# AN EMPIRICAL EXAMINATION OF ATTITUDE TOWARD ONLINE ADVERTISEMNET EFFECTIVENESS

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**Abstract:**

***Literature in advertising and information systems suggests that advertising in both traditional media and the Internet is either easily ignored by the audience or is perceived with little value. Numerous commercial websites have become a place where consumers obtain vast information, but understanding how and why online users actually become consumers, specifically loyal consumers, is a major concern for practitioners and academics. However, various studies assumed that the audience was passive and failed to consider the motives of the users. Internet marketing is still an experimental area that continues to grow, evolve and adapt. This study would investigate the factors affecting users' attitudes toward TV and internet and how those factors affect perceived ease of use and usefulness. The sample size would comprise of 200 respondents from various regions of Punjab. Based on research findings, the current paper also puts forth relevant suggestions and policy recommendations aimed at improving the effectiveness of advertisement scenario in the industry. Finally this paper would help the academicians as well as industry expert to analyze the potential of online advertisement in coming future.***

***Keywords: Online Advertisement, Youngsters, Effectiveness etc.***

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## Introduction:

The internet is becoming fast and important advertising medium that has reached a level where companies are considering it to be viable alternative to traditional medium. For this reason the company is interested in standardized measure such as reach frequency and gross rating point that allows them to compare advertising effectiveness to internet to other media. Online advertising has been the fastest growing part inside the whole advertising industry. As an interdisciplinary research field, online advertising needs support from different disciplines such as business, psychology and computer science. Numerous commercial websites have become a place where consumers obtain vast information, but understanding how and why online users actually become consumers, specifically loyal consumers, is a major concern for practitioners and academics. The incidence of consumers purchasing through the hosting company site or through advertisements placed by sponsors has been quite low, except for some particular online brand or products. For example, purchasing a book or CD is becoming more common online, yet

purchasing clothing or groceries are still less preferable online than in brick-and-mortar stores. There are number of shortcomings when it comes to measuring the effectiveness of advertisements. Marketers are interested in measuring banner ad effectiveness by counting no of advertisement click through. The second measurement problem is that of caching. This means that a user's subsequent requests for a page may be retrieved from a local cache, and a website server will not record the user's subsequent exposures to the ad on the web. The dominant form of measuring the advertisement effectiveness is through the click through rate and brand metrics. CTR indicates the active response to advertising, not just probable exposure to it. Brand metrics like brand awareness and recognition can be measured by traditional survey research unlike behavior response such as click through. Taking into consideration the difficulties involved in advertisement effectiveness, our survey uses the survey technique for data collection.

**Review of literature:**

**Zoftan and Chapanis (1982)** found that those with higher attitudes view computers as more efficient, dependable, precise, and organized. Users' attitudes toward the usage of computer concern perceptions of the competence and productivity of computers. Further, attitudes toward a site have been discussed to measure the ease of building a relationship with a business, website loyalty, e-satisfaction with the site or service provided by the business, length of time to stay on a website, or a comparison analysis between or among the sites (**Chen and Wells; Schubert and Selz 1999; Cho et al. 2002**). Prior studies also addressed that attitudes toward computers have important effects on the usage and ultimate success or failure of computer systems (**Webster and Martocchio 1992: Igbaria et al. 1990**).

Attitudes toward a website have been often considered as a variable to measure the effectiveness of web-sites, systems, or advertising (e.g., **Zhou 2002; Chen and Wells 1999**). Previous researchers found that attitudes toward a site are quite measurable (**Gibson 1997**). **Li et al. (2002)** report that online consumers are goal-oriented and perceive online ads as even more intrusive than those in other media, leading to negative attitudes, and impairing intentions to return to the site. In this research, we (1) examine the effects of online advertising, (2) investigate whether the particular type of ad affects consumers' levels of retention of website and ad content and consumers' perceived intrusiveness of the ad, and (3) look at whether the congruence of ad content (with the hosting site) affects these same variables.

The attitude-toward-the-ad theory based in marketing communications and advertising research has an extensive following (e.g., **Bruner & Kumar, 2000**). Studies have examined online advertising consumer attitudes, behavior, and perceptions, finding that consumers develop such negative attitudes towards the ads that they avoid them when possible. These negative attitudes affect brand perceptions (**Mackenzie & Lutz, 1989),** and lead to ad avoidance (**Abernethy, 1991).**

Some researchers expected ads in new media to be less intrusive (**Rust & Varki, 1996)** or even entertaining **(Coyle & Thomson, 2002**), but Reed (1999) found on-line ads disturbing to users. Irritation has been studied extensively in traditional media (**Greyser, 1973)** and can be caused by tactics that consumers perceive as annoying, offensive, or insulting. In addition, interruption was found to negatively affect consumers' attitudes towards the ads (**Rettie, 2001).** In-line ads to some extent blend into the web pages on which they are displayed, while pop-up ads, on the other hand, are designed to interrupt; perhaps explaining their intrusiveness.

Common sense tells us that ads that are most visible will be remembered. However, deeper consideration reveals that while pop-up ads are more interruptive than in-line ads, requiring a user to act to remove them, they appear on the screen for a shorter time period because users tend to close them immediately. Because so many users only focus on the "x" in the upper-right corner of the window (**Chan et al., 2004),** pop-up ads appear for only a brief period of time and in-line ads remain visible for a much longer period, raising the likelihood that users will see them in their peripheral vision, increasing user retention of the ad content.

Today, there is an increasing usage of metrics on consumer's attitude, branding effect and advertisement recall and recognition in evaluating online advertising effectiveness (**Higie, Sweall, 1991).** In terms of consumers, **Ducoff (1996)** found that Web advertising has been broadly defined. Using a mall intercept survey method, he found respondents considered many forms of Web communication to be advertising. For instance, almost 70 percent of respondents considered these message types to be advertising: free sample or trial offers, billboard-type logos, branded messages, graphic display of products, branded banners, online catalogs, shopper guides, and sponsor identification for Web sites. More than 50 percent of the respondents consider Web site homepages and corporate Web sites to be advertising **(Ducoff, 1996).** According to the study, banner advertisements are the most common type of Internet advertising besides Web site homepages themselves **(Ducoff 1996).**

**Ducoff (1996)** also found that Internet users rated Internet advertising as somewhat valuable, and also rated Internet advertising as slightly more informative as it was valuable. In this study, Internet users expressed that the Internet '"is a good source of up-to-date product information," "is useful," and "is entertaining." These results suggested an overall positive attitude toward Internet advertising among Internet users **(Ducoff, 1996).**

**Lindsay I Smith (2002)** focused on that PCA is a useful statistical technique that has found application in fields such as face recognition and image compression, and is a common technique for finding patterns in data of high dimension. PCA is used in computer vision, first showing how images are usually represented, and then showing what PCA can allow us to do with those images.

**Balu, (2007)** focused on the purpose of factor analysis is to select from a large number of random variables, a reduced number of factors which provide the possibility to more exactly and more complexly establish the interdependences. The principal component analysis is based on a rigorous mathematical instrument, which does not take into consideration any of the arbitrary elements or subjective decisions. The principal component analysis has to determine the eigen dominant valuation - method known under the name of "Hotelling's deflator method", where to find out the eigen values means to determine the joint factors.

**Research Methodology:**

This study investigates the factors affecting users' attitudes toward TV and internet, which have become an interactive marketing tool and how those factors affect perceived ease of use and usefulness. . The sample belonging to different cities of Punjab mainly in Jalandhar, Patiala, Ludhiana and Mandi Gobindgarh. The sample comprised of 220 respondents. This study investigated the factors affecting users' attitudes toward TV and internet and how those factors affect perceived ease of use and usefulness. One way Anova test have been applied to investigate the various factors affecting users' attitudes toward TV and internet. Based on research findings, the current paper also puts forth relevant suggestions and policy recommendations aimed at improving the effectiveness of advertisement scenario in the industry. Finally this paper helped the academicians as well as industry expert to analyze the potential of online advertisement in coming future.

**Factors for Advertisements:**

The factors affecting the advertisement effectiveness are identified on the basis of previous research done by Ducoffe. The advertisement effectiveness is divided on the basis on eight scales as listed below:

Informative scale

- Ads are good source of product information.
- Ads provide relevant product information
- Ads provide timely information
- Ads are source of up to date product information.
- Ads supply complete product information.
- Ads make product information immediately available
- Ads are convenient source of product information.

Attention scale

- Pay attention to ads
- Ads are eye catching
- Ads are attractive
- Read/watch ads
- Ads are effective in producing engaging messages

Emotional Scale

- Ads give details about the product, but do no stimulate emotions
- Ads have rational content rather emotional content
- I am touched by ads

Precipitating Scale

- I am likely to purchase a product after being exposed to ads
- I have thought of buying an advertised product after watching ads.

Attitude scale

- Ads help people change their attitude towards product/brands
- Ads help people change their belief
- Ads help people change their attitude towards the image of the company
- Ads make seem brand more appealing

Entertainment Scale

- Ads are entertaining
- Ads are enjoyable
- Ads are pleasing
- Ads are fun to use
- Ads are exciting

Irritation Scale

- Ads insults people's intelligence
- Ads are annoying
- Ads are irritating

- Ads have negative effect on society
- Ads are confusing

Deceptive Scale

- Ads lies
- Important facts about the product are left out of ads.

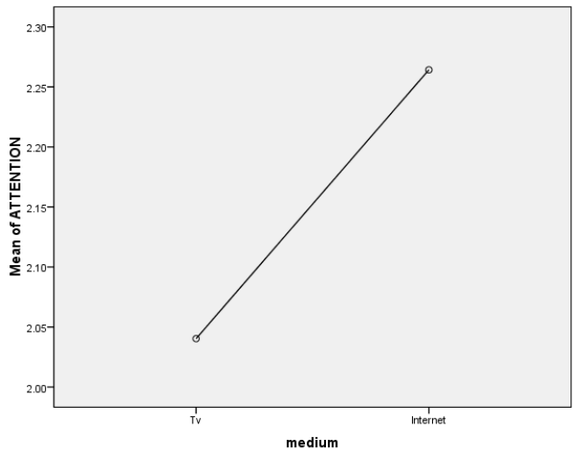
**Descriptive Statistics**

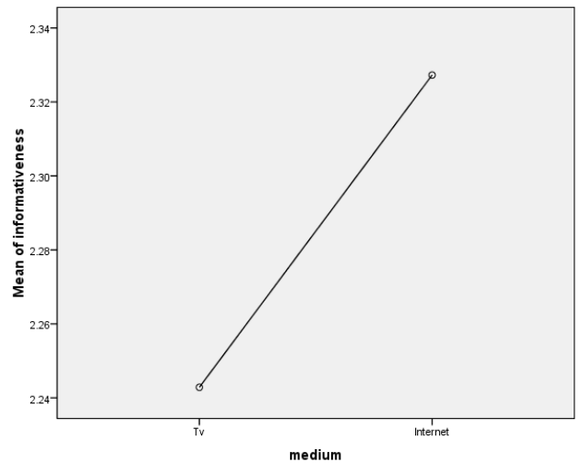
| | | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound | | |
| ATTENTION | Tv | 109 | 2.0404 | .49947 | .04784 | 1.9455 | 2.1352 | 1.00 | 3.40 |
| | Internet | 109 | 2.2642 | .53325 | .05108 | 2.1630 | 2.3655 | 1.20 | 4.00 |
| | Total | 218 | 2.1523 | .52751 | .03573 | 2.0819 | 2.2227 | 1.00 | 4.00 |
| INFORMATIVENESS | Tv | 110 | 2.2429 | .54133 | .05161 | 2.1406 | 2.3452 | 1.14 | 3.86 |
| | Internet | 110 | 2.3273 | .47611 | .04540 | 2.2373 | 2.4172 | 1.43 | 3.57 |
| | Total | 220 | 2.2851 | .51035 | .03441 | 2.2173 | 2.3529 | 1.14 | 3.86 |
| EMOTIONAL | Tv | 110 | 2.8030 | 1.08487 | .10344 | 2.5980 | 3.0080 | 1.33 | 12.00 |
| | Internet | 110 | 2.6879 | .59778 | .05700 | 2.5749 | 2.8008 | 1.33 | 4.33 |
| | Total | 220 | 2.7455 | .87577 | .05904 | 2.6291 | 2.8618 | 1.33 | 12.00 |
| PERCEPTION | Tv | 110 | 2.5318 | .81634 | .07783 | 2.3776 | 2.6861 | 1.00 | 5.00 |
| | Internet | 110 | 2.5682 | .75260 | .07176 | 2.4260 | 2.7104 | 1.00 | 4.50 |
| | Total | 220 | 2.5500 | .78353 | .05283 | 2.4459 | 2.6541 | 1.00 | 5.00 |
| ATTITUDE | Tv | 110 | 2.3568 | .64915 | .06189 | 2.2341 | 2.4795 | 1.00 | 4.50 |
| | Internet | 110 | 2.3045 | .57308 | .05464 | 2.1962 | 2.4128 | 1.00 | 3.50 |
| | Total | 220 | 2.3307 | .61146 | .04122 | 2.2494 | 2.4119 | 1.00 | 4.50 |
| ENTERTAINMENT | Tv | 110 | 2.3473 | .65339 | .06230 | 2.2238 | 2.4707 | 1.00 | 4.80 |
| | Internet | 110 | 2.3273 | .67876 | .06472 | 2.1990 | 2.4555 | 1.00 | 4.80 |
| | Total | 220 | 2.3373 | .66475 | .04482 | 2.2489 | 2.4256 | 1.00 | 4.80 |
| IRRITATION | Tv | 110 | 3.0309 | .68600 | .06541 | 2.9013 | 3.1605 | 1.20 | 5.00 |
| | Internet | 110 | 2.9855 | .63691 | .06073 | 2.8651 | 3.1058 | 1.60 | 4.80 |
| | Total | 220 | 3.0082 | .66079 | .04455 | 2.9204 | 3.0960 | 1.20 | 5.00 |
| DECEPTIVENESS | Tv | 110 | 2.5818 | .81984 | .07817 | 2.4269 | 2.7367 | 1.00 | 5.00 |
| | Internet | 110 | 2.4955 | .95181 | .09075 | 2.3156 | 2.6753 | 1.00 | 5.00 |
| | Total | 220 | 2.5386 | .88731 | .05982 | 2.4207 | 2.6565 | 1.00 | 5.00 |

