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EMBARKING ON THE PATH OF INDIAN RETAIL: FROM OLD TIMES TO NEW

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**Abstract:**

*The purpose of this paper is to review the changes that are taking place in the Indian retail sector today. India is poised to become a retail power house in the future. With many established foreign retailers eyeing to be a part of the retail growth story, this paper will provide information on the existing scenario to all of them. The information was drawn from various secondary sources including text books, the internet, national and internationally published research papers and scholarly articles.*

*The findings from the paper indicate how the organized retail in India has evolved over a period of time. There are many factors acting as the key drivers of retail growth: changes in consumer behaviour and resultant consumerism, a young working population, acceptance of purchases on credit, proliferation of media and so on. But along with growth opportunities, the retail sector also needs to overcome certain obstacles. A SWOT analysis of the sector can help the retailers to develop a futuristic approach.*

**Key terms:** Retailing, Modern retail, Growth opportunities, Challenges, SWOT analysis

**INTRODUCTION**

Retailing is not only an important aspect of the economic structure but very much a part of our everyday lives. Generally, the growth of any country is closely linked to how fast the economy is developing. Being very much a part of the economic structure, retailing has always played a major role in increasing productivity across a wide range of consumer goods and services in most of the developed economies across the world (Retailing sector analysis Report, 2012). India is presently being recognized as the second largest -growing economy as well as the most populated country in the world after China. This huge population as well as the growth factor indicates a boon for marketers (Mc Kinsey & Co. Report, 2008). The consistent growth in the (GDP) gross domestic product (supported by growth in private consumption, which consequently is helping the retail market to grow), especially when recession has adversely impacted the



developed economies is strengthening the belief of the economists in the bright future of India (India Retail Report, 2011, p.19).

This article is a review of the retail sector of India as it existed during the olden days, through the metamorphosis that were occurring along with changes and growth of the economy to the current retailing scenario with the onset of organized retailers. With the evolution of modern retail and the changes occurring in the Indian consumers' buying behaviour, there is seen a lot of scope for further growth opportunities in this sector, especially for organized retailing. It is for this purpose that many corporate business houses have forayed into retailing through adopting formats such as supermarkets, hypermarkets, etc. so as to cater to the various needs of their target customers. Many International retailers are also interested in tasting success in Indian retailing and are waiting for a favourable government policy to be put into practice. Under these circumstances there is felt a need to assess the modern retailing sector as it exists today in terms of growth opportunities, obstacles and challenges. An awareness of these will enable all those interested to take suitable retailing decisions.

#### **AN OVER-VIEW OF THE EARLY TIMES (FROM BARTER SYSTEM TO THE PRE MODERN 1980S PERIOD)**

The beginning of retail in India can be traced to the practice of the *barter system* prevalent during the olden times. At that time most of the merchandise was sold in the open market or by peddlers who procured basic perishable items from the local sources. While for specialty items they would travel long distances to bring it across to consumers who were in need of the same. There are other forms of retailing such as *Haats*, *Melas* and *Mandis* which have been in existence since ages and continue to be popular in many parts of India even today (Pradhan, 2007). Post independence, the Indian companies enjoyed living in a protective environment with hardly any competition resulting in monopoly in many areas and with not much choice left to the consumers to select from.

One of the early attempts at establishing a retail chain in India is the public distribution system or the *PDS* run by the Government of India, in 1939 at Bombay (present Mumbai). The purpose of the PDS was to help regulate the supply and distribution of essential cereals, sugar, and kerosene at subsidized rates to ration card holders. These PDS continue to function even today, although now they are popularly known as 'Fair Price Shops' (Pradhan, 2007). Another attempt at adopting the organized retailing format was through the *Apna Bazaars* and *Kendriya Bhandars* where a variety of merchandise is sold at reasonable prices (Bajaj, Srivastava, Tuli, 2009). Indian artisans and craftsmen have brought out through the creation of a wide collection of arts, crafts and artisanal items the richness of Indian culture, which is sold to tourists and local customers through the retail channel of government run Central Cottage Industries Emporium (CCIE) across the country. In 1957, the *Khadi and Village Industries (KVIC)* retail stores were established by the government to act as an incubator for the village industrial units as well as a custodian of cooperative institutions. Such government retail chain initiatives helped to provide the necessary push (effective marketing infrastructure) to small scale industries involved in the making of handicrafts and local goods (Singh, 2012). Another

remarkable achievement is the large network of *post office outlets* across all states and union territories in India. These can be termed as government run retail outlets to help people use various communicative methods to be in touch with friends and relatives (Pradhan, 2007).

Till the 1980s, although India had begun on her journey of independence, not much progress had really been made on the road of economic development. Damodaran (2014) made the following observations on retail evolution in India. The evolution of retailing was taking place slowly more in the form of unorganized retail outlets, with the involvement of the people of India as businessmen and consumers. Up to the decade of 1980s, on the one hand consumers did not have much purchasing power and on the other hand, with limited investments taking place coupled with a lot of governmental restrictions and protective measures for certain industries, not much industrialization took place. Study by Sengupta (2008) indicates that the retailing scenario at that time was more unorganized in nature with the small and medium businessmen operating as separate entities. Looking to the uniqueness, complexity and size of Indian demographics the structure of the retail sector had local banias (businessmen) operating neighborhood kirana or the mom-n-pop stores. Such stores are conveniently located in populated residential areas offering grocery and other multipurpose merchandise items and catering to the needs of the consumers in that area. Apart from the above outlets there are a large number of small unorganized retail players such as the paan-beedi shops (who stock various products in sachet form, batteries, soaps, bakery and confectionery items), tea/coffee/juice /ice cream parlors, stores selling electrical/furniture/hardware items and boutiques. There are few more people who can be said to be a part of the unorganized retail market, these include street hawkers selling goods on push carts within the main markets or localities and street corners as also the door-to-door vendors selling perishables/snacks/clothes/books etc. to customers who desire of the same.

### EMERGENCE & THE GROWTH OF ORGANIZED RETAILING

Sengupta (2008)'s study states that the early steps towards organized retailing can be traced to the mid 80s period when some of the restrictions placed on private institutions were lifted paving the way for modern format establishment. For decades the retail sector had regional players who had dominated the sector rather than retailers with a national presence.

- Some of these organized retailers included those who ran a chain of stores related to apparel retailing namely, *Raymonds*, *Vimal(Reliance)*, *Bombay Dyeing*, *S Kumars* and *Grasim*.
- In food and grocery retail segment modern retail made its presence felt much earlier in 1971 when the first supermarket, '*Nilgiris*' was set up in Bangalore. Subsequently, other business houses entered the food and grocery business and while some went on to make a national presence, there were others which had to wind up operations. For example, *Trinetra* from Hyderabad (now with Aditya Birla group), *FoodWorld* from Chennai (subsidiary of RPG group), *FreeMargin* from Kerala (a cooperative style chain of stores) etc. are retailers who started as



regional players and went on to become national players. Those retailers who had to close down were *Nanz* from North India and *Stop and Shop* (TVS Group) of South India.

- Prior to the liberalization of the economy, apart from many local jewelers (who formed a part of the un-organized sector) the jewelry retail market was dominated by few well-known regional retailers. To quote a few names:

| <b>Jeweler name<br/>in the year</b> | <b>Started first store at</b> | <b>Commenced</b> |
|-------------------------------------|-------------------------------|------------------|
| *Tribhovandas Bhimji Zaveri         | Bombay (present Mumbai)       | 1864             |
| *Krishniah Chetty & Sons            | Bangalore (Karnataka)         | 1867             |
| *Bhima Jewellers                    | Alapuzha (Kerala)             | 1925             |
| *P C Chandra                        | Kolkata (West Bengal)         | 1939             |
| * Kirtilals Jewellers               | Coimbatore (Tamilnadu)        | 1939             |

- Although the retail in India was highly un-organized and fragmented, infusion of certain western concepts brought about few structural changes. *Akbarallys* was India's first departmental store founded by Fakhruddin T. Khorakiwala in 1956 introducing the notion of all-under-one-roof convenient shopping through organized retail outlet. Chain of Akbarallys and Nilgiris retail outlets had been set up along the Western concept of supermarkets. In major cities certain high street areas (like Linking road, Bandra, Mumbai) came to be accepted as popular shopping spots. Apparel manufacturers such as Bombay Dyeing went for forward integration while Reliance Industries went for backward vertical integration to sell their own merchandise. Further, shopping centers and complexes also came up with a variety of stores to cater to the many needs of different customers.
- *Bombay Swadeshi stores* is another successful retailer in this sector since the past many decades. There are few other retailers like *Vijay sales*, *Khadims*, *Rhythm House* and *Apollo Pharmacy* who have been operating mainly in the metro cities for more than five and a half decades.

## **GROWTH OF THE MODERN (ORGANIZED) RETAIL SECTOR**

Bradstreet (2009) study gives information on the pace of growth of organized retail which took off in a big way after the liberalization and globalization of the Indian economy in the early 1990s. Modern retail has brought about a rapid transformation with many of the early entrants like *Shoppers' Stop*, *Pantaloon Retail*, and *Vivek's* amongst others who have grown manifold since then. Major business houses are either entering the retail scenario through modern outlets or amidst consolidation and expansion programs to be a part of growth phase. To quote the names of large corporate houses which have been attracted to the retail sector : Mukesh Ambani's Reliance group (*Reliance Fresh*, *Reliance Hyper*, *Reliance Jewels* etc.), Kishore Biyani's Future Group



(Pantaloen Retail, Big Bazaar, etc.), RPG Group (Spencer's Retail), Aditya Birla Group ('More' outlets), ITC Ltd. (Choupal Fresh, etc.), Wadhwan Holdings (Spinach), Godrej Group (Godrej's Aadhar and Nature's Basket), J Raheja Group (Hypercity) etc. These retailers have used various models such as single-format, multi-format or integrated urban-rural format, depending on its suitability to their retail operations.

Retail Industry Outlook study (2009) indicates that a sea change was witnessed with the entry of many new players in the retail sector. Some international retailers like McDonald's, Wal-Mart and Dominos forayed into the Indian retail organized market through collaborations with domestic companies and this marked the opening of a new chapter in the highly unorganized market. Alongside, this period also saw the emergence of new retail formats such as the departmental stores, supermarkets and hypermarkets which have gained popularity across the country. Post 2000 brought about acceleration with organized retail emerging as one of the fastest growing sectors of India. Some of the companies which started retail operations during this period and are renowned names today include Welspun Retail Ltd., Hypercity Retail (India) Ltd., Liberty Retail Revolutions and METRO Cash and Carry India Pvt Ltd.

The growth potential of this sector is immense. In fact even small towns and tier 1 & 2 cities are showing a major shift in customer lifestyles and preferences to emerge as attractive retail market destinations for retailers to expand their business (Retail Industry Outlook, 2009).

For more than a decade, the Indian organized retail market has been witnessing a consistent growth phase, even maintaining its share of about 30 per cent of the GDP at the current prices (India Retail Report, 2011, p.25). Changing market scenario of the organized retail market from the period of 2006-2007 onwards is presented in Table 1.

**Table 1: The Changing Indian Retail Market Scenario**

| At Market prices                                          | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (estimated) | 2011-12 (estimated) |
|-----------------------------------------------------------|---------|---------|---------|---------|---------------------|---------------------|
| Indian Retail Market (in Rs. crore)                       | 1309764 | 1504502 | 1731743 | 1948916 | 2221764             | 2555029             |
| Growth (in per cent)                                      |         | 14.9    | 15.1    | 12.5    | 14                  | 15                  |
| Indian Retail Market (as per cent of private consumption) | 52.9    | 53.3    | 53.7    | 53.3    | 53.7                | 53                  |
| Organized Retail Market (in crore)                        | 78300   | 90000   | 105000  | 126680  | 158603              | 206500              |

|                                                               |     |      |      |      |      |      |
|---------------------------------------------------------------|-----|------|------|------|------|------|
| Growth ( in per cent)                                         |     | 14.9 | 16.7 | 20.6 | 25.2 | 30.2 |
| Organized Retail Market (as per cent of GDP at market prices) | 1.8 | 1.8  | 1.9  | 2.1  |      |      |
| Organized retail market (as per cent of private consumption)  | 3.2 | 3.2  | 3.3  | 3.4  |      |      |
| Organized Retail Market (as per cent of total retail market)  | 6   | 6    | 6.1  | 6.5  | 7.1  | 8.1  |

(Source : IRIS PRIMARY RESEARCH, India Retail Report 2011, p.25)

The organized retail market, which is said to be around 8 percent of the total retail market is expected to grow much faster than the traditional market and gain a higher share(20 percent) of the whole market by the year 2020 (India Retail Market, Deloitte ,2013). From Table 1, it is seen that although the modern retail sector has been growing, its share in the total retail rose only marginally from 6% in the 2006-08 period to 6.5% in the 2009-10 period. This can probably be attributed to the general slow down which impacted the retail sector and thereby affected the projected estimations. The India Retail Report 2013 has indicated that the India retail market showed growth during the 2010-12 periods. This report reveals that the Indian retail industry experienced a growth of 10.6% between 2010 and 2012 and is expected to increase to USD 450 billion by 2015. It is felt that with economic growth, more of the Indian population will become a part of the consuming classes and organized retail will be able to attract more consumers into its open doors. McKinsey Report states that with over 300 million shoppers likely to patronize organized retail, by 2015 a five-fold growth i.e. a 14-18 % of the total retail market can be expected.

The Indian retail market is composed of multiple categories which when put together form the market size. Category wise contribution of Total retail market and organized retail in India is presented in Table 2 below.



Table 2: Category-wise, Total Retail Market-Organized Retail in India contribution during 2009-10

| Retail Category             | Total Retail Market (contribution in per cent) | Organized Retail Market in India (contribution in per cent) |
|-----------------------------|------------------------------------------------|-------------------------------------------------------------|
|                             |                                                | 34.9                                                        |
| Apparel & Clothing          | 7.3                                            | 0.7                                                         |
| Accessories                 | 0.4                                            | 9.3                                                         |
| Footwear                    | 0.9                                            | 2.9                                                         |
| Jewellery                   | 4.1                                            | 2.5                                                         |
| Timewear                    | 0.3                                            | 0.5                                                         |
| Eyewear                     | 0.1                                            | 12.5                                                        |
| Food & Grocery              | 67.6                                           | 7.7                                                         |
| Catering & Food Services    | 4.7                                            | 5.9                                                         |
| Home & Interiors            | 2.4                                            | 2.9                                                         |
| Leisure                     | 1.1                                            | 4.3                                                         |
| Mobile & Telecom            | 1.7                                            | 2.4                                                         |
| Pharmacy                    | 3.1                                            | 9.2                                                         |
| Consumer Electronics (CDIT) | 3.2                                            |                                                             |
| Personal Care & Fitness     | 0.3                                            | 0.9                                                         |
| Entertainment & Gaming      | 2.8                                            | 3.5                                                         |
| <b>Total</b>                | <b>100.0</b>                                   | <b>100.0</b>                                                |

(Source : IRIS Primary Research, Indian Retail Report, 2011, pp.26-27)

In the total Indian retail market in the 2009-10 period, the largest category was the Food & Grocery with 67.6 per cent share, followed by Apparel & Clothing (7.3 per cent), Catering & Food Services (4.7 per cent) and Jewellery (4.1 per cent) respectively. In the organized retail market, the Apparel & Clothing category contributes 34.9 per cent share, followed by Food & Grocery at 12.5 per cent, Footwear with 9.3 per cent and CDIT with 9.2 per cent. Retail category wise contribution of the other categories is given in Table 2.

The 2011 Indian Retail report also gave a view of the region wise retail market scenario. It indicated that North India enjoyed the highest market share of 29 percent (approximately Rs.5, 68,556 crore value) of the total retail market. The East India market valued at Rs.4,20,405 crore had the lowest per cent share of 21.6. Whereas, the West and South retail markets were in close margins at 24.5 and 24.8 per cent share of the total market at value of Rs. 4,77,472 crore and Rs.4,82,483 crore respectively.

## FACTORS CONTRIBUTING TO THE GROWTH OF MODERN INDIAN RETAIL

The emergence of modern retail in India is seen through the sprawling centers, multi storied malls and large complexes which are offering facilities for shopping, entertainment and food –all under a single roof to customers. This concept where all facilities for a pleasant shopping experience offered under one roof has gained acceptance among the working, nuclear families of today. Retail Insights (2009) and Bagaria's (2011) studies have identified certain factors which have contributed towards the growth of the modern retail in India:

- ❖ *Change in demographic profile of the 'young working' population:* When compared to many of the developed countries India has a large 'young working population' in the age group of 20-49 years with purchasing power. This young segment is a major driver of consumption with the ability and willingness to spend.
- ❖ *Change in consumer mindset regarding credit:* Unlike the previous generation, today's customers are willing to purchase goods and services on credit. With easy availability of credit, consumers are significantly increasing usage of plastic money for shopping purposes and eating out.
- ❖ *Changing consumer behavior and resultant consumerism:* Evolution of the Indian middle class due to education, a young working population with high disposable income i.e. rising income levels, the attitude of 'enjoy life by shopping and travel abroad' have resulted in exposure to global lifestyle. Such people are willing to increase their spending on various categories of products. Typically, such persons face paucity of time and prefer to shop at retail outlets which offer most things under one roof, a better choice of products, speed and efficiency.
- ❖ *Proliferation of media:* During the past 17-18 years media bombardment has helped to enhance consumer learning and knowledge about the global lifestyle of people. Such exposure through the media has created an aspirational attribute for consumption among Indians.
- ❖ *The entry of corporate, new entrepreneurs and foreign retailers:* The scope in this sector has prompted many corporate houses (Reliance group, Tata group, Aditya Birla Group, ITC etc.) to enter into retailing along with the existing small and regional players. This field is also attracting new entrepreneurs with support from venture capitalists, who are willing to invest in retail trade. Similarly, even though the issue of FDI (Foreign Direct Investment) has not been fully addressed, many MNCs have entered the sector through joint ventures, franchising etc. The competitive environment apart from bringing about innovations, improvements and niche markets, will also offer consumers an enjoyable shopping experience through quality products, entertainment and a feeling of satisfaction.
- ❖ *Technology benefits:* The retail operations in a store have been made easy with technology aided computerization facilitating inventory management, usage of bar coding on products, billing and even data management. Thus technology has



aided retail store operations to enable retailers' help customers complete their shopping with not much wastage of time.

- ❖ *Employment opportunities:* With organized retail gaining popularity, the industry has felt the need for qualified and trained manpower from professional educational institutes. Persons who qualify and emerge from such institutes not only have the potential of being employed by organized retailers but also will grow to become a new crop of customers with the flow of disposable income in their hands.

The presence of modern retail in India is visible through the sprawling shopping complexes, multiple storied malls (with a mix of shopping and entertainment outlets), supermarkets, hypermarkets, discount outlets, convenience stores etc. The mall concept has gained easy acceptance among Indian customers. However, a 'specialty' of the malls here is the existence of high value outlets along with mass category retail stores under the same roof (Srivastava, 2008), to cater to different categories of customers. Retail Insights (2009) study gives pointers on certain variables which have been the key drivers of the growth for organized retail here. These mainly include: the increase in education leading to financial independence (among the young) early, easy and many financial options, migration to better places for work opportunities, increase in the number of nuclear family households, rise in the number of women work force and plenty of emerging job opportunities for all educated age groups of people in the services sector especially during the past few years.

## SWOT ANALYSIS OF THE RETAIL SECTOR

The uniqueness of the Indian retail market is the co-existence of a major unorganized market (about 92 % of the total retail market) along with the organized market (which is only about 8 % of the total market). According to Amit Bagaria, with CAGR (Compound Annual Growth Rate) of 11.2 percent in 2011, the total India market is likely to reach Rs.40 trillion by 2016. Of the Rs.16.47 trillion to be added during this period at least one third is most likely to be from modern retail. In spite of the growth potential in this sector, it cannot be said that modern retail has truly arrived in India. The status of modern retail if viewed in the context of the overall retail market as well as the developed countries has a long way to go. Nevertheless by having a SWOT analysis of this sector one may be able to work out a futuristic outlook.

Table 3: SWOT analysis of the modern Indian retail sector

| Strength                                                                                                                                                                                                                                                                                                                                                                                                                                | Weakness                                                                                                                                                                                                                                                                                                                                                                                                                                           | Opportunities                                                                                                                                                                                                                                                                                                                                                                | Threat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▪ Sustained growth witnessed from this sector over the past thirteen years and the expectation of this trend to continue in the future.</li> <li>▪ Usage of advanced technology will enable modern retailers to have an effective supply chain in place that will help to reduce costs which can be passed on to the customers in the form of a reduction in prices of products sold.</li> </ul> | <ul style="list-style-type: none"> <li>▪ The fear that the global recession could impact the spending pattern of Indian consumers is reducing the risk appetite of retailers, who prefer to cater to the needs of known customers rather than expanding their customer base to include many more segments.</li> <li>▪ Typically, most of the decision making processes at most modern retail organizations are time consuming and slow.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Increasing population with even a faster growing disposable income in their hands to splurge on consuming goods and services.</li> <li>▪ The rural market along with small cities and town consumers' having purchasing power are displaying interest in the purchase of key consumer durables and non durable products.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Modern retailers (*) may not have access to huge capital which needs to be constantly invested for expansion purpose, this may curtail their growth opportunities.</li> <li>▪ Availability of quality space to operate new stores.</li> <li>▪ Want of suitably qualified and efficient manpower in retail operations.</li> <li>▪ The inability to get the correct merchandise mix to cater to a major percentage of the target buyers.</li> <li>▪ The government has not implemented the FDI Policy into actual practice.</li> </ul> |

\*The modern India retail sector includes large domestic or international corporations (or conglomerates) and smaller entrepreneurs. (Source: Bagaria, 2011)



## CONCLUSIONS

Indian retail sector is undergoing a rapid transformation, although it has a long way to go when compared to modern retailers operating in developed countries. The sector is at crossroads today. For, while India's huge 'young population' and increase in domestic consumption are indicators of the favorable trends (waiting opportunities) expected, it also has to face many challenges (Centre for Retailing). Along with growth opportunities, retailers need to address the various challenges like development of highly advanced supply chain operating system which can help to work out the merchandise more correct, develop educational institutes of excellence where those interested in retailing career gain sufficient knowledge on retail operations management, improve upon the government to speedup and implement the FDI policy and work on bringing about tax regulations which suit all retailers, not merely the small retail businesses. So, further research needs to be carried out in future in order to seek answers to the above challenging issues.

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MEASUREMENT OF FINANCIAL PERFORMANCE USING ECONOMIC  
VALUE ADDED MODEL: A COMPARATIVE STUDY OF SELECTED INDIAN  
COMPANIES

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**Abstract**

*In recent era, a number of companies in India are focusing on shareholders' value creation. The most famous value based model like EVA has been accepted by number of Indian companies as a part of voluntary disclosure practice as well as to give information to the shareholders for the creation of value of the holding of their shares. A company's first goal is to achieve profit maximization and then to focus on wealth maximization with the help to the value based measure called EVA. The EVA concept developed by Stern Stewart & Company is progressively replacing the traditional measures of financial performance on account of its important principles. The present paper examines the economic value added strategy of selected Indian companies by analyzing the movement in EVA of shareholders as well as to check the position of the companies towards market capitalization and enterprise value during the study period. Traditional measure like ROCE has also been included to judge the best performer company with the help of the average results of the study period on the basis of selected parameters.*

**Key Words:** Economic Value Added, ROCE, Market Capitalization, Enterprise Value

**INTRODUCTION**

Traditionally, public companies have been measuring their financial performance according to the method of Generally Accepted Accounting Principles (GAAP) as Earnings per Share (EPS). With the effect of their extended and continuous use, GAAP indicators have become the trademark measurements. As such EPS becomes a special measure of performance. In reality, the method used to calculate EPS ignores innumerable important expenses that can change the results materially. Considering this issue, two graduates of Chicago University evolved a new method of measuring and creating value in a business. In 1982, Joel Stern and G. Bennett Stewart III founded Stern Stewart & Co. and came up with the concept of Economic Value Added (EVA). Since then the concept and application of EVA has grown rapidly, with hundreds of companies worldwide adopting all or parts of it. EVA has significantly impacted the financial world and changed the way many people recognize the value. Stakeholders now have a better tool- EVA to measure the true performance of the firm and the management also has a better understanding about how to create value for its shareholders.

