achieve high outcomes(Hegarty,2010). It supports the view that the lack of intrinsic motivation is not related to poor performance(Hegarty,2010). Gottfried (1985,1990) and Harter (1981) also noted the high levels of intrinsic motivation in young children and documented how this motivation decreases with age. Harter's 1981 study has become the cornerstone of validation of the decline in intrinsic motivation with age. Pintrich (2000) affirms that mastery goals diminish with age whereas performance goals, which become the yardstick of measurement in educational systems, increase with age. Stewart (2005), through a study of undergraduate students, asserted that motivation changes as an individual move through a program and that motivation itself is different across various majors. Hegarty used Preliminary descriptive analysis to present an overall indication of motivation types and levels in graduate

students. Chi-square analysis was also used to investigate whether scale items are independent or homogenous (i.e does an absence of intrinsic motivation indicate the presence of extrinsic motivation or amotivation?)

Teachers instructional style to meet student's needs

SDT researchers arrogated that three types of instructional styles should be adopted in classrooms. First, autonomy support is necessary to satisfy the need for autonomy, the opposite meaning of a controlling style. This style aims to promote students inner motivational resources, such as their interests and values, by using practices such as allowing choice, spending the time to communicate with students, offering encouragements, and providing rationales (Reeve, 2002; Reeve & Jang, 2006). Second, the structure meets students need for competence, this style involves three representative behaviors: presenting clear expectations and directions to students, providing guidance when students need help, and offering informative feedback (Jang, Reeve, & Deci, 2010; Reeve, 2006). Last, involvement is important to satisfy the need for relatedness. Involvement is concerned with social and interpersonal relationships with others such as between students and teachers. This style entails the expression of affection and cares to students, and teachers dedication to time and interests of their students (Skinner & Belmont,1993). Structure meets students need for competence. It refers to the amount of time and quality of information that students receive in order to achieve the expected outcomes (Jang et al.,2010;Reeve,2006).

Relation between teachers' motivation and student motivation

When teachers are intrinsically motivated for teaching, students also report high intrinsic motivation for learning (Lam et al., 2009). Furthermore, students who are taught by not only intrinsically motivated teachers, but also intrinsically motivated peers who play a role as teachers are likely to have greater interests and engaged behaviors in the given tasks (Radel, Sarrazin, Legrain, & Wild, 2010). The motivation of the person teaching positively affects the motivation of learners; namely, "social contagion of motivation" exists (Radel et al., 2010, p.578). Even though the majority of studies show that the relations between teachers and students motivation are positive, this conclusion is not unequivocal.

Understanding Motivation factors in higher education

For higher education organizations, they can use analysis of student survival rates to better understand which factors contribute to surviving until graduation. The school can better investigate the relationship with high school GPAs, SAT scores, majors, socio-economic backgrounds, lower division grades and so forth to understand which factors help to promote student success. Lainson in his thesis examined whether any changes

occur based on students progress towards their graduation. He used a framework based upon " *Herzberg's two-factor theory (1959)*",and an "*expanded model*" developed by DeShields, Kara, and Kaynak (2005), Lainson conducted a survey where he collected 535 students data from 3 different universities out of which 1 is public state university in southern California and other two are private liberal art universities. Lainson tested" *maintenance and motivation factors against dependent variables and assessed segmentation by class standing* ". Results of Lainson findings support that students dissatisfaction raises as he is coming closer to graduation and his motivation levels are declining year by year. "*A key exception is that a student's motivation to finish a degree was not diminished, regardless of dissatisfaction or lack of motivation in other areas* ". Lainson mentioned that they are " three key areas of dissatisfaction emerged: " *1. expectations, 2. learning practical skills and 3.value*". Dissatisfied students are more likely to drop out from education or they may transfer to another college. Lainson's Objective is to evaluate factors that contribute to satisfaction and retention by building upon student satisfaction and retention model (SSRM) developed by Keveaney and Young (1997).Building on both Keaveney and Young's SSRM model (1997) and Deshields et al.study (2005), this study introduces a new Student Maintenance and Motivation Model for Satisfaction (SMMMS).This model includes the original extrinsic factors in SSRM and adds several additional intrinsic factors to align more closely to the methodology of Herzberg's two-factor theory. This model was then applied to a study of college students, looking specifically at levels of satisfaction across academic years. Evidence of student's academic year standing affecting satisfaction begins with the first year of their college life. " *The Cooperative Institutional Research Program, run by the Higher Education Research Institute at the University of California at Los Angeles, annually surveys more than 400,000 incoming freshmen* ". Survey data showed that student satisfaction is influenced by students prediction of satisfaction. Most influential is students post- enrollment. The survey found that the most powerful predictor of satisfaction was a "sense of belonging". "*Students who felt connected to campus life were more likely to be satisfied with their choice of college*" (Lainson,2014). In addition, Interaction of faculty members with students has improved students level of satisfaction and also sense of belongingness. Surveys also showed that " *students who indicated making money was a critical reason to attend college were shown to be slightly less likely to report satisfaction than students indicating other reasons, such as gaining an appreciation for ideas* " (Hoover 2010;Lainson 2014). Lainson study explored the correlation between maintenance and motivation factors,

students class standing and retention. The study used a correlational approach to examine quantitative data collected by surveying 535 undergraduate students of three southern California schools. This study analyzed data using convenience sampling on student perceptions of maintenance and motivation factors. Thel research question of the study is as follows: " *What is the relationship between students class standing and their level of satisfaction and motivation?* ". The researcher focused on a hypothesis that establishes the link between class standing and motivation and hygiene factors. A student is more likely to persist if he or she is close to graduating. From the interpretations of the study it was clear that Seniors were less motivated to study hard, achieve good academic grades, to obtain knowledge from attending classes, and to develop social relationships with other students. Seniors were also more likely to be frustrated by university policies and procedures. Herzberg never measured how likely a person was to feel motivated to work under the condition of "working to survive, "regardless of the employer; he only examined if and how motivation occurred within the context of the employer. Providing a treat or, as Herzberg says, "kicking the dog" is simply incentivizing the recipient to move, not to be motivated (Herzberg,1987). This reality is why pay/compensation has remained a maintenance factor and not a motivator, even though this point remains contentious for many critics of Herzberg.

Increase in dissatisfaction of senior students will decrease their motivation which affects their academic achievements and performance in placement drives, which enforces them to slowly disconnect them from college related activities and in future also this gap will remain and they will not attend for alumni meets. Dissatisfied seniors may not only feel trapped, but may also " *become punitive-not through leaving, but in attitude and actions related to alumni issues, future recommendations and negatively perceived brand awareness* ". In essence these students are crying " Help! I'm a senior. Get me out of here," with an increased singular motivation to finish even as they are disconnecting motivationally from the university family with potentially negative, long-term consequences.

Assessing Student Motivation using Expectancy Value theory

Expectancy value theory was used as an assessment tool for knowing students sentiment towards sustainable engineering. Assessing students' motivation to engage in sustainable engineering was the first effort to measure engineering students' attitudes toward SE using the three sub-scales of expectancy value theory and assessing correlations in these attributes with students' participation in various learning experiences to measure engineering students' attitudes toward SE using the three sub-scales of expectancy value theory and assessing correlations in these attributes with students' participation

in various learning experiences.(McCormick et al 2013).Many researchers have addressed the point of quality teaching in higher education. In marketing quality of product is always measured with the help of customer satisfaction, in the same way management of educational institutions should treat their students as customers as they are the main stake holders Bensimon (1995). Ames and Archer (1988) found that classroom climate will have an impact on motivational variables and if students are connected with classroom climate they will show long term involvement in learning. Autonomous motivation of the students have an impact on producing desirable outcomes .Fordham findings support that a positive relation exists between student's intrinsic motivation and their knowledge of curriculum (Dahl & Smimou,2011). Pintrich (2003) underlined the importance of scientific oriented research on student motivation. Pintrich in his research attempted to find out about expectations of students from the classroom, i.e what is the main aspect which motivates student to come to classroom, are they aware of their own motivational factor ? he also studied the how motivation leads to cognition (Dahl & Smimou,2011). Leper and Corpus (2005) studied the association between age of a student and their motivational orientations with the help of their academic outcomes. Leper and Corpus also supports that decline in intrinsic motivation as one becomes older in age and extrinsic motivation increases

as one becomes older there by he concluded that "*intrinsic motivation has a positive correlation with the academic outcome*" (Dahl & Smimou,2011). Darren and Kamal specifically worked on student's perception on teaching quality and he stresses on the point that student will percept positively on teaching quality of his instructors only when they have positive opinion on educational institution. Student's outcome depends on the quality of education provided by the institution and the most important factor is their motivation itself (Dahl & Smimou, 2011). Bean and Metzner (1985) mentioned that students achieving high grades may drop out from college if they have passed through low levels of utility, satisfaction and high levels of stress.

Student Motivation in Engineering Courses

Attrition of students is one of the raising problem in educational institutions during the first two years. Attrition of students in undergraduate level is high when they are in first two years (Suresh,2006; Vogt,2008; Mamaril & Usher,2013). Classroom Strength in service courses are large generally more compared to other courses. Students in these classes have pointed out that likened with other classes have course load to a greater extent and they do not have fundamental interaction with educators (Suresh,2006; Mamaril & Usher,2013). Research on Student motivation in engineering courses helps instructors to better understand the

relationship between student academic outcomes and their aim to persist in engineering (Mamaril & Usher,2013). Mamaril and Usher have found the relationship between constructs of motivation like self efficacy, task value, achievement goals to achievement and persistence using measures providing clear activities and tasks in engineering. Mamaril examined students engineering self efficacy, he proposed that "*student's continued matriculation in engineering programs may be due (in part) to their self-efficacy - the belief they hold about their capabilities*". "*social cognitive theory is based on the view that personal factors, behavioral factors, and environmental factors are interconnected and affect one another*"(Bandura,1997). Bandura's research showed that the individuals belief on their own capabilities to achieve desired outcomes acts as a primary motivator in various situations of once life. "*Self-efficacy helps determine the amount of effort people exert in an activity, and their persistence and resilience in the face of adversity*" (Pajares,1996). Students who have interest in engineering and who have believe on their own capabilities are motivated to complete the task with more efficiency (Bandura,1997).Table 1 shows the examples of items used by Mamaril and Usher in their survey.

Table 1 SELF-EFFICACY SCALE AND EXAMPLES (Mamaril & Usher,2013)

Scale	Example
General engineering self-efficacy	I can complete my course work if I do not quit (Mamaril & Usher,2013)
Engineering skills self-efficacy	I can invent new designs

Mamaril and Usher examined the association between self-efficacy and academic achievement using student's academic achievements obtained in service courses. Academic persistence and professional persistence were measured. Research findings support that self-efficacy and academic achievement are positively related. Mamaril used Independent-samples t tests to test the significance between gender and self-efficacy, his findings support that gender differences and engineering skills self-efficacy are significant. Men scored much higher in engineering self-efficacy and MSE self-efficacy engineering compared to women. So, self-efficacy in engineering is different for men and women (Vogt, Hocevar, Hagedorn,2007; Jones, Paretti, Hein, Knott,2010;Mamaril 2013).Research findings proved that "*women seem to report a lack of self-efficacy related to specific areas of skill, knowledge, or ability*" (Baker, Krause, Yaser, Roberts, Kurpius, 2007; Mamaril 2013). Mamaril's and Usher's findings support that who have better engineering self-efficacy have performed better in their academics .

Non-Traditional College Student Motivation and Success

Tales of unaccomplished dreams in the form of unfinished college degrees abound. These stories are rampant among nontraditional students who typically experience higher attrition rates from college when compared to their traditional counterparts (National Center for Education Statistics, NCES, 2002; Obade,2013). Horn defined Non-traditional students as "*undergraduates who have at least one or more of the following characteristics: delayed college enrollment after graduating high school, working full time while enrolled, financially independent, attend college part-time, have dependents, obtained a general education development certificate (GED) rather than a standard high school diploma, or single parenthood*" (Obade, 2013). University students who are older than 24 years and who is pursuing his graduation and whose marital status is married are also called as non-traditional students (Kasworm & Pike, 1994; Obade,2013), hence they are often also called adult learners (Merriam, Caffarella, & Baumgartner, 2007; Obade, 2013). Non-traditional students are distinct from traditional students has they might have negative pressures of life (Levin,2007;Obade,2013).These students are entering post secondary institutions with a heavier role burden based on their 'adult' life experiences than traditional students and thus have different sets of needs. Perhaps the most distinctive feature of non-traditional students is that they simultaneously combine their college education with other significant role, such as caring for dependents and full time employment (Deutsch & Schmertz,2011;Obade, 2013).In fact, non-traditional students, when compared to traditional students, are twice as likely to leave college without earning a degree (NCES,2002; NCES,2011; Radford, Berkner,Weeless, & Sepherd,2010; Obade,2013). Within a five year period, among the non-traditional students who had enrolled to obtain a bachelor's degree (rather than certificates), only 31 % had earned one after five years, compared with 54% of traditional students(NCES,2002). Obade mentioned that it is essential that higher education stake holders should promote the factors which are essential for students success in college. Student motivation has gained prominence as a viable explanation for student college success (Robbins et al.,2004),yet studies of non-traditional students motivation are limited(Obade,2013). Obade examined the role of achievement motivation in predicting non-traditional student success using the "*expectancy -value theory of achievement motivation*" (Eccles et al., 1983) and achievement goals theory (Dweck, 1986; Maehr, 1989; Nicholls, 1984). Better understanding of the achievement motivation factors of non-traditional students will enable colleges to respond to the needs of these students more appropriately and help them

succeed. Bean and Metzner argued that "*although environmental variables (e.g., hours of employment, family responsibilities) and academic variables (e.g., GPA) are both important, environmental factors supersede academic outcomes when it comes to influencing non-traditional students intent to leave or stay in college*". Obade considered three motivational factors namely balance self-efficacy, subjective task value, and achievement goals are included as mediators between non-traditional student status and college success outcomes.

Academic Motivation Scale to Measure Self-determination

Academic Motivation Scale (AMS) is an instrument used to measure self - determination. Self-determination theory describes three levels of academic motivation- that are intrinsic motivation, extrinsic motivation and amotivation. AMS instrument has been used reliably to study and measure motivation levels in students at different levels. *" Self-determination theory identifies two causes of desire to study; the need for recognition, praise and/or money (extrinsic motivation) and the need to fulfil and interest (intrinsic motivation)* " (Deci et.al,1991).Students who are intrinsically motivated show greater interest towards learning and it is known as deep learning style. Students who are extrinsically motivated does not show much interest towards learning compared

to intrinsically motivated students as these students are referred as '*surface learners'*. Rowe (2001) found that first year engineering students are extrinsically motivated to do engineering and their academic success is through surface learning style. The students who are intrinsically motivated are independent and they follow the approach of self-developmental learning. Course Curriculums of the universities should be in such a way that courses must be designed which promotes interest towards learning. Savage and Birch have recorded a quantifier of student motivation before entering the department by designing a questionnaire and conducted a pilot study, researcher also used informal conversations, and after collecting the data assessment was done based on the student responses. Students who state their responses in generic terms are awarded '1', Examples of recorded statements are *"I have been interested in electronics since an early age" , "I would like to study electronics because I feel it is a fast moving industry". A student's statement would be awarded a rating of "2"* ,if students have quoted an example in their responses it will give an appropriate idea about student's knowledge. The statements for which it can be awarded as *"2" are "I have been learning C and C++" & "I have built some digital electronic projects*". Responses can be awarded as 3 if interest is provided with an evidence which supports their response.

The rating was done based on their responses it is decided based on which statement got highest rating ,15 statements were assessed twice, there is time gap of more than 6 months for the first assessment and second assessment. The similar kind of assessment was done for the second time, during the second assessment also students rated the personal statements exactly the same. From findings it was evident that students understood the value of own learning and still they expect someone to guide them in a proper direction so that they can achieve the desired results. Savage and Birch found that students are not confident in class room discussions, Seven questions from the questionnaire found responses are varied with the student's year of study that is student from first year responded differently and student from 2nd year responded differently. Informal conversations with first year students revealed that if students have option to choose their electives for course work they would achieve better results, this enhances their motivation. From the data collected it was evident that " *no significant differences in motivation levels between the different years of study*".Savage and Birch found that motivation and student performance are not correlated. Interesting findings are though students are intrinsically motivated before joining the institution, as institution has not given opportunity for choosing their subjects based on their interest it ruined their interest of deep learning style which negatively affected

their performance. " However, the pre-University motivation rating was uncorrelated with the response to the extrinsic motivation questions (Pearson correlation coefficient of 0.072) and was only correlated with the response to the intrinsic motivation questions with a coefficient of 0.13. This gives indicates that the personal statement may not be a very accurate instrument in assessing students for admission to the department. " (Savage & Birch, 2008).Personal statements may not help to infer student's motivation. Riderer (2015) thesis work examined the relationship between the "*levels of motivation as measured on a continuum of self-determination of science, technology, engineering and mathematics students at sub-urban, single campus community in los-angels*". The study inquired the relationship between student's motivation level , gender, ethnicity. Data was collected using a AMS-C questionnaire, The data was analyzed using statistical methods: multiple linear regression, pearson-correlation, independent sample t-test and MANOVA. It is evident from the analysis that "*gender and ethnicity are predictors for several of the self-determination motivation continuum's levels but none of the motivation levels are predictors of the overall academic success of community college STEM students*" (Riderer, 2015). Motivation levels of students and their academic grades are not significant ." *Significant differences between motivational levels across*

genders and ethnicities were discovered" (Riderer, 2015). Female students scored high in both extrinsic motivation and intrinsic motivation compared to males. Teachers instructional practices such as facilitating students and counselling them have positive effect on their motivation and outcomes. There is a significant relation between teachers motivation and students motivation. Considering the significant relations between teachers and students motivation, researchers have proposed that teachers instructional styles may play a role as mediators between teachers and students motivation. The premise of SDT (Self determination theory) is that people are active organisms who develop their behaviors and goals, which mean that people are intrinsically motivated to do actions(Ahn). Within SDT, there are five sub-theories: " *Cognitive Evaluation theory (CET), Organismic Integration Theory (OIT),Causality Orientation Theory (COT), Basic psychological need theory (BPNT), and Goal Contents theory (GCT)*" (Deci & Ryan,1985; Deci & Ryan ,2000). BPNT "*addresses the concept of human beings needs (i.e., autonomy , competence and relatedness) at the psychological level and how those needs relate to intrinsic motivation and psychological well-being*". Cognitive Evaluation Theory(CET) addresses intrinsic motivation. " *Intrinsic motivation refers to engaging in an activity for its own sake* ". People who have intrinsic

motivation are doing an activity to attain innate satisfaction from the activity per se (Ryan & Deci, 2000 a). Organismic Integration Theory (OIT) is focused on extrinsic motivation, " *which is the pursuit of an activity to obtain outcomes outside of the activity*". For instance, The principle of OIT is that not all behaviors are intrinsically motivated, but rather some behaviors are motivated by interacting with environmental and contextual factors. SDT researchers divide extrinsic motivation into four types ,spread along a continuum from most to least externally controlled; these are "*external regulation, introjected regulation ,identified regulation , and integrated regulation*". Furthermore, some studies grouped external and introjected regulations together, labelling it as non-autonomous (or controlled) extrinsic motivation; the first level is external regulation, where behavior is guided by external control. At this level, the reason why people behave is to obtain rewards or avoid punishment. Such regulations occurs in the most controlling context and people's interests are not regarded. The second level, introjected regulation ,is still controlling but less than external regulation. People engage in activities because they either want to avoid the feeling of guilt or attain the feeling of approval. Because feeling guilt or approval is derived from the feeling of pressure, this introjected regulation is barely autonomous(Ryan & Deci,2000 a). Identified regulation is less controlling and more autonomous than the previous level.