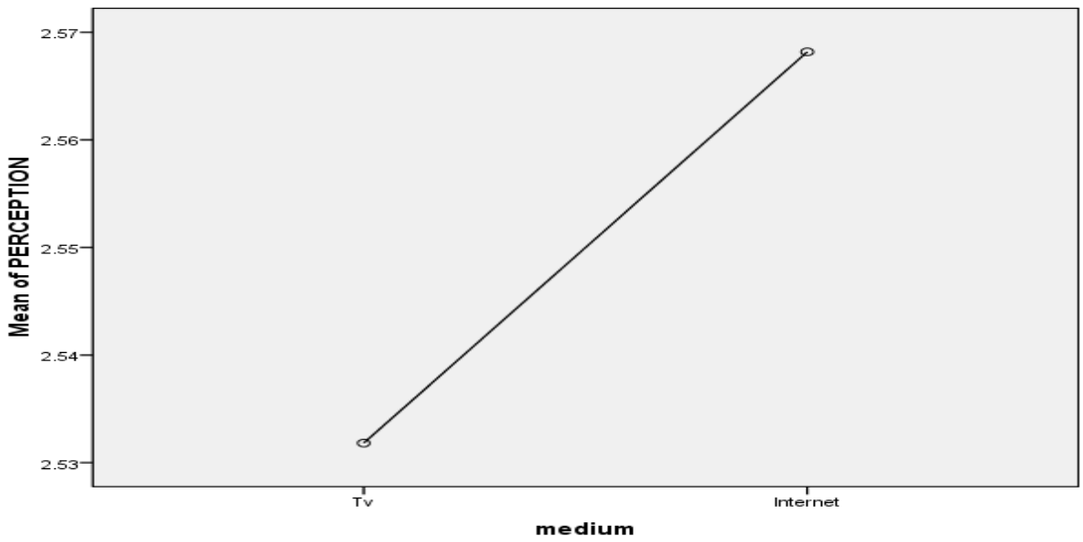
**ANOVA**

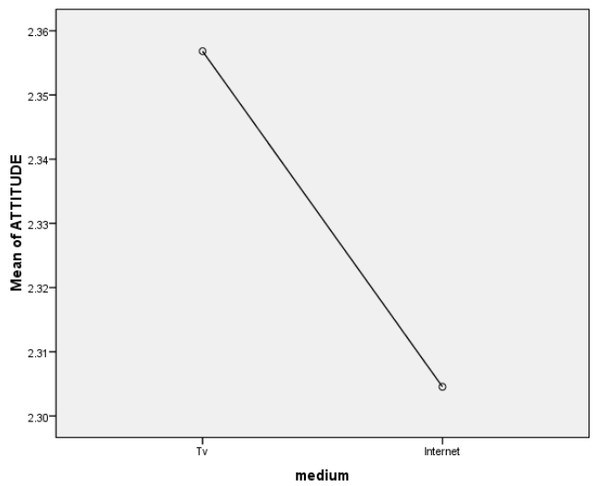
| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| ATTENTION | Between Groups | 2.731 | 1 | 2.731 | 10.232 | .002 |
| | Within Groups | 57.653 | 216 | .267 | | |
| | Total | 60.384 | 217 | | | |
| INFORMATIVENESS | Between Groups | .392 | 1 | .392 | 1.508 | .221 |
| | Within Groups | 56.649 | 218 | .260 | | |
| | Total | 57.041 | 219 | | | |
| EMOTIONAL | Between Groups | .729 | 1 | .729 | .951 | .331 |
| | Within Groups | 167.238 | 218 | .767 | | |
| | Total | 167.968 | 219 | | | |
| PERCEPTION | Between Groups | .073 | 1 | .073 | .118 | .732 |
| | Within Groups | 134.377 | 218 | .616 | | |
| | Total | 134.450 | 219 | | | |
| ATTITUDE | Between Groups | .150 | 1 | .150 | .401 | .527 |
| | Within Groups | 81.730 | 218 | .375 | | |
| | Total | 81.880 | 219 | | | |
| ENTERTAINMENT | Between Groups | .022 | 1 | .022 | .050 | .824 |
| | Within Groups | 96.752 | 218 | .444 | | |
| | Total | 96.774 | 219 | | | |
| IRRITATION | Between Groups | .114 | 1 | .114 | .259 | .611 |
| | Within Groups | 95.512 | 218 | .438 | | |
| | Total | 95.625 | 219 | | | |
| DECEPTIVENESS | Between Groups | .410 | 1 | .410 | .520 | .472 |
| | Within Groups | 172.011 | 218 | .789 | | |
| | Total | 172.422 | 219 | | | |

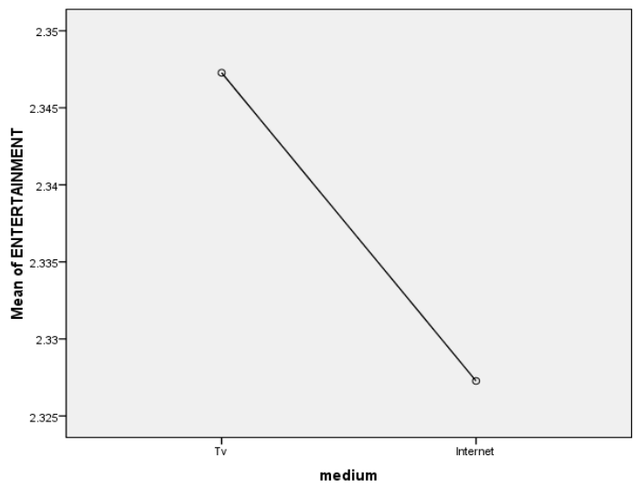
From the above table it can be inferred that the level of sig for Attention scale is .002 which less than the .05 so we can say that there is no difference in the attention scale of consumer for both TV and internet advertising. Mean charts shows that on attention scale the consumers are highly influenced by Internet. On Informativeness, Emotional, Perception, Attitude, Entertainment, Irritation & Deceptiveness scales the attitude of consumer differs in both TV and Internet advertising. From the mean charts it can be inferred that for the respondents the ads on the Internet are more informative than TV advertisements, whereas we can see consumer has more positive attitude towards TV advertisements and they also found it more entertaining. It can also be inferred from the responses that the TV advertisements are high on the Irritation scale as compared to Internet advertisement.

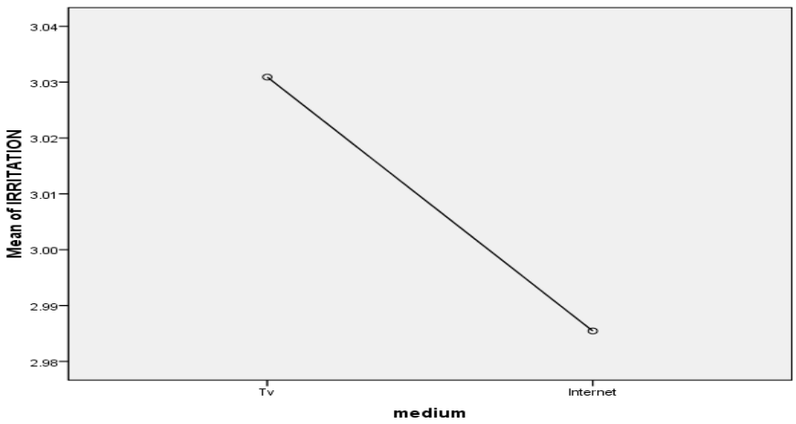

Mean of ATTENTION
2.30
2.25
2.20
2.15
2.10
2.05
2.00
Tv
Internet
medium


Mean of informativeness
2.34
2.32
2.30
2.28
2.26
2.24
Tv
Internet
medium


Mean of PERCEPTION
2.57
2.56
2.55
2.54
2.53
Tv
Internet
medium


Mean of ATTITUDE
2.36
2.35
2.34
2.33
2.32
2.31
2.30
Tv
Internet
medium


Mean of ENTERTAINMENT
2.35
2.345
2.34
2.335
2.33
2.325
Tv
Internet
medium




**Conclusion:**

Although there are various evaluation activities involved in campaigns and experiments, it is still difficult to determine the performance of current online advertising models. More and more evaluation experience is still required to establish universally accepted and well approved measurement methodologies and techniques for online advertising. Most research studies tested the effectiveness of a single model. Little research has been down on evaluating and comparing two or more online advertising models. To help advertisers to select appropriate and effective advertising models, it is necessary to carry out comparison studies among different online advertising models. Therefore, it is time to introduce more creative components such as sound, animation and streaming media to online advertising, by which designers can design and implement new online advertising models. Also, because our knowledge of what factors can affect the success of online advertising is limited, it is necessary and valuable to conduct experiments to evaluate the online advertising models. The findings will be useful to establish standards and guidelines of online advertising.

## References

1. Abernethy, Avery M (1991) Differences Between Advertising and Program Exposure for Car Radio Listening, *Journal of Advertising Research*, Apr/May, 31, 2, 33-43.
2. Balu, Mariana-Elena Voineagu and Furtuna, Felix, Principal Component Analysis - Statistical Method of Territorial Profile Factor Analysis (November 2006). Available at SSRN: http://ssrn.com/abstract=988300
3. Bruner, G.C. and Kumar, A. (2000) Web commercials and advertising hierarchy-of-effects, *Journal of Advertising Research*, January/April, 35- 42.
4. Chan, Anne, Dodd, Jon, and Stevens, Robert (2004) The efficacy of pop-ups and the resulting effect on brands, White Paper by Bunnyfoot Universality, Jan 1, http://www.bunnyfoot.com/bunnyfoot_popup.pdf.
5. Chen, Qimei and Wells, William D. (1999), "Attitudes Toward the Site," *Journal of Advertising Research*, September/October, p.27-37.
6. Cho, Yooncheong, Im, Il, Fjermestad, Jerry, and Hiltz, Roxanne (2002), "An Analysis of Online Customer Complaints: Implications for Web Complaint Managemnet," *Proceedings of the 35th Hawaii International Conference on System Sciences,* Big Island, Hawaii.
7. Coyle, J.R., & Thomson, E. (2001) The effects of progressive levels of interactivity and vividness in Web marketing sites, *Journal of Advertising*, 30, 3,65-77.
8. Ducoff, R. H. (1996). Advertising value and advertising on the Web. Joumal of Advertising Research, 36 (5), 21-35.

9. Gibson, Stan (1997), "Spin a Website to Attract More Customers," *PC Week*, March.
10. Greyser, S.A. (1973) Irritation in advertising, *Journal of Advertising Research*, 13, 1, 3-10.
11. Higie, R. A. & Sewall, M.A. (1991). Using Recall and Brand Preference to Evaluate Advertising Effectiveness, *Journal of Advertising Reseach*, 31, 2, 56-63.
12. Igbaria, M. (1990), "End-User Computing Effectiveness: A Structural Equation Model," OMEGA International Journal of Management Science, Vol. 18, Issue 6, 637 – 652.
13. Lindsay I Smith. (2002), A tutorial on Principal Components Analysis
14. Li, Hairong, Edwards, Steven M., and Lee, Joo-Huyn (2002) Measuring the intrusiveness of advertisements: Scale development and validation, *Journal of Advertising*, 31, 2, 37-47.
15. MacKenzie, Scott B & Lutz, Richard J (1989) An Empirical Examination Of The Structural Antecedents Of Attitude Toward the Ad in an Advertising Pretest Context, *Journal of Marketing*, Apr, 53, 2, 48-65.
16. Rettie, R. (2001) An exploration of flow during Internet use, *Internet Research: Electronic Networking Applications and Policy*, 11, 2, 103-13.
17. Rust, R.T. & Varki, S. (1996) Rising from the ashes of advertising, *Journal of Business Research*, 37, 3, 173-191.
18. Schubert, Petra and Dorian Selz (1999), "Web Assessment: Measuring the Effectiveness of Electronic Commerce Sites Going Beyond Traditional Marketing Paradigms," *Proceedings of the 32nd Hawaii Inter-national Conference on System Sciences.*
19. Webster, Jane and Martocchio, Joseph J. (1992), "Microcomputer Playfulness: Development of a Measure With Workplace Implications," *MIS Quarterly*, June, p.201-226.
20. Zhou, Zheng (2002), "Users' Attitudes Toward Web Advertising: Effects of Internet Motivation and Internet Ability," *Advances in Consumer Research*, Vol. 29, p. 71-78.
21. Zoltan, E. and Chapanis, A. (1982), "What Do Professional Persons Think About Computers," *Behaviour and Information Technology*, Vol. 1, Issue 1, January – March, pp.55-68.

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# AN EMPIRICAL STUDY OF MOTIVATION FACTORS FOR PURCHASING THE BIKE

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**Abstract**

***"The study aims to find out the motivation factors of consumer behavior towards two wheelers. A samples of 400 users selected randomly were studied. Standardized questionnaires were used to collect the data. The results reveal that users differ in consumer behavior towards motivation factors of two wheelers. The paper uses exploratory factor analysis to examine the factor structure and psychometric properties of these items. This research identified five types of motivations are labeled as* convenience conscious, brand conscious, liberty conscious, quality conscious and economy coconscious buyers. *Confirmatory factor analyses successfully validated the items used to measure five types of motivations. Structural Equation Modeling (SEM) using AMOS version 16 was utilized for model testing and to verify the five types of motivations. This study will help the managers to understand the consumer's motivations of buying the bike and help them to make their marketing strategies."***

***Keywords: consumer behavior, motivation factors, structural equation modeling***

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## Introduction:

The objective of this paper is to provide a framework to study markets for two-wheeler automobile. One look at the automobile industry can help us identify two important characteristics about two-wheeler (bike). First, bike is durable goods: you usually buy a bike with the intention of keeping for a long period of time; further, you can buy a new bike, since it is an industry with a well-developed secondary market. But bikes are also experience goods: you cannot ascertain every characteristic of the bike before buying the bike as far as your utility function is concerned. You can learn a lot about bikes before buying them, but you still learn a lot after driving them; in particular, you learn whether they are a good match or a bad match for you. The automobile industry in general and two wheeler industry in particular has shown a tremendous growth over the recent years. According to the Society of Indian automobile Manufactures (SIAM) the industry has grown by 16% in the year 2009/20010.Two Wheeler segment as a whole during the year 2008/09 grew by over 15%.This growth has been due to the Government's initiative on rural roads and better connectivity with major towns and cities,

improved agricultural performance, upward trend of purchasing power in the hands of rural people. India is the second largest producer of two-wheelers in the world. In the last few years, the Indian two-wheeler industry has seen spectacular growth. The country stands next to China and Japan in terms of production and sales respectively. Since motorcycles are notorious for being more dangerous than passenger car, safety isn't usually the number one criteria on a person's list when they buy, repair, or build their own motorcycle. Rather, speed, comfort, fuel economy and style are a few more common criteria. With fuel prices climbing higher and higher, more consumers are interested in motorcycles for their fuel economy. The size and shape of your bike will have a huge impact on its gas mileage though. For the highest number of miles per gallon, buy a smaller bike with an aerodynamic frame. This study focuses of various buying motivations of bike such as convenience conscious, brand conscious, liberty conscious, quality conscious and economy coconscious buyers.