## **UNDERSTANDING EVA**

EVA is the idea that companies do not earn a true profit until all costs, including items such as opportunity costs and cost of capital, have been covered. In other words, showing a profit on the income statement is not enough. The amount of earnings must also cover opportunity costs (the benefit foregone by using resources in a particular manner). But more importantly earnings must cover cost of capital (the return demanded by shareholders and cost of debt). Only the earnings left, if any, after subtracting the firm's physical costs and intangible costs, can be considered profits. When a company earns more than its total costs, then it has made a true profit or "economic profit." The term "economic profit" was first developed by British Economist Alfred Marshall and includes the cost of capital as well as other adjustments. However, its basic theme is that firms must account for all costs, tangible or intangible, to earn a real profit. If an economic profit is not earned, then it does not matter what the income statement shows. In reality, the company is merely breaking-even or operating at a loss. Only economic profits measure true performance and create real value for a company and its shareholders.

### **Significance of EVA**

Economic Value Added is an index to measure the financial performance. It takes into account the Profit, Loss, Balance Sheet efficiency and Opportunity Cost of Capital. EVA helps to measure performance of the business and can play vital role for important managerial decisions. It gives assistance for balancing the managerial incentives and interest of shareholders and can improve the financial literacy and business literacy throughout the firm. EVA is the surplus generated by an entity after meeting an equitable charge towards the providers of Capital. Time Value of Money is recognized in EVA reporting through the use of WACC. The Weighted Average Cost of Capital is based on the Present Value of future interest/dividend outflows.

### **Measurement of Economic Value Added**

The first step in applying the EVA concept is measuring a firm's performance by EVA standards instead of traditional accounting methods. The reason is quite simple: GAAP accounting provides a distorted view of a company's performance and creates numerous "anomalies" that must be corrected in order to see the firm's true economic results (Stern Stewart & Company). In all, over 160 different adjustments could be made to GAAP accounting procedures to measure earnings and value better. They cover all aspects of business to include inventory, restructuring, and depreciation. Though not all the adjustments can be implemented at once or in every company, the underlying principle is that managers should abandon traditional accounting techniques when measuring value (Stern Stewart & Company). Three of the most important changes are highlighted below.

- a) Cost of Capital (WACOC = Weighted Average Cost of Capital)

The biggest adjustment EVA makes is the cost of equity capital. In simple terms, cost of equity is the required rate of return demanded by investors, or a return equal to



the amount they could have received had they invested their money elsewhere. It is the opportunity cost of the investor that a firm must match or beat. If the return generated is less than the cost of equity, then the company's stock will sell below its true value and destroy its shareholder wealth: "Only by earning more than the cost of equity can a company create wealth. The cost of equity is a critical cutoff rate, an invisible but profound dividing line between superior and inferior corporate performance"

In equation form, this concept is stated as:

$$EVA = NOPAT - [WACC \times C]$$

b) NOPAT = Net Operating Profit after Tax

c) C = Capital Invested

The calculation of WACC includes both equity and debt. A friendlier form of the equation, also known as "residual income", is Economic Profit = Accounting Profit - The Cost of Equity. In equity capital is clearly not free. In reality, it is more expensive than financing through a bank, because shareholders almost always have a higher expected return than lenders.

There are so many traditional performance measures used by corporates such as Return on Equity (ROE), earning per Shares (EPS), Net operating profit after taxes (NOPAT) and Return on Investment (ROI) etc. These measures are not useful to measure the shareholders' value creation. The concept of EVA is very popular all over the world particularly in USA, UK and European countries as companies are using EVA as an internal as well as external performance measure because it is accurate with the organizational objective of shareholder's value creation. Due to its popularity lot of research work has been conducted in late 1990's covering diverse issues on EVA. Although theoretically the significance of EVA has been proved but there exist gap between the various studies about the superiority of EVA. In some academic literature EVA has been proved superior to traditional measures and some studies reject this hypothesis partially or fully. Present study has been conducted to measure the growth of economic value added of selected Indian corporates for the last seven years i.e. 2007 to 2013 and also examine the trend of market capitalization and enterprise value of selected Indian Companies during the study period.

### Limitations of EVA

EVA has a lot of advantages though it is not free of limitations. Some of the limitations are pointed out below:

- a) EVA is criticized to be a short-term performance measure. Some companies have concluded that EVA does not suit them because of their focus on long-term investments. An example is offered by American company GATX (Glasser, 1996) which leases transportation equipment and makes fairly long-term investments.
- b) The true return or true EVA of long-term investments cannot be measured objectively because future returns cannot be measured; they can only be subjectively estimated.
- c) EVA is probably not a suitable primary performance measure for companies that have invested heavily today and expect positive cash flow only in a distant future.

- d) The periodic EVA fails to estimate the value added to shareholders, because of the inflation and other factors.
- e) EVA suffers from wrong period of time. A company may have a lot of un-depreciated new assets in its balance sheet and it might show negative EVA even if the business would be quite profitable in the long run.
- f) Traditional financial ratios are commonly used for distress prediction. It was observed that EVA does not have incremental value in the predicting.

## LITERATURE REVIEW

Various articles dealing with the theory and applications of EVA have been published over the last two decades, but the concept is still evolving.

**Stern (1990)** observed that EVA as a performance measure captures the true economic profit of an organization. EVA-based financial management and incentive compensation scheme gives managers better quality information and superior motivation to make decisions that will create the maximum shareholders' wealth in an organization. EVA is a performance measure which is most closely linked to the creation of shareholders' wealth over a period of time. The financial management and the incentive compensation system based on EVA give the manager superior information and higher motivation. Accordingly EVA should be made the focal point for financial reporting, planning, and decision-making. The executives of an organization should look out for appropriate techniques that will guard them against any future attacks by corporate marauders. The best way of maximizing shareholder return is to offer incentives to managers for making decisions that boost long-term value. A major step is to provide cash bonus or stock option arrangements with incentives to that create built-in share value. The objective is to motivate the managers to look beyond short-term measures of economic performance by essentially turning managers into owners. The managers may be guided by EVA and pursue such objectives that improve operating profits investing more capital. Managers can be remunerated a proportion of both the total EVA and the positive change in EVA.

According to **Stewart (1994)** EVA is a powerful new management tool that has gained worldwide recognition as the standard tool of corporate performance. EVA presents an integrated framework of financial management and incentive compensation. The adoption of EVA system by more and more companies throughout the world clearly depicts that it provides an integrated decision-making framework, can reforms energies and redirect resources to create sustainable value for companies, customers, employees, shareholders and for managements.

**Rice (1996)** believes that there is a direct relationship between EVA improvement and a higher share price. EVA has been made a part of Varity's mantra company for building corporate culture and creating wealth for shareholders. Specific ways that EVA has been applied at Varity Company include:

1. EVA caused the company to take a closer look at its capital structure.
2. EVA identifies operations and projects that return more than the cost of capital.



3. EVA is used to evaluate potential joint ventures and
4. EVA provides a means of determining whether the sale of businesses or assets is in the best interest of shareholders

**Grant (1996)** found that the EVA concept may have everlastingly changed the way that profitability is measured. A survey was conducted that examines the empirical relationship between EVA and corporate valuation. Results suggest that EVA significantly bangs the Market Value Added of a firm and that this wealth effect stems from the company's residual return on capital. **Blair (1997)** observed that the EVA has generated much interest in the business community. This financial tool advocates debt finance evidenced by its basic formula, which uses the weighted cost as the cost of capital. It becomes cheaper than equity, partly due to the tax deductible interest.

**Rajeshwar (1997)** offered in his study that EVA can also be used as a device for shareholders' communication and manager incentive system, apart from measuring financial performance of organization. Demand for EVA among the corporate world has spurred competition among financial consultants, who help in computing EVA for business organizations. **Banerjee (1997)** has conducted an empirical research to find the superiority of EVA over other traditional financial performance measure. Ten industries have been chosen and each industry is represented by four/five companies. ROI and EVA have been calculated for sample companies and a comparison of both has been undertaken, showing the superiority of EVA over ROI. Indian companies are gradually recognizing the importance of EVA.

**Saxena (1998)** elucidated that there is no one method of measuring financial performance that is totally perfect. Thus a measure should be such that satisfies shareholders' expectations and is also being committed by top management. EVA is a measure that should be used by top management to evaluate investment center managers because it considers goal congruence between shareholders and managers. **Anand, et al. (1999)** revealed that EVA, REVA (Refined Economic Value Added) and MVA are better measures of business performance than NOPAT and EPS in terms of shareholder value creation and competitive advantage of a firm. Since conventional manager compensation systems emphasize sales / asset growth at expense of profitability, EVA is a measure that shifts focus on an organizational culture of concern for value.

**Shand (2000)** says Economic value added (EVA) measures a corporation's economic profit. The objective of EVA is to understand which business unit's leverage their assets to generate returns and maximize shareholder value. According to economic theory, capital eventually moves to the investment opportunities with the highest returns because investors want to maximize their profits. Getting decision makers to think about economic profits as they evaluate new business opportunities is the purpose of using EVA.

**Kumar, S (2000)** concluded that using EVA as the best financial indicator blindly may not be correct, since it is not without pitfalls. The pitfalls in EVA calculation and manipulation have been discussed. According to the author positive EVA figures do not ensure high financial performance. He suggests that EVA should be used for making comparisons between companies in the same industry group. He observes that computing COC at flat rates is meaningless. To make EVA relatively comparable EVA should be expressed in term of EVA (in Rs.) per unit of capital employed.

**Jawahar Lal and Malik (2001)** say that Economic Value Added is today's hottest financial idea and it can be well considered a revolution in management. In their opinion EVA is a measure of corporate performance and reflects all the dimensions by which management can increase value. They attempt to decipher EVA and analyze its superiority over traditional profit based performance measure, computation, implementation and application with special reference to a detailed case study of Hindustan Lever Ltd.

**Bardia (2002)** wrangled that the concept of EVA is better than the concept of accounting profit as a tool a value creation because it considers the overall cost of capital. In this paper an attempt has been made to analyze the financial performance of Infosys Technologies Ltd. On the basis of traditional parameters like ROCE, ROE, EPS, etc. and the new performance measure EVA.

**Irala (2007)** examined whether EVA has got better predictive power relative to the traditional accounting measures such as EPS, ROCE, RONW, Capital Productivity and Labour Productivity. Using the dataset for six years across 1,000 companies, the results supported the claim that EVA is the better predictor of market value compared to the other accounting measures.

**Chary and Mohanty (2009)** explained the concept of value from the perspectives of stakeholders and shareholders. Using a case based approach; they illustrated different methods of computing shareholder value. **Kaur and Narang (2009)** examined the shareholder value creation using two value based metrics of financial performance viz., EVA and MVA for a sample of 104 Indian companies. It provided a fact base for the strategic investors, researchers, portfolio managers and decision makers to dig below the surface numbers and interpret the economic realities of big business houses. The study supported the claim that EVA influences the market value of shares.

**Panigrahi (2005)** examined how the Economic Value Added (EVA) is superior to Market Value Added (MVA). This has been examined by financial performance of ITC Ltd, which has adopted the EVA as its performance measurement. This study found that by increasing Economic Value Added (EVA), Shareholder Wealth is created and established the fact that the Economic Value Added (EVA) is superior to the Market Value Added (MVA).

**Sharma and Kumar (2010)** have analyzed effectiveness of Economic Value Added in selected companies for the period of 2001-02 to 2008-09. Researcher has used traditional



measures along with EVA to measure effectiveness of the firm. The result of statistical tools reveals that except few majorities of the sample companies are able to continuously create value for their shareholders during the study period. The study finds that EVA is gaining popularity in India as important measures of firm performance.

*Sakthivel (2011)* analyzed shareholder's value in Indian pharmaceutical industry for the period of 1997-98 to 2006-07. It is concluded that the companies under pharmaceutical industry has succeeded to meet public expectations in terms of shareholders' value creation through EVA either by increasing operating income from assets in place through reducing cost of production or increasing sales, or reducing the cost of capital by changing the financing mix in capital structure. This study showed that shareholders' value creation tend to go up every year for pharmaceutical industry since 2000-01.

*McClure (2011)* mentioned that companies and their consultants use EVA<sup>TM</sup> as the most successful performance metric. Financial theory justifies this metric, which is consistent with valuation principles. Both of the aforementioned are important to investors when they analyze companies' performance.

## OBJECTIVES OF THE STUDY

The present study endeavors to achieve the following objectives:

- To examine whether the sample companies have been able to generate economic value effectively during the study period.
- To study the growth rate of EVA of the sample companies during the study period.
- To analyze the effectiveness of NOPAT and Cost of Capital for determination of Economic Value Added during the study period.
- To figure out the trend of market capitalization and value of enterprise during the study period.

## DATA COLLECTION AND METHODOLOGY OF THE STUDY

This paper is based on secondary data and covers a period of seven years ranging from 2006-07 to 2012-13. A sample of three Indian companies namely Hero Moto Corp, BHEL, and ACC has been selected for the purpose of study. The data is taken from the company's annual reports and from the websites. The conventional performance measures like such as ROCE has been used and value based measures like Economic Value Added, the percentage of EVA to average capital employed, and enterprise value based on number of times of average capital employed has been used. Besides that, certain other parameters have been also taken to judge the best performing company on the basis of average data of the study period.

## **LIMITATIONS OF THE STUDY**

- a) This study is limited to the period of 2007 to 2013.
- b) For the study purpose, three Indian companies have been selected i.e., Hero Moto Corp Ltd, BHEL and ACC. Out of these three companies, BHEL has strong average capital employed compared to other two companies. Hence the NOPAT of BHEL is obviously more than other companies and cost of capital is also more than other two companies.
- c) While taking average results of the study period, BHEL has highest average in most of the parameters tested because of above limitations.
- d) Limitations of EVA also apply to the present study.

## **BRIEF PROFILE OF COMPANIES UNDER THE STUDY**

1. Hero Moto Corp Ltd. (Formerly Hero Honda Motors Ltd.) is the world's largest manufacturer of two - wheelers, based in India. Company's new identity, reflects its commitment towards providing world class mobility solutions with renewed focus on expanding company's footprint in the global arena. Hero Moto Corp's mission is to become a global enterprise fulfilling its customers' needs and aspirations for mobility, setting benchmarks in technology, styling and quality so that it converts its customers into its brand advocates. The company will provide an engaging environment for its people to perform to their true potential. It will continue its focus on value creation and enduring relationships with its partners.
2. Bharat Heavy Electricals Limited (BHEL) is an engineering and manufacturing company. The Company is engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a range of products and services for the core sectors of the economy, including power, transmission, industry, transportation, renewable energy, oil and gas and defense. Its segment includes Power and Industry. It is a manufacturer of Power generation equipment, supplying a wide range of products and systems for thermal, nuclear, gas and hydro-based utility and captive power plants. It is also a manufacturer of a range of industrial systems and products. Products and systems supplied by the Company include captive power plants, centrifugal compressors, drive turbines, industrial boilers and auxiliaries, waste heat recovery boilers, gas turbines, pumps, heat exchangers, electrical machines, valves, heavy castings and forgings, electrostatic precipitators and seamless steel tubes. The vision of the company is to be a global engineering enterprise providing solutions for a better tomorrow and mission is to providing sustainable business solutions I the fields of energy, industry and infrastructure.
3. ACC (ACC Limited) is India's foremost manufacturer of cement and concrete. ACC's operations are spread throughout the country with 17 modern cement factories, more than 40 Ready mix concrete plants, 21 sales offices, and several zonal offices. It has a workforce of about 9,000 persons and a countrywide distribution network of over 9,000 dealers. Since inception in 1936, the company has been a trendsetter and important benchmark for the cement industry in many



areas of cement and concrete technology. The company's various manufacturing units are backed by a central technology support services center - the only one of its kind in the Indian cement industry. ACC has rich experience in mining, being the largest user of limestone. As the largest cement producer in India, it is one of the biggest customers of the domestic coal industry, of Indian Railways, and a considerable user of the country's road transport network services for inward and outward movement of materials and products. Among the first companies in India to include commitment to environmental protection as one of its corporate objectives, the company installed sophisticated pollution control equipment as far back as 1966, long before pollution control laws came into existence. ACC has made significant contributions to the nation building process by way of quality products, services and sharing expertise. Its commitment to sustainable development, its high ethical standards in business dealings and its on-going efforts in community welfare programmes have won it acclaim as a responsible corporate citizen. ACC's brand name is synonymous with cement and enjoys a high level of equity in the Indian market. It is the only cement company that figures in the list of Consumer Super Brands of India. The vision of the company is to be one of the most respected companies in India; recognized for challenging conventions and delivering on its promise.

## ANALYSIS OF DATA

With the help of the chart of average capital employed (See Chart No.1) it is observed that the BHEL has strong average capital employed compare to Hero Moto Corp Ltd and ACC and it is constantly increased year by year during the study period while the average capital employed of ACC constantly increased up to 2011 and started to decline. Likewise the average capital employed of Hero Moto Corp Ltd increased up to 2011 and started to decline up to 2013. If the attention is given to the growth rate of average working fund, (See Chart No. 2) it can be noticed that the growth rate of average working fund constantly declined from the last six year of ACC; while the growth rate of average capital employed of Hero Moto Corp Ltd declined in 2009, 2010 and 2011 which is improved in 2012 but fall down in 2013. For BHEL, it was improved in 2009 and 2010 which started to lower down in 2011 which little bit improved in 2012 and marginally fall down in 2013. The average capital employed is very important to determine EVA because it affects the cost of capital with the specific rate of cost of capital and for traditional measurement of return on capital employed.

In consonance with the chart of NOPAT (See Chart No. 3), it is examined that there is a huge difference of NOPAT between BHEL and other two companies because of BHEL has strong capital employed compare to other two companies. NOPAT of BHEL is constantly increased up to 2012 and started to fall down in 2013. The NOPAT of Hero Moto Corp Ltd constantly increased up to 2010 and started more ups and downs in forthcoming years. In spite of the NOPAT of BHEL is constantly increased up to 2012 but its growth rate (See Chart No. 4) of NOPAT of BHEL increased up to 2011 but it tends to decline in 2012 and 2013. The growth rate of NOPAT of Hero Moto Corp Ltd increased



up to 2010 and huge fall down in 2011. It is further grown in 2012 and dropped in 2013. In the case of ACC, the growth rate of NOPAT shown ups and downs in the years of 2008 to 2011 but it was declined constantly in 2012 and 2013. The chart of NOPAT of all three companies cannot give clear picture about the profit but the growth rate can give clear view about the profit because the NOPAT is key factor in the determination of EVA, Return on capital employed (%), and EVA / Capital employed (%).

The cost of capital (See Chart No. 5) of BHEL is constantly grown during the study period in spite of lower rate of WACOC. The reason is the growth of capital employed because the amount of cost of capital is based on the rate of WACOC and the amount of capital employed. The growth of cost of capital of ACC and Hero Moto Corp Ltd little bit similar during the study period. The trend of WACOC % of ACC tends to upward but the capital employed tends to decline hence the amount of cost of capital of ACC shown reduction in couple of years of the study period. The % of WACOC of Hero Moto Corp Ltd tends to constant increase in last five year of the study period and also for the increase in the capital employed the line of amount of cost of capital of the company shows uptrend. The growth rate of cost of capital (See Chart No. 6) of BHEL tends to decline in last three years. The growth rate of cost of capital of Hero Moto Corp Ltd reduced in 2009, 2010 and 2011 which was improved in 2012 and fall down in 2013. The growth rate of cost of capital of ACC improved up to 2010 and started to fall down up to 2012 and tends to improve in 2013. It should be noted that the amount of cost of capital is depends on capital employed and the variations in the cost of equity and cost of debt which forms the WACOC hence the fluctuations in WACOC and capital employed, the amount of cost of capital has been changed. Economic Value Added is significantly affected by the cost of capital. Any huge movement in cost of capital, reflects in the EVA

With the help of the chart of EVA (See Chart No. 7) it can be understand that the EVA of BHEL is on the first position, Hero Moto Corp Ltd on second and ACC is on third position. The reason of being first position of BHEL is high capital employed and NOPAT. The trend line of EVA of BHEL is increased up to 2012 but tends to huge decline because of reduction in NOPAT and effect of cost of capital. The EVA of Hero Moto Corp Ltd increased up to 2010 and fall down in 2011 which little bit improved in 2012 and finally dropped in 2013 on the grounds of increase in cost of capital and ups and downs in NOPAT. The EVA of ACC is improved up to 2009 and then after it started to constant decline due to constant reduction in profit and increase in cost of capital. It should be noted that the growth rate of average capital employed also tends to decline which is other indicator of downtrend of EVA. By taking view of the growth rate of EVA (See Chart No. 8) it is observed that the growth rate of EVA of BHEL is constantly increased up to 2011 and shows declining trend of growth thereafter. The growth rate of EVA of Hero Moto Corp Ltd shows uptrend up to 2010 and decline thereafter. It could not maintain the growth rate of earlier years. The growth rate of EVA of ACC shows downtrend in most of the years of the study period. The base of capital employed of all three companies is different and the growth rate of capital employed fluctuates more or less during the study period. The WACOC of all three companies in most of the years



tends to improve and in last couple of years, NOPAT of all three companies tends to decline in last few years hence the EVA of all three companies tends to decline.

With the help of analysis of traditional measure of performance like return on capital employed (see Chart No. 9) it is revealed that the return on capital employed of Moto Corp Ltd improved constantly up to 2010 and started to constant declined in 2013 because of declining growth rate of average capital employed and reduction in NOPAT. The rate of return on capital employed of BHEL tends to constant declined in 2010 which little bit improved in 2011 and dropped down constantly in next two years. The reason behind the downward trend is slow growth rate of NOPAT compared to the growth rate of average capital employed. The company has not effectively utilized the resources of capital employed to generate the NOPAT at higher rate. The return on capital employed of ACC declined in 2008 which improved in 2009 and started to show constant downtrend during the study period because of the slow growth rate of profit and / or reduction in the profit and slow growth rate of capital employed.

While discussing about the WACOC, the following aspects must be considered which includes cost of debt, cost of preference shares and cost of equity.

⇒ Cost of Debt ( $K_d$ ): It is the Discount Rate that equates the Present Value of After Tax Interest Payment Cash Outflows to the current Market Value of Debt Capital

⇒ Cost of Preference Capital ( $K_p$ ): It is the Discount Rate that equates the Present Value of Preference Dividend Cash Outflows to the current Market Value of Preference Share Capital.

Cost of Equity ( $K_e$ ) is the expected Market Rate Return on Equity Capital. This is generally derived from the Capital Asset Pricing Model (CAPM), in the following way

⇒ Cost of Equity Capital = Risk Free Rate + (Beta x Equity Risk Premium)

Beta is a relative measure of volatility that is determined by comparing the return on share to the return on the stock market. Thus, Beta is a measure of non-diversifiable risk. Beta is a statistical measure of volatility. For Listed Companies, Beta is calculated as the co-variance of daily return on stock market indices and the return on daily share prices of a particular Company divided by the Variance of the return on daily Stock Market indices. Generally, maximum of yearly Beta of the Company should be taken in calculations.

Equity Risk Premium: Equity Risk Premium is the excess return above the Risk Free Rate that investors demand for holding risky securities (i.e. Shares of the particular Company). Equity Risk Premium = Market rate of Return (MRR) Less Risk Free Rate

⇒ Overall Cost of Capital ( $K_o$ ): The Overall Cost of Capital of a Firm is the weighted average cost of the individual components of Capital i.e. Debt, Preference and Equity.

In case of the WACOC of all three sample companies, it can be said that the variations in WACOC may be caused by the above discussed aspects. It may fluctuate due to increase or decrease in debt or may be for the changes in beta and/ or risk premium because all three sample companies do not have preference capital. In accordance with



the chart of WACOC (See Chart No. 10) it is examined that the WACOC of Hero Moto Corp Ltd constantly declined up to 2009 and started to uptrend during the remaining period of the study. BHEL made good effort to bring down its WACOC constantly up to 2010 but it also started to improve in the next three years. The WACOC of ACC is remained lower compare to other two companies but it is constantly declined up to 2009 and started to improve for the remaining years of the study period.