According to this regulation, people perform acts when they think they are valuable or important to achieve their goals (Ryan & Deci,2000a).Thus, identified regulation is somewhat close to intrinsic motivation, even though the personal importance is not from intrinsic value but from utility value (Eccles,2005). The last level of extrinsic motivation is integrated regulation, which is the most autonomous and the least controlling form. At this level, people engage in activities because the activities have been incorporated into their sense of self. Integrated regulation is very similar to intrinsic motivation because the cause of behaviors is from an individual's internal need. self-determination theory has defined five detailed types of motivation intrinsic, integrated, identified, introjected, and external motivation, these 5 are clubbed into two major categories of motivation named as autonomous and controlled motivation (e.g., Ryan & Deci,2000a;Vallerand,1997). Autonomous motivation is a sum of intrinsic motivation, integrated motivation and identified regulation. Controlled motivation consists of introjected and external regulation. BPNT elaborates that if teachers satisfy students basic psychological needs, students are intrinsically motivated for learning (Deci & Ryan,2000; Ryan , 1995).

Research Gap

1. Studies have largely focused on intrinsic motivation, but not on extrinsic motivation.

2. Study mentioned that dissatisfaction occurs to a student and his motivation levels decrease as he or she is close to graduation but why these changes occur are not identified properly.

3. No single set of factors can fully account for why some students fail in college and why others succeed.

4. There is a limited research on student motivation.

The Implication from Review of Literature

1. Universities are focusing on recruiting and marketing efforts, Universities must implement strategies to prevent dissatisfaction and to improve motivation.

2. Increase in dissatisfaction of senior students affects their relationships with alumni and participate in future events.

3. Colleges and Universities may need to reconsider how they monitor, measure, and manage student/ customer relationships.

Conclusion and Suggestion

As the paper is a review paper the research data which supports the findings are missing. The author tries to examine the findings practically in future research. The Literature on the extrinsic motivation of students is very limited. Researchers can focus on this area which is challenging and which brings productivity to universities. The research on Students should be an interesting area for young researchers in india but unfortunately, the papers which

brings support to students in the Indian context are missing.

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ANALYSIS OF INTERACTION BETWEEN GLOBAL CRUDE OIL PRICE, EXCHANGE RATE, INFLATION AND STOCK MARKET IN INDIA: VECTOR AUTO REGRESSION APPROACH

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ABSTRACT

The present paper analyses the association between global crude oil price, exchange rate, inflation and stock market in Indian economic scenario. The paper employs Vector Auto Regression Model on monthly data from April 2001 to March 2017. The monthly data has been sourced from official website of Energy Information Agency (EIA), Reserve Bank of India (RBI) and Bombay Stock Exchange (BSE). The analysis reveals the variables being integrated of Order I (1) and negates the possible existence of long run relationship among them. The analysis shows the negative relationship between stock index and inflation and positive association with exchange rate and WTI crude oil price. The paper also indicates the indicates the WTI crude oil price increase cause increase in inflation and exchange rate depreciation. Although the increase in WTI crude oil price has a favourable impact on BSE Index, the paper necessitates the need of decrease in reliance upon crude oil price so as to curb the increase in inflation and exchange rate depreciation. The policymakers need to devise policies to keep control on the increase in inflation and conserve the foreign exchange.

Keywords: WTI, Inflation, Exchange Rate, Vector Auto Regression Model.

INTRODUCTION

Oil has always been termed as one of the key essential commodities in the global economy. Crude oil has always been considered to play a crucial role in economic activities at a global level as a whole. The oil price fluctuations have a capability of bringing in a paradigm shift in policies at macroeconomic level and decisions at microeconomic level of any nation as a whole.

Owing to key role of oil price fluctuations in any economy, many researchers have examined the interaction between global crude oil price and different macroeconomic variables like GDP, Foreign Exchange Reserve, Stock Market Fluctuation, Ratio of Export to Import to name a few. However, the outcome of studies has varied according to variations in the assumptions, research methods, variables, frequency of data etc. adopted by different researchers.

The present paper endeavours to analyse the relationship between global crude oil price, inflation, exchange rate and stock returns in India., one of the major oil importing country not only in Asia, but in the world. The paper employs Vector Auto Regression Approach to investigate the relationship between the given variables. The variables' stationarity is tested by employing, Augmented Dickey Fuller Test and Phillips-Perron Test. Akaike Information Criterion is taken as the parameter to estimate the appropriate lag order for the Vector Auto Regression Approach. The present paper intends to contribute to existing literature by analysing the relationship between the given variables in India, for which there is a dearth of studies.

Literature Review

A number of researchers have endeavored to examine the influence of global crude oil price shocks on macroeconomic variables of not only developed or oil exporting countries, but also in emerging and major oil importing nations too. Arinze (2011) when applied simple regression analysis on the variables, observed positive relationship between global crude oil price and inflation represented by Consumer Price Index. Le Blanc and Chin (2004) while estimating the influence of oil price fluctuations on inflation in U.S., Japan and select European countries by employing Augmented Phillips Curve Parameter Estimates found minimal effect of oil price fluctuations on inflation in economies under study. While comparing the same, the authors observed oil price having large impact on inflation in European countries under study as compared to that of United States. Roger (2005) highlighted the short run significance of oil price in European countries by analysing the short run trade-off between GDP and inflation in the countries under study. In small open economies like Ireland, Bermingham (2008) also observed the significant impact of oil price on inflation. For Euro area, Jacquinot et.al. (2009) also recognised oil price change as one of the major factor in estimating short run inflation. Similarly Castillo et.al. also found increase in oil price leavel causing higher level inflation.

Cologni and Monera (2008) in most of the G-7 countries observed significant impact of oil price on inflation and output growth. The authors observed increase in oil price causing increase in inflation and decrease in output growth. In Russia, while examining the influence of oil price and monetary shocks on the nation's economy, Ito (2008), found 1% increase in oil price

causing 0.25% increase in real GDP and 0.36% increase in inflation. In Taiwan, while applying ARDL Model with Augmented Phillips Curve on the data from January, 1982 to December, 2010, Chou and Tseng (2011) observed oil price having significant impact on inflation in long term. However in short term, the effect was insignificant. By using simple regression, Ali and Ramzan (2012), examined the effects of oil price on food sector prices in Pakistan. In their study, the authors observed, positive relationship between crude oil price and inflation in food prices. In Nigeria, When Phillip and Akintoye (2006) applied Vector Auto Regression Model on the data from year 1970 to 2003, did not observe any noteworthy influence of oil prices on output and inflation. However the authors observed significant influence of oil price shocks on exchange rate.

In Vietnam prior to year 1999, Nguyen and Seiichi (2007) observed bidirectional causality between real effective exchange rate and inflation level. The authors also observed existence of similar strong relationship between the given variables in other ASEAN nations like Malaysia, Singapore, Thailand and China. Arie et. al. (2010) also observed bidirectional causality between inflation and nominal exchange rate.

While analysing the relationship between oil price and industrial production, Cunado and Prez De Garcia (2003) observed index of industrial production having significant influence on oil price change. The influence of Industrial production on oil price volatility was also proved in the works of Serlettis and Shahmoradi (2005) and Ewing and Thompson (2007).

While analysing the influence of oil price shocks on international stock markets, Jones and Kaul (1996) postulated that in ost war period, the reaction of US and Canadian stock prices to oil price shocks can be entirely accounted for by the impact of oil price shocks on real cash flows alone. By employing Vector Auto Regression Model to examine to examine the influence of oil price volatility on real stock returns, Perry Sadorsky (1999) significant influence of oil price on stock returns. When Cong et.al. (2008) employed Multivariate Vector Auto Regression to analyse the relationships between oil price shocks and China Stock markets, the author did not find significant impact of the independent variables on the real stock returns of most of the stock indices except manufacturing index and some oil companies. Similarly Driesprong et.al (2008) also observed rising oil prices causing significant lowering of future stock returns of developed economies.

Abedeyi et.al. (2012) while estimating the impact of oil price shocks and exchange rates on real stock returns in Nigeria observed negative effects of oil price shocks on the stock returns. While applying Granger Causality test, the authors observed unidirectional causality running from oil price shocks to stock returns and

from stock returns to oil price shocks. Korhonen et.al. (2009) postulated that in in oil dependent OPEC Countries higher oil price lead to appreciation of real exchange rate with elasticity of the same with respect to oil price typically ranging between 0.4 and 0.5. Similarly in Turkey Ortuk et.al. (2008) found international oil price Granger causing the USD/YTL exchange rate.

The present paper intends to extend the existing literature by analysing the combined interaction between global crude oil price, exchange rate, inflation and stock market behaviour in Indian economic scenario.

Research Methodology:

Data:

To analyse the dynamics of relationship between the given variables, the monthly data for the period April 2001 to March 2017, for BSE Stock Index, Consumer Price Index (CPI) as proxy variable for Inflation in India, Exchange Rate and Global Crude Oil Price is collected. The data for Global Crude Oil Price represented by WTI Crude is obtained from official website of Energy Information Agency. The historical data for BSE Stock Index is obtained from official website of Bombay Stock Exchange. The data for Consumer Price Index and Exchange rate is obtained from official website of Reserve Bank of India.

Unit Root Test:

To ascertain data stationarity Augmented Dickey Fuller Test and Phillips Peron Test

are employed. Before proceeding to analysis of data Unit Root Test is imperative so as to avoid the problem of spurious regression. The process followed for testing the unit root in a given sample can be explained as follows.

The Augmented Dickey Fuller Test the modified version of Dickey Fuller Test comprises of 3 models which can be employed for obtaining required statistics

$$\Delta Y_t = a_0 + a_1 t + a_2 y_{t-1} + \sum_{s=1}^{k} b_s (\Delta Y)_{t-s} + U_t$$
Equation 1

$$\Delta Y_t = a_0 + a_2 y_{t-1} + \sum_{s=1}^{k} b_s (\Delta Y)_{t-s} + U_t$$
Equation 2

$$\Delta Y_t = a_2 y_{t-1} + \sum_{s=1}^{k} b_s (\Delta Y)_{t-s} + U_t$$
Equation 3

Y_t denotes the variables to be tested for stationarity and $\Delta Y_t = Y_t - Y_{t-1}$, t is the time trend.

The ADF test adds the lagged terms of dependent variable in the regression equation to take care of deterministic part of higher order correlation.

Phillips Perron (P-P) Test is a non-parametric approach which controls the serial correlation while testing the Unit Root. The method estimates the non-augmented Dickey Fuller Test Equation as follows:

$$\Delta Y_t = \alpha y_{t-1} + X_t \delta + \varepsilon_t$$
Equation 4

Where X_t is optional exogeneous regressor which may consists of constant or a constant and trend.

The Phillips Perron (P-P) Test controls the serial correlation and heteroskedasticity in error terms of regression by modifying the t-statistics of α coefficients.

Johanssen Cointegration Test:

The precondition for application of Vector Auto Regression Model is absence of cointegration or long run relationship between the given variables. There should not be any cointegration among the stationary variables of order I (1). The two non-stationary series are said to be co-integrated if there exists a stationarity in linear combination between them or there exists a long run equilibrium relationship between the given variables. The Johanssen's Co Integration approach developed by Johanssen and Juesilius (1990) is employed to calculate the co-integrating regressions and ascertain the long run equilibrium relationship between the given variables.

The Johanssen Cointegration framework employs the maximum likelihood procedure to ascertain the presence of co-integrating vectors in non-stationary time series as Vector Auto Regression (VAR)

$$\Delta Z_t = c + \sum_{i=1}^{k} \Gamma_i \Delta Z_{t-1} + \Pi Z_{T-1} + \eta_t$$
(Equation 5)

Z_t is a vector of non - stationary (log level) variables and C is termed as constant term. The information on the coefficient matrix between the levels of Π is decomposed as $\Pi = \alpha \beta$, where the relevant elements, the

matrix are termed to be adjustment coefficients and matrix consists of co integrating vectors.

The Johanssen's Co integration approach employs two test statistics i.e. Trace Statistics () and maximum Eigen value statistic () to determine the number of co integrating vectors (Brooks, 2008). The test statistics i.e. and can be expressed as follows.

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{g} \ln(1 - \hat{\lambda}_i)$$ (Equation 6)

and $\lambda_{max}(r, r+1) = -T \ln(1 - \hat{\lambda}_{r+1})$ (Equation 7)

Where r is expressed as number of co integrating vectors under null hypothesis and is the estimated value for the ordered Eigen value from the matrix. The different co integrating vectors termed as Eigen Vectors will be associated with Eigen Value.

The test statistics are then compared with their respective critical values given Johanssen and Juleius (1990). If the test statistics are greater than their respective critical values, then reject the null hypothesis that there are r co integrating vectors in favour of alternative that there are r+1 (for and more than r (for

3.3 Vector Auto Regression Model:

The Vector Auto Regression Models were introduced and popularised by Shims in the year 1980. These models are the system of regression models and are termed to be intermediate between univariate time series models and simultaneous equation models. The term

autoregressive in the VAR Models is attributed to the presence of lagged values of the dependent variable and the term vector is due to the vector of two or more variables.

The VAR models depicting the relationship between the given variables under study may be specified as follows:

$$lnBSE_T = \alpha_0 + \sum_{i=1}^{n} \alpha_1 lnBSE_{t-i} + \sum_{i=1}^{n} \alpha_2 lnCPI_{t-i} + \sum_{i=1}^{n} \alpha_3 lnExR_{t-i} + \sum_{i=1}^{n} \alpha_4 lnwti_{t-i} + \mu_t$$
(Equation 8)

$$lnBSE_T = \alpha_0 + \sum_{i=1}^{n} \alpha_1 lnBSE_{t-i} + \sum_{i=1}^{n} \alpha_2 lnCPI_{t-i} + \sum_{i=1}^{n} \alpha_3 lnExR_{t-i} + \sum_{i=1}^{n} \alpha_4 lnwti_{t-i} + \mu_t$$
(Equation 9)

$$lnBSE_T = \alpha_0 + \sum_{i=1}^{n} \alpha_1 lnBSE_{t-i} + \sum_{i=1}^{n} \alpha_2 lnCPI_{t-i} + \sum_{i=1}^{n} \alpha_3 lnExR_{t-i} + \sum_{i=1}^{n} \alpha_4 lnwti_{t-i} + \mu_t$$
(Equation 10)

$$lnBSE_T = \alpha_0 + \sum_{i=1}^{n} \alpha_1 lnBSE_{t-i} + \sum_{i=1}^{n} \alpha_2 lnCPI_{t-i} + \sum_{i=1}^{n} \alpha_3 lnExR_{t-i} + \sum_{i=1}^{n} \alpha_4 lnwti_{t-i} + \mu_t$$
(Equation 11)

Where: *lnBSE* = natural logarithm of BSE stock index

lnCPI = natural logarithm of Consumer Price index proxy variable for inflation.

lnExR = natural logarithm of Exchange Rate Variable.

lnwti = natural logarithm of WTI, proxy variable for crude oil price.

T = Current Time

α, β, γ and δ are the parameters of explanatory variables.

Empirical Findings:

Unit Root Tests: As observed from Table 1, presenting the results of Augmented Dickey Fuller (ADF) Test statistics and Phillips Perron (P-P) Test statistics, conducted for the presence of Unit Root, the variables under study are integrated of Order (1) and show stationarity at first order difference of the variable.

However, Inflation represented by Consumer Price Index did not show stationarity at first order difference according to Augmented Dickey Fuller Test, but satisfied the stationarity condition according to Phillips Perron Test.

Variables	Level I(0)		First Order Difference I(1)	
	ADF Statistic	PP Statistic	ADF Statistic	PP Statistic
BSE Index (LBSE)	-1.62	-1.92	-12.50	-12.57
Exchange Rate (LExC)	-1.75	-1.81	-12.54	-12.51
Inflation (LInf)	-1.85	-1.72	-1.03	-10.37
Crude Oil (LWTI)	-2.11	-1.99	-9.82	-9.70

Table 1: Unit Root Test Statistics of the Variables

To ascertain the presence of any long run relationship among the given variables, Johanssen Cointegration test is conducted. The results of the test are presented in Table2 and Table 3.

Hypothesized No of CE(S)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.079495	33.7054	47.85613	0.518
At most 1	0.060901	18.21563	29.79707	0.5502
At most 2	0.032733	6.465511	15.49471	0.6405
At most 3	0.001294	0.242066	3.841466	0.6227

Table 2: Trace Test for Johanssen Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Max -Eigen Statistic	0.05 Critical Value	Prob.**
None	0.079495	15.48977	27.58434	0.7086
At most 1	0.060901	11.75012	21.13162	0.5725
At most 2	0.032733	6.223446	14.2646	0.5847
At most 3	0.001294	0.242066	3.841466	0.6227

Table 3: Maximum Eigen Value Statistics for Johanssen Cointegration Test

The results presented in Table 2 and Table 3 confirms the absence of any cointegration or long run relationship among the given variables under study. The outcome of the cointegration test paves for applying Vector Auto Regression Model to analyse the relationship between crude oil price, inflation, exchange rate and stock returns in India.

VAR Lag Order Selection Criteria
Before application of Vector Auto Regression Model, appropriate lag length is required to be estimated. The lag length is estimate by applying lag order selection criteria like Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC) etc. The lag order selection criteria are presented in Table 4.

Lag	LogL	LR	FPE	AIC	SIC	HQ
0	1522.678	NA	7.28E-13	-16.59758	-16.52742*	-16.56914
1	1558.689	70.05286	5.85e-13*	-16.81627*	-16.46551	-16.67409*
2	1565.857	13.63081	6.44E-13	-16.71974	-16.08837	-16.46382
3	1577.821	22.22806	6.74E-13	-16.67563	-15.76365	-16.30596
4	1589.498	21.18478	7.07E-13	-16.62839	-15.43579	-16.14497
5	1603.22	24.2946	7.26E-13	-16.60349	-15.13029	-16.00633
6	1616.933	23.68044	7.47E-13	-16.57851	-14.82469	-15.8676
7	1633.91	28.57358*	7.42E-13	-16.58919	-14.55476	-15.76453
8	1644.839	17.91496	7.88E-13	-16.53375	-14.21872	-15.59536

Table 4: VAR Lag Order Selection Criteria

According to Akaike Information Criterion, Schwarz Information Criterion and Future Prediction Error, the appropriate lag length comes out to be 1. The appropriate lag length is estimated from minimum values of employed information criterion and the same is to be used in the model estimation.