Generally consumers expect conveniences driving i.e. companies are designing the product according to the need of consumers. But understand consumer behavior and knowing consumers is never simple. At the same time consumer's desire lot of things in the bike, it means they want quality product, fuel economy and as well as status symbol of bike, but when consumer buy the bike he considers the other factors. And it is more difficult that to understand what a consumer perceives about the product. Customers may say one thing but do another. They may not be in touch with their deeper motivations. They may respond to influences that change their minds at the last moment. If marketers understand accurately the consumer's motives then they can make effective marketing strategies. Consumer behavior is that behavior exhibited by people in planning the bike, purchasing the bike, and using this bike. Consumer behavior is an integral part of human behavior and cannot be separated from it.

In fact, the consumer behavior is a subset of human behavior. This does not mean that all human behavior is consumption oriented. When consumers buying the bike then they consider several factors before buying the bike such as brand name, fuel economy, exterior design the bike , finance facility, convenience etc. Consumer behavior refers to the total process by which individuals interact with their environment (Walters,1974).Consumer behavior is the acts of individuals directly involved in obtaining and using economic goods and services, including the decision processes that precede and determine these acts" state Engel and Blackwell (1982). In the process of consumer behavior, the deliberation relates to many variables and is aimed at solving consumption problems.

**Literature review**

There is no dearth of literature on consumer buying behavior relating to Two-wheeler (bike). Researchers from all parts of the world have tried to analyze the buying behavior of users, their significance, limitations, challenges etc. from different angles. Loudon and Della Bitta (1984) "The Consumer behavior is the decision process and physical activity which the individuals

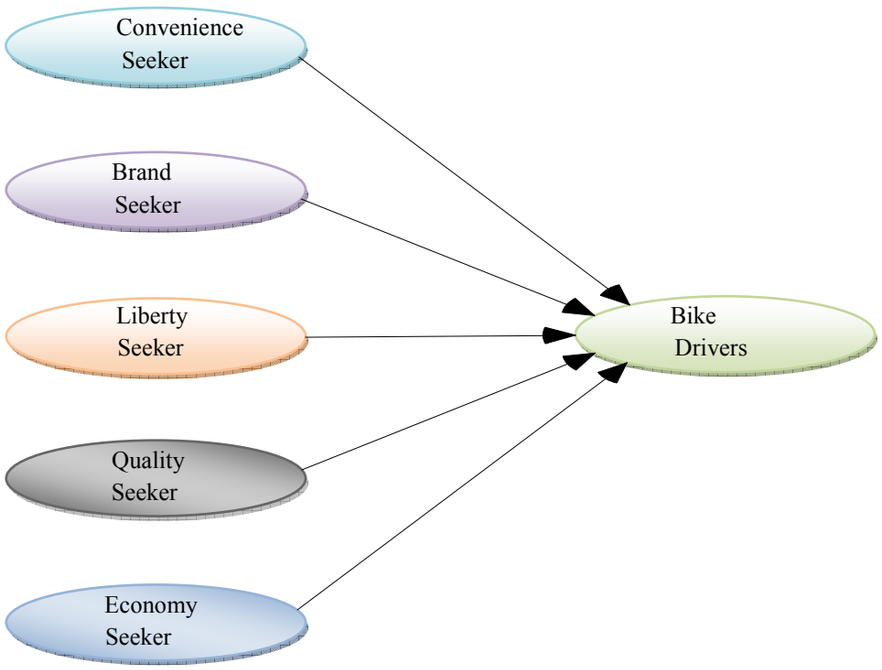
engage in evaluating, acquiring, using or disposing of goods and services". Bajaj (1986) has analyzed the growth pattern of the two-wheeler industry. Lallin (1989) study of the consumer behaviour and price perception found that nearly 50% of consumers correctly identified the real status of the brand purchased, a proportion closely comparable to the percentage of consumers who could correctly recall the purchase price of the brand. There is an abundant literature that has studied two-wheeler automobile markets, but has mostly ignored the role of experience. Recent developments have focused on the firms' decision of making the two-wheeler obsolete, either through the choice of durability (Waldman, 1996; Hendel and Lizzeri, 1999a) or the introduction of new products (Fudenberg and Tirole, 1998; Lee and Lee 1998). Another important contribution has been the incorporation of adverse selection in a model of two-wheeler automobile (Hendel and Lizzeri, 1999b, Johnson and Waldman, 2003). A survey by Waldman (2003) provides a synthesis of the evolution of the microeconomics of two-wheeler (durable goods).

In turn, there is a large literature on experience goods that has centered on the firms' strategies to overcome the asymmetric information problem by signaling high quality or by building a reputation (Klein and Leffler, 1981; Shapiro, 1982; Riordan, 1986; Milgrom and Roberts, 1986). More recently, there is a renewed interest on the consumer experimentation problem and its relationship with oligopolistic competition (e.g. Bergemann and Valimaki, 1996, 1997, 2002). Other authors have shown the relevance of experience in markets such as the two-wheeler automobile market (Crawford and Shum, 2005), yogurts (Ackerberg, 2004), and laundry detergents (Erdem and Keane, 1996). In that context, the contribution of this paper to this literature is the analysis of experience for a two-wheeler when there is a secondary market. Guinn and Faber (1989) compulsive buying appears too closely resemble other compulsive consumer behaviors in several ways. Design can be used to strategic advantage by enhancing the brand identity of a company (Borja, 2004; Schmitt & Simonson, 1997; Stompff, 2003). According to Karjalainen (2007) companies must develop two-wheeler automobile with designs which not only appear attractive but also carry distinctive references to the core values and the character of the brand. Chan and Sanders (2004) emphasized that the brand essence of two-wheeler automobile reflects the personality of the brand and allows customers to emotionally connect with the brand.

**Conceptual framework**

The present research focuses on five motives of buying the bike that help to classify the bike users, are examined in detail.

**Figure-1: Conceptual model for buying motivations of bike**




**1. Convenience seeker –** Buyers from this segment feel that bike should have good resale value, it should be very convenient to drive on rough roads and bike should be comfortable to drive even for long journey. Hence researcher names these buyers as convenience conscious buyers.

**2. Brand seeker –** Brand seeker buyers are those who feel that they always first look at the brand name before buying and they prefer to buy a bike whose original spares parts are easily available. These buyers named as brand conscious buyers.

**3. Liberty seeker –** Liberty seeker buyers feels that bike gives them sense of independence, enjoy when they drive the bike and feel proud when they drive the bike .These buyers are known as liberty conscious buyers.

**4. Quality seeker** – These buyers thinks that foreign collaboration bikes are always quality products and they want to buy a good quality product even at higher price. These buyers reflected quality conscious i.e. they named quality conscious buyers.

**5. Economy seeker -** In this segment, buyers want to buy cheap bike and prefer to buy bike on installment basis. Researcher named these buyers as economy conscious buyers.

**Objective of the study:**

Study the motivating factors of buying behavior of bike's users.

**Research Methodology:**

This research describes a study undertaken to better understand the motivations of bike's users. A total of 400 respondents were selected from Lucknow. The method of purposive sampling was employed whereby the respondents had to fulfill the criteria of having used the bike purchases. The questionnaires were personally hand-delivered in workplaces, homes and educational institutions. The questionnaire was developed with the help of literature, consultation with academicians and bike's users. Respondents were asked to rate the 23 statements relating to driving the bikes. Responses to all the statements in the questionnaire were measured on five-point Likert scale, ranging from 1= strongly disagree to 5= strongly agree. Demographic information such as gender, age, marital status, education level and income was also collected. The validation of survey instrument was checked through pilot testing of 100 respondents and variables were finalized after ensuring the balanced approach and objectivity of the survey. A proposed hypothetical Model was developed for the purpose of applying SEM (Structural Equation Modeling). Collected data were processed in the statistical software package of SPSS-17 and AMOS-16 (Analysis of Moment Structure) used to prove the hypothetical model and checked by goodness -of -fit model index shows the model fit.

**Respondents' Profile:**

**Table-1: Respondents' profile**

| Demographic Variables | | Percent |
|---|---|---|
| Education | Intermediate | 00.60% |
| | Graduation | 29.30% |
| | Post graduation | 16.20% |
| | Professionals | 53.90% |
| Age(in Years) | 16-25 | 85.00% |
| | 26-35 | 14.40% |
| | 36-45 | 00.60% |
| Income (Rs.) | Below 20,000 | 44.90% |
| | 20,001- 40,000 | 33.50% |
| | 40,001- 60,000 | 07.80% |
| | 60,001-80,000 | 04.20% |
| | Above 80,000 | 09.60% |

The profiles of respondents are as follows: **Education:** Intermediate-0.60 %, Graduates-29.30 %, Post graduates-16.20 %, Professionals-53.90 %. **Age:** 16-25years - 85.00 %, 26-35 year- 14.40%, 36-45 year-00.60 %. **Income:** Less than Rs.20,000 p.m.- 44.90%, Rs.20,001-40,000 p.m.- 33.50 %, Rs.41,000-60,000 p.m.- 07.80%, Rs. 60,001-80,000 p.m.- 04.20 % & Above Rs.80,000 - 09.60%.

**Exploratory factor analysis:**

The exploratory factor analysis was used in order to identify the various motivational factors of purchasing the bike. Principal Component analysis was employed for extracting factors and orthogonal rotation with Varimax was applied. As latent root criterion was used for extraction of factors, only the factors having latent roots or Eigen values greater than one were considered significant; all other factors with latent roots less than one were considered insignificant and disregarded. The extracted factors along with their eigen values are shown in table-2. The factors have been given appropriate names on the basis of variables represented in each case. The names of the factors, the statements, the labels and factor loading have been summarized in table -2. There are five factors each having eigen value exceeding one for bike's motivational factors. Eigen values for five factors are 4.243, 1.927, 1.750, 1.517 and 1.444 respectively. The 23 items were subjected to EFA and a final five-factor model was estimated, while none of the items exhibited low factor loadings (<0.40) or high cross-loadings (>0.40). The five -factor solution accounted for 67.310% of the total variance, and exhibited a KMO measure of sampling adequacy of 0.846. It is a pretty good extraction because we are able to economize on the number of choice factors (from 23 to 5 underlying factors), we lost 32.69 % of information content for choice of variables. The percentages of variance explained by factors one to four are 18.450, 16.378, 12.607, 10.596 and 09.279 respectively. Large communalities indicate that a large number of variance has been accounted for by the factor solutions.

**Table-2: Exploratory factor analysis results**

| Statements | Factor - 1 | Factor -2 | Factor -3 | Factor -4 | Factor-5 | Communalities | Composite reliability (α) |
|---|---|---|---|---|---|---|---|
| C.C.B -1 | **0.764** | | | | | 0.846 | 0.724 |
| C.C.B -2 | **0.704** | | | | | 0.638 | |
| C.C.B -3 | **0.684** | | | | | 0.622 | |
| B.C.B -1 | | **0.683** | | | | 0.764 | 0.836 |
| B.C.B -2 | | **0.672** | | | | 0.690 | |
| L.C.B -1 | | | **0.624** | | | 0.720 | |
| L.C.B -2 | | | **0.725** | | | 0.854 | 0.757 |
| L.C.B -3 | | | **0.697** | | | 0.682 | |
| Q.C.B -1 | | | | **0.729** | | 0.786 | 0.825 |
| Q.C.B -2 | | | | **0.632** | | 0.644 | |
| E.C.B -1 | | | | | **0.634** | 0.654 | 0.683 |
| E.C.B -2 | | | | | **0.754** | 0.846 | |
| Eigen Values | **4.243** | **1.927** | **1.750** | **1.517** | **1.444** | | |
| % of Variation | **18.450** | **16.378** | **12.607** | **10.596** | **09.279** | | |
| Cumulative % of Variation | **18.450** | **34.828** | **47.435** | **58.031** | **67.310** | | |

The first factor, convenience conscious buyers, accounted for the largest proportion, that is, 18.450% of the total explained variance. This factor was defined by three scale items and was primarily related to the convenient and comfortable drive. The second factor, brand conscious buyers, explained 16.378% of the variance and was constructed by two scale items, which were primarily associated with the concept of branding, namely, brand conscious buyers. The third factor, liberty seeker, explained 12.607% of the variance and was constructed by three scale

items, which were primarily associated with independence, enjoy and feeling of proud drive the bike. The fourth factor, quality conscious buyers, explained 10.596% of the variance, and encompassed two items related to quality product. Finally, fifth factor, economic conscious buyers, explained 09.279 % of the variance, and associated with buying the cheap bike. Varimax rotated factor analysis results for bike's motivational factors are shown in table -1 which indicates that after five factors are extracted and retained the communality is 0.846 for variable1, 0.638 for variable 2 and so on. It means that approximately 67.310% of the variance of variable1 is being captured by five extracted factors together. The proportion of the variance in any one of the original variable which is being captured by the extracted factors is known as communality (Nargundkar, 2002). The resultant empirical factor structure indicated that the convenience conscious buyers items form a first factor while some other factors brand conscious buyers, liberty conscious buyers , quality conscious buyers and economy conscious buyers formed the second, third , fourth and fifth factor respectively.

**1. Convenience conscious buyers -** This factor is most important factor which explained 18.450% of the variation. The statements as "Bike should have good resale value" (0.764), "Bike should be very convenient to drive on rough roads" (0.704), "Bike should be comfortable to drive even for long journey" (0.684), are highly correlated with each other. These statements reflect convenience conscious of customers using two wheeler bikes; hence, the researcher names this segment as convenience conscious buyers.

**2. Brand conscious buyers –** Second kind of factor explained 16.378% of the variances. In this segment, researcher took the two important variables such as "I always first look at the brand name before buying" (0.683), "I prefer to buy a bike whose spares parts are easily available" (0.672). These statements reflected brand conscious buyers i.e. researcher named these variables are brand conscious buyers.

**3. Liberty conscious buyers -** This factor explained 12.607% of the variations. "Bike gives me sense of independence" (0.624), "I enjoy when I drive the bike" (0.725) and "I feel proud when I drive the bike" (0.697). These statements show liberty conscious buyer hence researchers named this segment as liberty conscious customers.