The percentage of EVA to Average Capital Employed indicates that how efficiently average capital employed applied by the management in generation of EVA to the shareholders of the firm. From the chart of EVA/average capital employed (see Chart No. 11) it is observed that the Hero Moto Corp Ltd able to increase the percentage of EVA from capital employed in the range of 4% to 8% up to 2010 and started to fall down constantly and again reached to nearby 4%. BHEL has created nearby 9% ratio in 2007 and reached at top level and crossed 14% in the year 2008 but then after it declined year by year and finally stood at nearby 2% which is lower than the percentage of ACC in 2013 which indicates that the management of BHEL has not effectively utilized its average capital employed for economic value added. In case of ACC, the ratio was nearby 4% in 2007 which dropped down in 2008 with lower than 2% and remain steady between 2% to 4% during the study period. From the areal route of the chart, it can be said that all three companies has not effectively utilized their average capital employed in creation of economic value added.

The charts of market capitalization and enterprise value (See Chart No. 12 and 13) are very similar in the direction of trend as well as the charts of growth rate of market capitalization and the growth rate of enterprise value (See Chart No. 14 and 15) shows the same direction. The market capitalization and enterprise value of BHEL is very high compare to other two companies because the capital employed of BHEL is very high in comparison of other two companies. Although, BHEL has strong capital base, the market capitalization and enterprise value tends to decline constantly from the last three years. It was improved in 2008, dropped down in 2009 and reached at highest position in 2010. Market capitalization and enterprise value of Hero Moto Corp Ltd. improved constantly up to 2010 and shows ups and downs in next two years and finally declined in 2013. For the ACC, the market capitalization and enterprise value declined in 2008 but started to improve with slower growth rate up to 2012 and it also declined in 2013. It is noticed that the market capitalization and enterprise value of all three sample companies declined in 2013. From the bird's view of the charts of growth rate of market capitalization and enterprise value, it is noticed that the growth rate of all three companies for the years of 2011, 2012 and 2013 tends to decline or shows slower growth rate compare to the earlier year of the study period. It can be said that all three sample companies has not effectively performed for improvement of market capitalization and enterprise value in the last three years of the study period.

The Chart number 16 shows that how much times of enterprise value has been created against average capital employed of the firm. This chart is little bit similar to the chart of EVA to average capital employed. The chart line of BHEL indicates that the enterprise



value has been improved in 2008 and falls down in 2009 which further improved in 2010 and started to constant decline in the next three years. The value of enterprise of Hero Moto Corp Ltd. dropped down in 2008 and started to constant improve up to 2010 and tends to decline in next three years. The chart line of ACC shows that the enterprise value fall down in 2008 which remain steady in next coming years and improved in 2012 which also dropped in 2013. Taking overall view it is noticed that in the year 2013, the enterprise value of all three firms dropped down with more or less margin. It can be said that management of all three firms has not work effectively and has not made proper use of average capital employed in creation of enterprise value.

### **Average Results**

To highlight the best performer firm with the help of the parameters (See Exhibit 4), the average results of the study period has been taken as base. As the capital employed of BHEL is significantly big in size compare to the other two firms, the other parameters which are affected by capital employed is more compare to other two firms. Out of the average results of total parameters the rank allotted in ascending order. By taking the view of average results it is concluded that out of the total 12 parameters, BHEL has got first position on 8 parameters, Hero Moto Corp Ltd got first position on 3 parameters and ACC has got first position on 1 parameter tested. It comes to the conclusion that the performance of BHEL is superior compare to Hero Moto Corp Ltd and ACC in connection with the total parameters tested.

### **Eva Of Sample Companies During The Study Period**

According to the chart of average capital employed (See Chart No. 1), the chart of NOPAT (see Chart No. 3) and the chart of cost of capital (See Chart No. 5) it is found that the EVA of the sample companies is affected by the variations in the average capital employed, cost of capital and NOPAT. In the initial years of the study period, the EVA of all three sample companies improved but the EVA of ACC tends to constant declined up to 213. EVA of Hero Moto Corp Ltd increased up to 2010 and started to move towards decline up to 2013. The EVA of BHEL constantly improved up to 2012, but it was also fall down in 2013.

### **Nopat And Cost Of Capital and Movement Of EVA**

In consonance with the chart of growth rate of average capita employed (See Chart No. 2), the chart of the growth rate of NOPAT (see Chart No. 4 ) and the chart of the growth rate of cost of capital (See Chart No. 6) it is revealed that the growth rate of NOPAT of all three companies in most of the years tends to decline and the growth rate of cost of capital declined but lower than the NOPAT and also it is based on the growth rate of average capital employed hence the variations in growth rate of average capital employed also affected to cost of capital because there is not much huge variations in the rate of WACOC. Hence it can be concluded that the growth rate of NOPAT and Cost of Capital significantly affected the movement of EVA.

## **Market Capitalization and Value Of Enterprise During The Study Period**

Conforming to the charts of market capitalization and enterprise value (See Chart No. 12 and 14), it is examined that the trend lines of the charts of all three companies for market capitalization and enterprise value looks quite similar. As the market capitalization increase or decrease, the value of enterprise also tends to increase or decrease in the same direction. Although, the debt and cash equivalent plays a part in determination of enterprise value but it is very small in size of the amount in comparison of the size of the amount of enterprise value and market capitalization.

## **CONCLUSION**

The Economic Value Added concept is based on the principle that the value of firm only increases when the firm can generate surplus over its cost of capital. It helps to the management of the firm to focus on and gives clear view about what to be done for creation of wealth of shareholders and other stakeholders of the firm. The principles of EVA are not new and not easy to follow, but a firm which wants to achieve long term success and maximization of wealth of shareholders, it need to follow a strong measure of performance like EVA. It is a powerful performance measurement tool which, if used properly, can improve the performance of the company and can generate good returns to shareholders of the company. In the present paper, the analysis of the performance of three sample companies have been made with the help of selected parameters of last seven years and on the basis of the averages of the results of the study period, the ranks are assigned to judge the best performer company. On the basis of the ranks of parameters it can be concluded that BHEL is better performance compare to other two firms having first position of most of the parameters tested. The trend line of the charts of the companies for the different parameters suggests that in the last three years the EVA of majority of the firms tends to decline. Reason may be reduction in NOPAT or increase in cost of capital or slow growth rate of average capital employed or variations in WACOC. The companies need to improve average capital employed with higher rate with idle capital structure which can reduce the cost of capital and to make strong efforts to increase in NOPAT for Economic Value Added of the firm and also increase market capitalization for increase in enterprise value of the company.

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### Exhibit: 1 Hero MotoCorp Ltd.

Rs. In Crore

| Particulars                               | 2007       | 2008       | 2009       | 2010       | 2011       | 2012       | 2013       | AVG.       |
|-------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Average capital employed                  | 2415       | 2877       | 3499       | 3705       | 3989       | 4866       | 5286       | 3805       |
| <b>EVA</b>                                |            |            |            |            |            |            |            |            |
| NOPAT                                     | 859        | 969        | 1283       | 2233       | 1938       | 2393       | 2126       | 1686       |
| cost of capital                           | 374        | 394        | 448        | 510        | 563        | 715        | 792        | 542        |
| EVA                                       | 485        | 575        | 835        | 1723       | 1375       | 1678       | 1334       | 1144       |
| Return on capital employed (%)            | 35.57<br>% | 33.68<br>% | 36.67<br>% | 60.27<br>% | 48.58<br>% | 49.18<br>% | 40.22<br>% | 43.45<br>% |
| WACOC (%)                                 | 15.5       | 13.7       | 12.8       | 13.8       | 14.1       | 14.7       | 15         | 14         |
| EVA/Capital employed (%)                  | 20.08<br>% | 19.99<br>% | 23.86<br>% | 46.50<br>% | 34.47<br>% | 34.48<br>% | 25.24<br>% | 29.23<br>% |
| <b>Enterprise Value</b>                   |            |            |            |            |            |            |            |            |
| Market capitalization                     | 13753      | 13869      | 21390      | 38827      | 31739      | 41041      | 30792      | 27344      |
| ADD: Debt                                 | 165        | 132        | 78         | 66         | 1491       | 995        | 281        | 458        |
| Less: Cash and Cash Equivalents           | 2010       | 2698       | 3588       | 5833       | 5200       | 4041       | 3805       | 3882       |
| Enterprise Value                          | 11909      | 11303      | 17880      | 33060      | 28030      | 37995      | 27268      | 23921      |
| Enterprise value/capital employed (times) | 4.9        | 3.9        | 5.1        | 8.9        | 7.0        | 7.8        | 5.2        | 6          |

(Source: Annual reports of the companies)

### Exhibit: 2 BHEL

Rs. In Crore

| Particulars                    | 2007       | 2008       | 2009       | 2010       | 2011       | 2012       | 2013       | AVG.       |
|--------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Average capital employed       | 5544       | 6467       | 7751       | 11540      | 14680      | 19521      | 25906      | 13058      |
| <b>EVA</b>                     |            |            |            |            |            |            |            |            |
| NOPAT                          | 2454       | 2739       | 3047       | 4206       | 5867       | 6953       | 6509       | 4539       |
| cost of capital                | 797        | 929        | 1039       | 1536       | 2074       | 2921       | 3852       | 1878       |
| EVA                            | 1657       | 1810       | 2008       | 2670       | 3793       | 4032       | 2657       | 2661       |
| Return on capital employed (%) | 44.26<br>% | 42.35<br>% | 39.31<br>% | 36.45<br>% | 39.97<br>% | 35.62<br>% | 25.13<br>% | 37.58<br>% |
| WACOC (%)                      | 14.4       | 14.4       | 13.4       | 13.3       | 14.1       | 15         | 14.9       | 14         |
| EVA/Capital employed (%)       | 29.89<br>% | 27.99<br>% | 25.91<br>% | 23.14<br>% | 25.84<br>% | 20.65<br>% | 10.26<br>% | 23.38<br>% |
| <b>Enterprise Value</b>        |            |            |            |            |            |            |            |            |
| Market capitalization          | 55349      | 10090<br>7 | 73944      | 11702<br>7 | 10097<br>1 | 62940      | 43322      | 79209      |



|                                           |       |       |       |       |       |       |       |       |
|-------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                           | 89    | 95    | 149   | 128   | 163   | 193   | 1500  | 331   |
| ADD: Debt                                 | 5809  | 8386  | 10315 | 9790  | 9630  | 6672  | 7732  | 8333  |
| Less: Cash and Cash Equivalents           | 49629 | 92616 | 63778 | 10736 | 91504 | 56461 | 37090 | 71206 |
| Enterprise Value                          |       |       |       | 5     |       |       |       |       |
| Enterprise value/capital employed (times) | 9.0   | 14.3  | 8.2   | 9.3   | 6.2   | 2.9   | 1.4   | 7     |

(Source: Annual reports of the companies)

### Exhibit: 3 ACC

| Particulars                               | Rs. In Crore |        |        |        |        |        |        | Avg.   |
|-------------------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|
|                                           | 2007         | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   |        |
| Average capital employed                  | 4512         | 5268   | 6339   | 7144   | 7788   | 8142   | 8215   | 6773   |
| <b>EVA</b>                                |              |        |        |        |        |        |        |        |
| NOPAT                                     | 1439         | 1213   | 1607   | 1120   | 1325   | 1288   | 1096   | 1298   |
| cost of capital                           | 538          | 643    | 694    | 821    | 950    | 981    | 1084   | 816    |
| EVA                                       | 601          | 570    | 913    | 299    | 375    | 307    | 12     | 440    |
| Return on capital employed (%)            | 31.89%       | 23.03% | 25.35% | 15.68% | 17.01% | 15.82% | 13.34% | 20.30% |
| WACOC (%)                                 | 11.92        | 12.2   | 10.95  | 11.49  | 12.2   | 12.05  | 13.2   | 12.00  |
| EVA/Capital employed (%)                  | 13.32%       | 10.82% | 14.40% | 4.19%  | 4.82%  | 3.77%  | 0.15%  | 7.35%  |
| <b>Enterprise Value</b>                   |              |        |        |        |        |        |        |        |
| Market capitalization                     | 19288        | 9012   | 16362  | 20194  | 21345  | 26836  | 20806  | 19120  |
| ADD: Debt                                 | 306          | 482    | 567    | 524    | 511    | 163    | 35     | 370    |
| Less: Cash and Cash Equivalents           | 1489         | 1438   | 1876   | 2388   | 2932   | 3137   | 2621   | 2269   |
| Enterprise Value                          | 18045        | 8056   | 15063  | 18330  | 18923  | 23862  | 18220  | 17214  |
| Enterprise value/capital employed (times) | 3.8          | 1.4    | 2.4    | 2.6    | 2.4    | 2.9    | 2.2    | 3      |

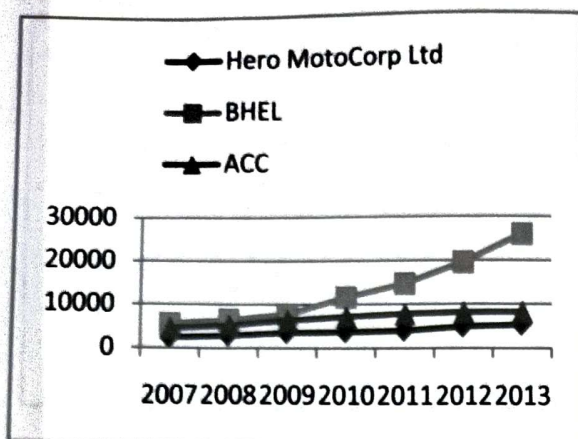
(Source: Annual reports of the companies)

### Exhibit 4: Average Results

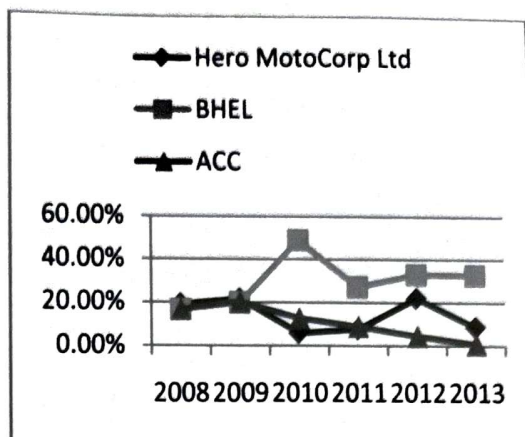
| Parameters                                | Average Values      |        |        | Ranks               |      |     |
|-------------------------------------------|---------------------|--------|--------|---------------------|------|-----|
|                                           | Hero Moto Corp Ltd. | BHEL   | ACC    | Hero Moto Corp Ltd. | BHEL | ACC |
|                                           |                     |        |        |                     |      |     |
| Average capital employed                  | 3805                | 13058  | 6773   | 3                   | 1    | 2   |
| NOPAT                                     | 1686                | 4539   | 1298   | 2                   | 1    | 3   |
| cost of capital                           | 542                 | 1878   | 816    | 1                   | 3    | 2   |
| EVA                                       | 1144                | 2661   | 440    | 2                   | 1    | 3   |
| Return on capital employed (%)            | 43.45%              | 37.58% | 20.30% | 1                   | 2    | 3   |
| WACOC (%)                                 | 14                  | 14     | 12     | 2                   | 2    | 1   |
| EVA/Capital employed (%)                  | 29.23%              | 23.38% | 7.35%  | 1                   | 2    | 3   |
| Market capitalization                     | 27344               | 79209  | 19120  | 2                   | 1    | 3   |
| ADD: Debt                                 | 458                 | 331    | 370    | 3                   | 1    | 2   |
| Less: Cash and Cash Equivalents           | 3882                | 8333   | 2269   | 2                   | 1    | 3   |
| Enterprise Value                          | 23921               | 71206  | 17214  | 2                   | 1    | 3   |
| Enterprise value/capital employed (times) | 6                   | 7      | 3      | 2                   | 1    | 3   |
| Total Ranks on First Position             |                     |        |        | 3                   | 8    | 1   |

(Source: Calculated from Annual reports of the companies)

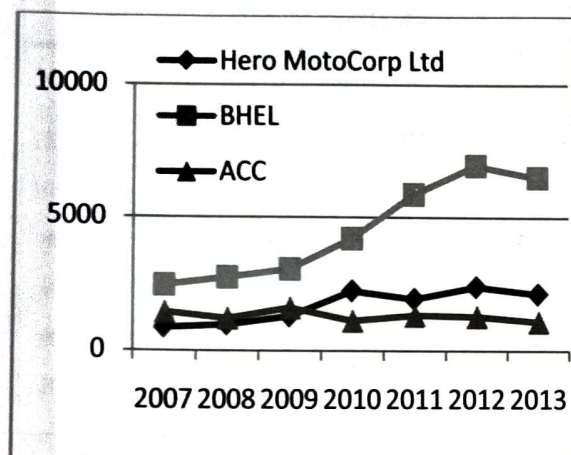
**Chart: 1 Average Capital Employed**



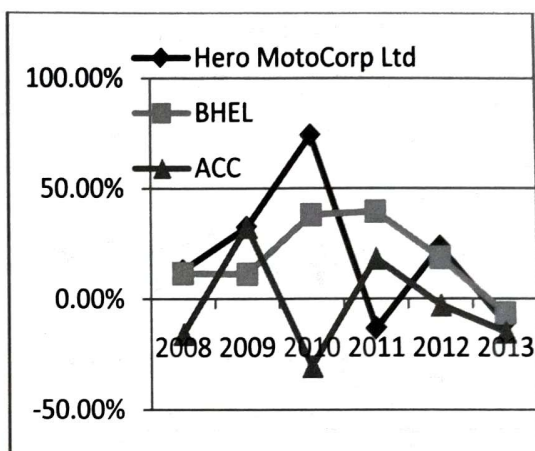
**Chart: 2 Growth rate of Average**



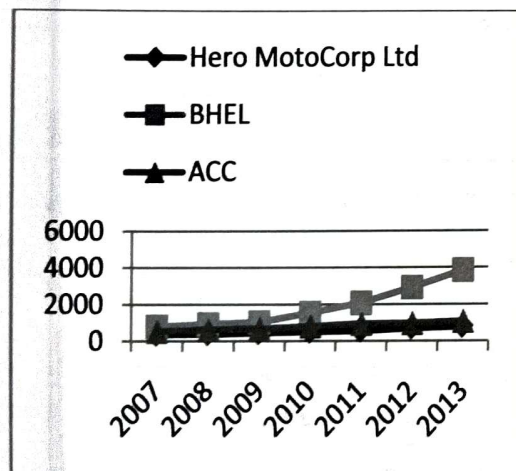
**Chart: 3 NOPAT**



**Chart: 4 Growth Rate of NAPAT**



**Chart: 5 Cost of Capital**



**Chart: 6 Growth Rate of Cost of Capital**

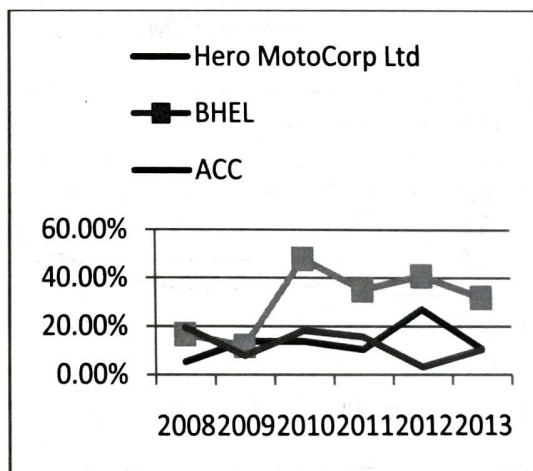




Chart: 7 EVA

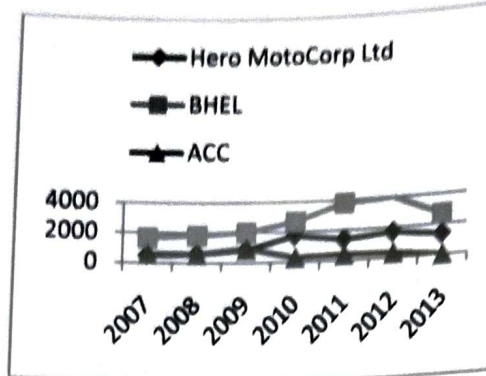


Chart: 8 Growth Rate of EVA

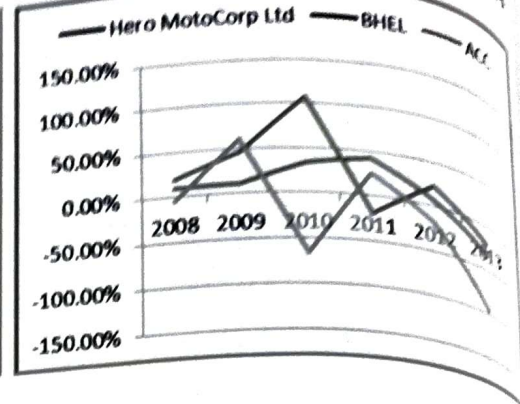


Chart: 9 Return on capital Employed

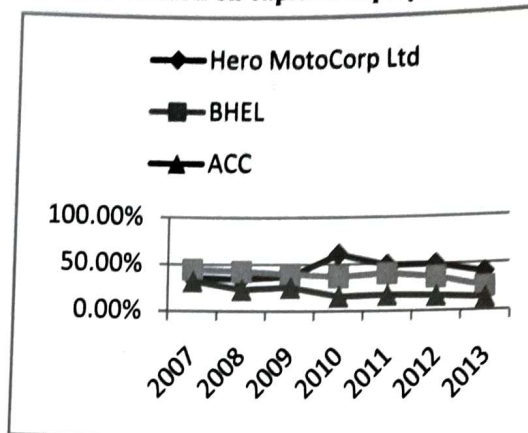


Chart: 10 Weighted Average Cost of Capital (%)

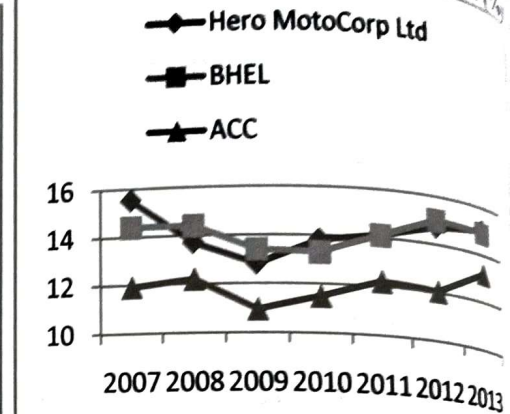
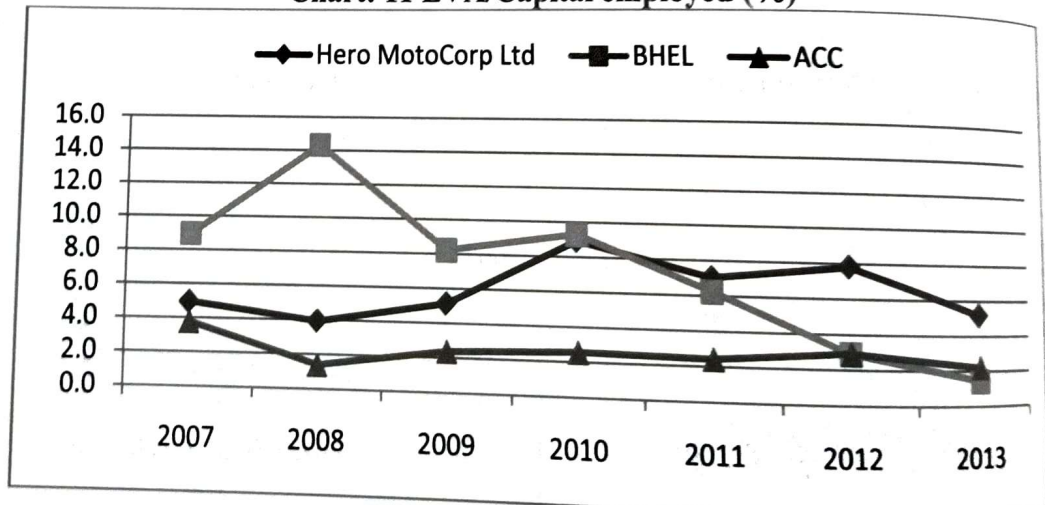
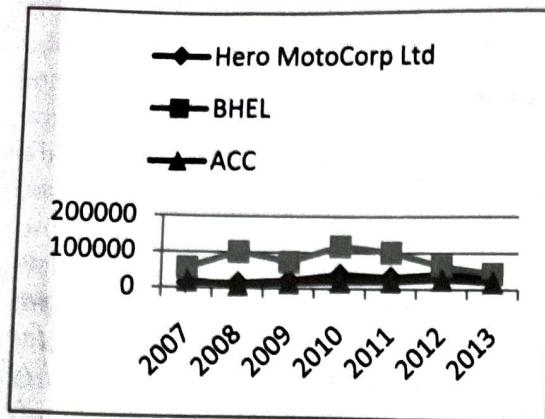