Estimation from Vector Auto Regression Model

After obtaining the appropriate lag length from lag order selection criteria, The VAR model is estimated from the monthly of the variables from the period, April, 2001 to March 2017. The results of the VAR model estimation are presented in Table 5

	LBSE	LINFINDIA	LEXCINDIA	LWTI
LBSE(-1)	0.995509	-0.001106	-0.016002	0.037227
	-0.02394	-0.00266	-0.00789	-0.03114
	[41.5810]	[-0.41565]	[-2.02939]	[1.19534]
LINFINDIA(-1)	-0.028233	1.000601	0.059251	0.053787
	-0.07567	-0.00841	-0.02492	-0.09843
	[-0.37312]	[118.977]	[2.37758]	[0.54647]
LEXCINDIA(-1)	0.067841	-0.003397	0.926143	-0.260026
	-0.10272	-0.01142	-0.03383	-0.13362
	[0.66046]	[-0.29753]	[27.3757]	[-1.94605]
LWTI(-1)	0.002908	0.00484	0.002892	0.915248
	-0.01948	-0.00216	-0.00641	-0.02534
	[0.14930]	[2.23574]	[0.45077]	[36.1254]
C	-0.096696	0.006717	0.162067	0.773549
	-0.26995	-0.03	-0.08891	-0.35116
	[-0.35819]	[0.22387]	[1.82279]	[2.20282]
R-squared	0.991408	0.99955	0.980243	0.966446
Adj. R-squared	0.991223	0.99954	0.979818	0.965724
Sum sq. resids	0.833313	0.010295	0.090395	1.410083
S.E. equation	0.066934	0.00744	0.022045	0.087069
F-statistic	5365.444	103279.8	2307.049	1339.31
Log likelihood	247.9889	667.5954	460.1157	197.7564
Akaike AIC	-2.544386	-6.938171	-4.765609	-2.018392
Schwarz SC	-2.459248	-6.853033	-4.680471	-1.933254
Mean dependent	9.403295	4.515188	3.915369	4.074259
S.D. dependent	0.714459	0.346983	0.155178	0.470296
Determinant resid covariance (dof adj.)		6.02E-13		
Determinant resid covariance		5.42E-13		
Log likelihood		1613.226		
Akaike information criterion		-16.683		
Schwarz criterion		-16.34244		

From the estimated results presented in Table 5, R^2 of 0.9914 indicates 99% of variation in BSE Index is explained by explanatory variables. The adjusted R^2 of 0.9912 i.e. 99% indicates the robustness of explanatory variables in explaining the variation in BSE Index. Similarly, R^2 for Exchange Rate, Inflation and Crude Oil

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Price of 0.9995, 0.98025 and 0.9664 respectively explains 99%, 98%, and 96% variations in the dependent variables by explanatory variables. The adjusted R^2 of 99%, 97% and 96% shows the robustness of explanatory variables in explaining the variations in inflation, exchange rate and crude oil price respectively. To interpret the individual parameters of the variables, Block F Test is employed to analyse the collective influence of the explanatory variables.

Block F- Test

The estimation from Block F Test is presented in Table 6. The Lag exclusion test points towards the parameters of all lag 1 variables being significant as well as jointly significant.

Chi-squared test statistics for lag exclusion:					
Numbers in [ ] are p-values					
	LBSE	LINFINDIA	LEXCINDIA	LWTI	Joint
Lag 1	21461.78	413119.4	9228.197	5357.241	458878.1
	[0.000000]	[0.000000]	[0.000000]	[0.000000]	[0.000000]
df	4	4	4	4	16

Table 6: VAR Lag Exclusion Wald Test

Granger Causality Test

The estimated results from the Granger Causality Analysis is presented in Table 7. From the estimated results it can be observed that there exists a unidirectional causality running from Grobal crude oil price to inflation, Stock index and inflation to exchange rate and from exchange rate to global crude oil price. Apart from there is absence of causality among the rest variables.

Table 7: Granger Causality Test of the Variables.

Dependent variable: LBSE			
Excluded	*Chi-sq*	*df*	*Prob.*
LINFINDIA	0.139222	1	0.7091
LEXCINDIA	0.436213	1	0.509
LWTI	0.022289	1	0.8813
All	0.954327	3	0.8123
Dependent variable: LINFINDIA			
Excluded	*Chi-sq*	*df*	*Prob.*
LBSE	0.172767	1	0.6777
LEXCINDIA	0.088525	1	0.7661
LWTI	4.998538	1	0.0254
All	13.694	3	0.0034

Dependent variable: LEXCINDIA			
Excluded	*Chi-sq*	*df*	*Prob.*
LBSE	4.118432	1	0.0424
LINFINDIA	5.652864	1	0.0174
LWTI	0.203195	1	0.6522
All	10.22864	3	0.0167
Dependent variable: LWTI			
Excluded	*Chi-sq*	*df*	*Prob.*
LBSE	1.428849	1	0.232
LINFINDIA	0.298628	1	0.5847
LEXCINDIA	3.787104	1	0.0516
All	11.53597	3	0.0092

Impulse Response Function (IRF)

The Impulse Response Function for given Vector Auto Regression Model for the variables is presented in Figure 1. From Impulse Response Graph it can be observed that Stock Index to global crude oil price and exchange rate has remained positive but for inflation the response has remained negative. The response of exchange rate has remained positive to impulse from inflation and global crude oil price but negative to Stock index. The Inflationary index initially remained negative and then become positive to

Figure 1: Impulse Response Graph for Vector Auto Regression Model
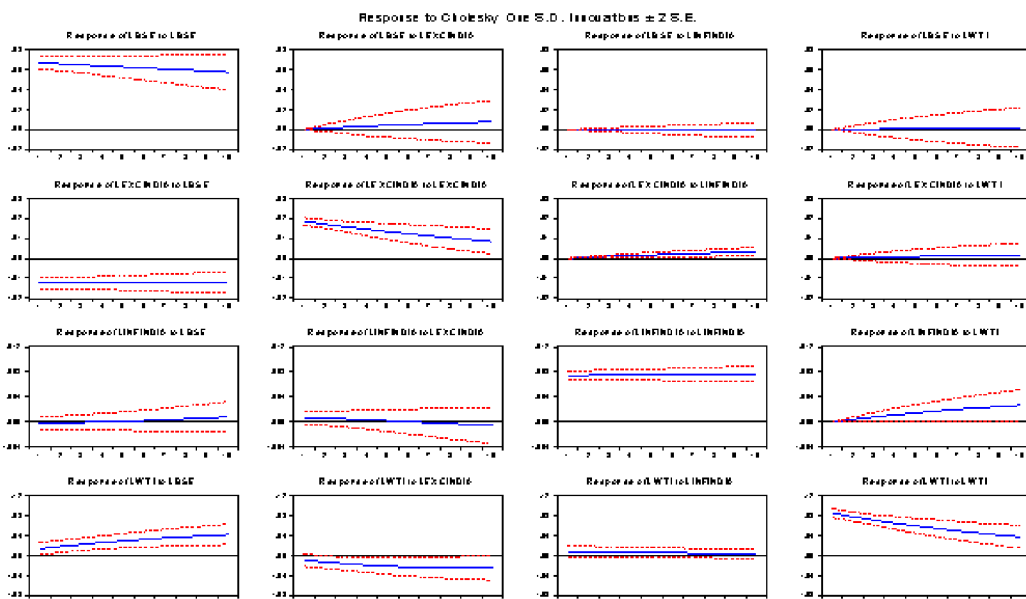
impulse from stock index and for exchange rate the response of inflation is initially positive and then becomes negative. The response of inflation to WTI crude oil price has remained positive all throughout. The response of WTI Crude Oil Price remained positive to impulse from inflation and Stock index but became negative to impulse from exchange rate. From the impulse response graph it can be observed that the impulse responses have rarely returned to equilibrium path.

Table 8: Variance Decomposition of the Variables

Variance Decomposition of LBSE:				
Period	S.E.	LBSE	LINFINDIA	LEXCINDIA	LWTI
1	0.066934	100	0	0	0
2	0.093908	99.98252	6.49E-05	0.016717	0.000694
3	0.114111	99.94491	0.000176	0.052687	0.002224
4	0.130742	99.89029	0.000298	0.10491	0.004502
5	0.14505	99.82142	0.000408	0.170721	0.007453
6	0.157683	99.74074	0.000491	0.247758	0.01101
7	0.169028	99.65041	0.00054	0.333935	0.015117
8	0.179341	99.55231	0.000555	0.427413	0.019723
9	0.188799	99.4481	0.000541	0.526574	0.024785
10	0.197535	99.33923	0.000508	0.630001	0.030264
Variance Decomposition of LINFINDIA:				
Period	S.E.	LBSE	LINFINDIA	LEXCINDIA	LWTI
1	0.00744	0.062354	99.93765	0	0
2	0.010551	0.051383	99.78534	0.010896	0.152383
3	0.012968	0.039073	99.45054	0.040325	0.47006
4	0.015037	0.029132	98.96345	0.091895	0.915527
5	0.01689	0.025711	98.34939	0.168181	1.456722
6	0.018594	0.033151	97.6295	0.270732	2.06662
7	0.020191	0.055796	96.82134	0.400137	2.722728
8	0.021704	0.097844	95.9395	0.556126	3.406532
9	0.023153	0.163232	94.9961	0.737699	4.102966
10	0.024548	0.255559	94.00128	0.943252	4.799911
Variance Decomposition of LEXCINDIA:				
Period	S.E.	LBSE	LINFINDIA	LEXCINDIA	LWTI
1	0.022045	30.3372	0.592517	69.07029	0
2	0.030465	32.15236	0.754872	67.08625	0.006524
3	0.036488	33.94182	0.938337	65.09845	0.021392
4	0.041234	35.69575	1.141906	63.1181	0.044241
5	0.045151	37.405	1.364428	61.1559	0.074667
6	0.048477	39.06126	1.604627	59.22188	0.112234
7	0.051356	40.65713	1.861125	57.32527	0.156479
8	0.053886	42.18617	2.132474	55.47444	0.206918
9	0.056133	43.64294	2.417174	53.67683	0.263055
10	0.05815	45.02301	2.713704	51.93891	0.324386

Variance Decomposition of LWTI:				
Period	S.E.	LBSE	LINFINDIA	LEXCINDIA	LWTI
1	0.087069	2.607307	0.574477	1.291969	95.52625
2	0.119235	3.799415	0.559453	2.032729	93.6084
3	0.141852	5.217531	0.538109	2.875152	91.36921
4	0.159571	6.837907	0.511845	3.775046	88.8752
5	0.174264	8.632657	0.482169	4.692678	86.1925
6	0.186914	10.57167	0.450597	5.594171	83.38357
7	0.198104	12.6243	0.418576	6.452206	80.50492
8	0.208208	14.76077	0.387421	7.246105	77.60571
9	0.217477	16.95318	0.358274	7.961452	74.7271
10	0.226084	19.17618	0.332088	8.589416	71.90232
Cholesky Ordering: LBSE LINFINDIA LEXCINDIA LWTI				

Stability of the Vector Auto Regression Model

From the Auto Regressive Inverse Roots of the Vector Auto Regression Model, it can be observed that the polynomial roots are within the unit circle indicating the stability of the model.

Table 9: Auto Regressive Inverse Roots of VAR Model.

Root	Modulus
0.997063	0.997063
0.962937 - 0.018370i	0.963113
0.962937 + 0.018370i	0.963113
0.914563	0.914563
No root lies outside the unit circle.	
VAR satisfies the stability condition.	
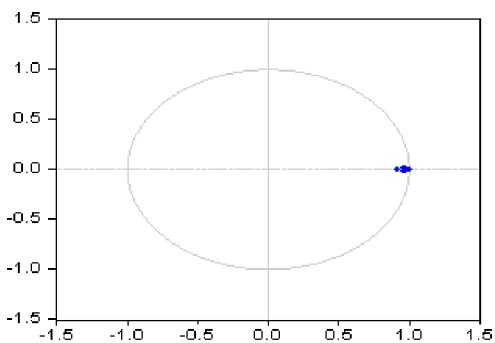
Figure 2: Graph of AR Inverse Root.

Conclusion

The present paper employed Vector Auto Regression Model to analyse and estimate the association between global crude oil price, exchange rate, inflation and stock index in Indian economic scenario. From the paper it can be well observed that there is a negative association between stock index and inflation which may be attributed to decrease in consumer purchasing power due to increase in inflation and in turn has a negative impact on the stock index. There exists a positive relationship between BSE Index and Exchange Rate and WTI Crude Oil Price. There exists a negative association between inflation and BSE Index and exchange rate. The increase in WTI crude oil price raises the cost of production for an oil importing country and thus causes increase in inflation and the same is well evident in case of data pertaining to India presented here. Similarly depreciation in exchange rate also causes increase in inflation. The increase in WTI crude oil price also causes depreciation in exchange rate value which

may be attributed to increase in demand of U.S. Dollar in which majority of trade is done.

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IMPACT OF MACROECONOMIC FACTORS ON INDIAN STOCK MARKET

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ABSTRACT

This study is on Impact of Macroeconomic factors on Indian stock market. The aim of the study is to analyze the relationship between selected macroeconomic factors and Indian stock market price. This study may also facilitate to the investors in buying and selling decisions of securities as in the study the effect of the selected macroeconomic variables on the stock market price returns is been analysed. This study may also be make investors capable to take better decision by viewing the relationship between the dependent (Sensex) and independent variables (Macroeconomic factors).

The methodology is used for the study is descriptive and Pearson correlation is used to find the relationship between the dependent and independent variables. Data over the period of 1991 to 2017 is used for the study.

The result shows that there is a positive relationship between the sensex and macroeconomic factors except avg. inflation and unemployment rate as they show negative relationship.

Key words : Stock market, Economic factors, SEBI

INTRODUCTION

The Indian stock market had seen various up-down since 1991, after the government implemented the Liberalization, Privatization and Globalization Model in India. This model has connected every country with other countries and as a result a single market is created. And thus from the economic point of view the importance of stock market is growing as it helps in movement of capital in rising and developed nations, prompting the development of industry and business of the country. There is a significant role of Indian capital market in the Indian economy growth. A small movement in the stock market affects the performance of economy. Investors regardless of whether Indians or outsiders can contribute or take the assets (funds) for capital appreciation in the capital market. An investor considers

various factors before and at the time of investing his funds into the stock market. These various factors may include past performance of a company, return on index or by company, return on assets or equity, free cash flow, internal management, various macroeconomic factors like GDP, inflation, interest rate, unemployment rate etc.

It is believed that return on stock market is changed as change or fluctuations in the macroeconomic factors. Some macroeconomic factors are significantly affecting the return on stock whereas some have mild affect. The market can be classified into two i.e. Primary market and secondary market. Primary and secondary market both are inter-related to each other as primary market creates secondary market. In the primary market various companies as well as government sell the securities first time in the market and when these securities further sold in the market that market called as secondary market.

The SENSEX, propelled in 1986 is comprised of 30 of the most effectively exchanged stocks in the market. Truth be told, they represent a large portion of the BSE's market capitalisation. They speak to 13 areas of the economy and are pioneers in their individual enterprises. The SENSEX is one of the benchmark in India. The SENSEX is considered an essential indicator of the Indian securities exchange because the BSE is the main exchange of the Indian resold market. It is the most as often as possible utilized indicator while

giving an account of the condition of the market.

The major role of an index is to catch the change in the price. Along these lines, a stock index will mirror the change in the price of stock, whereas index of bond catches the way in which bond costs go up or down. In the event that the SENSEX rises, it shows the market is doing admirably. Since stocks should reflect what organizations hope to earn later on, a rising index demonstrates that investor expect better profit from organizations. Furthermore, it is additionally a measure of the condition of the Indian economy.

Trends in Indian Stock Market

The stock market of India has an important position in Asia as well as in the world. Across the world the Bombay Stock Exchange (Sensex) is one of the earliest exchanges whereas if we look at National Stock Exchange is considered to be best in terms of advancement & sophistication of technology. After the globalization Indian stock market pace increased too fast and as a result it becomes a centre of attraction for investors over the world. The entire of nineties were utilized to investigation and adjust a productive and successful framework, and from the time of globalization, the stock market began to work proficiently and demonstrated its new statures, at various periods of its advancement. Indian stock market has seen various ups and downs there were times when the Indian stock market accomplishes new statures, breaking its

past records and there is time likewise when stock market dives up to its outrageous. As stock market index is an essential piece of the economy, these ups and downs cannot be ignored as an economy is affected by the several policies and other unavoidable situations created in an economy.

Macroeconomic Factors

➢ Inflation is an ascent in costs or price of a few things over a period of time. It is estimated through different indices and each gives particular data about the costs of things that it shows. The index could be the Consumer Price Index (CPI) or Wholesale Price Index (WPI) for indicated classes of individuals like farming laborers or urban non-manual workers. Every one of the index is made in a particular way with a specific year as the base year and they consider the value change over a year.

➢ The Unemployment rate is described as the level of unemployed workers in the aggregate work force. Workers are viewed as jobless in the event that they as of now don't work, in spite of the way that they are capable and willing to do as such. The aggregate work force comprises of all employed and jobless individuals inside an economy.

➢ An exchange rate is the cost of a country's cash as far as money. In this way, a exchange rate has two segments, the country's own money and foreign currency, and can be cited either straightforwardly or in a roundabout way. In an immediate citation, the cost of a unit of remote cash is communicated as far as the country's own money. In a roundabout citation, the cost of a unit of country's own is communicated regarding the foreign currency. The whole procedure of sending out and bringing in procedure of any nation is entirely subject to the exchange rate of money value of the country.

➢ Gold is a substitute speculation road for Indian financial specialists. The significance of gold has been expanded in the present world because of the monetary emergency in the present financial world. The financial specialists are putting resources into the Gold. Gold is dealt with as an elective speculation road. It is frequently expressed that gold is the best protecting acquiring power over the long haul.

➢ Foreign Exchange Reserve or Forex Reserves is the reserves of different currencies like Japanese Yen, United States Dollar, pound, Euro etc., control and kept by the financial organization i.e Reserve Bank of India and numerous alternative financial authorities as affirmed by the govt... The reason behind to keep up this sort of reserves is to manage any unexpected financial stuns and crises**.**

➤ Gross Domestic Product (GDP) is that the quantitative live of the overall financial movement in an economy. In significantly more particular terms, GDP speaks to the money related estimation of the considerable number of products and services created or produced in an economy inside a timeframe and inside a country's land limit. Gross domestic product is measures that help in estimating the execution of an economy.