**4. Quality conscious buyers** – Fourth type of factor explained 10.596% of the variances. In this segment, two important variables explained such as "I think foreign collaboration bikes are always quality products" (0.729), "I want to buy a good quality product even at higher price" (0.632). These statements reflected quality conscious buyers i.e. researcher named these variables quality conscious buyers.

**5. Economy conscious buyers -** Fifth kind of factor explained 9.279% of the variances. In this segment, two important variables described such as "I want to buy cheap bike" (0.634) and "It is good to buy bike on installment basis" (0.754). This statement reflected economy conscious buyers i.e. researcher named this variable economy conscious buyers.

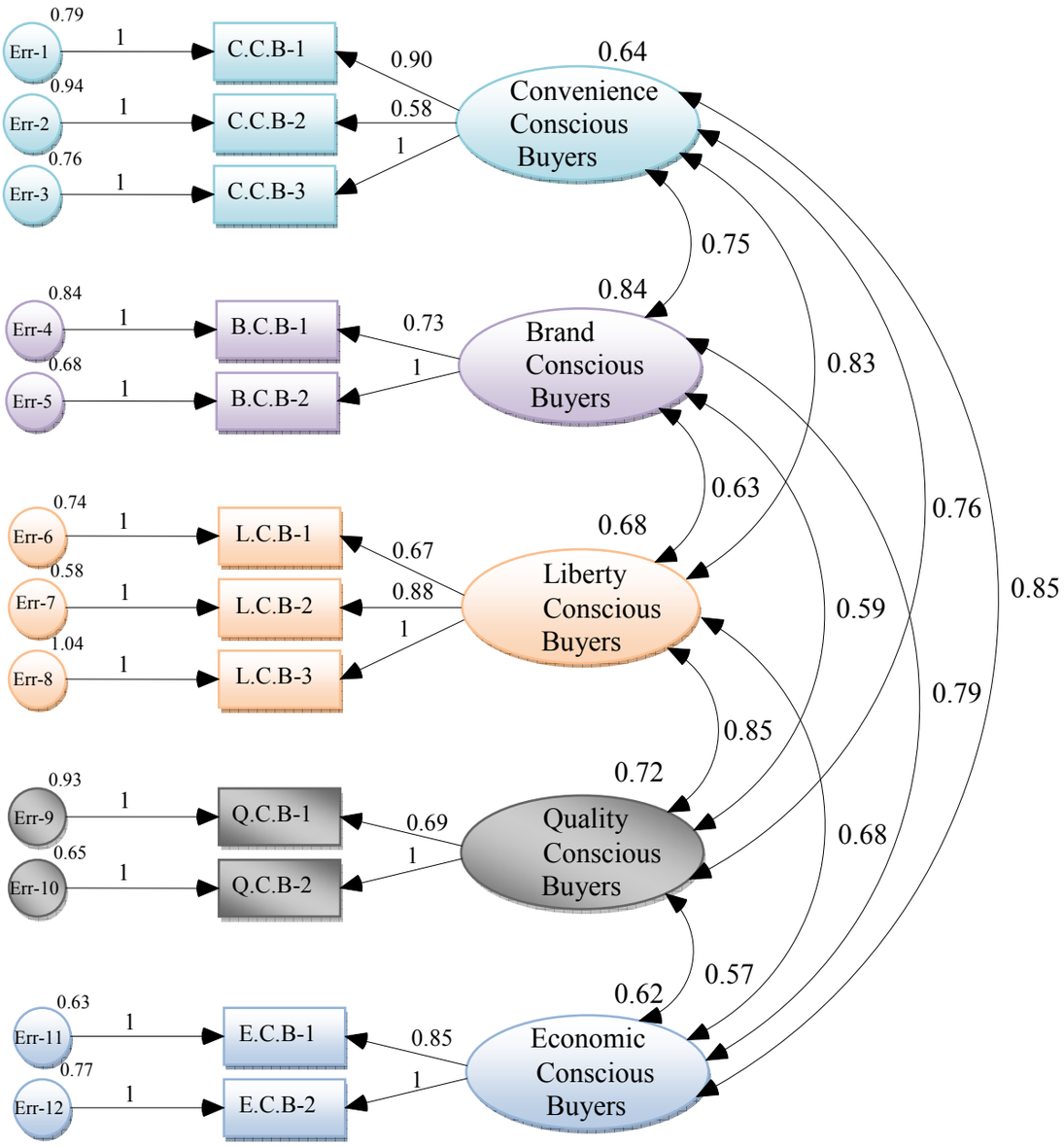



**Figure-2: Five factor CFA Model for buying behavior of bike**

**Confirmatory Factor Analysis:**

To further test the validity of the measures used in the study, CFA using Amos 16 was conducted (Byrne, 2006).Confirmatory factor analysis with partial disaggregation was performed on the five dimensions of purchasing bike' motivations. The partial disaggregation technique was applied instead of the traditional structural equation approach (or total disaggregation) although the traditional disaggregation technique provides the model detailed analysis for construct testing (each item is used as a separate indicator of the relevant constructed), it has a tendency to be cumbersome due to potentially high levels of random error in typical items and the many parameters that must be estimated. In contrast, partial disaggregation allows one to proceed with meaningful research by combining items into composites to reduce higher levels of random error and yet it retains all the advantages of structural equations, including accounting for measurement error, allowing for multiple, multidimensional variables and testing for hierarchal factor structures. To operationalzed partial disaggregation in this study, items that relate to a given construct (dimension) were combined to create two composite indicators for each construct instead of several single-item indicators.

The factor loadings and covariances obtained from the confirmatory factor analysis are as shown in figure-2. The chi-square is a badness-of-fit measure in the sense that a small chi-square corresponds to good fit and a large chi-square to bad fit. A number of fit measures that take particular account of the error of approximation in the population and the precision of the fit measure itself have been proposed (Browne & Cudeck, 1993). The Root Mean square Error of Approximation (RMSEA) is suggested to be used as a measure of discrepancy per degree of freedom (Browne & Cudeck, 1993; Steiger, 1990). The lower the RMSEA values; the better it is, with maximum acceptable values between 0.08 and 0.09. Further, to eliminate or reduce the dependence of chi-square on sample size, the values of the Goodness-of-Fit (GFI) and Adjusted Goodness-of-Fit (AGFI), Tucker Lewis index (TLI), Comparative fit index (CFI) and Normalized fit index (NFI) were used. The sore obtained from the analysis suggested an excellent fit between the data and the model ($X^2$ =285.37, degree of freedom = 159, GFI = 0.963, AGFI = 0.943, TLI = 0.935, CFI = 0.974, NFI = 0.906, RMSEA = 0.073) all the fit indices comply with the values recommended by (Heir *et al.,* 1998) and Arbuckle and Worthke(1995) except for chi-square/ degree of freedom.

**Table- 3: Fit Statistics in the structural Equation Model**

| S.No. | Goodness- of -fit model index | Recommended value* | Bike motivation model |
|---|---|---|---|
| 1. | Chi-square/degree of freedom** | ≤ 2.00 | 1.794 |
| 2. | Goodness-of-index (GFI) | ≥ 0.90 | 0.963 |
| 3. | Adjusted goodness-of-index (AGFI) | ≥ 0.90 | 0.943 |
| 4. | Tucker –Lewis index (TLI) | ≥ 0.90 | 0.935 |
| 5. | Comparative fit index (CFI) | ≥ 0.90 | 0.974 |
| 6. | Normalized fit index (NFI) | ≥ 0.90 | 0.906 |
| 7. | Root mean square of approximation (RMSEA) | ≤ 0.08 | 0.073 |

*These criteria are according to Arbuckle and Worthke (1995) and Hair et al (1998)

**Reliability and Validity Results**

Construct reliabilities were computed for the overall scale as well as at the dimension level. The results of the test indicated that the bike' motivations variables are a very much reliable instrument, registering an overall Cronbach alpha value of 0.86. All of the dimensions recorded coefficient alphas above 0.70, adhering to the minimum value of 0.70 suggested by Nunnally (1978). Hence, the internal consistency reliabilities of the measures used in this study were all acceptable. Next, the validity of the instrument is assessed using two methods; content validity and discriminant validity. Content validity refers to the degree which an instrument covers the meaning of the concepts included in a particular research (Babbie, 1992).

For this study, the content validity of the proposed instrument is adequate enough because the instrument has been carefully constructed, supported by an extensive literature review. Now, we also endeavored to test the discriminant validity of this instrument. Discriminant validity gauges the extent to which measures of 2 different constructs are comparatively distinctive from each other, and that their correlation values are neither an absolute value of 0 nor 1 (Campbell and Fiske, 1959). A correlation analysis was run on all the dimensions of bike motivations and the results are as presented in Table-4. It is found that all the dimensions are not perfectly correlated as their correlation coefficients fall between 0 and 1, hence establishing the discriminant validity of the bike motivation model. Composite reliability should be greater than 0.7 to indicate reliable factors (Hair et al 1995).This research paper, all the composite reliability coefficient are greater than 0.7 indicating reliability of all 23 variables. Now, composite reliability, variance extracted and Cronbach alpha coefficient values for all buying motivations of bike variables greatly exceeded the minimum acceptable values. This research indicated that measures were free from error and therefore yielding very consistent results (Zikmund, 2003). These tests showed that our data are reliable and valid for this research.

**Table 4: Correlation results**

| Dimensions | Convenience Conscious Buyers | Brand Conscious Buyers | Liberty Conscious Buyers | Quality Conscious Buyers | Economy Conscious Buyers |
|---|---|---|---|---|---|
| Convenience Conscious Buyers | 1.000 | | | | |
| Brand Conscious Buyers | 0.345** | 1.000 | | | |
| Liberty Conscious Buyers | 0.472** | 0.356** | 1.000 | | |
| Quality Conscious Buyers | 0.196* | 0.462** | 0.357** | 1.000 | |
| Economy Conscious Buyers | 0.201** | 0.268** | 492** | 0.381** | 1.000 |

**Correlation is significant at the 0.01 level (2-tailed).

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

**Relative importance of the five dimensions**

In order to determine the relative importance of the five dimensions in influencing customers' overall preference for purchasing the bike we regress the overall buying motivations for the individual dimensions. The results of such a regression analysis are shown in table-5. The adjusted $R^2$ value is statistically significant. The first dimension, convenience conscious buyers are most critical dimension for purchasing the bike. Brand conscious buyers are the second most important dimension. A striking result in terms of the dimensions in predicting overall buyer preferences is that liberty conscious buyers, quality conscious buyers and economic are conscious buyers the least important dimensions for bike buying behavior.

**Table-5: Relative importance of the five dimensions in predicting overall buying motivations of bike**

| Dimensions | Standard Coefficient | Significance Level | Adjusted $R^2$ |
|---|---|---|---|
| Convenience conscious buyers | 0.542 | 0.000 | 0.844 ($p<0.000$) |
| Brand conscious buyers | 0.381 | 0.000 | |
| Liberty conscious buyers | 0.258 | 0.004 | |
| Quality conscious buyers | 0.221 | 0.007 | |
| Economy conscious buyers | 0.174 | 0.000 | |

**Conclusions**

The result obtains from applying exploratory factor analysis to our data suggests that the theoretical factor structure consisting of five factors (convenience conscious buyers, brand conscious buyers, liberty conscious buyers, quality conscious buyers and economy conscious buyers) could empirically replicate. The confirmatory factor analysis results provide strong

support for the five dimensional structures to buying motivations of bike. Even small, the regression coefficient is statistically significant and its simple correlation is also significant. Present study shows that convenience conscious motivation is most significant when they buy the bike. These buyers want to get good resale value of the bike. Convenience conscious buyers feel that they are very convenient to drive on rough roads and also be comfortable to drive even for long journey. The second type of motivation i.e. brand conscious, these buyer prefer to buy good branded bike and they also want to get original spare parts of the bike.

The third significant motivation of bike is liberty conscious, as it is clear from the name i.e. these buyers feel that bike gives sense of independence when they drive. Liberty conscious buyers enjoy drives the bike and also feels proud when they drive the bike. Fourth type of motivation is quality conscious, it means buyers from this type believe in foreign collaboration bike are always quality products and they want to buy a good quality product even at higher price. Therefore, while economy conscious buyer is apparently one of the least important dimensions in the model setting it is by no means unimportant.

**Further research**

There is a need to conduct research regarding different angles of two-wheeler automobile bike and find their impact on the buying behavior of consumers, for which differences can be compared if research is conducted separately in the groups of different demographical basis and some other variables also should be considered. This proposed research can bring to surface the true association of buying motives of the consumers buying two-wheeler bike and will also facilitate in identifying the main factors accelerating the buying behavior in consumers and it will definitely help practitioners in improving their marketing strategies regarding products sales.