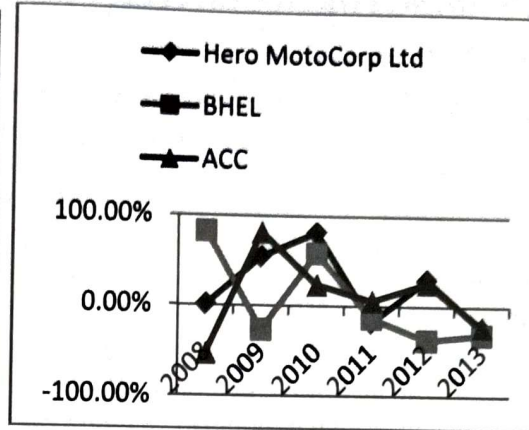
Chart: 11 EVA/Capital employed (%)



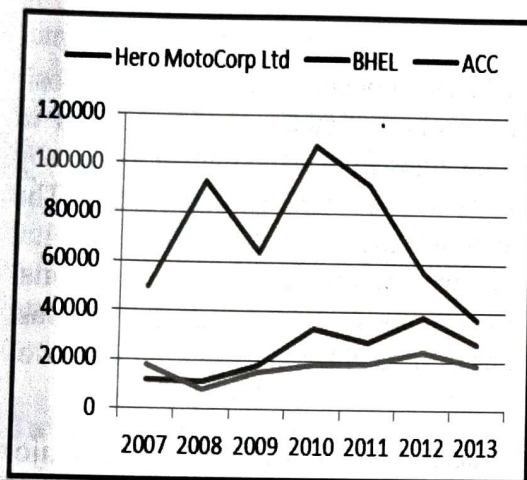
**Chart 12: Market Capitalization Capitalization**



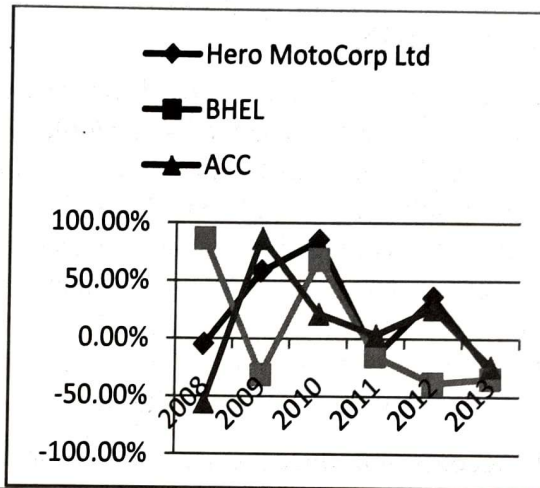
**Chart 13: Growth rate of Market Capitalization**



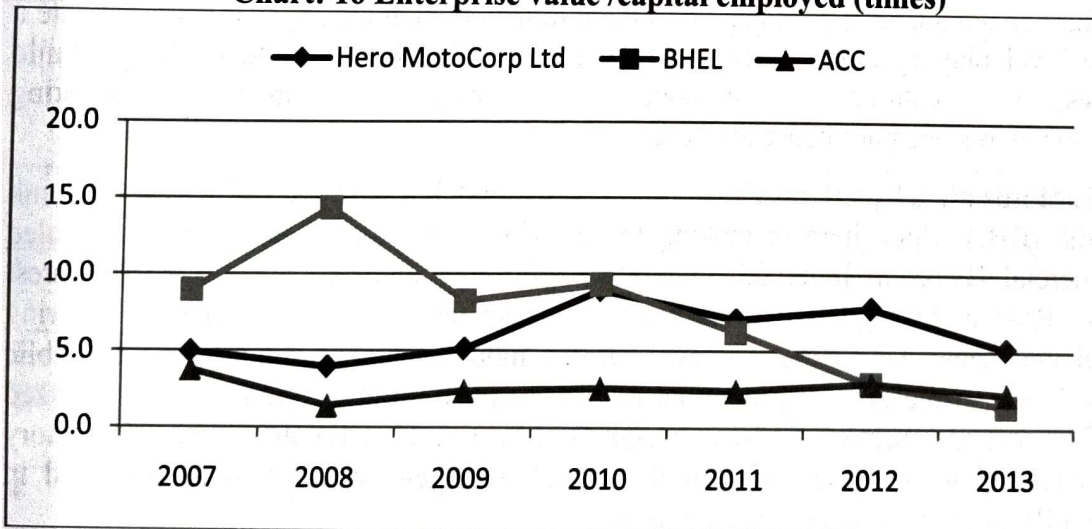
**Chart: 14 Enterprise Value**



**Chart: 15 Growth rate of Enterprise Value**



**Chart: 16 Enterprise value /capital employed (times)**





## PROVIDING FOR REGULATORY CAPITAL IN PUBLIC SECTOR BANKS IN INDIA

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### Abstract

*Basel Accords have considered capital as one of the major instrument for banks to ensure financial stability and performance in the era of internationalisation. The present paper describes capital required by public sector and private sector banks in India for effective implementation of Basel III. Various alternatives to manage required level of regulatory capital by public sector banks are discussed in the paper.*

**Keywords:** Bank, Basel, Capital, Prudential, Public Sector

### INTRODUCTION

An adequate level of capital provides stability to banks, boosts confidence of deposit holders and protects interest of stakeholders. The primary functions of capital is to support banks' operations by absorbing losses and changes in asset values, and thereby maintaining solvency ([http://www.rbi.org.in/Scripts/bs\\_viewcontent.aspx?Id=2023](http://www.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=2023)). Though capital regulations in banking industry existed even before the Basel Accords and capital ratios were used to establish minimum regulatory requirements. Though capital regulation in banking existed even before the Basel Accord of 1988, there were variations in the method and timing of its adoption in different countries (Evolution of the Basel Framework on Bank Capital Regulation, Anupam Prakash, 2009).

Basel Accords introduced since 1988 have considered capital as one of the major instrument to ensure financial stability and enhance performance of banking sector in the era of internationalisation of the sector. The two principal purposes of the Accord were to ensure an adequate level of capital in the international banking system and to create a "more level playing field" in competitive terms so that banks could no longer build up business volume without adequate capital (<http://www.bis.org/publ/bcbbsca01.pdf>).

Basel accords are adopted in India and prudential guidelines are issued by Reserve Bank of India (RBI) which help in making the banking sector Basel compliant. Scheduled Commercial Banks in India fall under three different kinds of ownership structure: Public, Private, Foreign. Different kinds of banks have different modes of ensuring capital adequacy. This paper reviews various modes for capital adequacy of Public Sector banks in the present prudential regulatory environment. The paper is organised into four sections. Section I states introduction, Section II elaborates various regulatory norms related to adequacy of capital. Capital management scenario is discussed in Section III. Section IV concludes the paper.

## PRUDENTIAL REGULATORY NORMS FOR BANKING SECTOR CAPITAL

Privatisation followed by internationalisation of banking sector in India has paved the way for enhanced regulations in order to ensure stability along with growth. India has adopted Basel standards since 1992 (Narsimham Committee Report, 1992) Basel regulatory standards aim at strengthening banks with the help of both micro-prudential as well as macro prudential regulations.

The main features of Basel I are documented over three sections (International convergence of capital measurement and capital standards, 1988). The framework provides a fair and reasonable degree of consistency in the application of capital standards in different countries, on a shared definition of capital. The accord was implemented in India in 1992 (as amended in 1998). Basel II replaced Basel I (Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework, 2006). India adopted these norms from 2009 (RBI, 2009). Basel III (International regulatory framework for banks, 2011) reforms were introduced as an after effect of financial crisis of 2008 and are being implemented in India since current financial year (RBI guidelines, 2012). The capital plays the role of buffer at the times of stress. Basel III standards seek to raise the quality and level of capital to ensure that banks are better able to absorb losses under different market environment, increase the risk coverage of the capital structure, introduce leverage ratio to serve as a support to the risk-based capital measure and introduce capital buffers to protect the banking sector from periods of excess credit growth.

Commercial Banks have to manage capital at required regulatory levels for effective conversion of banking sector from Basel II to Basel III. Prudential guidelines for capital adequacy as notified by RBI (2012) have made Maintaining of Capital levels necessary and critical to the survival and growth of the banking sector. Table 1 states minimum regulatory capital prescriptions as per Basel III.

**Table: 1 Minimum Regulatory Capital Prescriptions**

| Minimum<br>(as percentage of risk weighted assets) |                                                | Regulatory | Capital                                |                              | Prescriptions                    |
|----------------------------------------------------|------------------------------------------------|------------|----------------------------------------|------------------------------|----------------------------------|
|                                                    |                                                |            | Basel III<br>(as on<br>Jan 1,<br>2019) | Reserve Bank's Prescriptions |                                  |
|                                                    |                                                |            |                                        | Current (Basel II)           | Basel III (as on March 31, 2018) |
| 1 ---<br>(2+4)                                     | Minimum Total Capital                          | 8.0        | 9.0                                    | 9.0                          |                                  |
| 2                                                  | Minimum Tier 1 capital                         | 6.0        | 6.0                                    | 7.0                          |                                  |
| 3                                                  | of which: Minimum Common Equity Tier 1 capital | 4.5        | 3.6                                    | 5.5                          |                                  |
| 4                                                  | Maximum Tier 2 capital (within Total Capital)  | 2.0        | 3.0                                    | 2.0                          |                                  |



|              |                                            |      |     |      |
|--------------|--------------------------------------------|------|-----|------|
| 5            | Capital Conservation Buffer (CCB)          | 2.5  | -   | 2.5  |
| 6 ---<br>3+5 | Minimum Common Equity Tier 1 capital + CCB | 7.0  | 3.6 | 8.0  |
| 7 ---<br>1+5 | Minimum Total Capital + CCB                | 10.5 | -   | 11.5 |
| H            | Leverage Ratio (ratio to total assets)     | 3.0  | -   | 4.5  |

Source: RBI Reports (July 2012)

Table 1 shows that the minimum total capital requirement for Indian banks is 9 % (1 % higher), and that total minimum tier 1 capital with capital conservation buffer is 8.0 % (1 % higher). The leverage ratio is also higher by 1.5 % than the international standard (6.5 % higher). Indian banks are subjected to more stringent capital adequacy requirements than international counterparts. (<http://www.icra.in/Files/ticker/2010-September-BasIII.pdf>). Indian Banking sector could efficiently survive at the time of global recession 2008 ([http://www.rbi.org.in/scripts/BS\\_SpeechesView.aspx?Id=410](http://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=410)).

**Table 2: Additional Capital Requirements of Commercial Banks in India**

| Additional Capital Requirements                                                          | Public Sector Banks | Private Sector Banks |
|------------------------------------------------------------------------------------------|---------------------|----------------------|
| Additional Equity Capital Requirements under Basel III                                   | 1400-1500           | 200-250              |
| Additional Equity Capital Requirements under Basel II                                    | 650-700             | 20-25                |
| Net Equity Capital Requirements under Basel III (A-B)                                    | 750-800             | 180-225              |
| <b>Of Additional Equity Capital Requirements under Basel III for Public Sector Banks</b> |                     |                      |
| Government Share (if present shareholding pattern is maintained)                         | 880-910             | -                    |
| Government Share (if shareholding is brought down to 51 per cent)                        | 660-690             | -                    |

Source: RBI (Sep, 2012)

According to additional capital requirement to implement proposed Basel III guidelines, it is estimated that Indian banks would require between 880-910 billion at present level of government shareholding and between 660-690 billion if the shareholding is reduced to 51 % as external capital over next nine years. It is the public sector banks that would require most of this capital, given that they dominate (PSBs had a market share of more than 75 per cent and private banks (<http://www.hindustantimes.com/business/news/Features/Public-sector-banks-down-but-not-out/Article1-980685.aspx>) the Indian banking sector.

## **MANAGEMENT OF REQUIRED REGULATORY CAPITAL**

Different strategies can be adopted to ensure required prudential regulatory levels of capital for public sector banks are discussed below.

### **Recapitalisation**

Capital infusion by government is one of the strategies for public sector banks to ensure their adequacy of capital. The government has been making budgetary provisions for recapitalization of public sector banks since 1984-85 to ensure their capital adequacy. The total recapitalization of Rs. 2446 Crore took place from 1985-86 to 2000-01. The trend of recapitalisation continues with capital infusions of 1900 crore in 2008-09, 1200 crore in 2009-10, 20,117.23 crore in 2010-11, 12,000 crore in 2011-12 (data, GOI).

### **Control on Restructuring of Debts**

Banks including public sector banks are transferring their non-performing asset to its Corporate Debt Restructuring (CDR) cell and CDRs are restructuring the loan by lowering the interest rate and enhancing the loan repayment schedule without addressing the fundamental problems.

This may lead to higher defaults and erode capital base or reduce the efficiency of generating capital base. Restructuring norms loosened in 2008 need to be tightened (<http://www.economist.com/node/21560572>).

### **Maintaining Higher Reserve Funds**

According to Section 17 of the Banking Regulation Act (1949) every bank incorporated in India is required to create a reserve fund and transfer a sum equal to but not less than 20 per cent of its disclosed profits, to the reserve fund every year. The RBI has advised banks to transfer 25 percent and if possible, 30 per cent to the reserve fund. ([http://rbi.org.in/scripts/BS\\_CircularIndexDisplay.aspx?Id=3098](http://rbi.org.in/scripts/BS_CircularIndexDisplay.aspx?Id=3098)). This will help banks to increase their total capital in long run (<http://rbidocs.rbi.org.in/rdocs/publications/pdfs/16016.pdf>).

### **Maintain Government Ownership at Minimum or near to Minimum Levels**

To maintain the character of public sector, government needs to maintain fifty one percent stake in PSBs. Government may consider options for diluting stake in PSBs. Government has initiated legislative process to reduce the minimum Government ownership in nationalized banks from 51 to 33 per cent, without altering their public sector character (<http://www.indianexpress.com/news/plan-panel-asks-govt-to-cut-psu-bank-stakes-to-33-/291656/>). The option of consolidation may also be considered after undertaking an exercise of probable impact of such consolidation on risk weighted assets and capital structure amongst other important considerations.



**Table: 3 Percentage of Government Shareholding**

| % of Govt. Shareholding | Number of Banks |
|-------------------------|-----------------|
| 51-60                   | 9               |
| 61-70                   | 7               |
| 71-80                   | 4               |
| 81-90                   | 1               |

Source: RBI Reports (2011-12)

Above table shows that twelve public sector banks in India have government shareholding of more than sixty percent out of which one bank has shareholding above eighty percent.

### Improve Return on Equity/CRAR

Table 4 shows that return on assets ratio, CRAR and Net NPA Ratio is better for private sector and foreign banks compared to public sector banks in India. Public sector banks have core equity ratio (7.8 % for public sector banks and 11.5 % for private sector banks (CARE Data, 2012) lower than private sector banks.

**Table: 4 Bank Group-wise Aggregates (Amount in ` million)**

| Items                                                   | Public Sector Banks        |         |         |         |         |
|---------------------------------------------------------|----------------------------|---------|---------|---------|---------|
|                                                         | 2007-08                    | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
| Return on Assets                                        | 1.00                       | 1.03    | 0.97    | 0.96    | 0.88    |
| CRAR                                                    | 12.52                      | 13.49   | 13.27   | 13.08   | 13.23   |
| Net NPA ratio                                           | 0.99                       | 0.94    | 1.10    | 1.09    | 1.53    |
| Items                                                   | Private Sector Banks       |         |         |         |         |
|                                                         | 2007-08                    | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
| Return on Assets                                        | 1.13                       | 1.13    | 1.28    | 1.43    | 1.53    |
| CRAR                                                    | 14.34                      | 15.23   | 17.43   | 16.46   | 16.21   |
| Net NPA ratio                                           | 1.09                       | 1.29    | 1.03    | 0.56    | 0.46    |
| All Scheduled Commercial Banks<br>(Amount in ` million) |                            |         |         |         |         |
| Items                                                   | Bank Group-wise Aggregates |         |         |         |         |
|                                                         | 2007-08                    | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
| Return on Assets                                        | 1.12                       | 1.13    | 1.05    | 1.10    | 1.08    |
| CRAR                                                    | 13.01                      | 13.98   | 14.54   | 14.19   | 14.25   |
| Net NPA ratio                                           | 1.00                       | 1.05    | 1.12    | 0.97    | 1.28    |

Source: Computed from RBI reports

Implementation of Basel III guidelines in India would demand both, capital management and profitability management. The relationship between the capital-assets ratio and profitability is positive. (Goddard et al., 2004). Banks should be able to deliver efficient

financial intermediation without compromising the interests of depositors and borrowers ([http://rbi.org.in/Scripts/BS\\_ViewBulletin.aspx?Id=13646](http://rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=13646)).

### **Improve Internal Processes/Advanced Approaches**

Banking sector is in the process of shifting to advance approaches for capital management. (<http://www.rbi.org.in/scripts/PublicationsView.aspx?id=14628>) Adopting advance approaches would require banks to analyse various types of risks faced by the banks (credit, operational and market).

Banks should try to improve the computation and quality of risk weighted assets. Under the Basel II guidelines, banks are allowed to use their own estimated risk parameters for the purpose of calculating regulatory capital under advance approaches (<http://www.bis.org/publ/bcbsca05.pdf>). This will provide a gap for lowering required capital levels for Basel compliance.

### **Ensure Effective Data Management and Data Integrity**

Inefficient activities in the process of capital management should be eliminated and the process should be efficiently redesigned on the basis of data. Analysis of available data would explain the need and importance of activities in the management process (Principle 3, Basel Accords). Well managed and integrated data becomes a strong base for risk management and hence improve CRAR.

### **Other Alternatives**

RBI allowed banks to enhance their regulatory capital adequacy by issue of hybrid debt instruments (RBI, 2006). To be eligible for inclusion in Tier – II Capital, Banks can issue bonds as subordinated debt after complying with the regulatory provisions of RBI ([http://rbidocs.rbi.org.in/rdocs/content/pdfs/42MBI010212FL\\_A5.pdf](http://rbidocs.rbi.org.in/rdocs/content/pdfs/42MBI010212FL_A5.pdf)).

The Banking Bill, 2012, passed by the parliament in December will "enable the nationalized banks to raise capital through 'bonus' and 'rights' issue and also enable them to increase or decrease the authorized capital with approval from the Government and RBI. Ceiling of a maximum of Rs 3000 crore (Rs 30 billion) will not be a limit" (<http://www.thehindubusinessline.com/industry-and-economy/banking/psu-banks-can-increase-authorized-share-capital-ministry/article4226370.ece>).

### **CONCLUSION**

Capital adequacy is one of the challenges posed by Basel III implementation in India. Capital infusion of public sector banks differs from private sector banks due to their ownership. Policy and institutional initiatives can help these banks in managing required level of capital. Improved data management, efficient model developments, enhance risk management, and better performance can lead the road to efficient capital management.



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**STUDY OF BEHAVIOR OF TWO WHEELER DRIVERS TOWARDS HELMET WEARING, TALKING ON CELL PHONE WHILE DRIVING AND DRIVING WITH MANY PILLION RIDERS\***

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**Abstract:**

*Road fatalities are highest in India across the world. In India motorcyclists comprise highest number of road traffic victims. Gujarat State owns highest numbers of two wheelers and accounts for nearly 5% of road accidents in the country. Surat-the diamond and silk city of Gujarat has more than 75% two wheelers in its registered vehicular fleet. Percentage share of motorcyclists in road accident deaths in Surat city in the year 2007, 2008 and 2009 has been 28.6%, 29.4% and 28.6% respectively. The purpose of this paper is to study the risky behaviours of two wheeler drivers on roads and its causes. An attempt also has been made to identify the interventions for promoting safe road behaviour among two wheeler drivers.*

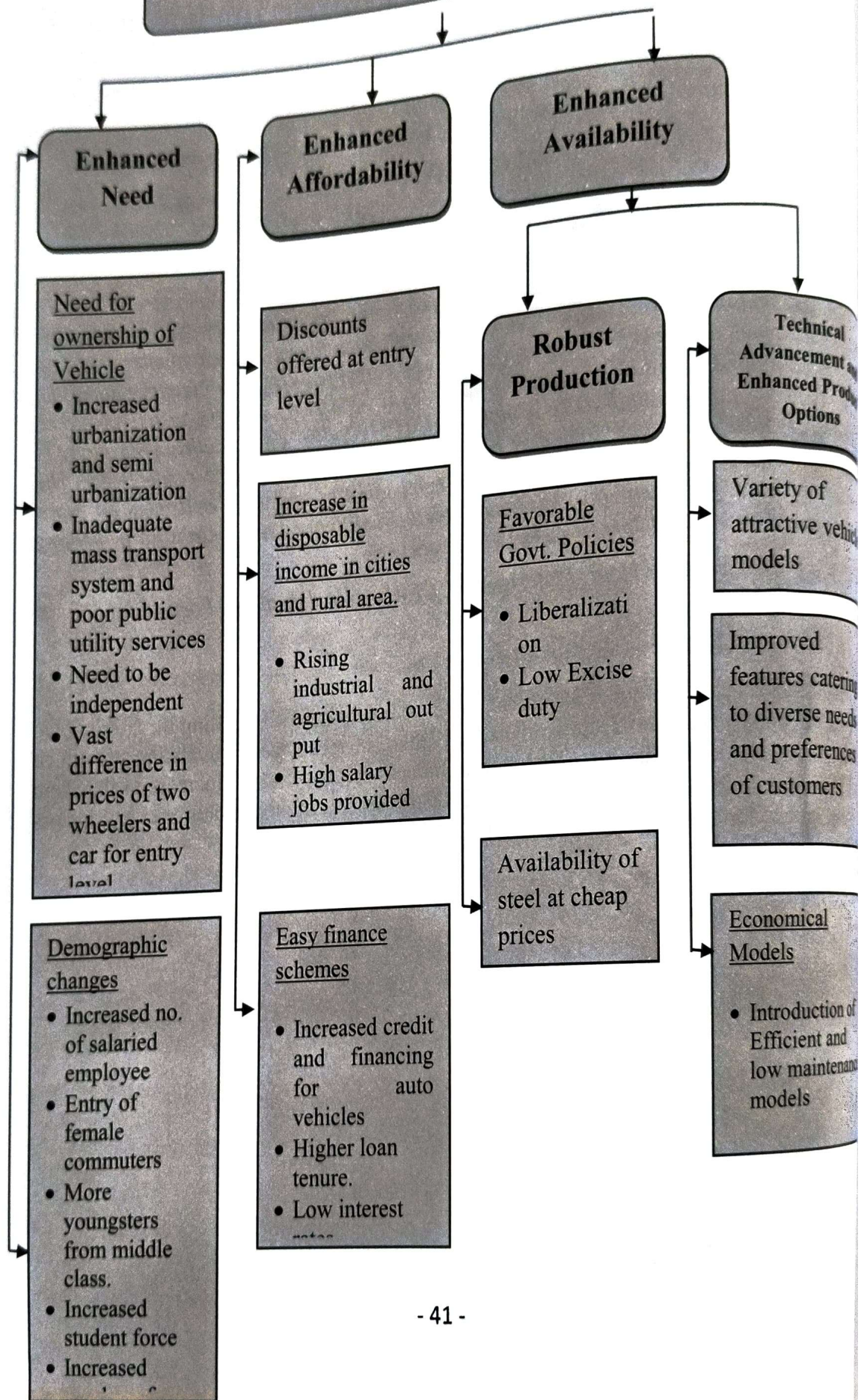
**Key Words:** *Risky Behaviour, Motorcyclists, Observational Analysis, Focus Group*

**INTRODUCTION**

Motorcycles being a highly convenient and economic mode of travelling on the road are popular among different sections of society alike. In recent years escalating growth of two wheeler riders in driving population in India is evident from its increased sales from 5.3 million in 2003-04 to 9.3 million in 2009-10. According to literature review factors responsible for mammoth growth of two wheelers are as follows:

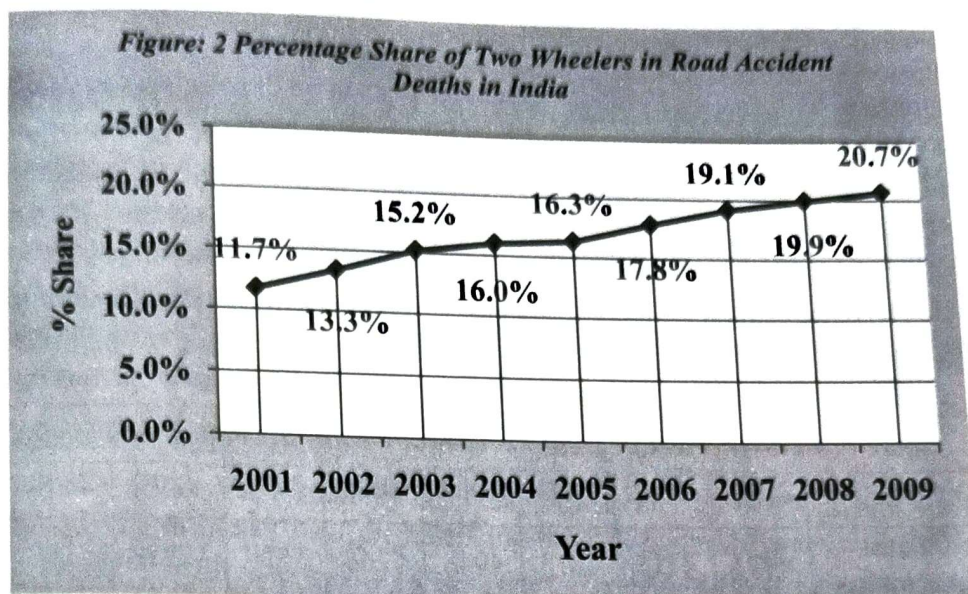


**Figure: 1 Demand Drivers for Two Wheelers in India**





Unfortunately, the growth of motorcycles / motorized two wheelers has been accompanied by growing number of fatal crashes in the country. The chart below describes the gravity of the situation.