Securities and Exchange Board of India

On 12 April, 1988 a board was set up by the Govt. of India named as "Securities and Exchange Board of India" (SEBI), as a between time administrative body to progress, arrange and sound advancement of securities and for saving and protecting the interest of investors and shareholders. Before getting a statutory status through an announcement as on January 30, 1992 the Securities and Exchange Board of India was to work inside the general definitive control of the Ministry of Finance, Government of India.

The declaration was later changed by a law of Parliament known as the Securities and Exchange Board of India Act, 1992. Objectives were in concurrence with the formation of SEBI, which were for the improvement of capital market. The capital market had seen an immense advancement in the midst of 1980's was depicted particularly by the growing help of general society. This regularly assists the investors in the market and market itself. Capitalisation incited different types of acts of neglect concerning associations, experts in the market, shareholders or investors, and others related with the securities displaying. The powerful instances of these acts of neglect in corporate segment by the self – styled exchange lenders, casual private game plans, device of expenses and casual premium on new issues and non-adherence of game plans of the Companies Act and encroachment of rules and controls of stock exchanges and posting essentials delay in movement with the offers et cetera. These demonstrations of disregard and out of the line exchanging hones have divided theorist sureness and copied money related pro grievances.

Role of SEBI

The fundamental reason behind Securities and Exchange Board of India was created is to provide a platform to support better exchange of securities through the securities markets. It similarly means to reinforce competition and bolster headway. This state joins the rules and controls associations, their interrelationships, establishments, practices, instruments and approach framework. This state goes for tending to the fundamental necessity of the three social events which essentially constitutes the market, viz., the patrons of securities (Companies), the monetary pros and the market middle people.

✓ To the investors, it provides to give a business focus in which they can

irrefutably suspect bringing responsibility & accountability which they require in an effective and efficient and very simple reasonable way.

✓ To the various investors it certainly needs to give confirmations for their rights and premiums through adequate, correct and genuine information and revelation of information on a reliable introduce.

✓ To the mediators, it should offer a centred, professionalized and developing business division with attractive and beneficial nuts and bolts so they can render better help for the examiners and budgetary patrons.

Literature Review

R. Mookerjee and Q. Yu (1997) used the monthly data of four macroeconomic factors such as Broad money supply, foreign reserve, narrow money supply and exchange rate over the period of Oct 1984 to Apr 1993 to analyse the relationship between macroeconomic factors and Singapore stock returns. Their study showed that foreign reserve, broad and narrow money supply had a long run association with stock market returns though exchange rate didn't show l;ong term relationship.

Sangeeta Chakravarty (2005) conducted a study that aim to know the nexus between macroeconomic factors and Indian stock market prices over the period of 1991-2005. The secondary monthly data was used for the study. She revealed

positive impact of inflation, money supply and index of industrial production on Indian stock return by using Granger Causality. Whereas it was found that there was no relationship of exchange rate, gold prices with the Indian stock market.

K. Pal and R. Mittal (2011) have taken quarterly data over the period of Jan 1995 to Dec 2008 to conduct a study on relationship between Indian stock market and macroeconomic factors with the Johansen's co-integration framework. Their study showed that there was a long-run relationship exists between the macroeconomic factors and Indian stock market. The outcomes likewise demonstrated that exchange and inflation rate significantly affect BSE Sensex yet gross domestic saving and interest rate were not significant.

A. Pethe and A. Karnik (2000) have taken monthly data over the period of Apr 1992 to Dec 1997 to conduct a study on relationship between Indian stock market and macroeconomic factors using error correction model and co-integration. Their study showed that the condition of economy and the stock market prices don't show a long run relationship.

Menike (2006) analysed a study on how macroeconomic factors affect stock prices in developing Sri Lankan Stock Market. Secondary data was used from 1991 to 2002. Multivariate regression was used by them on all factors for each stock. The study too discovers that there is a relationship between stock market in the

Colombo Stock Exchange and macroeconomic factors. It is also revealed that there is negative relationship between macroeconomic factors like Inflation rate, exchange rate and stock market in Colombo Stock Exchange.

Zhao (1999) conducted a study that aim to know the connection between Chinese financial market that consists of factors like index of industrial production and inflation. The secondary data was used for the study over the period of 1993 to 1998. The outcomes show that both expected growth in the industrial production and inflation have negative associations with the stock market prices.

Wong et al. (2005) analyzed a study to know whether macroeconomic factors affect the stock prices of Singapore and United States. They analyze the long run equilibrium relationships between the macroeconomics factors and the two countries. The secondary data was used over the period of Jan 1982 to Dec 2002. They found through a co-integration test that United States Stock's prices don't show relationship with the money supply and interest rate whereas there is a long run equilibrium relationship with the Singapore stock's prices of those factors.

Pimenta Junior and Hironobu Higuchi (2008) have taken monthly data over the period of 1994 to 2005 to conduct a study on the relationship between Ibovespa and macroeconomic factors such as inflation rate, interest rate and exchange rate using Granger causality test, Impulse and Response functions analysis, unit root test, and variance decomposition analysis. The study found that the Exchange rate was variable with a more advanced amount of causality in the Ibovespa, in any case, this outcome is factually satisfactory and impressive; along these lines, none of the factors chose introduced causality connection to the index.

Maku and Atanda (2009) conducted a study that aim to analyzed the short-run and long-run impact of macroeconomic on Nigerian capital market. Secondary data was used from 1984 to 2007. The macroeconomic factors (dependent variable) used for the study were real output, exchange rate, inflation rate and money supply. The outcomes of the study, acquired utilizing Error Correction Model and ADF, revealed that the share index is more receptive to chose factors and along these lines have noteworthy effect on share index.

Sezgin Acikalin, Rafet Aktas, and Seyfettin Unal (2008) have been taken quarterly data over the period of 1991 to 2006 to analyse the relationship between the macroeconomic factors and the stock market of Turkey named as Istanbul Stock Exchange. To find the relationship they used the secondary data. They selected four macroeconomic factors i.e. foreign exchange rate, production level, current account deficit, and interest rate of Turkey. They used the vector error correlation model and cointegration test and founded the long run stable relationship. With the help of casualty test, they found

unidirectional relationship between Turkey stock market and macroeconomic variables and change in the current account deficit, production level, and foreign exchange rate also affect the Istanbul Stock Exchange.

Joseph Tagne Talla (2013) had taken monthly data over the period of 1993 to 2012 to analyse the impact of macroeconomic factors on the stock market returns, a case of Stockholm Stock Exchange. For the study secondary data was used of four macroeconomic variables i.e. exchange rate, consumer price index, money supply, and interest rate. Multivariate Regression Model, unit root test and Granger causality test were used to find the relationship. The results show that both currency depreciation and inflation have significant negative impact on stock market returns. Whereas interest rate do not have any significant relationship but it affect the stock market returns negatively. Money supply has positive relationship with the stock market returns though not significant. No unidirectional, using Granger Causality, is found between the selected macroeconomic variables and the stock market returns.

Ngoc (2009) has taken monthly data over the period of 2001 to 2008 to analyze the relationship between Vietnamese stock prices and macroeconomic factor i.e. interest rate. In the study he additionally demonstrates the nexus between Vietnamese stock prices and US macroeconomic factors. Statistically, he discovered imperative associations between the money markets, domestic production sector and Vietnamese stock prices and Vietnamese stock price is also significantly affected by the US macroeconomic.

Mgammal (2012) conducted a study that aim to analyze the effect of various macroeconomic variables like inflation rate, exchange rate, and interest rate on the stock price of two gulf countries i.e. Kingdom of Saudi Arabia and United Arab Emirates. The secondary data was used for the study over the period of Jan 2008 to Dec 2009. The study revealed that in the short run the stock prices index 0of the Kingdom of Saudi Arabia is negatively influenced by the exchange rate whereas United Arab Emirates is positively affected by the exchange rate. The outcomes of study in long run showed that stock prices index of United Arab Emirates is negatively affected by the exchange rate.

Research Methodology

Objective

To measure the relationship between the stock market and selected macroeconomic variables.

Variables Selected

✓ Dependent Variable

  ➢ Sensex

✓ Independent Variables

  ➢ Unemployment Rate

  ➢ Exchange Rate

  ➢ Average Inflation Rate

➢ Gold Prices

➢ Foreign Exchange Rate

➢ Gross Domestic Product (GDP)

Limitations of the Study

This study is conducted on the Stock market indicator's sensex using the macroeconomic factors. This study covers only six macroeconomic factors to measure the relationship. The study is prepared within a limited time.

Sources of Data

Secondary data is used to analyzed the relation between the sensex and selected macroeconomic factors over the period of Jan 1991 to Dec 2017. Data was collected from Reserve Bank of India, World Bank, Bombay Stock Exchange.

Data Analysis

A stock market is affected by several factors so it is necessary to analyze those factors. In this study it is tried to do analyze how the different macroeconomic factors affect stock market indicator 'Sensex' and how it impact the investors' decision and their investment. To analyse the relationship Sensex as a dependent variables and all macroeconomic factors as a independent variables are selected.

A. Sensex and GDP

Correlations

		Sensex	GDP_Rate
Sensex	Pearson Correlation	1	.408*
	Sig. (2-tailed)		.035
	N	27	27
GDP_Rate	Pearson Correlation	.408*	1
	Sig. (2-tailed)	.035	
	N	27	27

*. Correlation is significant at the 0.05 level (2-tailed).

The above table shows the relationship between the Sensex and GDP. It is founded that there is a positive relationship between the sensex and GDP rate, means increase in the GDP rate will also lead to increase in the sensex or the stock market. The relationship between both is 0.408.

B. Sensex and Average Inflation

Correlations

		Sensex	Avg_Inflation
Sensex	Pearson Correlation	1	-.169
	Sig. (2-tailed)		.399
	N	27	27
Avg_Inflation	Pearson Correlation	-.169	1
	Sig. (2-tailed)	.399	
	N	27	27

The above table shows the relationship between the Sensex and Average Inflation. The result shows that there is negative relationship between the avg. inflation and sensex, means increase in the inflation rate leads to the decrease in the stock market indicator. The relationship between both is -0.169.

C. Sensex and Unemployment

Correlations			
		Sensex	UnEmp_Rate_No
Sensex	Pearson Correlation	1	-.734[**]
	Sig. (2-tailed)		.000
	N	27	27
UnEmp_Rate_No	Pearson Correlation	-.734[**]	1
	Sig. (2-tailed)	.000	
	N	27	27
**. Correlation is significant at the 0.01 level (2-tailed).			

The above table represents the relationship between the Sensex and Unemployment rate. The result indicates that there is a negative relationship between the unemployment rate and the sensex as the correlation between factors is -0.734. It means that increase in the unemployment rate leads to the decrease in the stock market indicator i.e sensex.

D. Sensex and Exchange Rate

Correlations			
		Sensex	Exchange_Rate_US_IND
Sensex	Pearson Correlation	1	.794[**]
	Sig. (2-tailed)		.000
	N	27	26
Exchange_Rate_US_IND	Pearson Correlation	.794[**]	1
	Sig. (2-tailed)	.000	
	N	26	26
**. Correlation is significant at the 0.01 level (2-tailed).			

The above table represents the relationship between the Sensex and exchange rate. It is founded that there is positive relationship between the exchange rate and sensex as the correlation between factors is 0.794. It shows that the change in the exchange rate will result in change in the stock market price.

C. Sensex and Foreign Reserve

Correlations			
		Sensex	Forex_Reserve_in_Billion
Sensex	Pearson Correlation	1	.959[**]
	Sig. (2-tailed)		.000
	N	27	27
Forex_Reserve_in_Billion	Pearson Correlation	.959[**]	1
	Sig. (2-tailed)	.000	
	N	27	27
**. Correlation is significant at the 0.01 level (2-tailed).			

The above table represents the relationship between the Sensex and Foreign Reserve. The result indicates that there is a positive relationship between the foreign reserve and sensex. It can be said that increase in the foreign reserve will lead to increase in the sensex or stock market prices. The relationship between both is 0.959.

C. Sensex and Gold Prices

Correlations			
		Sensex	gold_prices
Sensex	Pearson Correlation	1	.918[**]
	Sig. (2-tailed)		.000
	N	27	27
gold_prices	Pearson Correlation	.918[**]	1
	Sig. (2-tailed)	.000	
	N	27	27
**. Correlation is significant at the 0.01 level (2-tailed).			

The above table represents the relationship between the Sensex and gold prices. It is founded that there is positive relationship between the gold prices and sensex as the correlation between factors is 0.918. It can be interpreted that change in the gold prices lead to change in the stock market prices, means increase in the prices of gold leads to increase in the stock market prices and vice-versa.

Findings

➢ The correlation between Sensex and GDP is positive that means GDP affects the movement in the sensex. Increase in GDP certainly leads to increase in the sensex and vice versa.

➢ The relationship between the dependent variable i.e sensex and independent variable i.e average inflation is negative. That shows

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negative movement in both variables. If there is an increase in independent variable, dependent variable behaves reversely.

➢ The correlation between Sensex and Unemployment rate is found to be negative as the correlation is -0.734. It means that increase in the unemployment rate leads to the decrease in the stock market prices or in sensex.

➢ The relationship between exchange rate and sensex is found to be positive as the correlation between factors is 0.794. Increase in the exchange rate may be result in the increase in the sensex as the relationship is positive between variables.

➢ The correlation coefficient is 0.959 that shows a positive relationship between the two variables i.e. sensex and foreign reserve. Increase in the foreign reserve will lead to increase in the sensex or stock market prices.

➢ The relationship between Sensex and gold prices is positive as the correlation coefficient is 0.918. So, with the increase in the gold prices, the stock market prices will also increase or there is up movement on the sensex.

Conclusion

To support the macroeconomic variables the govt. and the policy makers need to make strategies and policies that complement with macroeconomic framework and further support the Indian

stock market. In the report I study how macroeconomic factors affect the Indian stock market using the six factors i.e. unemployment rate, average inflation rate, gold prices, gross domestic product, exchange rate, and forex reserve.

It can be concluded all the macroeconomic factors has been taken for the study have the relationship with the Indian stock market and all the factors whether in positive and negative way affect the movement in the stock market prices. Both Unemployment rate and average inflation have inverse relationship with the sensex whereas all other factors show positive relationship.

In the report it has also been founded the global recession in the early 2000s and in the 2008 hit the Indian stock market, this is due to the macroeconomic variables as variables like gross domestic product fell down drastically and other variables are also get affected.

Further to have better returns on the stock market and to retain the Indian investors and foreign investors, government and other policy makers are needed to make policies in complement to the macroeconomic variables.

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MACRO ECONOMIC FACTORS AND SHARE PRICE BEHAVIOUR: A STUDY ON SELECTED INDUSTRIES IN INDIA

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ABSTRACT

Share Market Investment has become popular in recent days due to its higher return comparing with other traditional form of investment. However, it is a fact that the market does not pay guaranteed return like in the traditional form of investment. The ups and downs in the return are the phenomena of a share market investment. The fluctuations in the share market are influenced by several set of factors relating to company, industry as well as economy. Hence, the investors should take the note of these factors while investing. The present study is an attempt to find out the relation as well as the effect of macroeconomic factors on the share price of selected industries. The result of the study disclosed that the macroeconomic variables are having significant influence on the share price.

Key Words: Share Price, Macroeconomic factors, Regression analysis

INTRODUCTION

Share market investment has become an interesting option for the investors since its inception in India, particularly after the economic liberalisation. This is one of the major avenues of investment that yields considerable returns to investors. Making profit in the market is a top as well as a tuff game. An investor with an objective of maximising return and minimising risk wants to know when he should invest or when he should divest. To be successful in this game requires the knowledge of the forces that cause ups and downs in the share prices. The available literature suggests that, there are mainly two sets of factors responsible for change in share

price. They are micro and macro level factors. The micro factors refer to firm specific factors such as ; dividend, profit, leverage, size of the firm etc. and macro factors refers to the macro economic variables such as; GDP, IIP, Money supply etc. The study on both the categories of factors is important to predict the price change. Due consideration of such factors by investors is also felt while investing their funds, since this would aid them in making wise investment decision. As on march, 2014, equity investment by Indian households is about 7.8% of the total financial savings. The equity culture has spread in our nation, what was the earlier

concern of rich and privileged class is now becoming a matter of interest for millions of middle and low income groups. A well-developed equity market helps in the progress of economy and it provides investors with a range of assets with varying degree of risk, return and liquidity apart from enhancing savings and capital creation. In the view of economic development, it has become imperative to study the relation of stock price movement and the numerous macroeconomic indicators. The macroeconomic events influence investors' psychology and it affects their buying and selling decisions. Hence, in this context, current research is an attempt to examine the influencing power of macroeconomic factors on share price.

REVIEW OF LITERATURES

In the last few decades, numerous studies have been carried out to examine the dynamic relationship between stock market behaviour especially relating to share price and economic activities. Fama (1981) laid foundation stone in this regard to understand the relation of macroeconomic indicators and stock prices. He found a significant relationship between them. Following his study, a number of empirical studies explored this topic. Industrial production was found to be a significant factor for Italy and Netherlands. However, in case of UK, Switzerland and Belgium, the importance of macroeconomic factors did not improve their ability to forecast.

Sen (1996) examined the share price movement in India during 1985–1994 to ascertain the role of foreign capital vis - a - vis internal economic factors such as GDP growth, change in interest rate and exchange rate movements in determination of stock prices. By employing regression model, the result of the study disclosed that both industrial production and foreign exchange reserve are key determinants of stock market performance in India. Further, the study revealed that stock prices received significant support from foreign capital flows.

Ibrahim (1999) investigates the dynamic interactions between seven macroeconomic variables and the stock prices for an emerging market, Malaysia, using co-integration and Granger causality tests. The results strongly suggest informational inefficiency in the Malaysian market. The bi-variate analysis suggests about the co-integration between the stock prices and three macroeconomic variables – consumer prices, credit aggregates and official reserves.

Günsel and Çukur (2007) carried out a study to know the effect of macro-economic factors on the London stock return. It considers seven macro-economic factors such as 1. the term structure of the Interest rate 2. Inflation 3. risk premium 4. Sectoral Industrial Production 5. Exchange rate 6. Money supply and 7. Sectoral dividend yield. The Regression results of the study show that there are big differences among industry portfolios against macroeconomic

variables. Test results indicated that dividend yield is significant and negative at 1% significance level for all the industries namely 1. Food beverage & tobacco 2. Constructions 3. Building materials & Merchants 4. Electronics and electrical equipment 5. Engineering 6. Household goods & Textiles 7. Paper, Packaging & Printing 8. Chemicals 9. Diversified and 10. Oil exploration & production. Current unexpected inflation does not have any effect on the industry returns except Food, Beverage and Tobacco at 10% according to the test results. Risk premium has a positive effect on the return of Construction and Engineering. Effective exchange rate is an important factor to determine the international competitiveness. Our results imply that two sectors, Building Materials & Merchants and Engineering suffer because of the effective exchange rate movements. Current money supply has a positive effect on the return of Building Materials & Merchants, Food, Beverage and Tobacco, and a negative effect on the return of Household Goods and Textiles. One month lagged term structure of interest rate has positive effect on the returns of four industries, Construction, Food, Beverage & Tobacco, Oil Exploration & Production and Electronic & Electrical Equipment. Unexpected Sectoral production figures seem to have negative relation with Food, Beverage and Tobacco industry at 5% significance level.