**Annexure-1: Measures of bike's motivations used in the study**

**Table-6: Measures of bike's motivations**

| Code | Statements |
|---|---|
| 1. | Bike finance companies have made the purchase of bike easy for middle class families. |
| 2. | I generally wait to learn, how good a new product is, before trying it. |
| 3. | Fuel efficiency of a bike is more important rather than its appearance. |
| **4. C.C.B-1** | **Bike should have good resale value.** |
| **5. C.C.B-2** | **Bike should be very convenient to drive on rough roads.** |
| **6. C.C.B-3** | **Bike should be comfortable to drive even for long journey.** |
| 7. | The bike should look attractive whatever the cost it may occur. |
| 8. | Exteriors of the bike should be attractive. |
| **9. L.C.B-3** | **I feel proud when I drive the bike.** |
| 10. | A bike should offer wide variety in color range. |
| 11. | The bike should incorporate latest technology. |
| 12. | I think bike is status symbol for me. |
| **13. L.C.B-1** | **Bike gives me sense of independence.** |

| | |
|---|---|
| **14. L.C.B-2** | **I enjoy when I drive the bike.** |
| **15. E.C.B-1** | **I want to buy cheap bike.** |
| 16. | Bike is a necessary product nowadays. |
| **17. Q.C.B-1** | **I think foreign collaboration bikes are always quality products.** |
| **18. Q.C.B-2** | **I want to buy a good quality product even at higher price.** |
| **19. B.C.B-1** | **I always first look at the brand name before buying.** |
| 20. | I want to own a bike when new model is introduced in the market. |
| **21. B.C.B-2** | **I prefer to buy a bike whose original spares parts are easily available.** |
| 22. | Pickup of a bike is its most critical part. |
| **23. E.C.B-2** | **It is good to buy bike on installment basis.** |

**Abbreviations:** C.C.B- Convenience conscious buyers, B.C.B- Brand conscious buyers, L.C.B- Liberty conscious buyers, Q.S.B- Quality conscious buyers, E.S.B- Economy conscious buyers

## References:


1. Aaker, D. A. et al. (1995) Marketing Research, 5th edition (USA: Wiley).
2. Aslam, Mubeen M. (2006). Are you selling the right colour? A cross-cultural review of colour as a marketing cue. Journal of Marketing Communications, 12(1), 15-30.
3. Bajaj, R., 1986. "Two Wheelers - Market Forces Takeover", Journal of marketing Research, Vol. 42, pp.45-54.
4. Bam D., 2003. How to select your perfect two wheeler?, India. Chitale, A., 1990. "Consumer Behavior", MC Craw Hill Book Company, England.
5. Engel, J., Blackwell, R., "Consumer Behaviors", the Dryden Press, Hinsdale Illinois, 1982.
6. Churchill GA. A paradigm for developing better measures of marketing constructs. J Mark Res 1979;16:64–73 (February).
7. Crilly, Nathan, Moultrie, James, & Clarskson, P. John (2004).Understanding products appearance: Cognitive and emotional response to products visual form. Proceedings of the Fourth International Conference on Design and Emotion, [CD-ROM], 12-14 July 2004, Department of Industrial Design, Middle East Technical University, Ankara, Turkey.
8. Cronbach, L.J. (1951) Coefficient alpha and the internal structure of test, Psychometric, 16, pp. 297–300.
9. Guinn, R., Faber, J., 1989. "Compulsive buying appears too closely resemble other compulsive consumption behaviours in several ways", Journal of marketing Research vol, 23.
10. Hair JF, Anderson RE, Tatham RL, Black WC. Multivariate data analysis. 4th ed. Upper Saddle River (NJ): Prentice-Hall, 1995.
11. Jamieson, L., Bass, F., 1989. "Consumer as purpose seeking to fulfill certain goals through buying behaviour", Journal of Advertising Research, vol 25,
12. Keon, J., 1984. "Advertising images, brand images and two wheeler consumer preferences", Journal of Marketing research, vol. 52, pp.21-25.
13. Lallin, J., 1989, "Reference effects of price and promotion on brand choice behaviour," Journal of Marketing Research vol, XXVI.
14. Loudon, D., Della Bitta, A., 1984. "The buying behavior is the decision process and physical activity which the individuals engage in evaluating, acquiring, using or disposing of goods and services", Individual in Society, McGraw Hill, Book Company, p. 383.
15. Malhotra, N. K. (1993) Marketing Research: An Applied Orientation (Englewood Cliffs, NJ: Prentice Hall).
16. Nunnally, J.C. (1978) Psychometric Theory (New York: McGraw Hill).
17. Punj G, Stewart DW. Cluster analysis in marketing research: review and suggestions for application. J Mark Res 1983;134– 48 (May).

18. Wood, A., Wilson, E., 1985. "Effect of consumer awareness of brand advertising on preference", Journal of Advertising Research, vol 25, No.4.
19. Walters, 1974, "Organizational Behavior - Human Behavior at work", 9th edition New Delhi: Tata McGraw Hill.
20. Zeithaml, V.A., 1981. How Consumer Evaluation Processes Differ Between Goods and Services. InThe Marketing of Services (Donnolly, J. and George, W., Eds.). 186-190. Chicago: American Marketing Association.
21. Zikmund, W. G. (2000) Exploring Marketing Research, 7th edn (Orlando, USA: The Dryden Press).

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# DEMOGRAPHIC DYNAMICS OF ATTITUDE TOWARDS CELEBRITY ENDORSED TV COMMERCIALS: AN INDIAN CONTEXT

*** Indrani Majumder**

***Abstract***

***Today companies choose to utilize celebrities as endorsers in their marketing campaigns to survive and moreover to reach at excellence in competitive "shake-out". Celebrity endorsements span across different product categories like food and beverages, paints, appliances, readymade garments, hotels, banking services and so on. The celebrities used are most movie stars and sports persons. The purpose of this study is to gain a deeper understanding of demographic aspects behind a company's choice of celebrity endorsement as part of its promotional strategy while positioning its brand to a particular segment of whole consumer set. To properly achieve the purpose face to face to interviews with the customers in five towns of Nadia District of the State of West Bengal in India were conducted. The overall conclusions from this study are that the organizations should go for celebrity as endorser in TV ads with a clear demographic perspective of the target audiences. Obviously it brings the brand more media exposure than other forms of endorsements but subject to the considerations of the demographic characteristics of the prospects.***

***Key Words: image building, brand stewardship, aspirational reference group, public recognition, mindshare and market share.***

**********

## Introduction

In the world of advertisement '*Celebrity Endorsement*' has turn out to be an additional name. Today, the use of celebrity advertising for companies has become a trend and a perceived winning formula of corporate image building and product marketing. Almost every company, nowadays, is mooring in famous celebrities in order to generate new demand. Marketers now seek to adopt 360 degree brand stewardship. With this perspective a brand sees no limits on the number of contact points possible with a target consumer to position it with an objective of long term inflow. Advertising ideas, thus, revolve around this approach, and the celebrity endorsement decisions are made through these strategic motives.

Three of humankind's greatest inventions— cinema, radio, and television, have extended the scope of endorsement as an advertising technique. At the time period of 80s, the rationale behind using celebrities was to surpass others (Fox, 1984). Today, use of celebrities as part of marketing communications strategy is fairly common practice for major firms in supporting corporate or

brand imagery. Experts' opinion in this aspect is that celebrity's word-of-mouth helps to certify the brand's claim. It helps to position the product into the target market by extending his/her personality, popularity, status in the society or expertise in the field to the brand. Moreover the expert view is that it helps to increase the recall value of the brand if truly and sincerely designed. The health of a brand can definitely be improved up to some extent by celebrity endorsement if one can remember that endorsing a celebrity is a means to an end and not an end in itself.

A whole new celebrity endorsement opportunity has cropped in the backdrop of 'Shining India'. In India Hindustan Unilever Ltd has roped in Bollywood stars to endorse their beauty soap Lux since 1950s. Vimal, Thums-Up and Gwalior are some of the other brands that have used star appeal during their early days of mass advertising. British actress Lillie Langtry became the world's first celebrity endorser when was appeared on a package of Pears Soap in 1893 (Bergstrom & Sharfstad, 2004). In US 20 per cent of all TV commercials feature famous personalities and close to 10 per cent of television advertising budget in the US goes for celebrity endorsements.

Celebrity endorsement is about endorsing products with help from a celebrity. The obvious question that arise here-from is all about the consumers' association towards a celebrity endorsed product. Is really celebrity endorsement beneficial for the organization in long term perspective or it is just to play a game for once in the field is another question that subsequently arise. Is really it increases the purchase intention of the prospects? The question is that which factors guide the customers to make a decision regarding a good or a service when the organization is rendering the messages through different media by the word of mouth of big celebrities of time. The study will try to give a focus on these aspects on the basis of a very short sample study. It will try to make a link between the Celebrity Endorsement and the consumer perception and attitude towards the endorsement and ultimately the endorsed product. The study will try to explore whether celebrity endorsement help to build a positive belief and attitude towards the product?

**Connoisseurs' view of Celebrity Endorsement**

Giving a brand a 'face' is more than just a marketing strategy to increase sales or gain market share. A truly designed celebrity endorsed commercial can change the future of the brand forever (Blazey & Ganti, 2005) and as celebrities enjoy public recognition a company can bank on this while this face opens his/her mouth on behalf of the company produced consumer product by appearing with it in an advertisement (McCracken 1989). Specific image, high profile and familiarity of a celebrity endorser make the advertisement distinctive (Atkin and Block, 1983; Sherman, 1985). The use of celebrity spokespersons help advertisers to stand out from the crowd and get attention (Kaikati, 1987). Research has shown that in general celebrity endorsement

influences the feelings of the consumers and can also influence the attitude the consumers have towards the advertisement and towards the brands, which can increase the purchase intentions and, consequently, increase sales. Academic findings and company reports safely argue that celebrity endorsers are more effective than non-celebrity endorsers when it comes to generating intensions to purchase and actual sales (Erdogan, 1999). Jagdish and Wagner (1995) state that celebrities make advertisements believable and enhance message recall. One market research findings focused on the fact that *8 out of 10 TV* commercials scoring the *highest recall* are those *with celebrities' appearances* (Media, Nov. 14, 1997). Potential advantages of utilizing celebrity endorsers are that it can increase attention, polish the image of the brand, especially when a brand is going to be introduced in the market or a repositioning of a brand will take place (De Pelsmacker, 2004). Research has shown that the fame of celebrities create and maintain attention of the consumers and additionally also achieve high message recall (Ohanian, 1991; O'Mahony and Meenaghan, 1997).

Tom et al. (1992) found that created endorsers were more effective in creating a link to the product than celebrity endorsers. With non-celebrity endorsers, consumers were significantly more focused on the brand and its features, whereas with celebrity endorsers the subjects were significantly more concentrated on the celebrity in the advertisement. Moreover, companies have limited control over the celebrity's personality which can also result in high risk and "no gain" situations (e.g. the "scandals" surrounding celebrities like Michael Jackson, Kate Moss, Britney Spears, Paris Hilton). When negative information is spread about a celebrity, it influences not only the consumer's view of the celebrity, but also the endorsed product (Klebba and Unger, 1982). Moreover in the case of multiple endorsements, both in terms of a single brand hiring multiple celebrities and that of a single celebrity endorsing multiple brands, consumers do get confused about the brand endorsed. When a single celebrity endorses numerous brands, the recall then gets reduced and reduces the popularity of the brand. Not many people can remember all the brands that a celebrity endorses and the chances of losing brand recall increases if the celebrity endorses multiple brands (Taleja, 2005). De Pelsmacker's view in this regard is that, pre-testing and careful planning is very important and the life-cycle stage of the celebrity has also been taken into account (De Pelsmacker, 2004).

The theories like 'Source Credibility Theory', 'Source Attractiveness Theory' and 'Meaning Transfer Theory' provide a basis on which the methodology of celebrity endorsement works and also explains how the process of the celebrity endorsement influences the minds of the consumers:

**Source Credibility Theory** (by Tellis): This theory tells that acceptance of the ad message depends on 'Expertise' (perceived *ability* of the source to make valid assertions) and Trustworthiness' (perceived *willingness* of the source to make valid assertions) of the source.

**Source Attractiveness Theory** (based on social psychological research): the acceptance of the message depends on familiarity (audience's *knowledge of the source* through exposure), likeability (*the affection* for the source's physical appearance and behavior) and similarity (*resemblance* between source and receiver). This theory explains the message acceptance in two ways: Identification and Conditioning.

**Meaning Transfer Theory** (by Grant McCracken): The theory explains that a celebrity encodes a unique set of meanings which if well used can be transferred to the endorsed product. Such a transfer takes place in three stages:

I. ***Encoding Meanings***: Each celebrity has a unique set of meanings such as age, gender, race, wealth, personality or lifestyle. For example Preity Zinta can be seen as a lively, charming, bubbly, witty and enthusiastic.

II. ***Meaning Transfer***: This stage transfers those meanings to the product. When skillfully portrayed, celebrities can communicate this image more powerfully than lay endorsers.

III. ***Meaning Capture***: This assumes that consumers purchase products not merely for their functional value but also for their cultural and symbolic value.

The theory says that consumers buy the endorsed product with the intention of capturing some of the desirable meanings with which celebrities have passed on to the product. This is more eminent in lifestyle products like clothes, perfumes, cell phones etc.

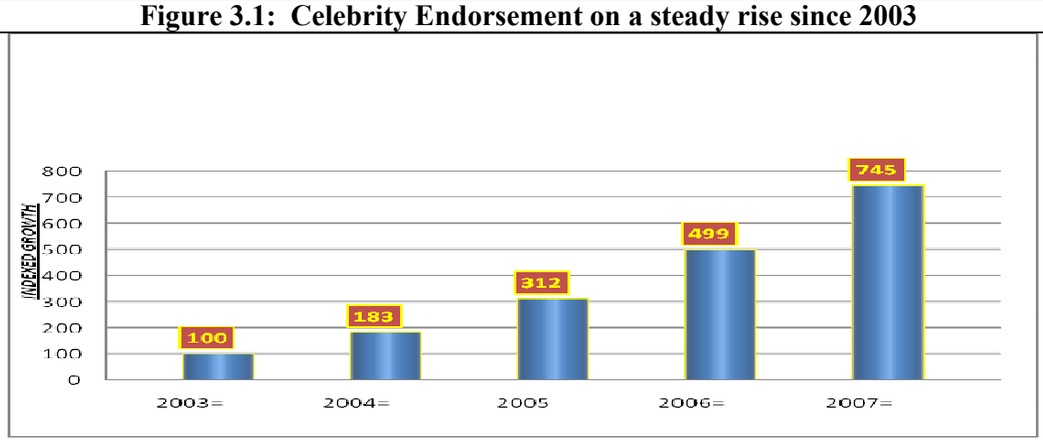
**Portrayal of recent time Celebrity Endorsement scenario for brands in India in TV commercials**

India is one country, which has always idolized the stars of the celluloid world. In the battle for mindshare and market share, companies in India have gone out of their way and hired celebrities to endorse their brands. Indian ad industry saw the swelling of a new trend in the latter part of the '80s. Hindi film and TV stars as well as sportspersons were roped in to endorse prominent brands. One of the first sports endorsements in India was when Farokh Engineer became the first Indian cricketer to model for Bryl cream. The Indian cricket team now earns roughly Rs. 100 crore through endorsements (Kulkarni & Gaulkar, 2005). Advertisements, featuring stars like Tabassum (Prestige pressure cookers), Jalal Agha (Pan Parag), Kapil Dev (Palmolive Shaving Cream) and Sunil Gavaskar (Dinesh Suitings) became common. When Palmolive used Kapil Dev in the '80s, his line 'Palmolive da jawaab nahin' became famous and it is remembered even today. Pataudi gave Gwalior suitings a strong competitive edge and pushed it to Number 2 in perceptions in the suitings market. Even Sridevi made Cema bulbs and tubes memorable by dancing in a bulb. Probably, the first advertisement to cash in on star power in a strategic, long-term, mission statement kind of way was Lux soap.