Source: National Crime Report Bureau years 2001 -2009

Human factors, Vehicle factors and environmental factors are the three important components of road safety. The physical characteristics of the vehicle coupled with unsafe behavioral factors of the driver exposes the two wheeler riders to high risks.

*Table: 1 Risk exposure due to Vehicle and Human factors*

| Vehicle Factors <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                       | Behavioral Factors                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Two wheelers are relatively unstable on the road as they rest and move on two points only.</li> <li>Two wheelers require continuous maneuvering and balancing by the driver.</li> <li>Being small in size these vehicles are not highly visible on the roads.</li> <li>The rider being directly exposed to environment hits his head to mobile or stationary objects on road in case of a crash.</li> </ul> | <ul style="list-style-type: none"> <li>Failure to wear helmets</li> <li>Not fastening helmet properly even if worn.</li> <li>Talking on cell phone while driving.</li> <li>Carrying more than one pillion rider.</li> <li>Driving at a very high speed.</li> <li>Drunken driving.</li> <li>Transporting huge amount of luggage.</li> </ul> |

<sup>1</sup> Head Injuries and Helmets: Helmet Legislation and Enforcement in Karnataka and India by National Institute Of Mental Health & Neuro Science, Bangalore(page 12)  
<http://www.nimhans.kar.nic.in/epidemiology/bisp/pha1.pdf> )



## BACKGROUND AND OBJECTIVE

Road fatalities are highest in India across the world. In India motorcyclists comprise highest number of road traffic victims. Gujarat State owns highest numbers of two wheelers and accounts for nearly 5% of road accidents in the country. Surat-the diamond and silk city of Gujarat has more than 75% two wheelers in its registered vehicular fleet. Surat city has seen a phenomenal growth in traffic population in the last decade as the numbers of registered vehicles increased by 114% during 2001-10. In the year 2010 out of 1625964 total registered vehicles, 78% were two wheelers<sup>2</sup>.

In Surat region, on highways and city roads everyday one comes across a large number of two wheeler drivers displaying blatant disregard for traffic safety rules.

Approximately 5% of road accident deaths by Two Wheelers occur in Gujarat. In Surat city too road accident deaths by two wheelers fluctuated between 5%-8% during 2001-2009.

Table: 2 Share of Two-Wheelers in Total Accidental Deaths in Gujarat and Surat City

| Year    |                 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007  | 2008 | 2009 |
|---------|-----------------|------|------|------|------|------|------|-------|------|------|
| Gujarat | Total Accidents | 4471 | 4715 | 4813 | 4948 | 5264 | 5599 | 12258 | 6386 | 6914 |
|         | Two-Wheelers    | 615  | 651  | 646  | 814  | 901  | 950  | 1057  | 1102 | 1260 |
| Surat   | Total Accidents | 118  | 148  | 147  | 160  | 230  | 140  | 259   | 245  | 217  |
|         | Two-Wheelers    | 22   | 54   | 52   | 62   | 79   | 51   | 74    | 72   | 62   |

Source: National Crime Report Bureau years 2001 -2009

Therefore three studies were conducted in Surat city and four talukas (Bardoli, Mahuva, Mandvi and Palsana) of Surat district to study the risky behaviours of two wheeler drivers on roads and its causes.

### Unsafe / Risky Behaviour

Three common unsafe and risky behaviours of two wheeler driver's are:

- Not Wearing Helmet

Despite established benefits of wearing helmet majority of two wheeler riders abstain from them. Female drivers mostly cover their faces with 'dupatta' instead of wearing a helmet. Photos below substantiate the fact.

<sup>2</sup> Data obtained from Regional Traffic Office, Surat.



- **Driving with Two or more as Pillion**

In Surat region many youngsters and elderly travel with more than one pillion rider on two wheelers. Often three or four friends are seen travelling together on a single two wheeler and playing pranks with each other.

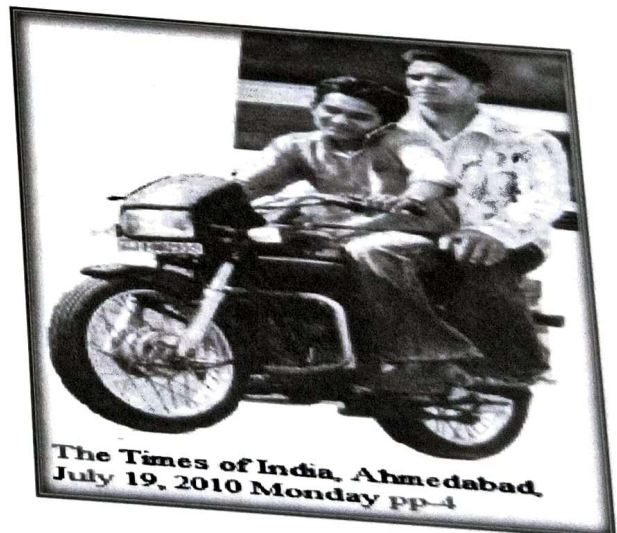
Similarly family consisting husband, wife along with one or more child and some luggage are also seen on this '*family two wheeler*'.

- **Talking on Cell Phone**

Two wheeler drivers are commonly seen using cell phone by one hand and handling the vehicle only by the other hand or balancing the cell phone between ears and shoulder blades by leaning on one side. This not only imbalances them but also divides their attention from the main task of driving. It virtually becomes impossible for the driver to respond quickly to any sudden swerve in the movement of his own vehicle or that of the oncoming vehicles. The use of cell phone while driving can create most dangerous situation for the driver as well as for the other people on the road.

### **Legal Provisions**

Driving without wearing helmet, talking on cell phone while driving and driving with two or more pillion is an offence as per Motor Vehicle Act 1988.





| <i>Table: 4 Offences under Motor Vehicles Act 1988</i> |                                                                                                                                                         |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Offence</b>                                         | <b>Legal Provisions</b>                                                                                                                                 |
| Driving without wearing helmet                         | Not wearing helmet by the driver and rider of motorized a two wheeler is an offence as per MV Act 1988 (sec. 129 r/w s 177).                            |
| Driving and talking on cell phone                      | Using mobile phone while driving a vehicle is an offence as under Rule 21 (25) of the Central Motor Vehicles Rules read with Section 177 of the MV Act. |
| Driving with two or more pillion                       | Driving motorized two wheeler with two or more passengers on it is an offence under Motor Vehicle act 1988(sec. 128 (1) r/w s. 177).                    |
| <b>Punishment</b>                                      | All the three offences attract a fine of Rs. 100 for first offence and Rs. 300 for second or subsequent offences.                                       |

## APPROACH AND METHODOLOGY

Qualitative approach comprising World Health Organization's (WHO) frame work for observational study with modifications according to local constraints, focus group and in depth interviews has been used. Observation of two wheeler drivers on highways, rural roads and city roads were carried out in Surat district for one month. Observations pertained to wearing helmet, talking on cell phone and driving with more than one as pillion. Photographic evidences of risky behaviour of two wheeler drivers have also been collected.

### Study: 1 Observational Study

In the first phase of a study observation of two wheeler drivers on highways, rural roads and city roads were carried out in Surat district for one month as per World Health Organisation's WHO<sup>3</sup> framework for observation with modifications according to local constraints.

| <i>Table: 5 Observation Method</i> |                                                                                                                                                                                                                                                                                                          |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Target Population</b>           | Motorized two-wheeler drivers on roads in Surat District                                                                                                                                                                                                                                                 |
| <b>Observation Sites</b>           | <ul style="list-style-type: none"> <li>• Bardoli Surat national highway no 6.</li> <li>• Mahuva Bardoli state highway no. 165.</li> <li>• Mandvi Bardoli state highway no.88.</li> <li>• Bardoli Palsana State highway no167.</li> <li>• Local city roads of Mandvi, Bardoli, Mahuva and Sura</li> </ul> |

<sup>3</sup> "Seat Belts and Child Restraints: A Road safety Manual for Decision Makers and Practitioners, WHO (2009), pp39-40 and Helmets-A Road Safety Manual for Decision Makers and Practitioners, WHO (2006), pp-38-39

|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                 | city.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Data Collection</b> <ul style="list-style-type: none"> <li>• <i>Instrument</i></li> <li>• <i>Period</i></li> <li>• <i>No. of Observers</i></li> </ul>                                                                                                                                                        | Manual recording of data in specifically designed form.<br>15 <sup>th</sup> April 2010 to 15 <sup>th</sup> May 2010<br>44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Protocol</b><br><b>Local City Roads</b><br><b>No. of observers</b><br><b>Observers Job</b><br>1 <sup>st</sup> Observer<br>2 <sup>nd</sup> Observer<br>3 <sup>rd</sup> Observer<br>4 <sup>th</sup> Observer<br><br><b>Mode of Observation</b><br><b>Duration of Observation</b><br><b>Time of Observation</b> | <u><b>Local City Roads</b></u><br>4 per site.<br><ul style="list-style-type: none"> <li>• Counted number of motorized 2 wheeler drivers on the site.</li> <li>• Counted drivers and pillion rider who wore helmet.</li> <li>• Counted the number of motorized two wheeler drivers talking on cell phone while driving and those who took their vehicle to a side on the road and then talked on cell phone.</li> <li>• Counted those driving with two or more passengers as pillion.</li> </ul> Standing at safe place near the particular site. Traffic passing from both sides was observed.<br>1 hour each in the morning and evening.<br>6:30 am to 7:00 pm as per the convenience of observers. |
| <b>Highways</b><br><b>No. of observers</b><br><b>Observers Job</b><br>1 <sup>st</sup> Observer<br>2 <sup>nd</sup> Observer<br><br><b>Mode of conducting Observation</b><br><br><b>Duration of Observation</b><br><b>No. of Observations</b>                                                                     | <u><b>Highways</b></u><br>2 per site.<br><ul style="list-style-type: none"> <li>• Counted the number of motorized two wheeler drivers and drivers and pillion riders wearing helmet.</li> <li>• Counted the number of motorized two wheeler drivers talking on cell phone while driving and those who took their vehicle to a side on the road and then talked on cell phone and driving with two or more passengers as pillion.</li> </ul> Observations were made through moving bus, car and auto rickshaw. Observations were confined to traffic passing from the opposite direction only.<br>20 minutes to 1 hour depending on the time taken in commutation.<br>40                              |

## DATA ANALYSIS

A total of 101,444 motorcyclists/two wheeler drivers were observed during the observation period. Observations pertained to wearing helmet, driving with more than one as pillion, talking on cell phone and talking on phone after parking aside. Their indulgence in risky/safe behaviour is tabulated in table: 7



To determine the relationship between observation sites and unsafe behavior of road users  $\chi^2$  test has been conducted and probability values (p-value) at 95% confidence level has been calculated for driving without helmet wearing, driving and talking on cell phone, driving with two or more pillion and talking on phone after parking aside against the recorded observations.

*Table: 6 Unsafe Behaviour Observed on Highways and City Roads*

| Observation Sites               | Total Observation | Driving without Wearing Helmet (p=0.000) |              | Driving and Talking on Cell Phone (p=0.000) |              | Driving with two or more pillion (p=0.000) |              | Talking on Phone after parking aside (p=0.000) |              |
|---------------------------------|-------------------|------------------------------------------|--------------|---------------------------------------------|--------------|--------------------------------------------|--------------|------------------------------------------------|--------------|
|                                 |                   | Nos.                                     | % ge         | Nos.                                        | % ge         | Nos.                                       | % ge         | Nos.                                           | % ge         |
| State Highway Bardoli-Mahuva    | 10295             | 9522                                     | 92.5%        | 136                                         | 1.32%        | 529                                        | 5.14%        | 69                                             | 0.67%        |
| State Highway Bardoli-Palsana   | 1342              | 1131                                     | 84.3%        | 20                                          | 1.49%        | 68                                         | 5.07%        | 13                                             | 0.97%        |
| National Highway Bardoli-Surat  | 33297             | 29139                                    | 87.5%        | 751                                         | 2.26%        | 1152                                       | 3.46%        | 259                                            | 0.78%        |
| National Highway Bardoli-Mandvi | 4765              | 4530                                     | 95.1%        | 153                                         | 3.21%        | 228                                        | 4.78%        | 49                                             | 1.03%        |
| Local City Roads Bardoli        | 26004             | 24887                                    | 95.7%        | 1157                                        | 4.45%        | 1389                                       | 5.34%        | 595                                            | 2.29%        |
| Local City Roads Mandvi         | 6911              | 6554                                     | 94.8%        | 409                                         | 5.92%        | 568                                        | 8.22%        | 108                                            | 1.56%        |
| Local City Roads Mahuva         | 2600              | 2595                                     | 99.8%        | 169                                         | 6.50%        | 458                                        | 17.62%       | 13                                             | 0.50%        |
| Local City Roads Surat          | 16230             | 16177                                    | 99.7%        | 493                                         | 3.04%        | 186                                        | 1.15%        | 84                                             | 0.52%        |
| <b>Total</b>                    | <b>101444</b>     | <b>94535</b>                             | <b>93.2%</b> | <b>3288</b>                                 | <b>3.24%</b> | <b>4578</b>                                | <b>4.51%</b> | <b>1190</b>                                    | <b>1.17%</b> |
| <b>Road Type</b>                |                   |                                          |              |                                             |              |                                            |              |                                                |              |
| Highway                         | 49699             | 44322                                    | 89.2%        | 1060                                        | 2.10%        | 1977                                       | 3.98%        | 390                                            | 0.78%        |
| Local City Roads                | 51745             | 50213                                    | 97.0%        | 2228                                        | 4.30%        | 2601                                       | 5.03%        | 800                                            | 1.55%        |
| <b>Total</b>                    | <b>101444</b>     | <b>94535</b>                             | <b>93.2%</b> | <b>3288</b>                                 | <b>3.20%</b> | <b>4578</b>                                | <b>4.51%</b> | <b>1190</b>                                    | <b>1.17%</b> |

Table: 7 Unsafe Behaviour Observed on Highways and City Roads

| Behaviour per 10,000 | Driving without Wearing Helmet (p=0.000) |             | Driving and Talking on Cell Phone (p=0.000) |             | Driving with two or more pillion (p=0.000) |             | Talking on Phone after parking aside (p=0.000) |             |
|----------------------|------------------------------------------|-------------|---------------------------------------------|-------------|--------------------------------------------|-------------|------------------------------------------------|-------------|
|                      | High way                                 | Local Roads | Highway                                     | Local Roads | Highway                                    | Local Roads | Highway                                        | Local Roads |
| Unsafe Behaviour     | 8918                                     | 9704        | 213                                         | 431         | 398                                        | 503         | --                                             | --          |
| Safe Behaviour       | 1082*                                    | 296*        | --                                          | --          | --                                         | --          | 78                                             | 155         |

\* Wearing Helmet and Driving (per 10000)

## FINDINGS

### • Driving without Wearing Helmet

$H_0$ : There is no association between wearing helmet and the type of road travelled.

Pearson Chi-Square  $\chi^2 = 2.467$ , and  $p < 0.001$  indicates rejection of null hypothesis. Thus, there is an association between wearing helmet and the type of road travelled.

- Driving without wearing helmet is higher on local city roads (97.0%) than on highways (89.2%).
- Overall all helmets wearing behaviour is a meager 6.8% only.
- Lowest wearing helmet rate is at Mahuva (0.2%)

### • Driving and Talking on Cell Phone

$H_0$ : There is no association between talking on cell phone while driving a two wheeler and the type of road travelled.

Pearson Chi-Square  $\chi^2 = 3.817$ , and  $p < 0.001$  indicates rejection of null hypothesis. Thus, there is an association between talking on cell phone while driving a two wheeler and the type of road travelled.

- This unsafe behaviour is adopted more on city roads (4.30%) than on highways (2.01%).
- Over all behaviour of talking on cell phone while driving is 3.02%, which is extremely dangerous and unsafe for all road users.

### • Driving with Two or More Pillion

$H_0$ : There is no association between driving with two / more as pillion and the type of road travelled.



Pearson Chi-Square  $\chi^2 = 64.690$ , and  $p < 0.001$  indicates rejection of null hypothesis. Hence, there is an association between driving with two / more as pillion and the type of road travelled.

- Driving behaviour with two or more pillion is higher on city roads (5.03%) than on highways.

- **Talking on Cell Phone after Parking Aside**  
 $H_0$ : There is no association between talking on cell phone after parking aside and the type of road travelled.

Pearson Chi-Square  $\chi^2 = 1.267$ , and  $p < 0.001$  indicates rejection of null hypothesis. Hence, there is an association between talking on cell phone after parking aside and the type of road travelled.

- This safe behaviour is adopted more on city roads (1.55%) than on highways (0.78%).
- Over all behaviour of talking on cell phone after parking aside is 1.17%, which is a positive and concerned behaviour towards personal safety on road.

#### OTHER RELEVANT OBSERVATIONS

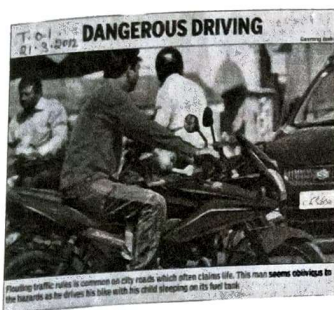
- In a very few cases both the driver and pillion rider were wearing helmet. In 4/5 cases only pillion passenger was wearing helmet while the driver was without helmet.
- In general, girls and ladies covered their faces with cloth only. They were rarely seen wearing helmet.
- In some cases, the rider's helmet was hanging either on motorcycle's handle or was tied to the side of the bike or the pillion passenger was holding helmet in his hands. This characteristic of motorbike drivers was also found in observation earlier observational studies carried out in Delhi<sup>4</sup> and Bangalore.<sup>5</sup>
- Some helmet wearers were seen talking on cell phone by putting their hand inside the helmet. This shows that chin strap was not buckled properly.
- Use of mobile phone by drivers of motorcyclists is prevalent among all age groups. It is not restricted to youngsters or college goers as is generally thought of. In fact, majority were non college goers as per the observation.
- On highways, motorized two wheeler drivers talk on cell phone while driving at a very high speed.
- Travelling with two or more adult persons is very common and a regular feature.
- Small kids sitting in front of the bike were found sleeping without driver's knowledge in many instances.
- Indulgence in other kinds of unsafe and hazardous behaviour observed are as under:

<sup>4</sup> Mohan D (1983) A Study of Helmet and Motorized Two-Wheeler Use Patterns in Delhi. American Association for Automotive Medicine Quarterly Journal, 29-32.

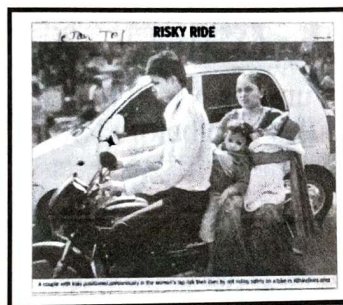
<sup>5</sup> NIMHANS (2005), "Head Injuries and Helmets: Helmet Legislation and Enforcement in Karnataka and India, National Institute of Mental Health a& Neuro Science, Bangalore pp. 21

- Many motorcyclists were seen transporting disproportionately heavy and large luggage e.g. bags/sacks/bales of cloths.
- LPG Gas cylinder a potentially hazardous material was seen to be transported frequently on motorcycle. The pillion rider holds it in his lap.
- Milkmen were carrying heavy containers of milk for delivery of milk.
- A huge amount of empty gunny bags and empty oil canisters Glass fittings, furniture item, computer's CPU, pedestal fans, vegetable and fruit containers, etc. was being transported on motorcycle.
- One motorcycle driver and his pillion companion had encircled a huge round of PVC pipe on his waist for transporting it to the destination.
- Transporting chickens and hens upside down tied with strings and carrying a goat in between pillion rider and driver was a routine and common feature.
- One motorcyclist was using his motorcycle as a mobile shop of utensils and other household items.

### Photographic evidences of unsafe behavior of motorized two-wheeler drivers on road



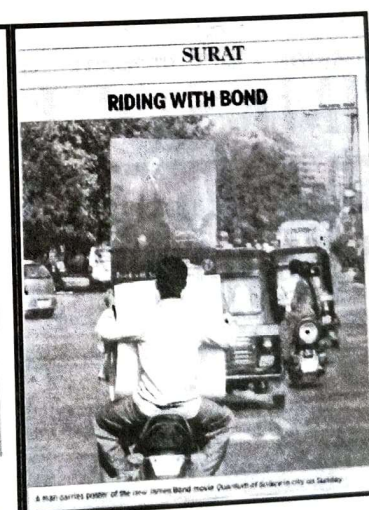
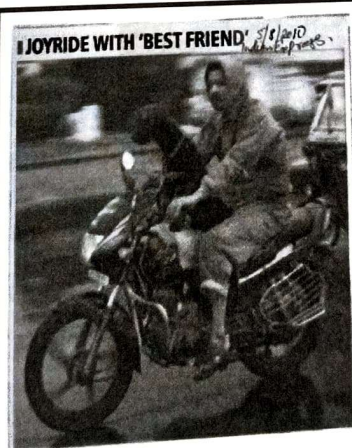
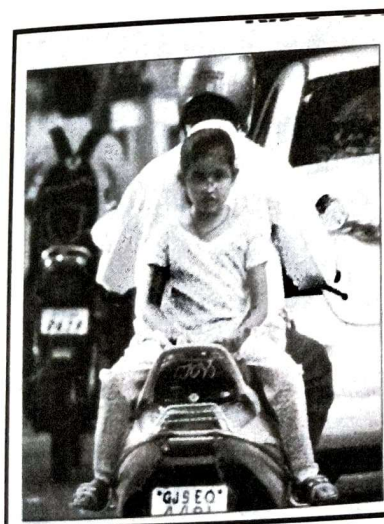
*Times of India 21-03-2012*



*Times of India- 10-01-2010*



*Indian Express-23-11-2010*



*Family riding on Family Two Wheeler Indian Express 5-8-2010 Times of India June 2009*





*Indian Express-23-11-2010*  
Observers  
April 2010



*These girls have run in the rains in the city*  
*Times of India 10-7-2010*



*Photographed by*

## MAJOR FINDINGS OF OBSERVATION

1. City roads witnessed higher violation of traffic safety norms than highways.
  - Driving without wearing helmet is higher on local city roads (97.0%) than on highways (89.2%).
  - The behaviour of talking on cell phone while driving is seen more on city roads (4.30%) than on highways (2.01%).
  - Driving behaviour with two or more pillion is higher on city roads (5.03%) than on highways.
2. Overall helmet wearing behaviour is a meagre 6.8% only.
3. Girls and ladies were rarely seen wearing helmet.