Gay (2008) has tried to identify by investigating the time series relationship between stock market index and macroeconomic variables like exchange rates and oil prices of BRIC countries. He used the Box Jenkins ARIMA model and studied for 1999-2000. The study result disclosed that there was no significant relationship between respective exchange rate and oil rate on the stock market indices of BRIC countries.

Somoye, Akintoye and Oseni (2009) carried out a research study on the determinants of equity prices in Nigerian capital Market. Considering a sample size of 130 companies, the study disclosed that all the variables have positive correlation to stock price with the exception of lending interest rate and inflation rate.

The study of Hussainey and Ngoc (2009) is based on two important aspects of share price behaviour in the context of Vietnamese stock market where the study disclosed the positive relation of domestic industrial production and US industrial production on the Vietnamese stock price.

Rahman, Sidek and Tafri (2009) in their study they tried to explore the interactions between selected macroeconomic variables such as money supply, exchange rate, reserves and industrial production index and stock prices in Malaysia. The study reveals the linkage of all the variables with stock prices.

Büyüsalvarci (2010) tries to study the impact of macroeconomic variables in ISE-100 index of Turkish Stock Market by using multiple regression model to the monthly data from 2003 to March 2010.

The result of the study indicates that interest rate, industrial production index, oil price, foreign exchange rate have negative effect on ISE-100 index return, while money supply positively influence ISE-100 Index return. However, inflation rate and gold price do not appear to have any significant effect in ISE-100 index return.

The study of Singh, Mehta and Varsha (2011) on Taiwan stock market revealed the effect of exchange rate and GDP on stock return while inflation rate, employment rate and money supply have negative relation with stock return.

Inegbedion (2012) carried out a study on the macroeconomic determinants of stock price in Nigeria. With the time series data from 2001 to 2009, the study discloses the significance of only one variable i.e. exchange rate out of three variables such as interest rate, inflation rate and exchange rate which influences the stock price behaviour in Nigeria.

Darrat and Mukharjee (1986) in their study applied a vector auto regression model (VAR) on Indian data over 1948-1984 to find out the relationship between stock price and important macro economic variables like exchange rate (rupee / dollar), prime lending rate, narrow money supply and index of industrial production. The results of the study reported weak causality runs from IIP to share price index (SENSEX and Nifty) but not the other way round. In other words it holds the view that the state economy affects stocks prices.

The study of Rao and Jose (1996) observed that the coefficient of total small saving with government on current and non current account was found significant at one per cent level followed by other task variables such as index of industrial production, whole sale price index, foreign exchange reserve, aggregate deposits with commercial banks, inter-bank call money rate etc at 5% level of significance.

The results of the study conducted by Pethe and Karnik (2000) disclosed that only index of industrial production affects SENSEX and NIFTY. The study however, found no evidence of casualty between other macroeconomic variables and the stock price indices.

Chakrabarti (2001) in his study investigated the casual relationship between FII and stock market returns. The result of the study disclosed that in the pre Asian crisis period any change in FII had a positive effect on the equity returns. But in post Asian crisis period, the causation was reverse – equity returns rather caused FII.

Panda and Kamaiah (2001) in their study investigated the casual relationship and dynamic interactions among monetary policy, expected inflation, real activity and stock returns in the post liberalisation period using a vector-auto regression model. The study disclosed that, expected inflation and real activity affect stock returns, monetary policy losses its explanatory power for stock returns when expected inflation and real activity are present in the system.

Bhattacharya and Mukherjee (2002) in their study used Toda and Yamamato's long run Granger causality test to examine the casual relationships between SENSEX and five macroeconomic variables viz money supply, index of industrial production, national income, interest rate and rate of inflation using monthly data from 1992-93 to 2000-2001. The study result disclosed that index of industrial production causes SENSEX casuality, while there exists a bi-directional casualty between SENSEX and rate of inflation.

Mukhopadhyay and Sarkar (2003) conducted a systematic analysis of the Indian stock market in the pre and post liberalization period and the influence of macroeconomic factors on stock returns. The study result revealed that specifically for the post liberalization period, the real economic activity, inflation, money supply, FDI and the NASDAQ index were significant in explaining variations in Indian stock returns.

Mishra (2004) investigated the relationship between stock market and foreign exchange employing Granger causality test and vector auto regression tool for the period 1992-2002. The study disclosed that there exists a unidirectional causality between the exchange rate and interest rate and also between the exchange rate return and demand for money. Further, the study revealed that there is no Granger causality between exchange rate return and stock return.

The study of Kumar (2006) explained the market movement using the direction of the funds flow from foreign institutional investors and mutual funds in the Indian stock market. The result of the study revealed that institutional activity had an influence on the stock market and both foreign institutional investors as well as mutual funds had a significant impact on the market's direction. Further, by employing Granger causality test, the study disclosed that Indian Mutual funds are leading the pack and are giving direction to the market and even foreign institutional investors are following their direction.

In Sharma and Singh (2007)'s study, variables like foreign exchange reserve, exchange rate, index of industrial production, money supply and claim on private sector were found to have a considerable influence on the stock market movement. However, a few variables like interest rate and wholesale price index showed a very negligible influence on the stock market.

Sharma and Mahendru (2010) in their study employed multiple regression models to test the effect of a selected number of macroeconomic factors on stock price. The key macro economic variables used in the study were change in exchange rate, foreign exchange reserve, inflation rate and gold price. The study result disclosed that economic variables like exchange rate and gold price had significant effect on stock price as a whole. However, the result of the study disclosed that inflation rate and

foreign exchange reserve had no influence on the stock price.

The findings of the study of Srivastava (2010) conclude that emerging economics like India in the long run are more affected by domestic macroeconomic factors. The main domestic macroeconomic factors affecting the Indian stock market in the long run are industrial production, wholesale price index and interest rate.

The study of Hosseini, Ahmed and Lai (2011) on the relationship between market indices and four macro economic variables namely crude oil price, money supply, industrial production and inflation rate in China and India disclosed that, there exist both long and short term linkages between macro economic variables and stock market indices in each of these two countries.

Tripathy (2011) in her study reported that the Indian stock market is sensitive towards changing behaviour of international market, exchange rate and interest rate of the economy.

Gupta (2011) in his study employed a regression model to identify the significance of domestic and international factors on stock prices in India. He took SENSEX as the dependent variable and index of industrial production, rate of interest, rate of inflation and foreign institutional investment as explanatory variables. The empirical result disclosed that Indian stock market is mainly influenced by international factors such as foreign institutional investment. Domestic macro variables do

not have any significant influence on the stock market.

The study of Kalra (2012) on the impact of macroeconomic variables on Indian stock market is a comprehensive one. Considering explanatory variables such as Forex rate, CRR, Reserve Repo Rate, Gold Price, Wholesale Price Index (WPI), Oil rate, Inflation rate and GDP, the study disclosed the positive association of forex rate, inflation rate and gold price with the movement of Sensex.

The study of Trivedi and Behera (2012) on the determinants of equity prices of India is one of the recent attempt to examine the influencing role of Index of Industrial Production (IIP), Wholesale Price Index (WPI), Interest rate, Money Supply, Foreign Institutional Investor (FII), Morgan Stanley Capital International Index (MSCI) on the equity prices. Cointegration tests demonstrate that equity prices (BSE Sensex) are significantly related to all the macroeconomic variables considered in this study.

RESEARCH METHODOLOGY
Objective of the Study

The broad objective of the study is to identify and quantify the influence of selected macroeconomic factors on the equity share prices in the Indian stock market. Based on the review of empirical studies the prominent macro factors influencing the variations in share price are gross domestic savings (GDS), gross domestic product (GDP), inflation, foreign institutional investment (FII), net resources

mobilized by mutual funds (NRMF), gold rate (GR) and exchange rate (ER). The present study has also made a modest attempt to examine the impact of the above macroeconomic factors on the variations in share price in Indian stock market. For accomplishing the above objective, the study proposes to test the following relations between share price of selected industries and the macroeconomic variables.

1. Gross domestic saving (GDS) is expected to have a positive influence on share price.

2. Gross domestic product (GDP) is expected to have a positive influence on share price.

3. Inflation is expected to have a negative influence on share price.

4. Foreign institutional investment (FII) is expected to have a positive influence on share price.

5. Net resources mobilized by mutual funds (NRMF) is expected to have a positive influence on share price.

6. Gold Rate (GR) is expected to have a negative influence on share price.

7. Exchange rate (ER) is expected to have a negative relationship with the share price.

Hypothesis

For the purpose of the analysis, the following null and alternative hypotheses have been developed.

H_0: Share prices are not affected by any of the macroeconomic determinants.

H_1: Share prices are affected by any of the macroeconomic determinants.

The Model

Basing on the above hypothesis, the following linear equation has been developed for the purpose of the study.

$$SP = \alpha_0 + \alpha_1 \, GDP + \alpha_2 GDS + \alpha_3 ER + + \alpha_4 IR + \alpha_5 GR + \alpha_6 FII + \alpha_7 NRMMF + U_t$$

Where:

SP = Average Share Price

GDP = Gross Domestic Product

GDS = Gross Domestic Savings

ER = Exchange Rate

IR = Inflation Rate

GR = Gold Rate

FII = Foreign Institutional Investment

NRMMF = Net Resources Mobilised by Mutual Funds

U_t = Error Term

Study Period and Data Collection

The study was carried out by using the data from secondary sources such as the Database on Indian Economy maintained by RBI as well as from the websites of AMFI and SEBI for the purpose of macroeconomic variables. The share price data has been collected from the Prowess database maintained by CMIE. For the purpose of this research the data relating to gross domestic savings (GDS), gross domestic product (GDP), inflation, foreign institutional investment (FII), net resources mobilised by mutual funds (NRMMF), gold rate (GR) and exchange rate (ER) and share price of different companies

belonging to selected industries are collected, processed and analysed using MS Excel and SPSS-14. As such, the sample finally holds only 104 companies for which the much needed financial information were available for the entire study period i.e. from 1997-98 to 2012-13. The classification of sample companies based on industry groups is as follows:

Table-1 Industry Constituents for Sample Size

Industry Group	No. of Sample Companies
Automobile	27
Pharmaceutical	20
Textile	20
Infrastructure	20
Cement	17
TOTAL	104

Limitations of the Study:

The study is based on share price data obtained from CMIE Prowess data base for the sample companies. Similarly macroeconomic variables are collected from the database maintained by RBI, AMFI and SEBI. As such, the study possesses all the inherent limitations of the financial data collected from secondary sources. Non availability of the required financial data for the entire study period has restricted the size of the sample. Therefore, the limitations of the small sample are very much prevalent in this study. The presence or absence of auto-correlation problem in the study has been tested by the DW statistics. However, no attempt has been made in the study to remove them, in case their existence is felt. It is also unlikely that, the multicolinearity among independent variables might give rise to unexpected signs of the estimated coefficients. Further, the step wise procedure used in this study for selecting variables to include in a model is an extreme example of brute empiricism. It also suffers from being overly influenced by the specific characteristics of the variables being examined. Thus while using the findings of the study, one should be careful and use the same judiciously by taking the various limitations into consideration.

ANALYSIS OF DETERMINANTS

Having analysed the impact of micro factors on the share price behaviour, in the last section, this section of the analysis seeks to examine the impact of a selected number of macro factors on the share price behaviour of selected sample industries. Like micro factors, the macro factors have a significant influence on the share price in the market. This is an undeniable truth. The review of literature dealt in the previous section confirms to this fact. In the present analysis, an attempt has been made to quantify the impact of a selected number of macro factors on the share price behaviour of the sample industries, through the extensive use of stepwise regression analysis. It is a time series analysis, covering a time period of 16 years i.e. from 1998 to 2013. The normality assumption of the regression equation has also been

tested by using Normal P-P Plot of the residuals which has been depicted in Fig. no-1 and it is shown at the end of the paper. For the purpose of analysis, regression equation of the following form is estimated to draw inferences.

$$SP = \alpha_0 + \alpha_1 GDP + \alpha_2 GDS + \alpha_3 ER +$$
$$\alpha_4 IR + \alpha_5 GR + \alpha_6 FII + \alpha_7 NRMMF + U_t$$

Relevant data for estimation of the above model are fed into the computer using SPSS 14 software for drawing inferences.

Results for Automobile Sector:

It is evident from the results of the estimated regression model for the automobile sector that, macro variables namely GDP, GDS and NRMMF have turned out to be the most significant determinants of share price. Other variables namely ER, IR, GR and FII have failed to find place in the estimated equation. The regression coefficients of GDP, GDS and NRMMF have the appropriate positive signs and they together explain around 91% of the variation in share price in auto sector. The estimated regression model is also found to be statistically significant at 1% level, which is well evident from its F value. Moreover, the DW value discloses no autocorrelation problem in the estimated model.

Results for Pharmaceutical Sector:

It is evident from the Table – 1 that, the estimated regression model for pharmaceutical sector is found to be statistically significant at 1% level and explains satisfactorily the share price behaviour in pharmaceutical sector. The regression coefficients of macro variables namely exchange rate (ER), foreign institutional investment (FII) and net resources mobilised by mutual funds (NRMMF) have the hypothesised negative or positive signs. All the above three variables are found to be statistically significant. The value of the coefficients of determination (R^2) is found to be 0.956. This implies that, around 95% of variation in share price in pharmaceutical sector is explained by ER, FII and NRMMF. Moreover, there is no evidence of autocorrelation problem in the estimated equation.

Results for Textile Sector:

In textile sector, the estimated regression model is found to be statistically significant at 1% level and explains satisfactorily the variations in share price (Table-1). It is further observed that, the regression coefficients of the macro variables namely gross domestic product (GDP), exchange Rate (ER) and net resources mobilised by mutual funds (NRMMF) have the appropriate signs. All the above macro variables are found to be statistically significant. The regression coefficients of GDP and NRMMF are found to be significant with their hypothesised positive signs. However, the coefficient of exchange rate (ER) is found to be significant at 1% level with its hypothesised negative sign. The value of the coefficients of determination (R^2) is found to be 0.918.

This states that around 91% of the variation in share price in textile sector is well explained by GDP, ER and NRMMF. Moreover, there is no evidence of autocorrelation problem in the estimated equation.

Results for Infrastructure Sector:

In infrastructure sector, the results of the estimated regression model disclose that GDP, GDS and FII are the three prominent macro factors influencing the variation in share price. Other macro variables considered for analysis namely ER, IR, GR and NRMMF have failed to find place in the estimated equation. The regression coefficients of GDP, GDS and FII have the appropriate positive signs and all of them turned statistically significant. The estimated regression model is found to be statistically significant at 1% level. The value of the coefficient of determination is found to be 0.892. This precisely states that around 89% of variation in share price in infrastructure sector is explained by GDP, GDS and FII together. Moreover, there is no evidence of autocorrelation problem in the estimated equation.

Results for Cement Sector:

It is evident from the regression results disclosed in Table – 1 that, the key macro factors influencing the share price in cement sector are gross domestic savings (GDS), exchange rate (ER) and net resources mobilised by mutual funds (NRMMF). The regression coefficients of all these three macro variables are found to be statistically significant with their hypothesised positive or negative signs. The estimated regression model is found to be statistically significant at 1% level. The value of coefficient of determination (R^2) is found to be 0.973. This implies that, around 97% of variation in share price in cement sector is explained by the estimated regression model.

The above industry wise analysis of stepwise regression tests for macro factors disclose that, the key macro factors influencing the share price behaviour in selected sample industries are gross domestic product (GDP), gross domestic savings (GDS), exchange rate (ER), foreign institutional investment (FII) and net resources mobilised by mutual funds (NRMMF). However, the analysis failed to establish the significance of variables namely inflation rate and gold rate. In none of the industrial sector their impact was felt. It is observed from the regression results that, net resources mobilised by mutual funds (NRMMF) as a key determinant of share price is found in automobile sector, pharmaceutical sector, textile sector and cement sector. The significance of gross domestic savings (GDS) is found prominent in automobile and cement sector. Foreign Institutional Investment (FII) turned out to be a significant determinant of share price in pharmaceutical and infrastructure sector. Gross domestic product (GDP) is found to be a significant determinant of share price in automobile, textile and infrastructure sector. Moreover, the influence of exchange rate (ER) is found prominent in pharmaceutical, cement and textile sector.

Table 1: Industry wise results of Stepwise Regression tests for Macro Factors (1998 - 2013)

$$SP = \alpha_0 + \alpha_1 GDP + \alpha_2 GDS + \alpha_3 ER + \alpha_4 IR + \alpha_5 GR + \alpha_6 FII + \alpha_7 NRMMF + U_t$$

Industry Group	a_0 Constant	a_1	a_2	a_3	a_6	a_7	R^2	Adj R^2	F Ratio	DW
Automobile Sector	- 222.489	0.523* (3.275)	0.427** (2.982)			0.656* (3.723)	0.913	0.907	147.251*	1.825
Pharmaceutical Sector	- 160.278			-.523** (-2.762)	0.457** (2.595)	0.942* (10.555)	0.956	0.923	111.31	1.782
Cement Sector	1099.266		0.926* (8.721)	- 0.157** (-2.793)		0.216* (4.108)	0.973	0.966	167.966*	1.821
Textile Sector	28.868	1.223* (11.146)		-0.453* (- 4.445)		0.261** (2.875)	0.918	0.898	44.855*	1.732
Infrastructure Sector	- 456.277	0.878* (7.251)	0.561* (3.332)		0.598** (2.791)		0.892	0.878	62.122*	1.875

Notes:

The above table discloses the industry wise standardised estimated regression parameters of the "Model of goof fit" only. Other estimated models have been ignored for analysis.

Figures in parentheses denote 't' values

* Significant at 1% level   ** Significant at 5% level

FINDINGS AND CONCLUSION:

Table- 2 Summary Results for Macro Factors

INDUSTRY GROUP/VARIABLES	GDP	GDS	ER	IR	GR	FII	NRMMF
AUTO	S*	S**					S*
PHARMACEUTICAL			-S**			S**	S*
TEX	S*		-S*				S**
INFRA	S*	S*				S*	
CEMENT		S*	-S**				S*
TOTAL	3	3	3	0	0	2	4

Source- Compiled from Table-1
s* - Significant at 1% level
s**- Significant at 5% level

The summery results of industry wise analysis for the macro variables are displayed in the table- 2. From the table it can be found that gross domestic product (GDP), gross domestic savings (GDS), exchange rate (ER), foreign institutional investment (FII) and net resources mobilised by mutual funds (NRMMF) are the key macro factors influencing share price behaviour in the selected sample industries. However, the analysis failed to establish the significance of variables namely inflation rate (IR) and gold Rate (GR) in any one of the sample industries chosen for the study. It is further observed from the regression results that, net resources mobilised by mutual funds (NRMMF) as a key determinant of share price is found in automobile, pharmaceutical, textile and cement sectors. The significance of gross domestic savings (GDS) is found prominent in automobile and cement sector. Foreign institutional investment (FII) turned out to be a significant determinant of share price in pharmaceutical and infrastructure sector. Gross domestic product (GDP) is found to be a significant determinant of share price in automobile, textile and infrastructure sector. Moreover, the influence of exchange rate (ER) is found prominent in pharmaceutical, cement and textile sectors. The result of the study shows the expected signs as discussed in the objective section of this paper. The current study can be extended by analysing more industries for theoretical development.