Around 130 television channels are broadcasting over 3 million television commercials each year in India. According to the report of AdEx India, a division of TAM Media Research, in the 1st quarter of the year 2008, 60% of all advertising dollars were spent on ads carrying celebrities. 49% growth was experienced in celebrity endorsement advertising volumes on TV during the year 2007 as compared to the previous year. There were in total 745 celebrity endorsements in 2007 as against 499 in 2006. Television ads with film stars or cricketers as models have notched up 60% more airtime in 2006 over the previous year, with 53 brands using cricketers and 191 film stars, according to a study by Adex India. The celebrity endorsement industry is worth Rs.550 crore (in the year 2008) and is growing at high double digit growth rate ranging between 60- 80%. Experts predict the growth rate to touch even triple digits, soon. A piece of research states that the target audience age group of 15-30 gets influenced first by cricketers, then Bollywood stars and only then music, festivals and food (Kulkarni, Gaulkar, 2005).

Following section is portraying a recent scenario of celebrity endorsement of commercials on TV in India as studied by AdEx India, a division of TAM Media Research. Their study finds that celebrity endorsement on TV has been on a growth curve. As already mentioned there has been 49 per cent growth in celebrity endorsement ad volumes on TV during 2007 compared to 2006 and in fact, it has grown six times in volume terms between 2003 and 2007 (Figure 3.1). It is of worth mentioning in this context that celebrities from the film industry accounted for 81 per cent share of the overall celebrity endorsed ad pie on TV during the year 2007 and 2008, while male actors accounting a greater share than the actress. Sports and TV personalities followed the film celebrities in the endorsements race (Figure 3.2).

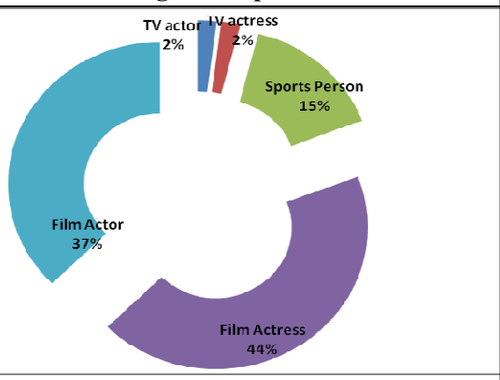
**Figure 3.1: Celebrity Endorsement on a steady rise since 2003**



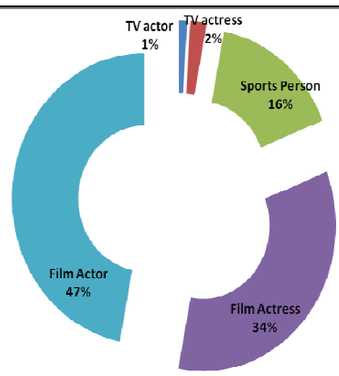

**Source:** The Hindu Business Line, Wednesday, Apr 09, 2008

**Fig 3.2: The distribution pattern of celebrity endorsers in TV AdShare of Celebrity Profession on TV**

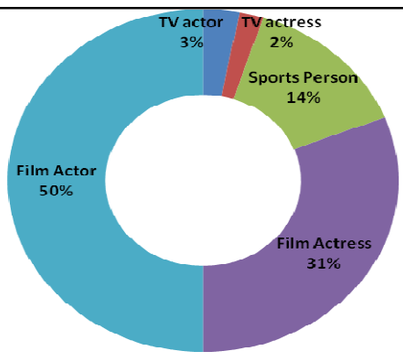
**during Jan-Sep 2009**



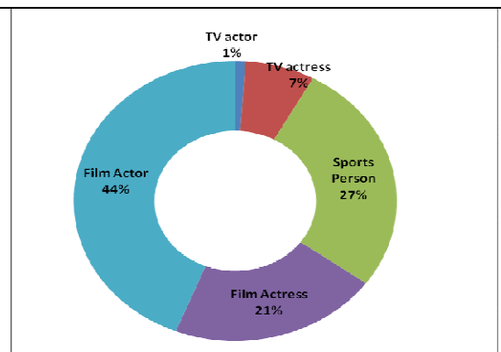

**during 2008**




**during 2007**



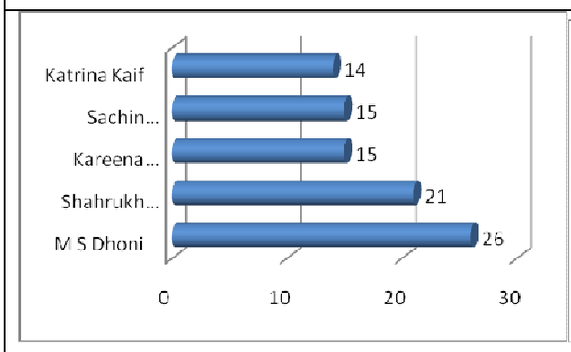

**during 2003**



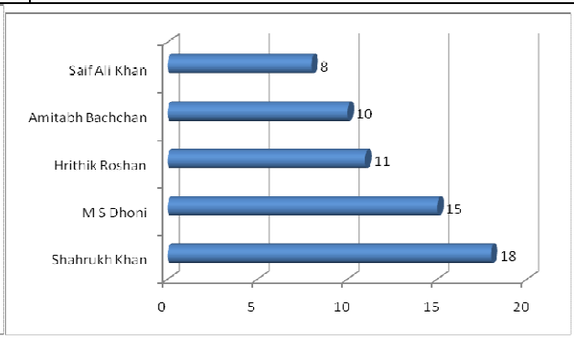

Source: AdEx India

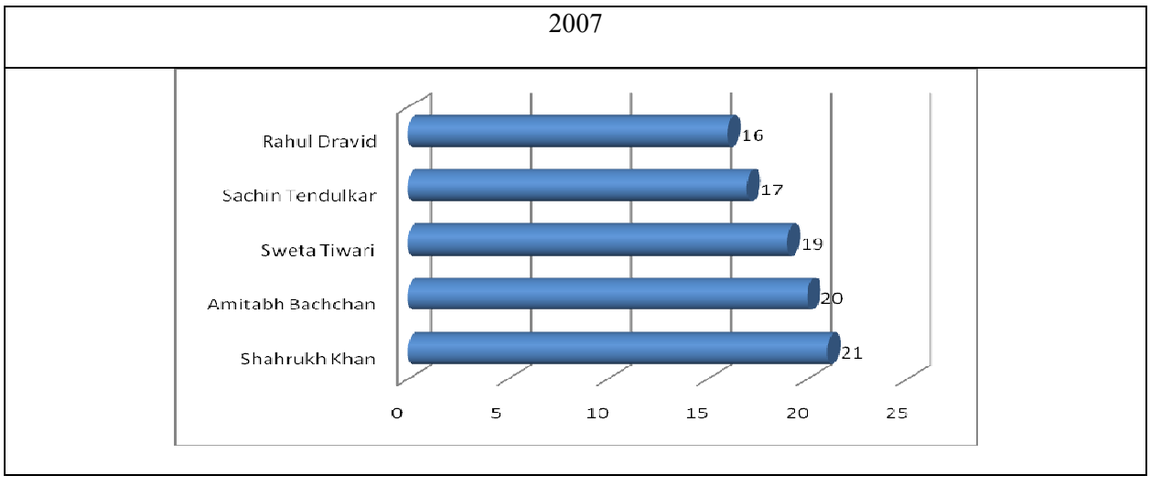
**Figure 3.3: Rank of Celebrities on the basis of no of endorsement**

**YEAR: 2009**




**YEAR: 2008**






The celebrity endorsed scenario of TV commercials revealed the fact that the FMCG producers mostly roped into the celebrities' fame, status, recognition, and image (Figure 3.3). In summer cool product category 'Pepsi Mycan' leads with maximum share of 33 per cent of overall advertising volumes of Celebrity endorsement on TV during January - April 2008 and 'Thums Up' and 'Coca Cola' followed the number one (Pepsi Mycan) with 19 per cent and 9 per cent share respectively during January - April 2008. 'Shahrukh Khan' led the Celebrity endorsement chart of Summer Cool categories on TV closely followed by 'Akshay Kumar' and 'Ranbir Kapoor' during January – April 2008 (Figure 3.4). In cellular phone service category R Madhavan has snatched the position. Figure 3.5 is showing the ranks of different products as per the costs on celebrity endorsed advertisements and figure 3.6 is the top brands endorsed by celebrities.

**Fig 3.4(a): Top five Summer Cool brands endorsed by the Celebrities during January - April 2008.**

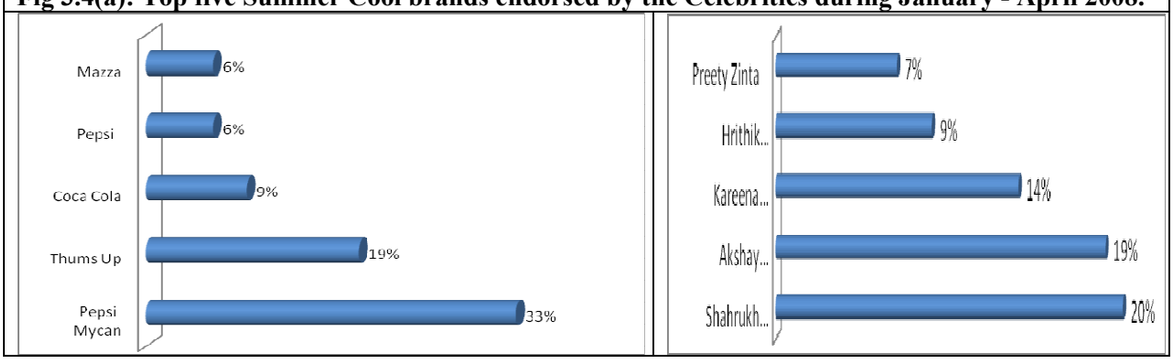
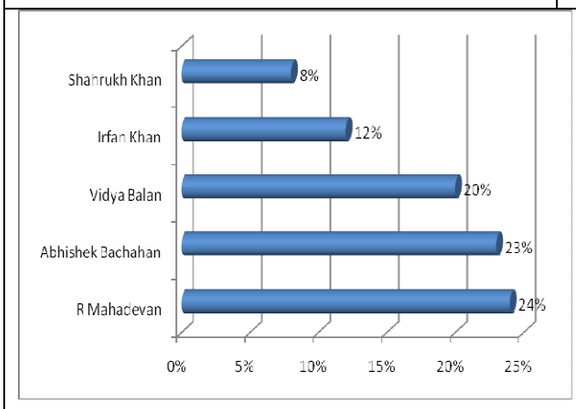


**Figure 3.4(b):**

**Celebrity Endorsing Cellular Phone Services on TV during Jan-May '08**




**Celebrity Endorsing Soap on TV during Jan-May '08**

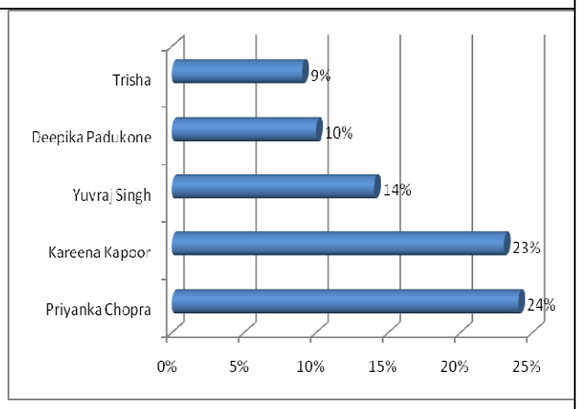



**Figure 3.5: top categories endorsed by the celebrities on TV**

| Top Categories | Rank in 2009 | Rank in 2008 |
|---|---|---|
| Cellular Phone Service | 1 | 1 |
| Shampoos | 2 | 4 |
| Toilet Soaps | 3 | 2 |
| Aerated Soft Drink | 4 | 3 |
| DTH Service Providers | 5 | 6 |
| Two Wheelers | 6 | 5 |
| Milk Beverages | 7 | 7 |
| Biscuits | 8 | 10 |
| Social Advertisements | 9 | 11 |
| Fairness Creams | 10 | 44 |

**Figure 3.6: Top brands endorsed by the Celebrities on TV**

| Rank | 2009 | H1 2008 |
|---|---|---|
| 1 | Clinic All Clear Tech Soft | Airtel Cellular Phone Service |
| 2 | Airtel Cellular Phone Service | Pepsi |
| 3 | Airtel Digital TV | Idea Cellular |
| 4 | Idea Cellular | Dish TV |
| 5 | Lux Toilet Soap | Thums Up |
| 6 | Boost | Boost |
| 7 | Lux Peach Cream | Bharat Petroleum Speed |
| 8 | BSNL-Corporate | Parachute After Shower Wet Look |
| 9 | Coca Cola | aywards 5000 soda |
| 10 | Dish TV | Lays Fight For Your Flavour |

In the Indian context, numerous examples can be uttered to establish the hypothesis that celebrity endorsements can beautify the overall brand. A standard example is Coke, which, till recently, didn't use stars at all internationally. In fact, India was a first for them. The result was a ubiquitously appealing Aamir cheekily stating *Thanda matlab Coca Cola*. Study reveals that the recall value for Nakshatra advertising is only due to the sensuous Aishwarya. The Parker pen brand used Amitabh Bachchan to revitalize the brand in India. According to Pooja Jain, Director, Luxor Writing Instruments Ltd (LWIL), post Bachchan, Parker's sales have increased by about 30 per cent. Star power in India can be gauged by the successful endorsement done by Sharukh for three honchos- Pepsi, Clinic All Clear and Santro. Irfan Pathan endorsing Hero Cycles has gained the brand immense recall and embarked through the positive association between the consumer and the brand. Richard Gere's endorsement for VISA in India has gained acclaim. Compatible celebrity product match in which celebrity brand attributes get transferred to the brand and increases the brand equity is of Mallaika Arora & Freshizza from Pizza Hut, Govinda & Navratan Tel, Sanjay Dutt & Elf Oil, Sunny Deol & Lux Undergarments, Aishwarya Rai & Nakshatra, etc.

Celebrity branding is all about the transfer of the value from the person to the product he endorses or stands for. Tabu endorsing Tetra Packed Milk, Shabana Azmi campaigning for AIDS Awareness, Amitabh Bachchan & Shahrukh Khan campaigning for Pulse Polio or Aishwarya Rai appearing in the Donate Eyes campaign are the examples, which reflect the transfer of celebrity values to the brand, creating an impact that generates recall.