### Study: 2 Focus Group

The second phase of study comprised four focus groups with graduate and post graduate students having homogeneity within the group in terms of age and educational qualification. Each group comprised 8 to 10 participants. The researcher conducted discussions with four focus groups in three levels.

In the first level, each participant presented his/her viewpoint on 'risky behavior of two wheeler drivers'. In Level 2, the participants were posed some questions based on their arguments in Level 1 and were allowed to ask questions to each other and counter the viewpoints expressed by other participants. The discussion pertained to merits and demerits of unsafe behavior of two wheeler drivers on the following key issues.

- Is peer pressure responsible for risky behavior?
- Is youth related life style responsible for risky behavior?
- Is optimistic bias that '*accidents happen to others*' is a reason for non compliance of traffic rules?
- Is weak implementation of law a reason for unsafe behavior on road?

- Is ignorance of outcome of unsafe behavior- promoted such behaviour among motorcyclists?

A consensus was reached on the key issues in the third level. The group reached a consensus that peer pressures and youth related life styles were mainly responsible for risky behavior of two wheeler drivers on roads.

### Study: 3 In depth Discussions

In the third phase of a study in depth discussions were held to obtain the views of stakeholders such as doctors, police officers, road transport officers, parents, teachers on road safety measures. Following key issues emerged from in depth interviews on the causes of unsafe behavior by two wheeler drivers:

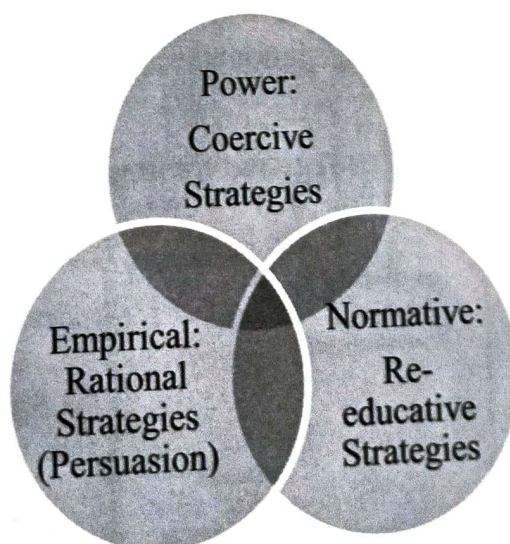
- Road users resist wearing seat belt and helmet.
- Conveniences attached to cell phone propel drivers to talk while driving.
- Youth related life style affects attitude and behaviour of youngsters.
- Road users often imitate unsafe practices displayed by others on road.
- Optimistic bias that 'accidents happen to others' promotes unsafe practices

### **SUGGESTED INTERVENTIONS**

Interventions in the form of planned social change, communication and education is suggested for promoting safe road behaviour among two wheeler drivers.

Planned social change strategy such as 'Directed Change Approach' comprising persuasive, power and re- educative strategies on the target is suggested (Z. Gerald, Philip Kotler and Ira Kaufman (1972), *Creating Social Change*, pp. 172-186). According to Philip Kotler, one of the approaches to accomplish social change is 'Directed Change Approach' where change is sought through application of persuasive, power and re- educative strategies on the target. This three pronged approach uses three different methods to overcome resistance, inertia and indifference of change targets.

**Figure: 2 Directed Change Strategy for Promotion of Safe Road Behaviour**



Adapted from Chin and Beene (1961)



Power strategy attempts to produce behavioral compliance among individuals. It is realized through watchfulness and threats from authority figures. For their own benefit, the change targets end up cooperating out of fear of punishments.

Persuasion strategy attempts to induce desired behavior in individuals. It is done by convincing the change targets that the alternate behavior serves their own interest.

In re-educative strategy, individuals are confronted and sensitized about the relevance of alternate behavior. Here, the targets internalize the required behavior because it appears advantageous to them.

Stakeholders like, traffic authorities, parents and head of the educational institutes may be involved for execution of these strategies. It is suggested that surgeons, celebrities and survivors of road crashes narrate the impact of unsafe road behavior via news stories and visuals. Also, statistics of fatal crashes and injuries may be made known to mass through the media.

Secondly, a communication system may be developed to facilitate unlearning preferred unsafe road practices and to disseminate knowledge and information. The researcher suggests a communication strategy to take the form of education, encouragement, enforcement, engagement, emergency care and evaluation.

It is imperative to launch a concerted and sustained campaign to educate the public on road safety and to sensitize them towards harmful effects of bad road behavior. Increased public awareness may help modify belief and attitude of road users. Education and encouragement must be supported by legislation and enforcement. Appropriate action shall help realize the slogan of World Health Day 2004, that "ROAD SAFETY IS NO ACCIDENT".

### **Intervention by Surat City Police**

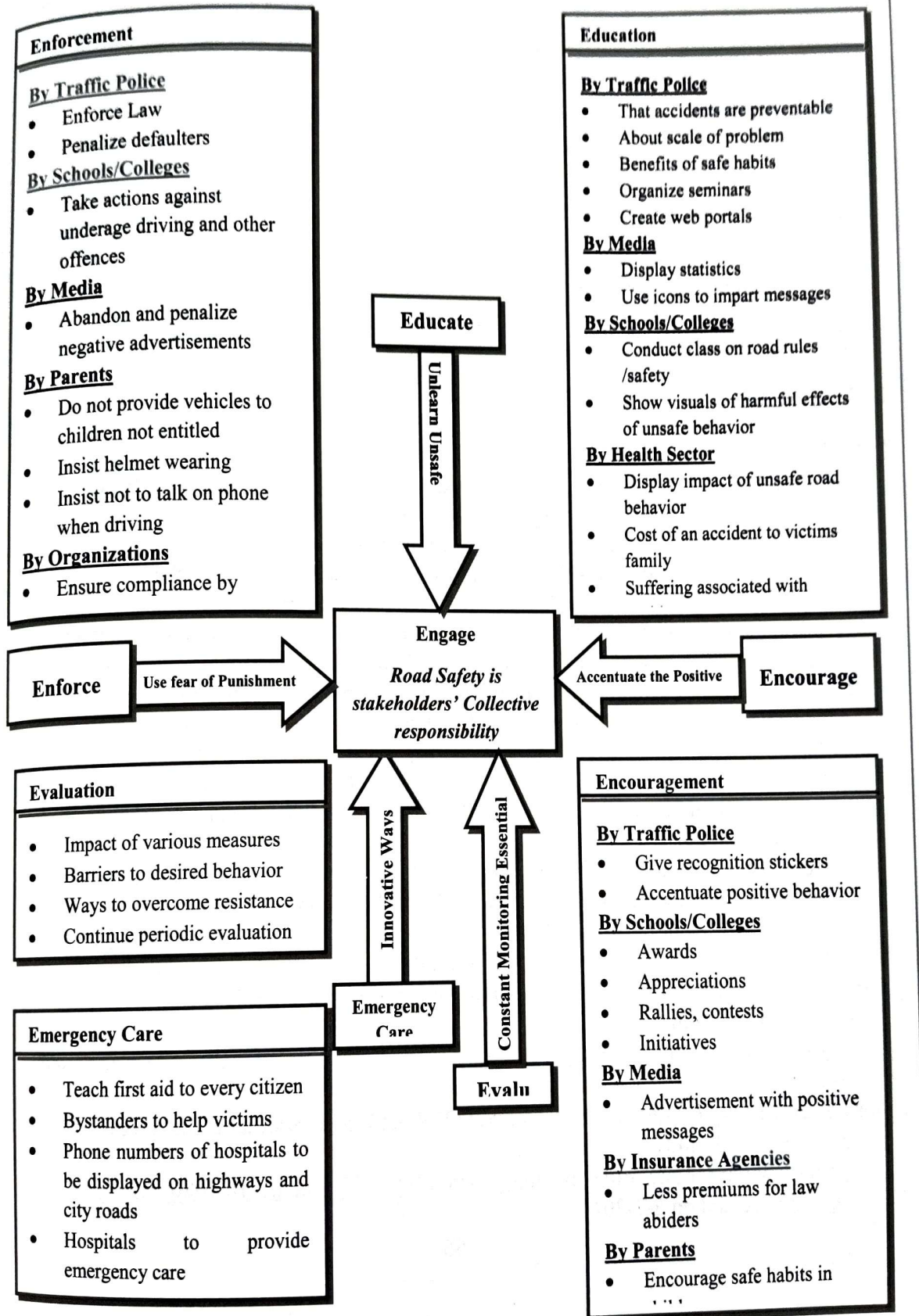
In an attempt to enforce traffic rules effectively, the Surat city police has started a **circuit television (CCTV) camera surveillance network** from April 2013. In a 200 km 104 CCTV cameras have been installed at 26 strategic locations.

The police sends challans for fines by post along with a photograph of the offender and vehicle owners - caught on camera flouting traffic rules. The address of the offender is traced through the vehicle's registration number. Within 15 days of receiving the challan, the offender has to pay the fine at the nearest branch of Dena Bank.

This example of implementation of legislation through power strategy may be extended to other places.

The following communication model is suggested for implementation.

## Communication Model





## CONCLUSIONS

A total of 101,444 observations were made. It was found that 80% motorcyclists did not wear helmet and many drove with more than one pillion. Motorcyclists of all age groups were seen talking on cell phone while driving. It was not restricted to youngsters or college goers as is generally thought of. City roads witnessed higher violation of traffic safety norms than highways. Also, two wheelers were used as a carriage vehicle for transporting gas cylinders, cloths, grains, milk containers, children, poultry, PVC pipes etc.

Focus group saw a consensus on two key issues (i) peer pressures and (ii) youth related life style being responsible for risky behaviour. Similarly, four key issues emerged from in depth interviews with stakeholders: (i) unsafe practices displayed by other road users, (ii) environmental conditions and road characteristics, (iii) optimistic bias that 'accidents happen to others' and (iv) ignorance of outcome of their unsafe behavior- promoted risky behaviour among motorcyclists.

\*Paper presented at 16<sup>th</sup> International Conference, Road Safety on Four Continents, Beijing, China. 15-17 May 2013

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**THE BANK OMBUDSMAN SCHEME- ASSESSMENT AND EMERGING CHALLENGES**

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***Abstract***

*With the aftermath of global financial crisis, competition among the commercial banks, both public sector banks and private, has yielded high level of business, huge expansion in branches and on line business, multiplied interest income with fee oriented income and of course the consumer grievances have become more complex than earlier. With the recent stagflation in our economy, the financial sector consumers have become wary with economic uncertainties and difficulties and are looking up to the Government and Reserve Bank of India (RBI) to address the issues and disputes concerning them. Bank Ombudsman Scheme (BOS) has become most significant initiative of RBI to deal with the individual complaints, consumer enquiries and feedback measures to the banks. The BOS initiates improvements and reduce disputes and help banks to resolve disputes with consumers and even assuring to deal within time and without loss of monies in such consumer disputes which fail to resolve the initiatives taken at the bank level and reduce the burden on the courts. With the adoption of BOS, RBI has taken up an internationally best practice to deal with and resolve consumer grievances and disputes with the banks and related service providers. In this paper, first part introduces the concept of BOS and the initiatives taken up by RBI. Recent experience of RBI in dealing with consumer grievances and disputes through the BOS is presented and analyzed in the second part. Emerging Challenges for RBI and the banking sector are posed in the conclusion.*

**Keywords:** Bank Ombudsman Scheme (BOS), Know Your Customer (KYC), Financial Inclusion, Customer Grievances, Customer protection.

**INTRODUCTION**

The interrelated objectives of commercial banks viz., financial performance and stability, financial inclusion and consumer protection have become the centre stage of financial landscape and disclosure to the RBI and the consumers. For an economy of our size and scale of banking operations, the interface and the trade off of these triple objectives are complex as these augment the financial stability through addressing inter alia, addressing systemic risk, extending the scope of regulation, mitigating pro-cyclicality, and strengthening prudential oversight as they become vital to the financial inclusion across the nation. Of course, when hikes in the rates of service are imminent with the high cost of operations and the reach of the banking to the masses /financial inclusion become more stupendous. Further, with the opening up of banking sector and financial innovation, awareness of new financial products and services to the consumers at large

becomes vital. Apart from providing such innovative products, the clauses and provisions have to be properly and adequately informed to the banking consumers. These laws rarely help out the poor and vulnerable consumers, because of their lack of resources and unfamiliarity with the complexities of the legal system and their ignorance of the enabling laws. With the boom time, when the banking sector has offered many expensive services and products, a common person can ill afford to access, a downturn means absence or dearth of even basic financial services. In India, BOS has been in vogue since 1995. The vision and goals of the BOS are presented below:

**Vision** – To be a visible and credible system of dispute resolution mechanism for common persons utilizing banking services

**Goals-**(1) To ensure redressal of grievances of users of banking services in an inexpensive, expeditious and fair manner that will provide impetus to improved customer services in the banking sector on a continuous basis

(2) To provide feedback/suggestions to RBI towards providing appropriate and timely guidelines to improve the level of customer services and to strengthen their internal redressal systems

(3) To facilitate quick and fair (non-discriminatory) redressal of grievances through the use of IT systems comprehensive and easily accessible database and enhanced capabilities of staff through training

(4) To enhance the awareness of the BOS

As the BOS provides an alternative system to the Courts, it is imperative that the system with judges being independent, impartial and having necessary financial skills to resolve financial disputes in a fair and transparent manner. In the Indian context, the independence of the Banking Ombudsman has been ensured by his appointment by RBI as the regulator. Further to ensure his impartiality, the tenure is generally capped at a maximum of three years. The existing appeal provisions in the BOS are aimed at justice and remedy of systemic issues. The interaction between the Banking Ombudsmen, Banking Codes and Standards Board of India (BCSBI), Indian Banks Association (IBA) and the regulatory departments within RBI is channeled through a dedicated department –Customer Service Department. Customer care issues are at the top of RBI's agenda and the banks make conscious evaluation of the customer service and financial inclusion issues while approving any new innovation in the financial sector. The World Bank – IMF led Financial Sector Assessment Programme (FSAP) also appreciate the BOS. Due to changing level of expectations by the customers of various banks and the range of new products offered by these banks, the BOS has undergone extensive changes in June 2002, December 2005 and the revised BOS was brought into operation in the BOS 2006.

### **BOS 2006 and subsequent revisions of 2013**

The various initiatives undertaken by RBI to address the customer care issues got a shot in the arm with the setting up of the Committee of Customer Service in the Banks under



the chairmanship of Shri M.Damodaran, former Chairman of SEBI in 2006. Some of the important recommendations that have been implemented among the banks include abolition of foreclosure charges on floating rate home loans, introduction of basic savings account, Unique Identification no., (UID) such as KYC for opening 'no-frills account', differential merchant discount /fee for debit cards, multi-factor authentication for card transactions, blocking of card by SMS in case of misuse, uniformity in inter-branch charges (no discrimination among the customers of home branches and non-home branches). The issues in not implementing the balance recommendations are being discussed with the stakeholders and RBI. In May 2007, the BOS 2006 was amended further to appeal against award or rejection of a complaint for reasons stipulated under the BOS, to the appellate authority. The BOS 2006 was further amended in February 2009 to include deficiencies arising out of internet banking, ATM and credit cards. In addition, a customer would also be able to lodge a complaint against the non-adherence of the provisions of the Fair Practices Code for lenders or the code of the Banks' commitment to the customers issued by the Banking Codes and Standards Board of India (BCSBI). Further to Damodaran Committee and the Rajya Sabha Committee on Subordinate Legislation in their report on BOS had made recommendations. In view of this, an internal working group for revision and updation of the BOS 2006 was constituted by RBI in July 2012. The working group submitted its report in January 2013. Some of the important recommendations of the working group include extension of the BOS to include non-scheduled urban cooperative banks/district and state cooperative banks, modifying the definition of 'bank' in the BOS, pecuniary jurisdiction of BO, opening of new offices of Banking Ombudsmen (OBO), introduction of fresh grounds of complaints, appointment of additional ombudsman in offices of high volume of complaints, and increasing public awareness of the BOS. The recommendations of the working group are being examined by the Customer Service Department of RBI for implementation.

## **RECENT EXPERIENCE**

As competition among banks has failed to deliver the desired results to safeguard the interests of the customers, the RBI has intervened by ensure to protect the interests of customers. Recent experience of RBI in dealing with consumer grievances and disputes through the BOS is presented and analyzed hereunder. Fifteen OBOs covering 29 states and 7 union territories handle the complaints received from the bank customers on deficiency in banking services under various grounds of complaints specified in the BOS. A comparative position of complaints received during the last three years 2010-13 are presented below:

**Table 1: Comparative position of complaints**

|                                     | 2010-11 | 2011-12 | 2012-13 |
|-------------------------------------|---------|---------|---------|
| Number of OBOs                      | 15      | 15      | 15      |
| Complaints received during the year | 71274   | 72889   | 70541   |

Source: The Banking Ombudsman Scheme, Annual Report 2012-13 (RBI)

OBOs at New Delhi, Kanpur, Mumbai and Chennai received more than 5000 complaints against banks each year. These four OBOS accounted for more than 50 per cent of the total number of complaints received by all OBOs.

A comparative position of population –group wise distribution of complaints received against banks is given below:

**Table 2: Comparative position of population –group wise distribution of complaints**

No .of complaints received during the years

| Population Group | 2010-11             | 2011-12             | 2012-13            | % increase (+)/decrease (-) |
|------------------|---------------------|---------------------|--------------------|-----------------------------|
| Rural            | 7816 (11%)          | 8190 (11%)          | 8598 (12%)         | +1 %                        |
| Semi Urban       | 10816 (15%)         | 11982 (16%)         | 10868 (16%)        | 0                           |
| Urban            | 21218 (30%)         | 24565 (34%)         | 24246 (34%)        | 0                           |
| Metropolitan     | 31424 (44%)         | 28152 (39%)         | 26829 (38%)        | -1 %                        |
| <b>Total</b>     | <b>71274 (100%)</b> | <b>72889 (100%)</b> | <b>70541(100%)</b> |                             |

Note: Figures in brackets indicate % to total complaints in the respective years.

Source: The Banking Ombudsman Scheme, Annual Report 2012-13 (RBI)

It may be observed from the above table that there has been only marginal change in the population –group wise distribution of complaints received in the OBOs. The sources of complaints remain heavily skewed towards customers in urban/metropolitan areas. Complaints from urban and metropolitan areas account for 72 % Of the total complaints as compared with 28 % of total complaints received from rural/semi-urban areas. This may be attributed to increased availability of banking services in metro/urban areas, financial literacy and higher awareness of the BOS of the bank customers in the urban/metropolitan areas compared to their counterparts in rural/semi urban areas. With



increasing penetration of banking services into rural hinterlands and ongoing drives aimed at financial inclusion and financial literacy, this mix is expected to undergo a significant change in coming years. Further, OBOs receive complaints in diverse modes such as on line, e-mail, Fax, couriers, registered/ordinary posts and hand delivery. A comparative position of complaints received through different modes is provided in Table 3.

**Table 3: Comparative position of complaints mode –wise No. of complaints received during the years**

| Mode             | 2010-11                 | 2011-12             | 2012-13            |
|------------------|-------------------------|---------------------|--------------------|
| E- mail          | 9736 (14%)              | 9499(13%)           | 11381 (16%)        |
| On line          | 9265 (13%)              | 10026 (14%)         | 8160 (12%)         |
| Post/Fax/Courier | 52273 (73%)             | 53364 (73%)         | 51000(72%)         |
| <b>Total</b>     | <b>71274<br/>(100%)</b> | <b>72889 (100%)</b> | <b>70541(100%)</b> |

**Note: Figures in brackets indicate percentages to total in respective years.**

**Source: The Banking Ombudsman Scheme, Annual Report 2012-13 (RBI)**

Post/Fax/Courier had remained a popular mode for receiving complaints with 72 % throughout all three years studied here. Electronic mode was preferred by 28 % of the complainants. As in the past years, individuals continued to lodge complaints to the highest levels than other categories. Complaints pertaining to meet commitments /non observance of fair practices code /BCSBI codes were a major ground of complaint with 18130 complaints constituting 26 % of the complaints received. A large volume of complaints indicates lack of awareness among the bank staff as also the customers. With 25 % of the complaints received, card related complaints was the second largest ground. Broadly, the reasons for the card –related complaints are issue of unsolicited cards charging of annual fee in spite of being offered as ‘free card ‘ ,authorizations of loan over phone, sale of unsolicited insurance policies and charging of premium on such policies , wrong billing, settlement offers conveyed telephonically ,non-settlement of insurance claims after the demise of the card holder , excessive charges, wrong debits to accounts etc.,

### **Cost of running the BOS**

Cost of running the BOS is fully borne by the RBI. The cost includes the revenue expenditure and capital expenditure incurred on administration of the BOS. The revenue expenditure include establishment expenses such as salary and allowances of the sta

attached to the OBOs and the non-establishment items such as rent, taxes, insurance, law charges, postage and telecommunication charges, printing and stationery expenses, publicity expenses, depreciation and other miscellaneous items. The capital expenditure includes furniture, electrical appliances, computers /related equipment, telecommunication equipment and motor vehicles. Table 4 present the cost of handling complaints at OBOs.

**Table 4: Cost of handling complaints at OBOs**

|                                               | 2010-11 | 2011-12 | 2012-13 |
|-----------------------------------------------|---------|---------|---------|
| Total Cost (Rs. Millions)                     | 261     | 281     | 315     |
| Complaints received                           | 72021   | 72889   | 70541   |
| Average cost of handling a compliant (in Rs.) | 3619    | 3858    | 4468    |

**Source: The Banking Ombudsman Scheme, Annual Report 2012-13 (RBI)**

Aggregate cost of running the BOS has increased from Rs.261 million to Rs.315 million during the last three years. Average cost of handling complaint has risen to Rs. 4468 in 2012-13 from Rs.3619 per compliant in 2010-11.

## **CONCLUSION: EMERGING CHALLENGES**

- RBI has demonstrated adopting internationally best practices in introducing and operating Bank Ombudsman Scheme (BOS) for nearly last two decades since 1995. BOS help to support improvements and reduce disputes at the bank level and resolve any consumer disputes that fail to resolve themselves and reduce the burden on the courts. Internationally it is becoming increasingly evident that the consumers and the service providers find it easier and convenient to resolve disputes through the ombudsmen than the courts.
- In our economy with growth of financial inclusion, innovations in financial instruments and technology have become drivers of the banking sector. With the expansion of E-Commerce, Digital Literacy and awareness of transacting on the digital medium will enable the bank customers /“netizens” to take advantage of the initial momentum created by the financial inclusion to the next level by sustaining the earning potential and consumption boom in the economy. Customer care issues and compliance mechanisms for the protection of banking consumers has to be evolved as part of the BOS.
- As Shri K.C. Chakrabarty (former Deputy Governor, RBI) has emphasized “These are challenging and exciting times for the banking sector. We must be all prepared to face the challenges and convert the opportunity knocking at our doors into a win- win situation both for the bankers and customers. We need to



establish clearly the links in service-profit chain by defining performance benchmarks and aim to achieve zero tolerance limits for customer grievances. “

- There is all round optimism around the potential for expansion of the economy and benefits possible to be reached to the common man as a result of the drive for Financial Inclusion and Pradhan Mantri Jan Dhan Yojna (PMJDY) launched as recently as August 2014. PMJDY has driven a massive 6.18 crore account additions by the banking industry in the two months ended October 2014. Given the strong focus of the banking sector and the number of accounts going forward, BOS would be geared up to meeting a higher level of the satisfaction of the bank customers.