Fig-1 Normal P-P Plot of Regression Standardised Residuals for Macro Variables (TEXTILE SECTOR)
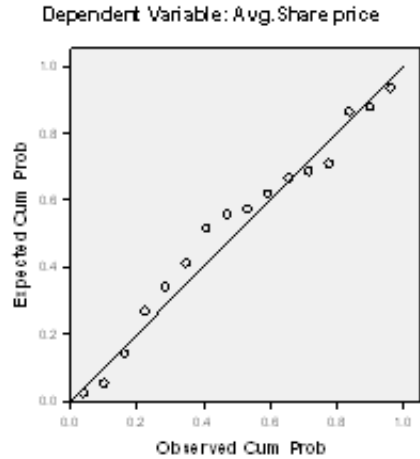
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: avg price

(PHARMACEUTICAL SECTOR)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: avg price
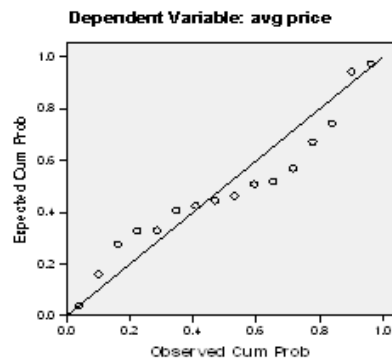
(AUTOMOBILE SECTOR)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Avg. Share price

(INFRASTRUCTURE SECTOR)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable : avg price
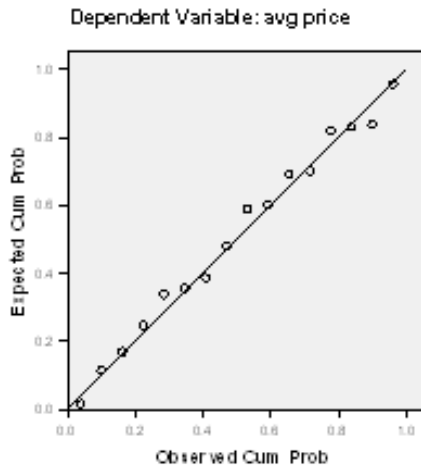
(CEMENT SECTOR)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: avg price
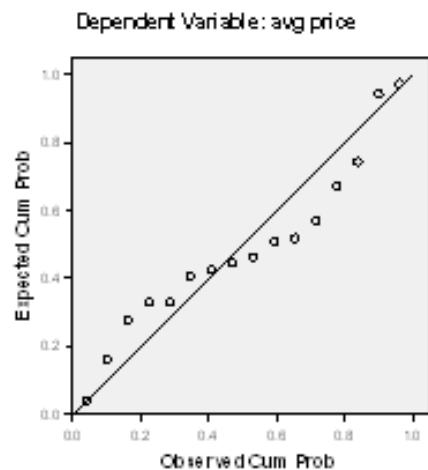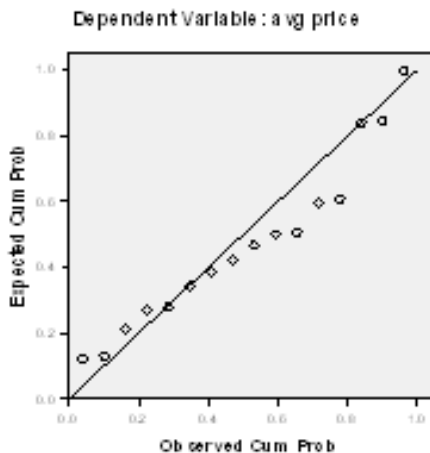
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INFLUENCE OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE

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ABSTRACT

Financing decision is one of the important areas in financial management to increase shareholders' wealth. Firms can use either debt or equity capital to finance their assets. The purpose of the study is to find out the determinants of capital structure and its impact on financial performance. We have used secondary data and taken 50 top manufacturing companies for our study. Regression model has been used to study the relationship and impact of capital structure on profitability. The study concludes that there is a significant relationship between capital structure and profitability and capital structure has significant impact on financial performance of sample companies.

Keywords: *Financial Management, Shareholder's Wealth, Equity Capital, Debt, Capital Structure, Financial Performance*

INTRODUCTION

The basic aim of starting a business is earning profit for which the proprietor has to sacrifice or invest some amount of money in the business. Money invested helps in acquiring resources i.e. assets. The assets of the business are used in process of production, distribution and in the operation of the business. The funds to be invested are procured from various sources. The source can be promoter himself or outsiders to the business. Those funds are the input to business which will provide the expected output. This input is termed as capital/financial capital. The source of financial capital can be of two types- owned capital and borrowed capital. Owned capital is raised from owners (promoters/shareholders) also known as owner's equity and borrowed capital is raised from lenders or investors known as debt fund or outsider's equity. The capital can be of various types on the basis of time such as long term capital, medium term capital & short term capital. Long term capital is basically obtained by issuing share capital, debenture capital,

venture capital mortgage, retained earnings etc. The term loan, leasing, Bank overdraft, trade credit, factoring etc. are the sources of Medium and short term capital. All these mix of sources of funds is known as financial structure. The portion of finance structure consisting of long term capital can be said as capital structure.

The capital structure is the combination of equity capital and debt capital. The proportion of debt and equity in capital structure varies from firm to firm and time to time. A firm can adopt a capital mix of either 100% equity and zero debt or 100% debt with zero equity or any combination of both. Equity financing is less risky in the sense of cash flow commitments, but results in a dilution of ownership and earnings where as debt capital creates an obligation or liability with low-cost and high risk. It is a very important component of corporate finance. Long before 50 years financial management has not got that much importance and deals with only procurement of funds but at present it has taken the basics of any business including procurement, utilization and control of finance. So it directly affects the performance of business organization. That's why finance manager should take a decision of optimal capital mix which will increase the financial Performance.

REVIEW OF LITERATURE

Goyal, (2013) made a study entitled "Impact of Capital Structure on Performance of listed Public Sector Banks in India" with the purpose to measure the impact of capital structure on banking performance. He has taken 19 PSU banks listed on NSE as the sample for the study. It is concluded that the profitability measured by return on equity (ROE) reveals an average of 17.98 percent with median of 18.19 percent. This picture may suggest a good performance during the period under the study. The average value of TDC variable is 18.66 with median of 17. This position reveals that the banks are financially leveraged with a large percentage of total debt being short-term. The average growth is 21.29 and the average firm size is measured by logarithm of assets.

Mohamed & InunJariya, (2015) studied the "Effect of Capital structure on profitability of Food and Beverage sectors in Sri Lanka" by taking 14 companies of the Beverage, Food & Tobacco industry and 24 companies from the Manufacturing industry. They conducted the study to find out the relationship between profitability of the listed Beverage, Food and Tobacco industry in Sri Lanka and capital structure and to recognize the impact of capital Structure on the profitability of the Food and Tobacco industry and listed Beverage, in Sri Lanka. The study revealed that total debt to asset (TDA) has a negative impact on return on equity (ROE) and return on capital employed (ROCE) and is significant at 0.05 significance level whereas leverage, measured by total debt to equity (TDE) shows a negative relationship but not significant. TDA is also

found out a negative impact on profitability measured by ROCE after controlling for LNS at 0.01 significant levels. It is clear that both the measures of leverage (TDA & TDE) have negative impact on both the measures of profitability (ROE & ROCE). The value is less than 0.01 for all the cases. Therefore, it could be concluded that at 1% significance level, leverage/debt capital has a negative impact on the profitability of beverage, food and tobacco sector firms listed on Sri Lanka**.**

Babalola, (2012) in their research on "The Effects of Optimal Capital Structure on Firm's Performances in Nigeria" examined an optimal capital structure to maximize the performance of selected firms under the same systematic risk. They found a strong curvilinear relation between ROE and the debt-to-assets ratio. The theory predicts that the value of firms will first increase, then decrease, as debt ratio increases. Most existing papers on capital structure require firm's performance or firm's value to bear the linear relation with debt ratio, but the empirical evidence does not support this. In contrast, there is an evidence that the quadratic relations are significant, yet these have not received much attention in the finance literature

Kumar, (2015) made a study entitled "Capital Structure and its Impact on Profitability". The study has made with the objectives of identifying the relationship between profitability and capital structure of SME, finding an optimal capital

structure that would be associated with the best performance, finding an optimal capital structure that would be associated with the best performance and finding out the impact of capital structure on the profitability. Data collected from some secondary sources studied from 2008 to 2013 and it is concluded that the debt/equity composition varies substantially among the SME and there is significant relationship between Debt to total funds and ROE. There is no relation or there is insignificance between debt to total funds and ROCE.

Habib et al, (2016) made a study entitled "Impact of debt on profitability of firms; evidence from non-financial sector of Pakistan". This study focuses on expanding the existing empirical knowledge on the impact of debt on profitability of companies by taking 340 firms listed on the KSE. The study analyzed the financial statements of all the sample companies to find out the influence of debt on the profitability of concerned firms. It is concluded that there is a significant but negative relationship between debt and profitability, thus, the higher the debt, the lower the profitability.

Movalia, (2015) conducted a study on " Capital structure analysis and profitability of Indian Tyres Industry" with the objective to know the Debt-Equity ratio of listed Tyre Companies, to measure profitability of Tyre industry, to measure the impact of debt-equity ratio on profitability of listed companies in the

Tyre industry. The study was based on descriptive and analytical research design which found out that debt-equity ratio of the company is having significant impact on profitability of Tyre companies in India. MRF, Apollo Tyres, Dunlop India and Modi Rubber having Ideal capital structure, so respectively they are having good profitability.

RESEARH GAP

Many studies have been conducted on the impact of management & control, Costing technique, marketing strategy, employee performance on profitability but very few researches have been made on impact of capital structure on profitability in India. Those studies made on this topic are basically on different industries like SME, Food & beverages industry, IT industries,

Tyre industries etc but a few studies have been taken on manufacturing sector or service sector in common.

STATEMENT OF THE PROBLEM

In India, a few studies have been undertaken to establish the relationship between optimum capital structure and performance variables like ROE, ROA, and ROCE etc. So, the study is an attempt to analyze the relationship between capital structure and performance variables to understand and evaluate the impact of capital structure on various performance variables.

IMPORTANCE OF THE STUDY

The present study mainly analyses how far the capital structure affects the profitability of corporate firms in India.

Table 1: STATIONERITY TEST RESULTS

Variables	ADF Statistics	P Value	Order of Integration
ROA	8.54	0.0000	I(0)
ROE	8.35	0.0000	I(0)
ROCE	7.89	0.0000	I(0)
EPS	20.63	0.0000	I(0)
CURRENT RATIO	22.06	0.0000	I(0)
DEBT EQUITY RATIO	20.78	0.0000	I(0)
LD – TA	9.30	0.0000	I(0)
TD - TA	9.15	0.0000	I(0)

Source: Author Computation from Computer output

Table 2: DESCRIPTIVE STATISTICS

	ROA	ROE	ROCE	EPS	CR	D/E	LD-TA	TD-TA
Mean	9.46	22.63	15.59	54.27	1.88	0.75	13.56	27.80
Std. dev	7.35	16.96	14.51	238.53	5.73	2.00	13.12	24.61

Source: Author Computation from Computer output

Asset size and business revenue would appear to be the important factors in determining the profitability of corporate firms. This is a benchmark of performance by seeing which investors and lenders invest in business. In India, a few studies have analyzed the relationship between asset size and business revenues on the impact of capital structure and Profitability. Though many research studies have been undertaken in the field of capital structure, only a very few studies have been undertaken to analyze the association between capital structure and Profitability.

Therefore, this study is a maiden attempt to analyze the

- Profitability of the firms.
- Significant relationship among different sized firms in terms of capital structure and Profitability.

The study constitutes an attempt to provide an empirical support to the hypothesized relationship between capital structure and Profitability. Is there any significant difference in the impact of capital structure on Profitability of manufacturing firms in India? How far does the capital structure affect the business revenue of firms, and what is the inter-relationship between capital structure and Profitability.

OBJECTIVES OF THE STUDY

- To identify the determinants of capital structure.
- To measure the impact of capital structure on financial performance.

RESEARCH METHODOLOGY

Sources of Data

Secondary data have been used for the study. The required data have been collected from money control website. The

Table 3: Multicollinearity Test

Independent Variables	Variance Inflation Factor
Debt Equity Ratio	1.0557
Current Ratio	1.0023
Longterm Debt _ Total Asset	1.4398
Total Debt _ Total Asset	1.4510

Source: Author Computation from Computer output

Table 4: Regression Result

Independent	Multiple R	R Square	Adjusted R	P Value
ROA	0.507441323	0.257496696	0.25149667	6.44e-31 < 0.05
ROE	0.31239629	0.09759144	0.09029925	2.31e-10 < 0.05
ROCE	0.461304	0.212801	0.20644	1.02e-24 < 0.05
EPS	0.072391	0.00524	-0.0028	0.625743

Source: Author Computation from Computer output

data have been taken from the financial reports of the sample companies.

Sample Design

Considering the availability of data, a study period of 10 years has been taken. 20 firms selected out of 100 listed firms on the basis of market capitalization, 20 firms out of top 100 firms on the basis of total assets employed and 10 firms from list of top 100 firms on the basis of revenue & growth have been selected. So, in total we have taken 50 manufacturing companies for our study.

Variables

Dependent variables (Financial Performance variables)

ROA- Return on Asset

ROE- Return on equity

ROCE – Return on Capital employed

EPS- Earning per Share

Independent variables (Capital Structure)

CR - Current ratio

LD _ TA - Long term debt to Total assets

TD _ TA - Total debt to Total assets

DER - Debt equity ratio

Econometric Model

$$Y_e = â_0 + â_1 DER + â_2 CR + â_3 LD\_TA + â_4 TD\_TA + å$$

Where,

Y_e = Profitability Variables (ROA, ROE, ROCE, EPS)

$â_0$ = constant or the value of Y when all values of X are zero

$â_1, â_2, ……..$ = Slope of the independent variables

DER = Debt – Equity Ratio

CR = Current ratio

LD_TA = Long Term Debt to Total Asset

TD_TA = Total Debt to Total Asset

Å = The error term

Statistical Measures

- Multicollinearity test- To study the inter-dependence among independent variables

- Stationery Test – To find out whether the data has a unit root or not.

- Descriptive Statistics **-** Descriptive statistics are used to describe the basic features of the data in a study. SPSS test has been used to calculate descriptive statistics.

- Multiple regression technique- for analysis of degree of impact of capital structure on profitability.

Software used for Data Processing

- **SPSS -** SPSS helps to determine regression analysis, Multicollinearity Test and Descriptive Statistics.

- **Eviews9.5 -** It helps to determine the unit root test.

HYPOTHESIS

H^1_0 There is no relationship between ROA and capital structure variables.

H^2_0 There is no relationship between

ROE and capital structure variables.

H^3_0 There is no relationship between ROCE and capital structure variables.

H^4_0 There is no relationship between EPS and capital structure variables.

DETERMINANTS OF CAPITAL STRUCTURE

Financial Leverage: It means the use of borrowed capital to increase the sales and earnings. The use of more debt component in the business magnifies the earning of shareholders. The more and more debt a company uses, the higher its financial leverage but at the same time the risk of high interes payment arises which negatively affect the company.

Growth & Stability of Sales: The growth and stability in sales is a measure factor for capital structure of firms. If a company is having fair sales then it can raise a high level of debt and vice versa.

Cost of Capital: It means minimum rate of return that one investor should expect on his investment. It should provide minimum cost of capital.

Cash Flow: The firm which can generate stable cash inflows, they have more opportunity to employ more debt in its capital structure as compared to the one which has unstable and lesser ability to generate cash inflow.

Nature and Size of a Firm: Nature and size of a firm influence the capital structure. Public sector firms may employ more debt as comparison to private sector firms because of stability and regularity of their earnings.

Flexibility: It means the firm's ability to adopt the capital structure according to the changing conditions. The capital structure is flexible if it has no difficulty in changing its sources of funds.

Requirement of Investors: The requirement of investors influences the capital structure of a firm. It is necessary to meet the requirements of both institutional as well as private investors when debt financing is used.

Capital Market Conditions: Capital Market Conditions affects the firm's capital structure. The conditions are different as it is dependent on market and pessimistic business conditions.

Inflation: Inflation is a major factor that should be considered at the time of financing decision. During the high inflation period if one company is using more debt financing then they have to repay the debt with rupees more than what they have taken.

DATA ANALYSIS

Stationery Test

This paper has used Augmented Dickey – Fuller test to find out the stationary of data.

H_0: Data has unit root.

H_1: Data has no unit root.

We have found all the data are stationery at level because the test statistics is lower than the critical values. So, we will reject

null hypothesis H_0. So, we can conclude that the above paper has no unit root. Therefore, we can run regression.

Descriptive Test

Table no 2 gives the summary of the descriptive statistics of the data used in this study. The above table shows that the mean and standard deviation of EPS is 54.27 and 238.53. It shows there is no consistency in EPS. The TD-TA is not consistent to some extent as the standard deviation is more with comparison to mean value. Current ratio, Debt Equity ratio, LD-TA, ROA, ROCE, ROE shows consistency as their standard deviation is satisfactory.

Multicollinearity Test

In the study four independent variables have been taken. We first run regression equation to find out if there is any Multicollinearity among the independent variables.

From table no 1 it is observed that VIF value of independent variables is less than the rule of thumb 10. Hence there is no Multicollinearity between independent variables and all the variables are eligible for running regression equation.

Regression Results

From the regression table as given above it is found that there is a positive relationship between ROA and all independent variables (D/E, CR, LD_TA, TD_TA) as evident from R^2 i.e. 0.257496696. This indicates around 25

% (approx) of ROA is contributed by independent variables. It can be said that a unit change in capital structure leads to a change of 25% in ROA which is very significant. Here p value is 6.44E-31 i.e. $p<0.05$. It implies that there is a significant relationship between ROA and all independent variables collectively. Hypothesis 1 predicts that "There is no relationship between ROA and CS variables". The above results confirm that this hypothesis is rejected and alternative hypothesis is accepted i.e. there is a significant relationship between ROA and CS variables.