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**Objective of the study**

There is a myth that celebrity endorsement is used to give a brand advantage over its competitors. Research has shown that the use of celebrities in advertisements can have a positive influence on the credibility, message recall, memory and likeability of the advertisements and finally on purchase intentions (Menon, 2001; Pornpitakpan, 2003; Pringle and Binet, 2005; Roy, 2006). The company makes use of the celebrity's characteristics and qualities to establish an analogy with the products specialties with an aim to position them in the minds of the target consumers. But the opposite view also exist that there is a risk that the celebrity and/or his/her unexpected behavior overshadows the product and this suggests that the use of anonymous models or even no celebrity is still an option that should be investigated seriously. The review of the literature has also shown that the match between the brand and or product and the celebrity has to be optimal. When a brand and/or product is endorsed by a celebrity endorser, the

perceived celebrity image and the perceived brand image will interact with each other and images will be transferred from the endorsed brand to the celebrity endorser and vice versa. MG Parmeswaran, executive director of FCB Ulka, says "As advertising professionals, we recommend celebrity endorsements when the case is justified. There are many cases where the companies need to use the celebrity to break out of a category clutter. At times, celebrity endorsement is used to build credibility to the brand offer. In this light the objective of my study will be give a focus on the following issues:

- To what extent the effect of celebrity endorsement vary across different product categories?
- Is the liking of celebrity endorsement demography (e.g. gender, age, occupation) specific?
- Most desirable characteristics of celebrity endorser.

**Methodology**

**Data Collection:**

The study is based on the primary data collected by interviewing the sample buyers personally. A detailed questionnaire embracing the objectives laid down was designed and canvassed to the sample.

In order to judge the role of celebrity endorsed advertisement in the decision making process of the consumers, products like refrigerator, TV, two wheeler, 4 wheeler, washing-machine and like was chosen from durable category and hair-oil, tooth-paste, cold drinks, health drinks, dress material, jewelries etc from FMCG category was considered and from service category banking insurance, cell-phone services were chosen.

To study the message recalling scenario of the celebrity endorsed advertisements the name of the following 15 celebrity endorsers has been mentioned:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Saif Ali Khan | Amitabh Bachchan | Shahrukh Khan | Sachin Tendulkar | Aamir Khan | Salman Khan | Aishwarya Rai | Kareena Kapoor |
| Hrithik Roshan | Juhi Chawla | Katrina Kaif | Akshay Kumar | Mahendra Singh Dhoni | Sonali Bendre | Preity Zinta | |

A set of 10 statements that were being used to judge the negativity or the positivity of the attitude of the consumers towards the celebrity endorsed advertisement are as follows:

| | |
|---|---|
| 1. | Celebrity can communicate benefit of the product clearly. |
| 2. | Celebrity endorsed (CE) ads are more attractive than others. |
| 3. | CE ads reflect the status of the brand. |
| 4. | CE ads do not interfere too much with enjoying TV programme that the others do. |
| 5. | Celebrities do not use the endorsed products. |
| 6. | It distracts the attention from the brand. |

| | |
|---|---|
| 7. | Celebrities don't use to convey their own opinion rather they are being purchased to say positively. |
| 8. | The commercials do not convince me to buy the products |
| 9. | I'm tired of celebrity endorsed ads. |
| 10. | The commercials are much more attractive. |

A 7-point Likert-summated scale, the range of which is stated in the following table, has been used to rate the abovementioned statements related to the measurement of attitude towards celebrity endorsed advertisements:

| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|---|---|---|---|---|---|---|
| **STRONGLY DISAGREE** | **DISAGREE** | **SOMEWHAT DISAGREE** | **NEITHER AGREE NOR DISAGREE** | **SOMEWHAT AGREE** | **AGREE** | **STRONGLY AGREE** |

In order to avoid the complexity of the signs the positive nos. from 1 to 7 has been selected where 4 is the neutral point.

Another 7-point scale is used to determine the role of the celebrity endorsed ads in decision making process (at any stage from need recognition to brand selection). The detail of the scale is as follows:

| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|---|---|---|---|---|---|---|
| **total negative role** | **negative role** | **Somewhat negative role** | **Neither negative role nor positive role** | **Somewhat positive role** | **positive role** | **total positive role** |

Thurstone Case V scaling model has been used in order to find out the most important celebrity endorser attribute.

**Area of study:**

To accomplish the objective of the study the survey was conducted in five towns of Nadia district of the state of West Bengal.

**Sample Size:**

The size of the sample in each town was 40 that constituted 200 respondents in total from all towns. The selection of the sample respondent in each and every area was little bit purposive so that they can represent each income, occupation group and belong to different age categories.

**Tools for Analysis:**

Chi-square analysis was used to study the significance of the demographic factors like age, income class, occupation and gender on attitude towards celebrity endorsement commercials on TV commercials. Correlation coefficient has been computed to reveal the degree of association of age factor, gender and the other demographic factors as mentioned with attitude towards celebrity endorsed TV ads.

**Hypotheses:**

The following is the replication hypothesis based on Connoisseurs' views that were tested on the basis of collected data:

| | | |
|---|---|---|
| 1st Null Hypothesis | : | H10 = attitude towards celebrity endorsed ads are sex independent. |
| 2nd Null Hypothesis | : | H20 = attitude towards celebrity endorsed ads are age independent. |
| 3rd Null Hypothesis | : | H30 = attitude towards celebrity endorsed ads are income class independent. |

These entire null hypotheses were being tested against the following corresponding alternative hypothesis:

| | | |
|---|---|---|
| 1stAlternative Hypothesis | : | H11 = attitude towards celebrity endorsed ads are sex dependent. |
| 2nd Alternative Hypothesis | : | H21 = attitude towards celebrity endorsed ads are age dependent. |
| 3rd Alternative Hypothesis | : | H31 = attitude towards celebrity endorsed ads are income class dependent. |

**Findings & Analysis**

Table 6. A: Respondent's Demographic Profile

| • Age distribution of the respondents | | | | | • Income wise distribution of the respondents | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Frequency | Male | Female | % | Per-capita* Income Level (in '000 Rs) | Frequency | Male | Female | % |
| below 20 | 24 | 8 | 16 | 12 | < 1 | 8 | 8 | 0 | 4 |
| 20-30 | 136 | 76 | 60 | 68 | 1-3 | 128 | 70 | 58 | 64 |
| 30-40 | 20 | 12 | 8 | 10 | 3-5 | 28 | 12 | 16 | 14 |
| Above 40 | 20 | 16 | 4 | 10 | 5-10 | 36 | 20 | 16 | 18 |
| | | | | | >10 | 8 | 8 | 0 | 4 |
| TOTAL | 200 | 112 | 88 | 100 | TOTAL | 200 | 112 | 88 | 100 |

*note: per capita income=HH income/no. of family members. The objective behind taking this per-capita income was to consider the income status orientation of the financially dependent respondents.

• Occupational Status Of The Respondents

| CATEGORY | Frequency | M | F | Percent (%) |
|---|---|---|---|---|
| Unemployed | 132 | 52 | 80 | 66 |
| Blue-collar Employee | 12 | 8 | 4 | 6 |
| White-collar Employee | 32 | 28 | 4 | 16 |
| Business person | 24 | 24 | 0 | 12 |
| Total | 200 | 112 | 88 | 100 |

The recall scenario of the celebrity endorsed ads were such that only 16 respondents out of total 200 could not tell about a single ad endorsed by the celebrities that was being selected. A weight '1' was given to the right commemoration of the advertisement endorsed by the abovementioned celebrities. If one can remember 2 or 3 or more ad endorsed by that particular celebrity then the weightage corresponding to that respondent and corresponding to that celebrity was given. i.e. if one can remember 5 ads endorsed by Amitabh Bacchan then it was counted as 5. The average was estimated just by dividing such summed up numerical by 15 (the no. of celebrities). The ultimate result that was got is that the 'Correlation-Coefficient' between age and average recall scenario, as computed, is (-0.230340054), where average recall scenario is nothing but the summation of the score of the commemoration divided by 15 (the no. of celebrities selected). The negative symbol is an indication of the fact that the persons at a lower age are fond of this kind of ads and vice versa. Another interesting result revealed the fact that commemoration and income is positively related and the 'Correlation-Coefficient' between income & average recall rate is (+0.06582), though the degree is not so high.

**Hypothesis Testing:**

1) Influencing role of SEX to attitude towards Celebrity endorsed ad:

H10 = attitude towards celebrity endorsed ads are sex independent.

H11 = attitude towards celebrity endorsed ads are sex dependent.

Data table B1 is revealing the sex based attitude scenario of celebrity endorsed TV ads.

Table B1: Observed frequencies of SEX BASED Attitude towards celebrity endorsed TV commercials

| SEX | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | Freq. of neutral attitude to CE | ROW SUM | % of positive attitude |
|---|---|---|---|---|---|
| M | 64 | 40 | 8 | 112 | 57 |
| F | 36 | 48 | 4 | 88 | 41 |
| COL. SUM | 100 | 88 | 12 | 200 | |
| % | 50% | 44% | 6% | 100% | |

Table B2: Expected frequencies

| SEX | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | Freq. of neutral attitude to CE |
|---|---|---|---|
| M | 56 | 49.28 | 6.72 |
| F | 44 | 38.72 | 5.28 |

ESTIMATED $\chi 2$ =7.124
d. f.= (Row-1)(Column-1)= 2

Table $\chi 2$ (at 95% level of significance) = 5.99

The Chi-square analysis to the above dataset is rejecting the null-hypothesis and divulging the fact that there is a significant difference between the attitude of male and female customers towards the celebrity endorsed TV advertisements. The percentage analysis is depicting the picture that males are much more inclined towards celebrity endorsed ads.

2) Influencing role of AGE to attitude towards Celebrity endorsed ad:

H20 = attitude towards celebrity endorsed ads are age independent.

H21 = attitude towards celebrity endorsed ads are age dependent.

Table C1: Observed frequencies of AGE BASED Attitude towards celebrity endorsed TV commercials

| AGE | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | Freq. of neutral attitude to CE | ROW SUM |
|---|---|---|---|---|
| below 20 | 16 | 4 | 4 | 24 |
| 20-30 | 60 | 72 | 4 | 136 |
| 30-40 | 12 | 8 | 0 | 20 |
| 40 above | 8 | 12 | 0 | 20 |
| Column Sum | 96 | 96 | 8 | 200 |

Table C2: Expected frequencies

| AGE | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | Freq. of neutral attitude to CE |
|---|---|---|---|
| below 20 | 11.52 | 11.52 | 0.96 |
| 20-30 | 65.28 | 65.28 | 5.44 |
| 30-40 | 9.6 | 9.6 | 0.8 |
| 40 above | 9.6 | 9.6 | 0.8 |

ESTIMATED $\chi 2 = 21.1$

d. f. = (Row-1)(Column-1) = 6; Table $\chi 2$ (at 99% level of significance) = 16.81

The outcome of the above chi-square analysis is the rejection of null-hypothesis and obviously acceptance of alternative hypothesis. So age factor plays a significant role in developing attitude towards celebrity endorsed ads. And correlation-coefficient figure is revealing a negative relationship and the degree is as follows:

Correl (age, attitude) = - (0.114657354),

So we can conclude here-from that aged persons are not so prone towards these types of advertisements.

3) Influencing role of INCOME-CLASS to attitude towards Celebrity endorsed ad:

H30 = attitude towards celebrity endorsed ads are income class independent.

H31 = attitude towards celebrity endorsed ads are income class dependent.

Table D1: Observed frequencies of INCOME-CLASS BASED Attitude towards celebrity endorsed TV commercials

| Income class (,000) | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | Freq. of neutral attitude to CE | ROW SUM |
|---|---|---|---|---|
| < 1 | 0 | 4 | 4 | 8 |
| 1-3 | 64 | 52 | 8 | 124 |
| 3-5 | 12 | 16 | 0 | 28 |
| 5-10 | 20 | 16 | 0 | 36 |
| >10 | 0 | 4 | 0 | 4 |
| COL. SUM | 96 | 92 | 12 | 200 |

Table D2: Expected frequencies

| Income class (,000) | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | Freq. of neutral attitude to CE |
|---|---|---|---|
| < 1 | 3.84 | 3.68 | 0.48 |
| 1-3 | 59.52 | 57.04 | 7.44 |
| 3-5 | 13.44 | 12.88 | 1.68 |
| 5-10 | 17.28 | 16.56 | 2.16 |
| >10 | 1.92 | 1.84 | 0.24 |

ESTIMATED $\chi 2 = 40.399$
d. f.= (Row-1)(Column-1)= 8
Table $\chi 2$ (at 99% level of significance) = 20.09

So the data set is rejecting the null hypothesis and at the same time establishing the alternative hypothesis as the fact. Thus income class is a significant guidance to develop an attitude towards celebrity endorsed TV commercials. And exactly there exists a negative relationship among these two, though the degree is not so high:

Correl (Income, CE attitude) = - (0.11568531)

4) Influencing role of OCCUPATIONAL CATEGORY to attitude towards Celebrity endorsed ad:

Table E1: Observed frequencies of OCCUPATION based Attitude towards celebrity endorsed TV commercials

| Occupation category | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | neutral | ROW SUM |
|---|---|---|---|---|
| unemployed | 68 | 56 | 8 | 132 |
| blue collar | 4 | 8 | 0 | 12 |
| white collar | 12 | 20 | 0 | 32 |
| business person | 16 | 4 | 4 | 24 |
| COL. SUM | 100 | 88 | 12 | 200 |

Table E2: Expected frequencies

| Occupation category | Freq. of +ve attitude to CE | Freq. of -ve attitude to CE | neutral |
|---|---|---|---|
| unemployed | 66 | 58.08 | 7.92 |
| blue collar | 6 | 5.28 | 0.72 |
| white collar | 16 | 14.08 | 1.92 |
| business person | 12 | 10.56 | 1.44 |

ESTIMATED $\chi 2 = 18.29247$
d. f.= (Row-1)(Column-1)= 6
Table $\chi 2$ (at 99% level of significance) = 16.81

The above chi square result is rejecting the null hypothesis and makes the alternative hypothesis established. And Table E3 is revealing another scenario that the positiveness of the attitude towards the kind of advertisements is more in unemployed and business persons. The reason may

be the fact of the comparatively plenty time for entertainment and conversely the busy schedule of the employees.

| Table E3 : % of positive attitude of different occupational category | | | |
|---|---|---|---|
| unemployed | blue collar | white collar | business person |
| 51.5152 | 33.3333 | 37.5 | 66.6667 |

Role of Celebrity Endorsed AD in any state of Decision Making Process

(Using 7-point scale that ranges from 1 to 7, as stated earlier):

The mean scores (on a 7-point scale) for different product category are as follows:

| Table F: Mean Score of role of CE ads in decision making process | | | | |
|---|---|---|---|---|
| | DURABLE | FMCG | SERVICE | AVERAGE (for all product category) |
| Mean Score | 4.32093 | 4.763566 | 4.658915 | 4.581137 |
| Rounded figures | 4.00 | 5 | 5 | 5 |

The above table is depicting the picture that though in the case of FMCG products and services this kind of ads have a positive role, in the case of durable commodities the picture is neutral. And the extent of positive role in the case of FMCG and services is not so greater. But overall scenario is a positive one. Somewhat these ads play a role in the decision making, either in the case of need recognition or in the case of brand selection. Likewise the other non-celebrity endorsed ads they sometimes make the customers aware about the availability and so on.