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**MARKETING OF FOOD PRODUCTS TARGETED TOWARDS CHILDREN –  
THE ETHICAL ISSUES**

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**Abstract**

**Purpose** - This paper sets out to examine how the high levels of commercial marketing of energy dense, nutrient-poor foods and beverages especially targeted to children are responsible for obesity. Problem and mechanism to fight against related to prominent issue of health and safety standards, in product categories like biscuit, noodles, jams, etc. is thoroughly discussed in this paper.

**Design/methodology/approach** - An extensive literature survey was conducted to get authentic test reports of food categories under study. Highlighting facts of tests of leading brands are studied and analysed. Food safety norms, regulation practiced world over and in India is also thoroughly studied also comments are put on shortcomings, lacunas.

**Findings** - There are an estimated 35 million overweight/obese children in developing countries, compared to 8 million in the developed countries. Most brands in test results are high in sugar, sodium, salt and low score on other important count. Indian standards fall short on setting specific limits for sugar; salt other ingredients, so marketers are taking consumers on ride.

**Research limitations/implications** - The findings limited to few selected product categories cannot be generalized on across range of products. Only few popular brand's results were studied and analysed.

**Practical Implications** - Research given an insight of truth of label information. Research findings can use to know about:

How to make smart buying decision?

Shortcomings of food safety standards.

Strategies to have control on the issue.

**Keyword(s)** - Childhood obesity; Food safety standards; Test result; Brands.

**INTRODUCTION:**

Modern day's products are highly complex, so right to safety has become significant. The right to safety emphasis on protection against goods, which are hazardous to health or like, the consumer has the right to protect against such goods. The problem of health and safety has been prominent issue in the development of consumerism. World over epidemic of obesity is affecting the health and well being of millions children. The high levels of commercial marketing of energy dense, nutrient-poor foods and beverages



especially targeted to young children are responsible for this. This commercial marketing also undermines the healthy eating.

### **ROLE OF CHILDRENS IN BUYING PROCESS**

Many consumption decisions of an individual will be influenced by type of family in which he/she is a member. Individuals are influenced both in purchase and use of products, by other family members in general and children in specific. He/she involves at least definable roles i.e. gatekeeper, influencer, decider, buyer and user. His role as a decider is prominent in product categories like biscuits, chocolates, cold drinks, pizzas, noodles, stationeries, etc. He also acts as a purchaser and prominent consumer for the products specified as above.

In India, the realization that children mean business is relatively recent for marketers. Children power flows in changing family equations. As can be seen from, purchasing decisions are now increasingly influenced if not wholly determined by children. It clearly indicates that children hold the key to success in several product groups. Another important factor about the children is "Pester Power", which increases with age and there is little difference in pester power-compared girls with boys & children from different socio-economic profiles. It may be for this reason Indian TV commercials, children are being used in ads for products, relates to them and also for the products, which are remotely associated with kids.

Brand loyalty established with children now will provide huge benefits for the firm in the future. So the marketers are tried to gain their acceptance to earn a profitable customer in long run. But it is very detrimental, in case unethical products are marketed to them. Unlike in the olden days the child had to wait till he/she has was able to read, comprehend and express, now days thanks to Computers, Internet, TV and movies, the child starts absorbing commercial information even from the tender age of two years. They absorb brand publicity and retain it better than elders do.

Uneducated consumers are ignorant. Lack of education awareness spilled its ill effect in every sphere of the society, including consumption. Consumers are ignorant and uneducated about the market conditions. In such situation, the marketer has a tendency to exploit the consumers. It is equally true with educated ignorant consumers, and most of the Indian consumers are like this only. Advertising agencies and marketing management have a very important role to play to put check on overplaying the claims.

### **FOOD CONSUMPTION, CHILDHOOD OBESITY AND ITS HEALTH IMPACT**

Childhood obesity is increasing and increasing at a rapid pace specifically in most of the developed part of the world. World over epidemic of obesity is affecting the health and well being of millions children. The high levels of commercial marketing of energy dense, nutrient-poor foods and beverages especially targeted to young children are responsible for this. This commercial marketing also undermines the healthy eating.

In UK according to one survey, 16 per cent of boys and 10 per cent of girls aged between 2-10 in UK are obese. The UK government banned advertisements for foods and drinks high in salt, sugar or fat from television programmes. British Government tried to fight against the problem of increasing childhood obesity; however this decision left both advertising agency and health group angry.

#### **Some Important Facts**

More than 1.8 million adolescents die every year due to preventable causes. 59% clientele of fast food giants are students. Obesity ranks as the fifth leading global risk for mortality. There are an estimated 35 million overweight/obese children in developing countries, compared to 8 million in the developed countries. (Source: Gwalani P., "Obesity weighing down kids", The Times of India, Nagpur, Sept. 10, 2013, pp.5)

"Adolescent health nutrition status has an intergenerational effect. Habits acquired during childhood and adolescence remains with a person throughout his life and also set an example for his children. Also, obesity in childhood invariably continues into adulthood, leading to a very high incidence of non-communicable lifestyle disorders in life" said Dr.C.P. Bansal national president of IAP (Indian Academy of Pediatrics). WHO's guidelines for recommended dietary allowances is:

- 1% energy from trans fat (2-2.5gm/day)

- Less 10% energy from free sugar

- 15-30% fats of total calories

- 55-75% carbohydrates of total calories

- 10-15 % proteins of total calories

- 20-25 gm per day added sugar

- 5-6gm/day salt

(Source: Gwalani P., "Obesity weighing down kids", The Times of India, Nagpur, Sept. 10, 2013, pp.5)

#### **RESEARCH PLAN:**

The data for the study collected from various authentic reports from various recognized labs, published in various magazines, journals and newspapers. The research inputs include mostly observations from food categories targeted to children. The research focused on identifying Indian standards, standards prevailing in other countries, and identifying gaps where standards are not available pertaining to food product categories under study.

#### **RESEARCH GAP:**

Both government as well as private sector agencies has increasingly become worry on commenting on food product quality or safety on record.

Standard marks like FPO, etc mark is missing on leading brands which mandatory for this category of product category under study.

Identifying need of standard code dealing with food product quality and safety for advertising and marketing communications in any media. Standard code, regulations in countries world over and in India and its effects of obesity among children.



## TEST RESULTS OF PRODUCTS: AN EYE OPENER

Health drink industry is worth a Rs. 1400 crore healthy and children under 14 years are major segment. Each brand is claiming to be more nutritionally fortified than other brands. When milk is supposed to be a complete food in itself, do add-on health drinks really serve the purpose? The test conducted on 10 leading of brands from the segment by the leading organization have different story to tell

Most brands are high in sugar, their sugar content ranges between 60-75%. When tested on parameters like protein content, dietary fiber, hygienic processing, micro-biologically safety, solubility, and low score in most of the other count.

Fruit juices are no exception to this Juice drinks can be easily misleading. The product may not be all juice and it may not be the juice one would assume it to be.

Tropicana's Peach Papaya one of the leading brand in this category, in its Papaya drink does not contain any peach or papaya juice. It's mostly water sweeteners and some pear juice - this was revealed in the US.

It is being said if a juice product is called a "beverage", "drink" or "punch" it may not be 100 percent juice, which is not known to the consumers. It probably contains large amount of water, sweeteners, and white grape juice which is cheap and not very nutritious.

(Source: "When package labels become misleading", *Consumer Voice*, Vol. 7, Issue 1, July 2006, pp.6)

For children breakfast is incomplete if bread, toast is not accompanied with Jam. Jams are consumed by people from all the age groups but extensively used by children. If Jam identified with primary ingredient as fruit pulp, it could be farther from the truth as revealed in comparative testing: Twelve most popular brands of India by an organization of high repute are tested.

It observed that quantity of preservatives is above maximum permissible limit in all brands.

FPO mark is missing on three brands which mandatory for this category of product category. Jams also entitled for ISI mark. But no brand under the study have ISI mark, may be because of the fact that it is voluntary in nature.

Sugar, and not fruit pulp, is the main ingredients in jams.

(Source: "Raising a toast to your jam?", *Comparative test*, *Consumer Voice*, Vol. 7, Issue 5, November 2006, pp.6-11)

Potato chips can easily be called an 'unhealthy food'. Voice tests of nine brands of potato chips reveal:

All brands have high fat content

Brands that claim to have pudina or chaat flavor, actually rely on their high salt content to get people addicted to the taste.

According to the UK Food Standards Agency even 1.25g or more per 100g of salt is a "lot of salt". Brands tested have sodium content and salt content many times more than this limit.

(Source: "When the Chips are Down", *Comparative test, Consumer Voice, Vol. 7, Issue 1, July 2006, pp.9-13.*)

These days' corn flakes and their variants and other options available, as a breakfast cereal. One such study selects and tests only the large selling variety of plain corn flakes which are consumed across the country. Findings are:

Some of the brands did not meet the claims with actual test results of nutritional facts like Sodium, Calorific Value, Carbohydrates, Protein, Vitamin A&C, and Iron & Fat.

Most brands give misleading claims on their packing and display fruits & other ingredients on packs. Where they are not added or added in small quantity.

(Source: "Corn Flakes", *Comparative test, Consumer Voice, Vol. XIII, Issue IX, September 2012, pp.7-12.*)

The Indian noodles market stands at a whopping Rs. 1,000 crore – and its growing. In a user survey, Consumer Education and Research Society (CERS) found that many consumers have instant noodles more than once or twice a fortnight and that too of big pack sizes. To check claims, 15 widely sold brands were tested in in-house lab. Findings are:

All 15 tested brands were found to be high in the sodium content. Of these only five brands mentioned the amount of Sodium. Schezwan Noodles mentioned a sodium content of 1.92 mg/100g, whereas the tests revealed a shocking value of 1185mg/100g. The UK FSA Standards consider 130mg/100g to 600mg/100g as acceptable.

Fat content in almost all the brands was on the higher side, in the range of 14.7 per cent to 18.4 per cent. As per UK FSA Standards consider 3g/100g to 20g/100g fat is acceptable.

Brands mentioning whole wheat flour (atta) have maida or a combination of maida and atta.

(Source: "Instant Noodles are they a treat or a trick?", *Comparative test, Consumer Voice, Vol. XIII, Issue XII, December 2012, pp.22-27.*)

In India cookies are the children favorite and one of the most common snacks. Consumer VOICE collected eight brands of butter-bite biscuits, to find out and see whether they kept their promise. Some disturbing facts are as mentioned below:

Most brands contain moderate to high sugar. The Sugar content in two tested brands Priyagold and Anmol was found to be twice their declared value. Diabetics have to be careful.

The Indian standards have set no specific limit but a higher quantity of sugar is not desirable.

Indian standards do not have any prescribe requirement for carbohydrates since a wide variety of biscuits is produced. The results are between 65.45 and 70.71 per 100g. Experts recommend lower value of carbohydrates as better.

(Source: "Sugar, Butter, Cashew What's In Your Cookie?", *Comparative test, Consumer Voice, Vol. XIII, Issue XI, November 2012, pp.7-13.*)



## OTHER KEY ISSUES RELATED TO FOOD PRODUCTS TARGETED TO CHILDREN

Cold Drinks and controversy always go hand in hand. After pesticides in colas, contamination with particles was highlighted in the media. For every one case that highlighted in mass media there may be hundred such cases, which may go, unreported. History witness, the leading confectionary company has to recall its products in USA. Thanks to food standards for contamination. Now the same brand is very popular in India. In the similar situation as above will the company do the same Chocolates with worm-infection in Maharashtra are still fresh in consumer's minds. Silence from every concerned sections related to the issue is very surprising.

Biscuits are mostly associated with children. Manufactures of leading brands of biscuits are under scanner. Many more E-numbers like ingredients mentioned on biscuit packets is under scanner. All bakers and biscuit manufactures for allegedly using animal part from slaughtered pigs, cattle, dogs and donkeys in the manufacturing of biscuits. Many of the additives are made from animal products. This is of great concern especially considering non-vegetarian population interests.

A survey conducted by Food and Drug Administration and Pune Municipal Corporation in the year 2006 observe very surprising findings. Tests identified adulteration in almost 15% of food products. The adulterated ingredients lead to major health problems. The sample of food includes cooking oil, dairy products like cheese, sweets; and other products like ice-cream, bread, cake, ice candy, etc., mostly liked by children.

Milk contaminated with synthetic material is being sold in northern states posing serious threat to the life and health of the consumers. Samples collected by the Food Safety and Standards Authority of India in 2011 revealed large scale of adulterated milk across the country. The Supreme Court favoured life imprisonment for people indulging in production and marketing of adulterated milk and asked the state governments to make amendment in laws.

(Source: "SC wants life term for milk adulteration", The Times of India, Dec. 12, 2013, Nagpur, pp.8)

## REGULATIONS ON JUNKFOOD AROUND THE WORLD

- In Britain, availability of variety of fresh fruits is mandatory in school canteens. The only drinks available would be bottled water, juices, yogurt and milk drinks with sugar less than 5%.
- The former governor of California, Arnold Schwarzenegger had signed a bill banning the sale of sodas in schools and set fat, sugar and calorie standards of all foods. In school vending machines, yogurt nuts and milk have replaced candy bars, chips and colas.
- Disney announces in January 2013 that it was banning junk food ads aimed at kids on its TV networks.
- Australian Association of National Advertisers (AANA) has introduced AANA Food and Beverage Code and AANA Children Code dealing with advertising

and marketing communications in any media directed primarily at persons 14 years of age or younger.

- Countries where there are total ban on advertisements on junk food has been implemented include Sweden, Norway, Ireland and Quebec province of Canada.
- Study in Quebec where fast food advertising geared specifically towards children has been banned both online and in print for the last 32 years, has shown that the province has the least obesity in Canada, and the ban decreased children's consumption by an estimate two or four billion calories. (Source: Gwalani P., "Obesity weighing down kids", The Times of India, Nagpur, Sept. 10, 2013, pp.5)

### **DO IT NOW: INFLUENCING THE COUNTRY'S FUTURE IN A WRONG WAY**

It means awareness of the consumers or boycott of unsafe, unhealthy products becomes the only solution. It has become a common excuse for manufactures to absolve themselves of any responsibility by simply stating that "the product in questions is spurious". Ever since the center of science and environment testing generated controversy broke out, both government as well as private sector agencies has increasingly become worry on commenting on food product quality or safety on record.

Today's children are tomorrow's consumers. These are the very few such cases, which is reported and highlighted. There are many such cases, which are not reported at all. Situation may worst in case product is targeted and marketed in rural part of India. Single consumer finding difficulty to battle with corporation on the issues of adulteration, sub-standard products/ and unjust claims made in advertisements. Considering the grim situation in food products market in India it is important to take some corrective action.

This is a fact with branded biscuits available in the market, what will be the case with unbranded biscuits. Inquiry and Action is must against all bakers and biscuit manufactures for allegedly using harmful additives, since children are decider and consumer of these category products. They are fooled by exorbitant claims made by the marketer and skillfully used promotional tools like gifts, cartoon stickers, tattoos, etc. It's mandatory for all packaged food to be declared as vegetarian or non-vegetarian. Unfortunately industries are smart enough to devised ways to get around it, and concealing as non-vegetarian product.

Adherence to global manufacturing standards at all the food product-manufacturing units should be must. A very recent example in USFDA banned import of drugs made at Ranbaxy's Mohali plant. *USFDA claims its tablets embedded with 'black fiber' that was suspected to be hair from an employee's arm, 'black spots' of oil from machines in tablets and absence of running water in toilets. The US health regulator made 11 observations, citing various violations of Current Good Manufacturing Practices (CGMP). USFDA also pointed out the lack of hygiene in the toilet complexes of the plant. "During the course of inspection, the toilet facility adjoining change room of the raw material storage area did not have running water for hand washing and toilet*



flushing," it said. Stating that washing and toilet facilities are lacked hot and cold water. "Additionally, there are no procedures to direct employees to wash hands with soap and water after toilet use and prior to gowning...", further said. Taking a lesson from this case Indian government should seriously think over coming out with Current Good Manufacturing Practices (CGMP) for food products also. If similar type of inspection is carried out in all food manufacturing plants most of the manufacturing has to be shut down. Also possibility of conformance to such astringent norms by manufacturing plants is very rare.

(Source: "USFDA found suspected hair, oil in Ranbaxy tablets", The Times of India, Nagpur, Sept. 19, 2013, pp. 13.)

Mothers at home can be made aware about recipes Jam, Sauce, etc. which are simple to make Mass media can play an important role in it. Toll Free Help line, websites can make the certain difference in this regards. Consumer organizations should take on all unethical advertisements for open discussion. All such issues/ cases should be highlighted, in Media. Prevention is better than cure hence stops buying and offering products is immediate solution to the problem. At first step, children should not be exposed to junk food ads. Boycott, the weapon remains just as potent today as it was during freedom struggle time. 'Opinion leader' not necessarily implies a strict leader, follower relationship can also do this job effectively. In case of school going children, the source that is identified as having major impact on the decisions of children, is Teachers. 'Teachers' guidance to the children in this context can have a decisive impact. CERS recommends that:

The Food Safety and Standards Authority of India (FSSAI) take note of the salt minimization efforts recommended by the Food Standards Agency (FSA) of UK and suggest limits of salt and sodium.

Labeling information on the salt sodium content to be made more specific and prominently displayed.

(Source: "Instant Noodles are thy a treat or a trick?", Comparative test, Consumer Voice, Vol. XIII, Issue XII, December 2012, pp.22-27.)

Suggestions by IAP's Task Force

Celebrities concerned may come out in support of the cause by refusing to endorse such ads.

Celebrities could also showcase their own lifestyle to promote healthy habits.

Food Standards & Safety Regulations of India (FSSAI) should also:

Regulations to reduce salt, sugar, and fats in junk foods;

Change labeling rules for Trans fat, sugar and salt and making them mandatory for any food product.

(Source: "USFDA found suspected hair, oil in Ranbaxy tablets", The Times of India, Nagpur, Sept. 19, 2013, pp. 13.)

Punishment should be made harsher for offence and sought response from states on what action they are taking to control the menace. To quote the present Food Safety Act awards six months jail term which is grossly inadequate, the SC felt and asked sates to amend the law. Already UP, Bengal & Odisha has amended the law in this regard.

(Source: "SC wants life term for milk adulteration", The Times of India, Dec. 12, 2013, Nagpur, pp.8)

### **END NOTES**

The protect larger interest of children researcher recommend SCALP formula eliminate menace of unhealthy, poor in nutrition, with harmful additives junk food, and also adulteration in the food product.

**STANDARDS:** Defining standards, ore precisely. Suggest limits of salt sugar, fats and sodium in junk foods. Labeling information should be made more specific and prominently displayed. Also identifying the need of standard code dealing with food product quality and safety.

**CGMP:** Government should seriously think over coming out with Current Good Manufacturing Practices (CGMP) for food products.

**AMENDEND CONCERNED LAWS:** Punishment should be made harsher for offence and sought response from states on what action they are taking to control the menace. Punishments in Food Safety Act is grossly inadequate, the SC felt, need to amend.

**LOOK WEST:** In absence of standards, norms, standard come it is nothing wrong to look west for it. Standard code, regulations in countries world over can used as basis to derive the same. Australian Association of National Advertisers has introduced AANA Food and Beverage Code and AANA Children Code dealing with advertising and marketing communications in any media directed primarily at persons 14 years of age or younger.

**PRVEVENTION IS BETTER THAN CURE:** Preventing/boycotting unsafe, unhealthy products become is the immediate solution.

It is important to take some corrective action especially regarding food products market in India. Children are having great pester power and almost have a final say about these category hence action against all manufactures for allegedly using harmful additives and marketers who are skillfully fooled children by exorbitant claims and promotional tools. Celebrities concerned can come out in support of the cause and also showcase their own lifestyle to promote healthy habits.



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**A STUDY ON THE SERVICE QUALITY DIMENSIONS OF SUPER MARKETS  
IN GUJARAT STATE**

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**Abstract**

*Quality in a service is a measure of the extent to which a delivered service meets the customer's expectations. Service quality is considered a critical determinant of competitiveness. Superior service quality is a key to improved profitability. Consumer service is a key factor towards generating loyal retail customers, and ultimately, successful retail businesses. The main objective of the study is to find the most significant dimension of Retail Service Quality Scale (RSQS) influencing service quality of super markets in Gujarat State. Purposive sampling method is used to collect data. 400 respondents visiting Big Bazaar, D-Mart, Pick-N-Pay, Star Bazaar and Vishal mega-mart in Gujarat were taken to study their perception and preferences regarding service quality of super markets. With the help of RSQS model, it was found that super markets in Gujarat State are fulfilling the expectations of the Customers. It further indicates that the perception of the consumers towards super market is good and that super markets are succeeding in its mission of replacing the traditional stores in India.*

**Keywords:** Service Quality, RSQS model, Super Markets

**INTRODUCTION**

Consumer service is a key factor towards generating loyal retail customers and ultimately, successful retail businesses. Defined as an activity that supplements or facilitates store sales, consumer service includes such items as free parking, gift wrapping, environment and delivery. Additionally, sales personnel offer consumer service through their interactions and relationships with customers. Nature and extent of Service Quality is dependent upon certain identifiable factors or dimensions which can be optimized with wise managerial judgments.

The subject of service quality has aroused considerable recent interest among business people and academics. Of course, buyers have always been concerned with quality, but the increasing competitive market for many services has led consumers to become more selective in the services they choose. Conceptualizing the quality for services is more complex than for goods. Because of the absence of tangible manifestations, measuring service quality can be difficult.



## LITERATURE REVIEW

Bernardo Balboni (2011) in their article demonstrates the crucial role of retail service quality as a key activator in the formation of customer loyalty to the store. The results prove that customers consider retail service quality as a second-order dimension and recognize the main contribution of physical aspects and reliability first-order dimensions.

Chowdhary and Prakash (2007) suggested that generalization of quality dimension was not possible among all type of service taken together. Gronroos (1983) elaborated service quality as both technical and functional, the first signifies what the customer gets and the latter how the customer receives the service. When a customer assessed service quality, the company's profile or image acts a "filter". If a company had a positive image, it is easier to overlook smaller mistakes in its service delivery; to regard them as temporary disturbances.

Edward Burch et al. (1995) examined the applicability of the service quality measurement scale (SERVPERF) to the rental industry. The SERVPERF scale was found to explain a great deal of the variation in service quality. While satisfaction seems to have a significant positive effect on purchase intention, service quality does not seem to have a similar effect.

Lehtinen and Lehtinen (1982) defined service quality in terms of physical quality, interactive quality and corporate (image) quality. They also suggested that when compared with the other two quality dimensions, corporate quality tended to be more stable over time.

Leen et al. (2004) aimed at validating the retail service quality (RSQS) instrument developed by Dabholkar et al. (1996) in the Malaysian business setting, specifically in the context of apparel specialty stores. Findings obtained from the confirmatory factor analysis and reliability tests indicated that all the five dimensions of physical aspects, reliability, personal interaction, problem-solving and policy were highly suited for measuring retail service quality in clothing stores, also proving that the instrument was applicable in the Malaysian culture. Through the correlation analysis, it was shown that retail service quality is furthermore associated with future consumption behaviour in terms of the customers' intention to visit, purchase and recommend the stores to others. Shashank Mehra (2006) in his study of Grocery store (Reliance Fresh and Big Bazaar) suggested that Reliance fresh has a chance to improve on its parking facility and Big Bazaar has to improve their overall service quality.

Tan et al. (2010) used SERVQUAL model to evaluate the link between service quality dimensions and knowledge sharing. They found that assurance and the reliability dimensions of service quality were the two most important dimensions and had significant positive relationship with knowledge sharing.

## **OBJECTIVE OF THE STUDY AND RESEARCH PLAN**

To find the most significant dimension of Retail Service Quality Scale (RSQS) influencing service quality of super markets in Gujarat State.

### **Nature of Data and Sources of Data**

Primary data is used for the study. This data has been collected through questionnaire.