The above table propounds that there is a positive relationship between ROE and all independent variables i.e. 0.09759144. It means around 10 % (approx) of ROE is contributed by independent variables. So it can be said that change in a unit of capital structure will lead to 10% change in ROE. Return on equity is the basic indicator of profitability, but only 10% is affected by these variables. The remaining 90% change may be due to other variables like competition from the market, state of economy, promotion of the company which influences volume of sales, cost of raw materials, labour etc., and the impact of which is not considered in this study. Here p value is 2.31E-10 i.e. $p<0.05$. It concludes that there is a significant relationship between ROE and all independent variables. Hence H_0^2 'There is no relationship between ROE and CS variables is rejected and alternative

hypothesis is accepted i.e. There is a significant relationship between ROE and independent variables.

We find that there is a positive relationship between ROCE and all independent variables from the regression table i.e. R^2 0.212801 i.e. this shows around 21% (approx) of ROCE is contributed by independent variables. It also signifies the level of significance between ROCE and all independent variables is 1.02E-24 i.e. $p<0.05$. It denotes that there is a significant relationship between ROCE and all independent variables. The above result concludes that the null hypothesis H^3_0 is rejected. So, alternative hypothesis is accepted i.e. there is significant relationship between ROCE and independent variables.

There is a positive relationship between EPS and all independent variables as evident from adjusted R^2 0.00524 i.e. this indicates around 1 %(approx) of EPS is contributed by independent variables which is very negligible. Here we can see the effect of these variables on EPS is very insignificant. A change in capital mix does not incur much change in EPS. There may

be some other variables like dividend decision, state of economy etc. which we have not considered here in our study. The p value is 0.625743 i.e. $p>0.05$. It signifies that there is no significant relationship between EPS and all independent variables collectively. Thus, we conclude that the null hypothesis is accepted.

ANOVA

ROA = 14.02 + 0.01 CR – 0.31 D/E – 0.15 LDTA – 0.08 TDTA

Here C is the estimated constant of the regression and the value of C is 14.02. The current ratio shows positive contribution towards return on asset. The current ratio co-efficient is 0.01, it means 1 unit change in current ratio leads to 0.01 unit change in ROA.. D/E, LDTA, TDTA contributes negatively towards ROA.

ROE = 28.90 - 0.05 CR – 0.34 D/E – 0.32 LDTA – 0.05 TDTA

The constant intercept is 28.90. All the independent variables contributes negatively towards return on equity. Here Debt Equity co-efficient is -0.34. It means 1 % change in D/E leads to -0.34% change in ROE. The CR, LDTA, TDTA co-

Table 5: ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	14.02340	0.466418	30.06616	0.0000
CR	0.013170	0.049679	0.265097	0.7910
DEBTEQUITY	-0.317046	0.145861	-2.173615	0.0302
LDTA	-0.153603	0.026042	-5.898260	0.0000
TDTA	-0.081199	0.013941	-5.824443	0.0000

efficient is -0.05, -0.32, -0.05.

ROCE = 23.94 - 0.07 CR – 0.53 D/E – 0.29 LDTA – 0.13 TDTA

The intercept value is 23.94. The CR, D/E, LDTA, TDTA co-efficient value is – o.07, -0.53, -0.29, -0.13. Debt equity ratio impacted negatively towards ROCE most. 1 unit change in D/E brings -0.53 unit change in ROCE.

EPS = 73.13 - 0.60 CR + 4.16 D/E – 0.61 LDTA – 0.45 TDTA

The constant co-efficient value is 73.13. Debt Equity ratio contributes positively towards Earning per share. The Debt Equity co-efficient is 4.16. It means 4.16 unit changes in EPS due to 1 % change in D/E ratio. All other independent variables affected negatively towards EPS.

Table 6: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	28.90886	1.186455	24.36574	0.0000
CR	-0.051306	0.126373	-0.405990	0.6849
DEBTEQUITY	-0.348407	0.371036	-0.939013	0.3482
LDTA	-0.324043	0.066245	-4.891606	0.0000
TDTA	-0.054548	0.035463	-1.538162	0.1246

Table 7: ROCE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.94425	0.947749	25.26433	0.0000
CR	-0.073647	0.100947	-0.729560	0.4660
DEBTEQUITY	-0.539850	0.296386	-1.821441	0.0691
LDTA	-0.298611	0.052917	-5.643022	0.0000
TDTA	-0.134862	0.028328	-4.760717	0.0000

Table 8: EPS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	73.13923	17.50997	4.177004	0.0000
CR	-0.607986	1.865036	-0.325991	0.7446
DEBTEQUITY	4.160480	5.475829	0.759790	0.4477
LDTA	-0.611410	0.977655	-0.625384	0.5320
TDTA	-0.451779	0.523369	-0.863212	0.3884

Source: Author Computation from Computer output

FINDINGS

- There is a significant relationship between ROA, ROE, ROCE and Capital Structure Variables.

- There is no relationship between EPS and Capital Structure variables.

- Capital structure variables have approximately 25% impact on profitability variables on an average.

CONCLUSION

The study results reveal significant relation between capital structure and profitability. These findings imply that change in debt and equity position is associated with the profitability. Every firm should follow optimum capital structure which maximizes their profitability and reduce costs. The debt and equity capital should be selected carefully by organizations. The capital structure decision is crucial for any business organization. The capital structure of a concern depends upon a large number of factors such as leverage or trading on equity, growth of the company, nature and size of business, the idea of retaining control, flexibility of capital structure, requirements of investors, cost of floatation of new securities, timing of issue, corporate tax rate and the legal requirements.

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SWACHHA BHARAT GRAMIN: A BUDGET ANALYSIS OF INDIA'S SANITATION PROGRAM, ODISHA STATE

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ABSTRACT

This paper examines changes in spending patterns of Indian Government in the Ministry of Drinking Water & Sanitation for the period 2013-14 till 2015-16 and the thrust moving from drinking water to sanitation; it also examines the expenditure patterns of the different components in rural sanitation in the state of Odisha specifically. It traces the trajectory of increased budgeting of the GOI since 2014 on sanitation, but initially decreased spending in sanitation by the states, due to late release of funds; it also examines the sudden surge in expenditure in the states particularly Odisha in the area of sanitation from 2015-16 which translated into improved infrastructure and better coverage particularly in individual household toilets.

A component wise analysis shows the uneven patterns of expenditure with more investment on infrastructure, particularly household toilets which has no doubt helped in combatting open defecation, but low spending in areas like Information Education and Communication (IEC) and a complete neglect of environmental considerations by no spending in Solid And Liquid Waste management standing as obstacles in real behavioural change in the state of Odisha. The paper comes up with recommendations to review component wise spending and ensure greater convergence for better delivery.

Key Words – *Budget, Component, Expenditure, Health, Sanitation, Water*

INTRODUCTION

Is there any relationship between sanitation, health, nutrition, and our well being? It has been found that drinking contaminated water and not appropriately disposing human excreta, lack of proper hygiene and improper disposal of waste, both solid and liquid can be the major cause of many diseases.

Governments in India have consistently spent sizeable allocations in the area of drinking water and sanitation, but in spite of this around 595 million people, which are nearly half the population of India, defecate in the open (UNICEF: 2011); and Census 2011 (GOI: Census 2011) reports that that 22 % of rural households have to walk more than 500 metres to fetch drinking water.

India accounts for 90 percent of the people in South Asia and 59 percent of the 1.1 billion people in the world who practice open defecation (Banerjee et al 2013). Though sanitation missions are as old as the formation of the Indian state, and have in each 5 year plan addressed the component of sanitation, but the emphasis was first on drinking water and shifted majorly to sanitation only in 2015 with the Swaccha Bharat Mission (SBM). The figures in both areas (Drinking water and Sanitation) still leave a lot to be desired and India was one of the major defaulters in the Millennium Development Goals (MDGs).

Since 2015-16 with increased allocation for sanitation, there has been a marked decline in the drinking water allocations of the Government of India (GOI) and this could have grim impacts, considering the recent drought- situation in India, increasing the drinking water crisis and even leading to slip-backs in toilet usage. Further, the Parliamentary Standing Committee on Rural Development in the 23rd Report on the Ministry of Drinking Water and Sanitation in May, 2016 takes note of the repercussions of the decline in the Union Budget allocation for drinking water programme in rural India. Concerns have also been expressed on the quality of water which is being addressed by a sub-mission of the National Rural Drinking Water Programme, (NRDWP). (Agarwala: 2017)

The sanitation missions at both the state and national level have seen a major boost not in just their budgets, but also in the thrust of official attention. A Component wise analysis of different budget heads under sanitation, with the emphasis on the state of Odisha, shows large increases in toilet coverage at the household level in the state, and precipitous rise in total spending on sanitation, but poor coverage in public toilets including schools and Anganwadis (Day care centres).

Note must also be taken of previous failures of missions like the Total Sanitation Campaign launched in 1999 where it was reported that 81 million households constructed toilets at the end of the 11th plan period. But this data was subsequently found to be incorrect. The decade infact saw progress being turned upside down and ironically an increase in the number of rural households without latrines by 8.3 million. (Arjun: 2015) Considering these statistics, more than infrastructure, behavioural change has to be the key. And will a limited focus on household infrastructure alone change behaviour patterns when there is very limited emphasis on public toilets.

Hypotheses

1. As a result of greater emphasis and policy thrust on rural sanitation post Swacha Bharat Mission, there was increased spending in sanitation in the state level at Odisha from 2015-16, inspite of delays in fund disbursement, following patterns of previous years.

2. Increased spending on sanitation saw an emphasis on building of household level toilets, without concomitant spending on public utilities of sanitation and waste management.

Literature Survey

There has been substantial scholarship establishing the causal relationship between poor sanitation and human health. Jamie Bartram et al, argue in their paper, "Focusing on Improved Water and Sanitation for Health", "that a silent humanitarian crisis kills some 3900 children every day and thwarts progress towards the MDGs (now changed to SDGs- Goal 6) especially in Asia and Africa". They reiterate that the basis of this catastrophe is that 4 of every 10 people in the world do not have access to even a simple pit latrine and almost 2 in 10 have no access to safe drinking water. They reveal that far more people are victims of these conditions than terrorism or weapons of mass destruction, but these have not captured the public and political imagination and public resources, the way the more politically volatile issues have. (Bartram et al: 2005)

Mishra and Ghadai, in "Merit Goods, Education Public Policy– India At Cross Roads", show that there is a significant reduction in the Indian budget in different sectors including swacha bharat and state that the reason given by the Indian Finance Minister, is that with increased allocations by the 14th Finance Commissions in areas like education, health and sanitation, the states should take the initiative. (Mishra, Ghadai: 2015)

In a study on, "Health, Nutrition and Prosperity: A Microeconomic Perspective", Duncan Thomas and Elizabeth Frankenberg put forth the view that "health and economic prosperity are congruent". They opine that in both micro and macro data, ample evidence is present that a wide range of health indicators has a positive correlation with diverse dimensions of economic prosperity. "Isolating the causal pathways that link health and economics has been a core issue. Causality runs in both directions is likely". They say that higher income individuals invest more in human capital, including health: as incomes grow, more is invested on better diets, improved sanitation and good health care, leading to better productivity. (Thomas, Frankenberg: 2002)

Lack of sanitation leads to disease, was first noted scientifically in 1842 in Chadwick's seminal work. (Mara et al: 2010) "Report on an inquiry into the sanitary condition of the labouring population of Great Britain". (Chadwik: 1842) A less scientifically rigorous but nonetheless professionally significant indicator of the impact on health of poor sanitation was provided in 2007, when readers of the BMJ (British Medical Journal) voted sanitation as the most important *medical* milestone since 1840. (Ferriman: 2007)

Methodology

Based on the rationale of examining the spending patterns, to understand the relationship between money spent and targets achieved, a detailed analysis of the MoDWS data for the State of Odisha was

initiated with a look at a cross section of performance at a district level and budgets spent on different heads. The achievements of each district were tabulated against the money spent.

The study in its' nature is exploratory; carried on to develop an understanding of whether the significant decline in the budgets of the MoDWS in 2015-16 and a precipitous decline in the drinking water budget, affect the outreach of drinking water to hitherto unreached areas, and in tandem affect public health. It also explores the changing patterns of investment in water and sanitation and the need to emphasise on behavioral change to ensure sustainability, through the consideration of expenditure data. On this basis the districts were ranked on the different components under the water sanitation mission like HHs covered under toilets, Information, Education and Communication material available (IEC), Solid and Liquid Waste Management (SLWM), etc. After the districts were ranked, a second stratification on performance and geographical location was made to ensure that the sample was inclusive from a geo-political perspective.

The data for the concerned study are secondary in nature and collected from the Ministry of Drinking Water Sanitation (MDWS), Government of India, website (http://sbm.gov.in/sbm/). All the data has been analyzed using simple arithmetical techniques such as percentages and with the help of excel.

Sampling:

For the purpose of this analysis, initially stratified sampling process was adopted, based on two stratification variables:

1. **Performance** - the first criterion taken into consideration is performing, less performing and non performing districts with regard to sanitation expenditure and toilet construction. Districts chosen – Angul, Balasore for good performance and Koraput, Malkangiri for poor performance.

A comparison of Odisha data with the state of Rajasthan was done, as Rajasthan was found to have incurred the maximum expenditure in 2105-16, if seen from a component wise break up of sanitation data, as well as overall spending patterns also, followed by Odisha.

2. **Geographical location (Zone)-** Different geo- political regions was the second consideration, along with pockets of high concentration of Scheduled tribes and castes. Samples were taken from all the five geo-political zones, Southern, Western, Northern, Central and Coastal Odisha. The districts of Koraput, Malkangiri and Ganjam have been chosen as samples for South Odisha, and with the first two districts being entirely scheduled areas with more than 50% tribal population; Sundergarh for Northern Odisha also a scheduled district with high tribal population, and home to industrial infrastructure and rapid urbanization. Balangir and Bargarh for Western Odisha with high Scheduled caste populations,

Kandhamal for Central Odisha and Cuttack and Khordha from Coastal Odisha with Khordha also home to the State headquarters, Bhubaneswar.

A comparison with the expenditure data of Jharkhand, which is bordering Odisha and also has similar composition of ethnic groups, has been done to understand the patterns of investment and thrust in two similar states.

After the initial stratified sampling process, the 11 districts and two states have been chosen based on purposive sampling process. The criterion used for the purposive sample was the best and the worst performers as regards to expenditure and the geo-political representation.

Discussions, Policy Implications

Declining trend in allocations for Drinking water in the Budgets:

From FY 2013-14 to FY 2014-15, the total allocation of MoDWS was enhanced by less than 1 percent from Rs 12,006 crore to Rs 12,107 crore. In FY 2013-14, the MoDWS budget was already just

0.11 percent of GDP at current prices. In FY 2015-16, the budget further dropped to Rs 6,236 crore, which is a 48 percent reduction from FY 2014-15. (Kapur et al: 2015).

Though at the start of FY 2015-16, GOI allocated Rs 3,625 crore for rural sanitation but the revised allocation was enhanced that year by passing supplementary budgets in July and December. One of the reasons for this increase is due to the introduction of a 0.5 per cent Swachh Bharat cess introduced in November 2015. (Kapur, Srinivas and Raychoudhury: 2016)

With a proportionate increase in budget allocations for rural sanitation, the share of drinking water has been reduced even further in 2015-16. A provision of Rs 2611 crore was made for NRDWP (National Rural Drinking Water Program) and rural water supply inclusive of Rs 261 crore for the North-Eastern Region. 22% and 10% of the total allocation i.e., Rs 575 crore and Rs 261 crores, is earmarked for Scheduled Caste Sub-Plan and Tribal Sub-Plan respectively for the year 2015-

Table 1- Annual allocations of The Ministry of Drinking water and Sanitation			
Year	MDWS – Annual allocation[1]	Swach Bharat Mission- (only sanitation)	Nirmal Bharat Mission (only sanitation)
2015 -2016	Rs. 6236 crores	Rs – 3625 crores	-
2014 -2015	Rs 12,107 crores		Rs 2,850 crores
2013-2014	Rs 12,006 crore		Rs 2,300 crores
2012-2013	Rs 13,005 crore		Rs 2,500 crores
2011 -2012	Rs10,005 crores		Rs 1500 crores

(Gopalakrishnan: *2015 & GOI: 2015*)

16. (GOI, MDWS: Notes on Demand-2015) This is a drop from 2014-15 by 72 %, the budget for Drinking water in 2014-15 being Rs 9192 crores.

Just 26.9 million of 167.8 million households (16%) in rural India have piped water, as per the statistics of the MoDWS given to the Rajya Sabha on February 6, 2017 as per newspaper reports.

Changing allocation patterns and priorities:

Total Sanitation Campaign (TSC) approach was adopted in 1999 and it spoke about behavioural change as the "prime driver" for sanitation. In 2012, the programme was again revamped as Nirmal Bharat Abhiyan (NBA). In 2014, it was redesigned once again and renamed as the Swachh Bharat Mission (SBM). In FY 2015-16, the budget for rural sanitation stood at 58% of the total MoDWS allocations, hiked from 24 percent in FY 2014-15, a hike of 34% points.

From Rs. 1,500 crore in FY 2011-12, the provision for rural sanitation has been steadily increasing, each year, with the exception of 2013-14, which saw a 8% decline. Rs 3,625 crore had been earmarked for the SBM from the overall Rs. 6,244 crores, which is 58% of the allotted fund to the MDWS in the financial year (2015-16) which is an increase of **27%** over the previous financial year.

But though allocation increased, spending decreased. Sizeable funds were allocated to states for sanitation, but a large amount was unspent. The principal reasons quoted

were "delay in central release of funds". (Gopalakrishnan: *2015)*. In FY[1] 2013-14, 30% of funds were released only at the end of the financial year, that is in the last month (February- March); resulting in under spending and the states spending a mere 45% of funds allotted. Similar trends had been observed in the previous financial year (2012-13) which saw 36% funds being released as late as March 2013.

In FY 2014-15, till February 2015, as little as 33% of the approved fund was disbursed by GOI and consolidated at the block, district and state level. Upto February 2016, only 49 per cent of the total allocation had been sanctioned by Government of India for the financial year. Release of SBM funds to states has been quite slow. (GOI).

Annual Implementation Plans see their final sanction by the National Scheme Sanctioning Committee of the MDWS. The funds get released based on approvals.

The GOI[2] releases for rural sanitation saw a decline. In FY 2010–11, GOI released 97 percent of its allocations. This further decreased to 94 percent in 2013–14.

Spending patterns in Odisha and a comparison with other states: Let us look at the funds available in Odisha under Swach Bharat Mission (in lakhs) and the total Expenditure in 2015-2016.

The expenditure patterns of Odisha were very low. While 2013 – 14 saw, Odisha carrying forward a balance of Rs 5608. 75 lakhs and even with a minuscule allocation of Rs 30.99 lakhs, the state was

able to spend only 10.57% of the budget, leading to a carry forward of Rs 5112. 67 (lakhs); but even this was one of the highest amongst states of its size at the national level. While 2014-15 definitely saw improvement, but still only less than 50% of the budget allocated (Rs 3641.38 lakhs) was spent. This is poor performance considering funds were available, as balances show. The balances in the year, 2013-14 was Rs 5112.67 lakhs and in the year 2014-15 was at a slightly reduced Rs 3687.99 lakhs.

Angul district of Odisha had the highest available fund of Rs 859.13 lakhs (state share) and Rs 2585.228 lakhs (Central share) in 2014-15 but made a expenditure of a mere 36% of the state and central allocation and Ganjam district with 18% expenditure in the state share and 29% of the central share showed one of the lowest spending.

There were a few exceptional performers inspite of the general tide of low spending. The districts of Bhadrak (95%), Sambalpur and Jagatsingpur with 100% expenditure of funds under the central share and the districts of Balangir, Bhadrak, Jagatsingpur and Sambalpur with 100% expenditure under State share, were exceptions to the general rule of low spending.

But in 2015 -16 Odisha showed unprecedented realization with the state spending as much as Rs 39913.76 lakhs (101.98%) of the state share and Rs 119706.30 lakhs (173%) of the central share. 15 of the 30 districts of the state showed 100% expenditure under state share, though the State capital, Bhubaneswar showed poor spending of Rs 33.93 lakhs and only in the component IEC material . All the districts (with the exception of the state headquarters, Bhubaneswar) spend 100% of their funds under the Central share, with Bhubaneswar spending Rs 53.35 lakhs and only under IEC.

The following districts of Odisha showed some of the highest expenditures in the country. Angul district is also being show cased by the SBM, GOI as a model district for sanitation in the country. This has been a remarkable turn around story.

1. Mayurbhanj - Rs 2565.06 lakhs (SS) + Rs 7694.36 lakhs (CS); = Rs 10259.42 lakhs

2. Baleswar - Rs 2495.90 lakhs (SS)+ Rs 7483.37 lakhs (CS); = R   s 9979.27 lakhs

3. Sundergarh - Rs 2219.26 lakhs (SS) + Rs 6653.68 lakhs (CS); = Rs 8872.94 lakhs

4. Bargarh - Rs 1951.02 lakhs (SS) + Rs 5865.15 lakhs (CS); = R   s 7816.17 lakhs

5. Ganjam - Rs 7567.57 lakhs (CS); = Rs 7567.57 lakhs

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[2] Financial Year

[3] Government of India

6. Angul - Rs 1625.07 lakhs (SS[3]) + Rs 4877.37 lakhs (CS[4]); = Rs 6502.44 lakhs

7. Dhenkanal - Rs 1612. 71 lakhs (SS) + Rs 4838.56 lakhs (CS); = Rs 6451.27 lakhs

8. Keonjhar -Rs 4917.44 lakhs (CS) and = Rs 4917.44 lakhs

9. Balangir - Rs 4441.33 lakhs (CS); = Rs 4441.33 lakhs

10. Navarangpur - Rs 4395.46 lakhs CS) = Rs 4395.46 lakhs

11. Jagatsingpur - Rs 4189.45 lakhs (CS); = Rs 4189.45 lakhs

12. Cuttack - Rs 4066.48 lakhs (CS); = Rs 4066. 48 lakhs

13. Jajpur - Rs 4036.27 lakhs (CS); = Rs 4036. 27 lakhs

During this period (2015-16) the India expenditure stood at Rs 1246850.64 (lakhs) (with Rajasthan spending the most in absolute numbers at Rs 171302.8 (lakhs) and Odisha following in second position with an expenditure of Rs 159620.1 lakhs; and with Goa showing a whopping 1080.93% of expenditure under the state share though the actual expenditure stood at a mere Rs 160.95 lakhs and Rs 482.85 lakhs (324%) under the central share.

In comparison in 2013-14 the India expenditure stood at a mere 39.35% of the allocation, with the total expenditure of all the states (centre + state share) at

Rs. 268820 (lakhs). In a mere two years there was a rise of 363% in the national level spending on sanitation. Bihar, Madhya Pradesh, Tamilnadu and Uttar Pradesh were some of the major spenders in 2013-14, though none of them crossed 60% of their total budget with Tamilnadu at the top with 58.61%.

Consistently Jharkhand, Odisha's neighbouring state with a sizeable tribal population like Odisha, spent at rates below the Odisha spending, with the exception of 2013-14, when Odisha expenditure stood at 10.57% as against Jharkhand at 18.96%. But in 2015-16, Odisha had gone much ahead with 101.98% spending (Rs 39913.76 lakhs) under the state share and (Rs 119706.30 lakhs (173%) of the central share as against 32.43% (Rs 8829.44) of Jharkhand under the state share and Rs 26276. 79 (157%) of the central share. (GOI, MDWS: SBM Gramin, 2013-14, 2014-15, 2015-16)

What led to such an impetus in spending in the area of rural sanitation, for a state which had been classified as a laggard in the particular theme. Among the many reasons that can be ascribed to the increased spending, some of the foremost may be ascribed to a greater national consensus around "no open defecation" having been developed with the launch of the SBM, which saw greater bureaucratic involvement and the second is bigger

[4] State share

[5] Central share

allocations to sanitation as against drinking water also changed the thrust of the campaign from 2014-15. But it is noteworthy to see whether this percolated to all the components of sanitation or has been limited to a few areas.

Component wise spending in 2015-16 -Central and State Share.

Under the component wise expenditure the paper has examined some of the main program components of sanitation under the SBM (Gramin). They are

1. Integrated Household Latrine (IHHL)
2. Solid and Liquid Waste Management
3. Sanitary Complex
4. School Toilet
5. Anganwadi Toilets
6. IEC

I. IHHL

The situation of household toilets in the block level survey conducted by the Ministry of Drinking Water and Sanitation in 2012 shows districts like Angul with less than 5% households with toilets. Districts like Balasore (34%) Ganjam (20%) and Khordha (22%) HHs with access to toilets were some of the best performers, inspite of very low coverage, with tribal districts like Malkangiri and Koraput showing toilet coverage as low as 2.4% and 2.7% respectively, of the HHs with access to toilets. The total increase in Integrated Household Latrine (IHHL) from 2012 to 2016 is of 14% points in Odisha, with the maximum coverage reported in 2015-16.

Sl	Districts	No. of HH covered in 2013-14	No. of Households covered 2014-15 (including unapproved	% change	No.of HH reported in [2015-16]	Total Balance uncovered HHs	% of HHS left
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Angul	397	10601	328.58%	54125	221000	71%
2.	Balangir	3956	2690	-38.58%	49191	308185	81%
3.	Bargarh	2599	3872	39.86%	65048	264847	68%
4.	Ganjam	1481	3301	80.15%	85044	497561	71%
5.	Koraput	415	4694	242.58%	37445	232807	83%
6.	Malkangiri	21	2254	467.59%	23670	105634	79%
7.	Kandhamal	46	5661	481.27%	36532	120321	71%
8.	Khordha	469	3907	211.99%	40757	177765	67%
9.	Cuttack	575	3917	191.87%	44726	362306	75%
10.	Balasore	10055	12070	18.27%	81970	224737	44%
11.	Sundergarh	875	3783	146.4%	73756	206431	65%

Table 2- Changes in 2013-14 to 2015 -16 in IHHL

(GOI-MDWS: Target vrs Achievement- 2017)

While certain districts like Balasore and Angul have taken very sizeable and successful leaps forward to challenge open defecation, but seven of the eleven sample districts still continue to show more than 70% HHs without toilets. Below Poverty Line (BPL) families must be incentivized to make toilets. Availability of water stands as a major impediment in IHHL use, and availability of water must be linked with

construction of toilets, or fall backs can be anticipated as in previous missions.

Some Highlights of IHHL

1. The highest expenditure on IHHL in Odisha has been made by Mayurbhanj district with an expenditure of Rs 2562.11 lakhs under the state share and Rs 7685.84 lakhs under the central share, followed by Ganjam with an expenditure of Rs 2526.05 lakhs under the state share and Rs 7560. 16 lakhs under the central share and Balasore stood third with Rs 2459.07 lakhs under the state share and Rs 7376.85 lakhs under the central share.

2. The lowest expenditure under IHHL in Odisha has been made by the district of Boudh (Rs 904.41 lakhs) under the central share and (Rs 300.87 lakhs) under the state share. Though low expenditure may not signify low coverage, as Boudh is the smallest district of Odisha with just 3 CD[1] blocks. Kalahandi and Malkangiri districts also continue to be low spenders under IHHL.

3. Balasore now shows the second lowest (44%) HHs left without toilets, just below Deogarh district with 41%. Malkangiri and Koraput with low expenditure under this head also still have 79% and 83% HHs respectively to be covered.

II. Solid and Liquid Waste Management:

To create clean environs, it is essential to focus on IEC interventions emphasising on Solid and Liquid Waste Management (SLWM) for creating a felt need for such waste management amongst the people. This should lead towards setting up of methods for scientific disposal of waste material in manners that have visible impacts on populations. The local self government has to be encouraged to demand for a system to manage waste in their environment, and also take the responsibility to operate and maintain.

All the 30 districts of Odisha have not spent a single rupee under this head, Solid and Liquid Waste Management under the state or central share; and even Khordha district, whose headquarters is Bhubaneswar the state capital, seems to have drawn a blank under this for the last two financial years 2014-15 and 2015-16.

In 2014-15, Gujarat had the maximum expenditure both from the central and the state share under SLWM with an expenditure of Rs 1324.68 lakhs (central + state share). 9 states including Odisha made no expenditure under this head. In 2015-16, Gujarat was replaced by Haryana who topped the expenditure under this head from both the Central and State share with an expenditure of Rs 1309.19 lakhs. 12 states including Odisha drew a blank under this head. (GOI-MoDWS- District Wise State and Central Share: 2015-16)

Such management is urgent and must be made while adhering to the rules of

1. Municipal Solid Waste Management and Handling 2000

2. Environmental Protection Act 1986
3. Biomedical Waste Management and Handling Rules 1998
4. Hazardous Waste Management and Handling Rules 1989, 2003, 2008

III. Sanitary Complex

With the exception of Cuttack district no other district has made a sanitary complex in 2015-16. Cuttack district has made an expenditure of Rs 8.4 lakhs from the central share and Rs 4.2 lakhs from the state share, which is the only expenditure under this head in this financial year. None of the other major urban hubs in the state have invested on sanitary complexes in the year, inspite of the emphasis on creating urban infrastructure around sanitation by the SBM. In 2014-15, from the state share, Rs 4.67 lakhs and central share Rs 9.35 lakhs was spent by Cuttack; and the only other districts who spent under Sanitary Complex are Balasore and Dhenkanal. There is a decline of 45% in expenditure between 2014-15 and 2015-16, under this head.

IV. School Toilet

Very low emphasis has been paid to school toilets, even though 21% of schools remain without toilets in the state. Only Balasore and Kendrapada, of the 30 districts have spent Rs 74,000 and Rs 3.92 lakhs respectively (central share) and Sundergarh and Khordha have spent Rs

32,000 and Rs 1. 68 lakhs respectively (state share) on school toilets in 2015-16.

As against this in 2014-15, the state had spent Rs 188.35 lakhs under Central Share and Rs 82.08 lakhs under state share. There is a 75% drop in expenditure under this head between 2014-15 and 2015-16.

V. Anganwadi Toilet

Not a single district of Odisha has incurred any expenditure on Anganwadi toilets (day care centres for children), either from the Central or State share in 2015-16. This is inspite of the fact that only 48.49% of Anganwadis in the state have toilets. In 2014-15 the state had also spent a mere Rs 1.60 lakhs (both central and state share inclusive) under this head.

VI. IEC

Two districts of Odisha, Gajapati and Nayagarh have not spent a single rupee either from the state or Central share under IEC. State headquarters, Bhubaneswar has spent only on one head, IEC. The total expenditure in IEC has been Rs 562.62 lakhs in the year 2015-16. The expenditure in the year 2014-15 was Rs 564.98 lakhs. There is a decline of 0.4% from the previous year.

Interstate Comparison

If we look at component wise spending in the year 2015-16, under the head of

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[6] Community Development

[7] Integrated Child Development Scheme

IHHL, Odisha spending at Rs 39,680.98 lakhs (SS) and Rs 119030.59 lakhs (CS), stood next to only Rajasthan at Rs 41730.95 lakhs (SS) and Rs 126577.75 lakhs (CS) .

The lowest spending was recorded by Sikkim among states at Rs 44.72 lakhs, (37.78%) under the state share (The three UTs of A&N Islands, D&N Haveli and Puducherry) did not spend at all, and the lowest spending under the Central share was again by Sikkim with an expenditure of Rs 400. 12 lakhs. The 3 Union Territories of A&N islands, Puducherry and D&N Haveli, did not spend even under the Central share. But Sikkim's low spending does not reflect poor sanitation coverage for Sikkim.

Spending under the head of Community Incentive to GP was seen only in the state of Chattisgarh and Gujarat which spent Rs 166.31 lakhs and Rs 499 lakhs respectively.

Under the head of sanitary complexes, the highest spender was West Bengal spending Rs 282.03 lakhs in the state share and Odisha stood at a poor 22nd position with a spending of Rs 4.2 lakhs in the state share; as far as Central shares was concerned, Puducherry spending Rs 560.5 lakhs was at the top and Odisha was at a lowly 23rd position with a spending of only Rs 5.93 lakhs.

Himachal Pradesh topped spending under School toilets with an expenditure of Rs 803.62 lakhs under the central share and Rs 74.39 lakhs under the state share and with Odisha showing a mere spending of 2 lakhs from the state share and marginally more at Rs 4.66 lakhs from the central share. (Contradictory data about central spending in school toilets in Odisha is seen in the MDWS website). But Odisha has mobilized sizeable funds from Public Sector Undertakings and even some private companies under their mandatory CSR expenditure for the Swach Vidyalaya Campaign in 2015-16.

In Anganwadi toilets, Jharkhand with an expenditure of Rs 74.25 lakhs and Jammu and Kashmir with a spending of Rs 36.57 lakhs top the central share expenditure charts on this head. Rajasthan with a state share expenditure of Rs 31.9 lakh has the highest spending from the state share. Odisha spent nothing from either the state or central share on anganwadi toilets, though only 48.49% of anganwadis in the state have toilets. The visualization of the ICDS[2] programme of the anganwadi as an ECD (Early Childhood Development) centre and to be the first health post for children cannot be fructified without basic sanitation and toilets in the centres. Urgent utilization of funds under this head is required to make the anganwadi centres's functional in the true sense, and not to merely work as food distribution points.

The maximum spending from the state share on IEC was done by West Bengal with a spending of Rs 508.53 lakhs and Odisha at the 10th position with a spending of Rs 151.35 lakhs. As far as central share was concerned, West Bengal tops here too with a spending of Rs 1500.83 lakhs and Odisha in comparison at the 12th position with a spending of Rs 411.26 lakhs.

Fig - 1- IEC Expenditure - Centre/state share in
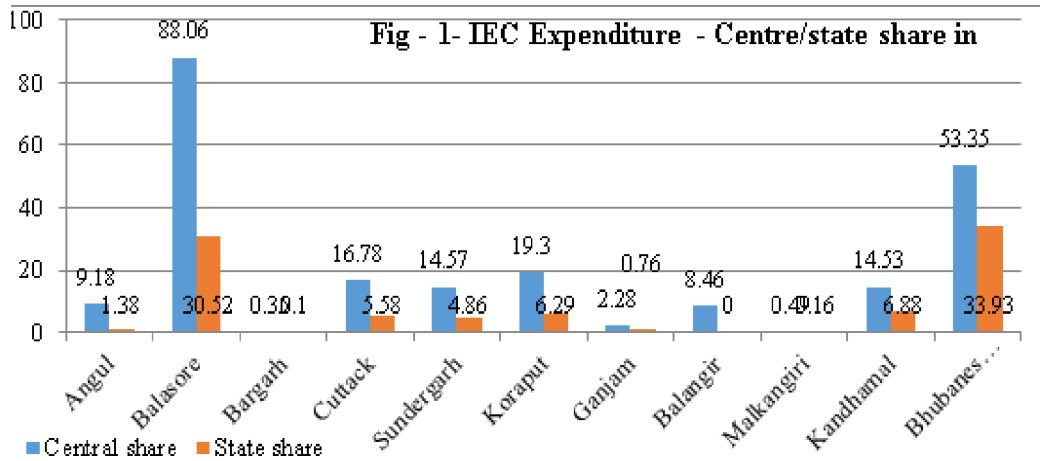
One of the prime drivers for change always has been behavior change, more so in practices which have a cultural connotation. Ablution practices socio – culturally have been based around public bodies like ponds, streams, as it is often connected to the ritual life cycle of a family and an individual and has important socio-cultural implications. These behavioral practices only change gradually. Thus repeated links between morbidity and open defecation through constant use of IEC in local languages can play an important role in changing the behavior patterns. **But Odisha continues to show poor expenditure patterns on IEC, with only two districts in the sample, Balasore and Bhubaneswar (Khordha) crossing an expenditure of Rs 50 lakhs**. Odisha must take a leaf out of the example set by its neighbouring state, West Bengal here which shows an expenditure of more than 2000 lakhs under this head in 2015-16.

Training and Extension on Health, Hygiene and Behavioural Change- Major investments on innovative extension services are required, with a special cell devoted to dissemination of IEC. The extension services must be monitored and coordinated with the panchayat to make it more effective. Districts like Koraput, Malkangiri, Balangir which still have low coverage in IHHL and also in the other components of SBM continue to also show poor expenditure on IEC. They must be encouraged to use IEC more extensively at effective points.

It is the role of village level extension workers, as well as the PRI functionaries to most effectively transmit information on practices related to use of basic social and physical infrastructure. Lack of training on the causal relationship between morbidity and bad sanitation, stands as an impediment in working as an effective change agent in areas like sanitation. Training of all PRIs and extension workers

is an investment required to make the campaign more effective.

Conclusion

The Swaccha Bharat Mission has clearly not been just about increased budgets for sanitation, but States like Odisha which have long been laggards in the area of sanitation have also seen clear increase in not just spending and expenditure, but in the coming up of real time infrastructure both at the household level and the public institution level. But important areas like School toilets, Anganwadi toilets which have an important role in not just checking high IMR[1] and CMR[2], but also increasing enrolment and retention of girls in the schools- continue to be neglected.

And is the shift away from Drinking water to sanitation, an appropriate mechanism; will shifting the emphasis away from drinking water not be just addressing the problem in halves as clean drinking water plays an equally important role, as better sanitation for good health. Is it not essential and appropriate to increase investments in both the areas, as a healthy workforce can better contribute to economic growth and human development?

The importance of IEC in contributing to the ultimate success of a sanitation program is clearly not seen in states like Odisha, whose focus in spite of several failed sanitation missions continue to be only on physical infrastructure and not on behavioral change. Behavioral change may ultimately be the key in the important area of water and sanitation and its neglect could be the missing link.

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