### **Sample design**

Purposive sampling method is used to collect the data. A sample size of four hundred consumers was taken from different cities of Gujarat State. A structured questionnaire was given to 400 respondents of different cities of Gujarat State which consisted of close ended questions.

### **Population**

Population includes Consumers in different cities of the Gujarat State.

### **Sample element**

Individual Consumers who visit the super markets are the sample element.

### **Sampling technique**

Purposive sample technique is used to select the sample.

### **Sample size**

The sample size of 400 respondents was taken from different cities of Gujarat State.

### **Questionnaire design**

A Structured questionnaire has been prepared and distributed among the selected consumers in different cities of Gujarat State to study their perception and preferences regarding service quality dimensions of Super Markets.

### **Area of the study**

The area of study is limited to Gujarat State. Different Super markets of Gujarat State like Big Bazaar, D-Mart, Star-Bazaar, Vishal-Mega mart and Pick- N-Pay are selected for research to study the consumers perception and preferences regarding service quality dimensions of Super Markets. The study can be extended for consumers across greater geographical area.

### **Frame work of data analysis**

Statistical package for social science (SPSS.16) was used to analyse the data. RSQS (Retail Service Quality Scale) model was used.

### **Limitations of the study**

For the research work, data was collected and interpreted with utmost reliability and consistency but due to prejudices of a few respondents, certain limitations of the study are as follows:

1. The study depicts the present scenario in the different cities of Gujarat and hence the result may not be applicable to another period of time.
2. The study is limited to 400 respondents belonging to different cities of Gujarat.
3. Answer to the questionnaire depends upon the beliefs and prejudices of consumers.



4. It is assumed that respondents are true and honest in expressing their views and have filled the questionnaire honestly and without any bias.
5. The study is conducted only for super markets, hence this cannot be generalised for other retail formats.

### DATA ANALYSIS

Table 1 Classification of respondents of selected super markets of Gujarat State

|                  | Respondents |
|------------------|-------------|
| Super Markets    | 150         |
| Big-Bazaar       | 175         |
| D-Mart           | 25          |
| Star-Bazaar      | 25          |
| Vishal-Mega mart | 25          |
| Pick-N-Pay       | 25          |
| Total            | 400         |

Retail Service Quality Scale (RSQS) Measurement  
Table 2 Service Quality Evaluation of Super Markets

| Statement                                                                                                                         | A (%) | N (%) | DA (%) | mean | S.D   | S.E   |
|-----------------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|------|-------|-------|
| <b>Dimension 1: Physical Aspects</b>                                                                                              |       |       |        |      |       |       |
| 1.The super market has modern- looking equipment and fixtures                                                                     | 88    | 10    | 2      | 4.18 | 0.758 | 0.038 |
| 2.Materials associated with this supermarkets service (such as shopping bags, loyalty cards and catalogs ) are visually appealing | 66    | 25    | 9      | 3.71 | 0.879 | 0.044 |
| 3. The super market has clean, attractive and convenient physical facilities ( restrooms, fitting rooms)                          | 71    | 21    | 8      | 3.90 | 0.964 | 0.048 |
| 4. The layout at the super market makes it easier for customers to find what they need                                            | 89    | 7     | 4      | 4.40 | 0.835 | 0.042 |
| 5. The layout at the super market makes it easier for customers to move around in the super market                                | 83    | 14    | 3      | 4.31 | 0.827 | 0.04  |
| <b>Dimension 2: Reliability</b>                                                                                                   |       |       |        |      |       |       |
| 6. When this super market promises to Do something (such as repairs, alterations ) by a certain time, it will do so               | 35    | 35    | 30     | 3.04 | 1.159 | 0.05  |
| 7.The super market provides its services at the time it promises to do so                                                         | 51    | 33    | 16     | 3.46 | 1.035 | 0.03  |
| 8. The super market performs the service right the first time                                                                     | 52    | 30    | 18     | 3.45 | 0.992 | 0.05  |
| 9. The super market has merchandise                                                                                               | 70    | 18    | 12     | 3.82 | 1.018 | 0.05  |

|                                                                                                        |    |    |    |      |       |       |
|--------------------------------------------------------------------------------------------------------|----|----|----|------|-------|-------|
| available when the customer want it                                                                    |    |    |    |      |       |       |
| 10. The store insists on error- free sales transactions (relating to billing, returns etc) and records | 74 | 16 | 10 | 3.99 | 0.975 | 0.049 |
| <b>Dimension 3 Personal Interaction</b>                                                                |    |    |    |      |       |       |
| 11. Employees in the super market have the knowledge to answer customer's Questions                    | 69 | 21 | 10 | 3.81 | 0.971 | 0.049 |
| 12. The behaviour of employees in the super market instills confidence in Customers                    | 67 | 22 | 11 | 3.74 | 0.976 | 0.049 |
| 13. Customers feel safe in their transactions with the super market                                    | 67 | 24 | 9  | 3.85 | 1.017 | 0.051 |
| 14. The employees in the super market give prompt service to customers                                 | 67 | 22 | 11 | 3.77 | 1.008 | 0.050 |
| 15. Employees in the super market tell customers exactly when services will be performed               | 40 | 35 | 25 | 3.18 | 1.082 | 0.054 |
| 16. Employees in the super market are never too busy to respond to customer's requests                 | 50 | 30 | 20 | 3.40 | 1.055 | 0.053 |
| 17. The super market gives customers individual attention                                              | 40 | 24 | 36 | 3.08 | 1.205 | 0.060 |
| 18. Employees in the super market are consistently courteous with customers                            | 67 | 21 | 12 | 3.77 | 0.979 | 0.049 |
| 19. Employees in the super market talk courteously to customers on the telephone                       | 57 | 25 | 18 | 3.50 | 1.076 | 0.054 |
| <b>Dimension 4 problem Solving</b>                                                                     |    |    |    |      |       |       |
| 20. The super market willingly handles returns and exchanges                                           | 38 | 27 | 35 | 3.08 | 1.203 | 0.060 |
| 21. When a customer has a problem, the super market shows a sincere interest in solving it             | 42 | 39 | 19 | 3.33 | 0.997 | 0.050 |
| 22. Employees of the super market are able to handle customer complaints directly and immediately      | 48 | 31 | 21 | 3.35 | 1.042 | 0.052 |
| <b>Dimension 5 Policy</b>                                                                              |    |    |    |      |       |       |
| 23. The super market offers high quality merchandise                                                   | 73 | 19 | 8  | 3.94 | 0.956 | 0.048 |
| 24. The super market provides plenty of Convenient parking for customers                               | 77 | 13 | 10 | 4.08 | 1.034 | 0.052 |
| 25. The working hours of super market are convenient to all their customers                            | 69 | 21 | 10 | 3.89 | 1.038 | 0.052 |
| 26. The super market accepts all major credit cards                                                    | 71 | 19 | 10 | 3.99 | 1.071 | 0.054 |



Consumer perception about the service quality dimensions of super markets were measured. The results obtained from the survey is presented as below:  
It was found that the statements like; Modern- looking equipment and fixtures; the layout which makes it easier for customers to find what they need; the layout which makes it easier for customers to move around; insistence on error- free sales transactions (relating to billing, returns etc) and records; Convenient parking; acceptance of all major credit cards have mean value  $\geq 4$ . This indicates that super markets in Gujarat State are fulfilling the expectations of the Customers. It further indicates that the perception of the consumers towards super market is good and that super markets are succeeding in its mission of replacing the traditional stores in India, as none of the item score means value  $< 3$ .

#### Dimension 1 (Physical Aspects)

In this category, five statements were measured and it is found that modern- looking equipment and fixtures, the layout which makes it easier for customers to find what they need and the layout which makes it easier for customers to move around in the super market had mean value  $> 4$  while remaining two statements had means value  $> 3$ . This indicates that the respondents strongly agree with all the statements. Majority of the respondents had a positive perception of the physical aspects dimensions at super markets, ranging from 66% to 89% as they strongly agreed with all statements in this dimension. The strongest agreement was with the statement, "the layout at the super market makes it easier for customers to find what they need" while the weakest agreement was with the statement, "Materials associated with this supermarkets service (such as shopping bags, loyalty cards and catalogs) are visually appealing". To test whether there is any statistical significant influences of select factors on customer perception at supermarket in Gujarat, " t-test" at confidence level of 0.05 or 95% (df = 399, t tab value =  $\pm 1.96$ ) and the mean and standard deviation values of RSQS wer found.

$H_0$ : There is no significant influence of physical aspect of super market on customer perception in Gujarat

$H_1$ : There is a significant influence of physical aspect of super market on customer perception in Gujarat

Table 3 One Sample Test (Test Value = 3)

| Physical Aspect Factors                                        | N   | mean | S.D  | S.E  | T    | df  | p-value<br>Sig.(2tail) |
|----------------------------------------------------------------|-----|------|------|------|------|-----|------------------------|
| 1. The super market has modern- looking equipment and fixtures | 400 | 4.18 | 0.75 | 0.03 | 31.1 | 399 | .000                   |

|                                                                                                                                   |     |      |      |      |       |     |      |
|-----------------------------------------------------------------------------------------------------------------------------------|-----|------|------|------|-------|-----|------|
| 2. Materials associated with this supermarkets service (such as shopping bags, loyalty cards and catalogs) are visually appealing | 400 | 3.71 | 0.87 | 0.04 | 16.15 | 399 | .000 |
| 3. The super market has clean, attractive and convenient physical facilities ( restrooms, fitting rooms)                          | 400 | 3.90 | 0.96 | 0.04 | 18.67 | 399 | .000 |
| 4. The layout at the super market makes it easier for customers to find what they need                                            | 400 | 4.40 | 0.83 | 0.04 | 33.53 | 399 | .000 |
| 5. The layout at the super market makes it easier for customers to move around in the super market                                | 400 | 4.31 | 0.82 | 0.04 | 31.68 | 399 | .000 |

Based on the outcome of the t-test analysis at 95% confidence level, the  $H_0$ : There is no significant influence of physical aspect on customer perception at super markets in Gujarat is rejected, since one sample t-test successfully revealed a statistically significant values for physical aspects of super markets. Mean values fall in positive side of RSQS rating ( > ),  $t_{cal}$  value >  $t_{tab}$  value and  $p$ -value < 0. 05 for all the select physical aspect factors under study.

### Dimension 2 (Reliability)

In the reliability category, five statements were constructed and it is found that none of the statements had mean value more than 4 but all the statements had mean value more than 3, which indicates the reliability of super markets in Gujarat.

60% to 74% respondents had a positive perception of the Reliability dimensions of super market and agreed with all statements in this dimension. The super markets provides the equal benefits to the customers by providing goods when the customers want it. The longest agreement was with the statement, "The store insists on error- free sales transactions (relating to billing, returns etc) and records" while the weakest agreement was with the statement, "When this super market promises to do something (such as repairs, alterations ) by a certain time, it will do so".

- 0: There is no significant influence of reliability aspect of super market on customer perception in Gujarat
- 1: There is a significant influence of reliability aspect of super market on customer perception in Gujarat



**Table 4 One Sample Test (Test Value = 3)**

| Reliability Factors                                                                                                 | N   | mean | S.D  | S.E   | T     | df  | p-value<br>Sig.<br>(2-<br>tailed) |
|---------------------------------------------------------------------------------------------------------------------|-----|------|------|-------|-------|-----|-----------------------------------|
| 1. When this super market promises to do something (such as repairs, alterations ) by a certain time, it will do so | 400 | 3.04 | 1.15 | 0.058 | 0.69  | 399 | .000                              |
| 2. The super market provides its services at the time it promises to do so                                          | 400 | 3.46 | 1.03 | 0.052 | 8.89  | 399 | .000                              |
| 3. The super market performs the service right the first time                                                       | 400 | 3.45 | 0.99 | 0.050 | 9.07  | 399 | .000                              |
| 4. The super market has merchandise available when the customer want it                                             | 400 | 3.82 | 1.01 | 0.051 | 16.11 | 399 | .000                              |
| 5. The store insists on error- free sales transactions (relating to billing, returns etc) and records               | 400 | 3.99 | 0.97 | 0.049 | 20.31 | 399 | .000                              |

Based on the results of the t-test analysis at 95% confidence level, the  $H_0$ : There is no significant influence of reliable service on customer perception at super market in Gujarat is rejected, since the t-test successfully revealed a statistically significant values for reliable service factor. Mean values fall in positive side of RSQS rating ( $> 3$ ), t cal value  $>$  t tab value and p-value  $< 0.05$  for the entire select reliable service factor under study.

### **Dimension 3 (Personal Interaction)**

Personal Interaction of super markets with the consumer value greater is good as the result indicates that all the statements in this category have mean than 3. This trend of interaction (relationship) will be helpful to win the confidence of the consumers and retain them.

40% to 69% respondents had a positive perception of the Personal Interaction dimensions at super market who agreed with all statements in this dimension. The strongest agreement was with the statement, "Employees in the super market have the knowledge to answer customer's Questions" while the weakest agreement was with the statement, "the super market gives customers individual attention".

$H_0$ : There is no significant influence of personal interaction aspect at super market on customer perception in Gujarat

$H_1$ : There is a significant influence of personal interaction aspect at super market on customer perception in Gujarat

Table 5 One Sample Test (Test Value = 3)

| Personal Interaction Factors                                                            | N   | mean | S.D   | S.E   | T     | df  | p-value<br>Sig.<br>(2-tailed) |
|-----------------------------------------------------------------------------------------|-----|------|-------|-------|-------|-----|-------------------------------|
| 1. Employees in the super market have the knowledge to answer customer's Questions      | 400 | 3.81 | 0.971 | 0.049 | 16.53 | 399 | .00                           |
| 2. The behaviour of employees in the super market instills confidence in Customers      | 400 | 3.74 | 0.976 | 0.049 | 15.10 | 399 | .00                           |
| 3. Customers feel safe in their transactions with the super market                      | 400 | 3.85 | 1.017 | 0.051 | 16.67 | 399 | .00                           |
| 4. The employees in the super market give prompt service to customers                   | 400 | 3.77 | 1.008 | 0.050 | 15.40 | 399 | .00                           |
| 5. Employees in the super market tell customers exactly when services will be performed | 400 | 3.18 | 1.082 | 0.054 | 3.33  | 399 | .00                           |
| 6. Employees in the super market are never too busy to respond to customer's requests   | 400 | 3.40 | 1.055 | 0.053 | 7.55  | 399 | .00                           |
| 7. The super market gives customers individual attention                                | 400 | 3.08 | 1.205 | 0.060 | 1.33  | 399 | .00                           |
| 8. Employees in the super market are consistently courteous with customers              | 400 | 3.77 | 0.979 | 0.049 | 15.71 | 399 | .000                          |
| 9. Employees in the super market talk courteously to customers on the telephone         | 400 | 3.50 | 1.076 | 0.054 | 9.26  | 399 | .000                          |

Based on the results of the t-test analysis at 95% confidence level, the  $H_0$ : There is no significant influence of personal interaction on customer perception at super market in Gujarat is rejected, since the t-test successfully revealed a statistically significant values for personal interaction factor. Mean values fall in positive side of RSQS rating ( $> 3$ ),  $t$  cal value  $>$   $t$  tab value and  $p$ -value  $< 0.05$  for all the select personal interaction factor under study.

#### Dimension 4 (Problem Solving)

Three statements were used to know the problem solving aspects of super market and it was found that 48% of respondents reported that the employees of the super market are able to handle customer complaints directly and immediately (3.35 mean value), 42% of respondents reported that when a customer has a problem, the super market shows a



sincere interest in solving it (3.33 mean value) while 38% respondents reported that the super market willingly handles returns and exchanges (3.08 mean value).

$H_0$ : There is no significant influence of problem solving aspect of super market on customer perception in Gujarat

$H_1$ : There is a significant influence of problem solving aspect of super market on customer perception in Gujarat

Table 6 One Sample Test (Test Value = 3)

| Problem Solving Factors                                                                          | N   | mean | S.D   | S.E   | T    | df  | p-value<br>Sig.(2-tailed) |
|--------------------------------------------------------------------------------------------------|-----|------|-------|-------|------|-----|---------------------------|
| 1. The super market willingly handles returns and exchanges                                      | 400 | 3.08 | 1.203 | 0.060 | 1.33 | 399 | .000                      |
| 2. When a customer has a problem, the super market shows a sincere interest in solving it        | 400 | 3.33 | 0.997 | 0.050 | 6.60 | 399 | .000                      |
| 3. Employees of the super market are able to handle customer complaints directly and immediately | 400 | 3.35 | 1.042 | 0.052 | 6.73 | 399 | .000                      |

Based on the results of the t-test analysis at 95% confidence level, the  $H_0$ : There are significant effects of problem solving on customer perception at super market in Gujarat is rejected, since the t-test successfully revealed a statistically significant values problem solving factor. Mean values fall in positive side of RSQS rating ( $> 3$ ),  $t$  value  $>$   $t$  tab value and  $p$ -value  $< 0.05$  for the entire select problem solving aspect in study.

#### Dimension 5 (Policy)

To measure the policy of super markets, four statements were constructed for purpose and it was found that the majority of the respondents (77%) reported that super market provides convenient parking for customers (4.08 mean value). indicates that majority of the respondents agree about the policy of convenient parking super market while 71% reported that the super market accepts all major credit (3.99 mean value) and 73% respondent reported that the super market offers high quality merchandise (3.94 mean value).

$H_0$ : There are no significant effects in policy aspect of super market on customer perception in Gujarat

$H_1$ : There are significant effects in policy aspect of super market on customer perception in Gujarat

Table 7 One Sample Test (Test Value = 3)

| Policy Factors                                                             | N   | mean | S.D   | S.E   | T     | df  | p-value<br>Sig.(2<br>tailed) |
|----------------------------------------------------------------------------|-----|------|-------|-------|-------|-----|------------------------------|
| 1. The super market offers high quality merchandise                        | 400 | 3.94 | 0.956 | 0.048 | 19.58 | 399 | .000                         |
| 2. The super market provides plenty of Convenient parking for customers    | 400 | 4.08 | 1.034 | 0.052 | 20.77 | 399 | .000                         |
| 3. The working hours of super market are convenient to all their customers | 400 | 3.89 | 1.038 | 0.052 | 17.11 | 399 | .000                         |
| 4. The super market accepts all major credit cards                         | 400 | 3.99 | 1.07  | 0.054 | 18.33 | 399 | .000                         |

Based on the results of the t-test analysis at 95% confidence level, the  $H_0$ : There are no significant effects of super market service policy on customer perception at super market in Gujarat is rejected, since the t-test successfully revealed a statistically significant values for policy factors. Mean values fall in positive side of RSQS rating ( $> 3$ ), tcal value  $>$  t tab value and p-value  $< 0.05$  for all the select policy aspect under study.

## CONCLUSION

With the help of RSQS model, it was found that the statements like; Modern- looking equipment and fixtures; the layout which makes it easier for customers to find what they need; the layout which makes it easier for customers to move around; insistence on error-free sales transactions (relating to billing, returns etc) and records; Convenient parking; acceptance of all major credit cards have mean value  $\geq 4$ . This indicates that super markets in Gujarat State are fulfilling the expectations of the Customers. It further indicates that the perception of the consumers towards super market is good and that super markets are succeeding in its mission of replacing the traditional stores in India, as none of the item score means value  $< 3$ .

Majority of the respondents had a positive perception of the physical aspects dimensions at super markets, ranging from 66% to 89% as they strongly agreed with all statements in this dimension. The strongest agreement was with the statement, "the layout at the super market makes it easier for customers to find what they need" while the weakest agreement was with the statement, "Materials associated with this supermarkets service (such as shopping bags, loyalty cards and catalogs) are visually appealing". Improvements in the ambience of the outlet, better shelves and space management, clear electronic sign posts, clean walkways and aisles, lighting, promotional islands, etc should improve overall shopping experience for customers.



In the reliability category, 35% to 74% respondents had a positive perception of the Reliability dimensions of super market and agreed with all statements in this dimension. The super markets provides the actual benefits to the customers by providing goods when the customers want it. The strongest agreement was with the statement, "The store insists on error- free sales transactions (relating to billing, returns etc) and records" while the weakest agreement was with the statement, "When this super market promises to do something (such as repairs, alterations ) by a certain time, it will do so". Improvements that can be done by management are; Improving communication amongst staff members, using updated systems to process complaints and when super markets promises to do somethings like repairs, alterations etc. it should fulfill its promises within a certain time.

In the Personal Interaction aspect, 40% to 69% respondents had a positive perception of the Personal Interaction dimensions at super market who agreed with all statements in this dimension. The strongest agreement was with the statement, "Employees in the super market have the knowledge to answer customer's Questions" while the weakest agreement was with the statement, "the super market gives customers individual attention". Training of staff to enable them in assisting customers and provide them with relevant and timely information. The super markets should send mail at certain joyful occasion such as marriages, Birthday, Anniversaries etc. The consumers will have the feelings of concern about themselves by the retail outlets.

In the Problem Solving aspect, 48% of respondents reported that the employees of the super market are able to handle customer complaints directly and immediately (3.35 mean value), 42% of respondents reported that when a customer has a problem, the super market shows a sincere interest in solving it (3.33 mean value) while 38% respondents reported that the super market willingly handles returns and exchanges (3.08 mean value). The super markets should provides proper training programs to its sales person because they are the person who push the brand to the consumers.

To measure the policy aspect of super markets, four statements were constructed for the purpose and it was found that the majority of the respondents (77%) reported that the super market provides convenient parking for customers (4.08 mean value). This indicates that majority of the respondents agree about the policy of convenient parking at super market while 71% reported that the super market accepts all major credit cards (3.99 mean value) and 73% respondent reported that the super market offers high quality merchandise (3.94 mean value). The super markets should provide information regarding special schemes to regular consumers personally by phone or mail.

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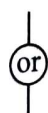
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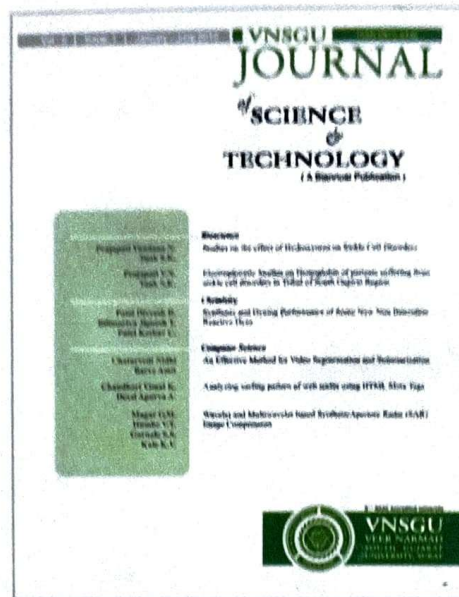
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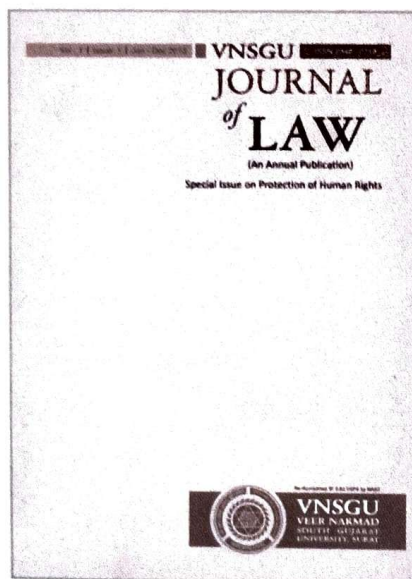


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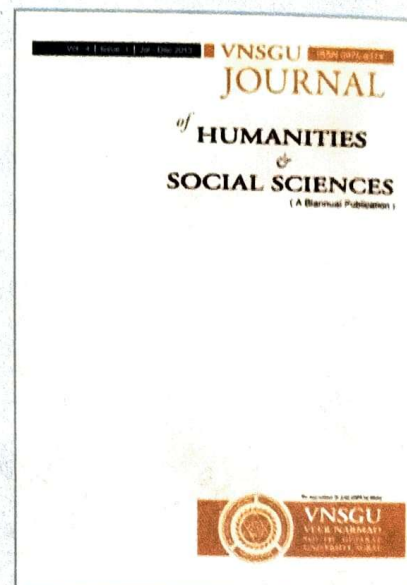
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