**Celebrity endorser's attributes behind the success of the ads:**

The dataset of Table G1 is being used to determine the preferred celebrity endorsers attributes – viz. Physical Attractiveness (PA), Trustworthiness (T), Similarity (S), Respect (R) and Expertise (E). The numbers in each cell is depicting the number of respondents preferring the column attributes than the row attributes.

Table G1: Observed frequencies of respondents preferring row attributes than column attributes

← Preferred Attributes →

| | PA | T | R | S | E |
|---|---|---|---|---|---|
| PA | 0 | 115 | 68 | 89 | 115 |
| T | 85 | 0 | 68 | 119 | 102 |
| R | 132 | 132 | 0 | 72 | 128 |
| S | 111 | 81 | 128 | 0 | 128 |
| E | 85 | 98 | 72 | 72 | 0 |

Table G2: Observed proportions of respondents preferring row attributes than column attributes

← Preferred Attributes →

| | PA | T | R | S | E |
|---|---|---|---|---|---|
| PA | 0 | 0.574468 | 0.340426 | 0.446808 | 0.574468 |
| T | 0.425532 | 0 | 0.340426 | 0.595745 | 0.510638 |
| R | 0.659574 | 0.659574 | 0 | 0.361702 | 0.638298 |
| S | 0.553192 | 0.404255 | 0.638298 | 0 | 0.638298 |
| E | 0.425532 | 0.489362 | 0.361702 | 0.361702 | 0 |

| Z values related to preference proportion | | | | | |
|---|---|---|---|---|---|
| | PA | T | R | S | E |
| PA | 0 | 0.19 | -0.41 | -0.23 | 0.19 |
| T | -0.19 | 0 | -0.41 | 0.24 | 0.03 |
| R | 0.41 | 0.41 | 0 | -0.34 | 0.35 |
| S | 0.23 | -0.24 | 0.34 | 0 | 0.35 |
| E | -0.19 | -0.03 | -0.35 | -0.35 | 0 |
| Column Sum | 0.26 | 0.33 | -0.83 | -0.68 | 0.92 |
| MEAN | 0.052 | 0.066 | -0.166 | -0.136 | 0.184 |
| RANK | 0.218 | 0.232 | 0.00 | 0.006 | 0.35 |

So the attribute preference pattern of celebrity endorser for the sample is as follows:

$$E > T > PA > S > R$$

That is the respondents' attitude towards celebrity endorsed ads is first of all guided by the expertise of the celebrities, then trustworthiness. Physical attractiveness is the third important factor of this attitude development.

**Conclusion:**

Companies frequently use celebrity as spokespersons to deliver their ad message and to persuade and to convince consumers of their brands. A billion of dollars spent per year on celebrity endorsement. This research result suggests tentatively that the use of celebrity endorsers in TV commercials could be effective in influencing attitudes and purchase intentions. But the success of the use of celebrity endorsers varies across different products. And more significantly the success of the use of the celebrity endorsers in the commercials depends on the fact that for which demographic segment the ad was meant—is it meant for the males or else; is it for the teenagers; is it for the white collar workers; is it for the housewives or for the students, i.e. for the financially dependents; or it is for the business personnel, for the reason that demography make a significant difference of the psyche of the consumers. So the marketers should go thoroughly about the psyche of the different demographic segment before finalizing the strategies with a long term perspective. Then only the marketing organizations can become able to satisfy their esteem need; fame, prestige in the consumers' society can be gained. And this is the only way to reach at the top of Self-actualization Mountain—the ultimate destination of individual human being as an organization of different activities, the ultimate destination of a group of individuals with a rational perspective.

## References:


1. C Atkin & M Block (1983), "Effectiveness of Celebrity Endorsers", Journal of Advertising Research, Feb/Mar, Vol. 23 (1), 57-61.
2. G E Belch & M A Belch (2001), "Advertising and Promotion: An integrated marketing c communications perspective", 5th ed. New York: McGraw-Hill. ISBN 0-07-231445-1.
3. Christian Bergstrom & Rikard Skarfstad (2004), "Celebrity Endorsement, Social Science and Business Administration Programmes", Dept. of Busi Admn and Social Sciences, Division of Industrial Marketing and e-Commerce, Lulea University of technology, 2004:193 SHU.ISSN: 1404_5508/ISRN:KTU_SHU—04/193—SE
4. Naveen Blazey & Shashi Kanth Ganti (2005), "Impact of Celebrity Endorsement on Overall Brand", Marketing @ Knowledge Zone.
5. Kristin Blondé and Irene Roozen (2007), "An Explorative Study of Testing the Effectiveness of Product Placement compared to 30-second TV-Commercials" for the 6th International Marketing Trends Congress, Paris 26-27 January 2007.
6. P De Pelsmacker, M. Geuens and J. Van den Bergh (2004), "Marketing Communications, A European Perspective", second edition, Prentice Hall.
7. B Z Erdogan (1999), "Celebrity endorsement: A literature review". Journal Marketing Management, 15 (4), 291-315.
8. Jagdish, A., & Wagner, K.A. (1995). The Economic Worth of Celebrity Endorsers: An event study analysis, Jolurnal of marketing, 56(3), 56-62. ISSN 0022-2429.
9. Jack G Kaikati (1987), "Celebrity Advertising: A Review and Synthesis," International Journal of advertising, 6, 93.
10. Sanyukta A Kulkarni & Sahir U Gaulkar ( 2005), "Impact of Celebrity Endorsements on Overall Brand" , Marketing@Knowledge Zone
    http://www.indianmba.com/Occasional_Papers/OP88/op88.html
11. J M Klebba & L S Unger (1982), "The Impact of Negative and Positive Information on Source Credibility in a Field Settijng" Advances in Consumer Research, 10(1), 45-48.
12. Rajesh S Lalwani, "India media news marketing India advertising Indian brands TV media newspapers", http://www.exchange4media.com/Viewpoint/viewpoint.asp?view_id=40
13. L K Marhue. & I Mathur (1997), "The wealth effects associated with a celebrity endorser. The Michael Jordan phenomenon", Journal of advertising research, 37(3), 67-73.
14. G McCracken (1989), "Who is the Celebrity Endorser? Cultural foundations of the Endorsement process", Journal of Consumer Research, 16(12), 310-321.
15. Grant McCracken (1989), "Who is the Celebrity Endorser?" Journal of Consumer Research, 16 (December), 310-321.
16. Ablihasha Mehta (1994), "How Advertising Response Modelling (ARM) Can Increase Ad Effectiveness" , Journal of Advertising Research, 34, no. 3, pp. 62-74.
    Menon, K. (2001), Celebrity Advertising: An Assessment of Its Relative Effectiveness.
17. R Ohanian (1991), "The Impact of Celebrity Spokespersons' Perceived Image on Consumers' Intention to Purchase". Journal of Advertising Research. February/March (1991): 46-54.
18. Sheetal Patel (2008), "Of celebrity branding, brand marketers, and India", Monday - Sep 15, 2008 Televisionpoint.com
19. H Pringle & L Binet (2005), "How marketers can use celebrities to sell more effectively" Journal of Consumer Behaviour, Mar2005, Vol. 4 Issue 3, p201-214.
20. C Pornpitakpan (2003), "The Effect of Celebrity Endorsers' Perceived Credibility on Product PurchaseIntention: The Case of Singaporeans" , Journal of International Consumer Marketing, 2003, Vol. 16 Issue 2, p55-74
21. S Roy (2006), "An exploratory study in celebrity Endorsements. Journal of creative communications 1:2 (2006) Sage Publications New Delhi.
22. Leon G Schiffman & Leslie Lazar Kanuk (2004), Consumer Behaviour, Prentice-HBall of India Private Limited, New Delhi.
23. Stratford P Sherman (1985), "When You Wish upon a Star", Fortune Vol. 112.
24. T A Shimp(2000), "Advertising, promotion: Supplemental aspects of integrated marketing communication", 5th ed. Forth worth, Tex.: Dryden. ISBN 0-03-021113-1
25. Neha Taleja (2005), " Impact of Celebrity Endorsements on Overall Brand", Marketing @ Knowledge Zone, http://www.coolavenues.com/know/mktg/neha_taleja1.php
26. Tellis, Effective Advertising: Understanding When, How, and Why Advertising works
27. Tom Gail, Clark Rebecca, Elmer Laura, Grech Edward, Masetti Joseph and Sandhar, Harmona (1992), "The Use of Created versus Celebrity Spokesperson in Advertisement", The Journal of Consumer Research, 20, no; 4 pp. 535-547.

29. "Celebrity endorsement ads on TV up 49% during 2007", *Bureau, The Hindu Business Line,* Business Daily from THE HINDU group of publications, Wednesday, Apr 09, 2008, http://www.blonnet.com/2008/04/09/stories/2008040950750500.htm

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# FIGHTING CORRUPTION IN SINGAPORE WITH PARTICULAR REFERENCE TO THE ROLE OF LEADERS

*** Dr. Sam Choon Yin**

***Abstract:***

***A key factor that defines the dynamic capabilities of Singapore is effective leadership. Singapore leaders' intolerance for improper practices has led to a direct fight against corruption. This entails increasing the probability of catching the offenders and raising the penalty cost incurred by corrupt individuals. This paper describes and analyzes Singapore's experience in curbing corruption, with particular reference to the role of leaders. It is well known that public and private sector corporations are susceptible to the agency problem. Hence, the lessons drawn from Singapore's experience are applicable not only to national leaders but corporate leaders in the private sector as well.***

***Keywords: Corruption, Singapore and Effective Leadership***

**********

## Introduction:

Since the Asian financial crisis of 1997-98, a great deal of attention has been placed on microeconomic reforms, particularly in the area of corporate governance and principal-agent relationship. There were indeed many cases of questionable corporate behaviour before and during the Asian financial crisis. For example, Hyundai raised US$1 billion to bail out the Halla Group when the latter collapsed in Korea in 1997. Shareholders were not pleased with this arrangement which could be attributed to the fact that the founder of the Halla Group was the younger brother of Hyundai's head. In Thailand, two senior managers of the Bangkok Bank of Commerce lent funds to themselves and senior politicians when the bank was already in financial trouble. Thailand's central bank had to spend large amount of public money to bail out the institution rather than letting it collapse with bad debt amounting to US$3 billion. These examples illustrate how weak leadership and corporate governance could lead to questionable transactions and the abuse of minority shareholders' rights.

This paper argues that it is important in both private and public corporations to appoint clean core leaders who are able to set the climate of honesty and integrity for the rests to follow. A key feature of clean leaders is that they concentrate on the larger picture and long-term sustainability of the entity in-charge as opposed to succumbing to shorter term benefits. Good governance in the public and private sectors happens because the leaders choose it as a policy and make it a priority.

The paper begins by reviewing the consequences of corruption. The section shows that corruption is equally susceptible in the private and public sector. The paper proceeds to consider the case of Singapore. Singapore offers a case study that is worth exploring because it depicts one of the few success stories in which corruption problem has been mitigated. Nobody has ever said that combating corruption is easy, which makes it even more important to study and learn from the success stories. While there are many reasons that have contributed to explaining low corruption in the city state, the role of effective leadership is certainly a key factor. As Bertrand de Speville (2010, p. 4), the former Commissioner of the Independent Commission Against Corruption in Hong Kong wrote, "Lee Kuan Yew's (the first Prime Minister of Singapore) personal intolerance of corruption galvanized the people of Singapore. The Corrupt Practices Investigation Bureau was placed under his direct control and before long was making a marked impact". Interestingly, the role of leadership has not received much attention in the literature. This is surprising since effective leadership provides the key to defining the dynamic capabilities of the nation. This paper aims to fill this gap in the literature by examining the manner in which leaders are selected in Singapore. Lessons are drawn that could be applicable to private and public corporations as means to mitigate the corruption problem.

**Corruption: A Brief Review**

Corruption can be interpreted in terms of the agency problem. Known as the necessary evils of the 'efficient form of economic organization', the agency problem arises because of conflicts of interest between agents (managers in private and public sector corporations) and principals (shareholders in the private sector and the citizens of the country in the public sector). The former may be more interested in expropriating funds and maximizing self interest rather than the interest of the principals. Within the context of the private sector, this problem was first observed by Berle and Means (1932) and further extended in an often-quoted paper by Jensen and Meckling (1976).

The agency problem can therefore be observed within the public sector. For example, it can involve the citizens (principals) and governing elites (agents) or the citizens (principals) and bureaucrats (agents). In an ideal world, public office holders would have a genuine interest in serving the public including the old and poor. In such an ideal setting, minimal incentives are required to motivate public office holders. In reality, at least some public office holders consider politics as a career to earn their living. After all, significant time and capital is invested to get elected and once elected they may try to find whatever means they could to reap profit through corruption. Since it not easy, if not impossible, for principals to identify in advance the agents that could be susceptible to the agency problem, public sector corporations generally rely on material incentives and impose monitoring mechanisms to better align the interest of the principals and agents.

The Public Choice School led by James Buchanan, Gordon Tullock and William Niskanen recognizes the agency problem in the public sector. In their seminal works Buchanan and Tullock (1962) and Niskanen (1971, 1991) described politicians as self-interested individuals just like anyone else who may be interested in maximizing their personal interest rather than that of the public which they supposedly represent. The problem is worsened, as citizens are generally not very willing to monitor public sector managers. The reason is that the citizens perceive their voices to be unimportant in initiating any changes thus undermining their interest to seek costly information and internalize part of the government failures.

A result of the agency problem is corruption which we would define as decisions by agents to maximize their personal interest and at the expense of the principals. Since the agency problem is common in both the public and private sectors, corruption can exist in both sectors. For example, professional managers in private sector organizations may expropriate company funds to travel excessively and furnish their offices with unnecessary electronic gadgets instead of returning any excess cash to the shareholders. They may hire someone or offer contracts to one closer to them without going through formal or proper procedures. In banks, managers may offer loans to a friend or relative without proper checks on credit worthiness thus subjecting the bank to unwanted but minimisable risk. With respect to procurement, it is possible for a manager to purchase materials at a higher price because he/she has received bribes from the seller. These problems are as likely to occur as in public sector organizations. However, proving that corruption has taken place in the private sector requires more work. For example, while receiving additional monetary benefit is outright wrong in the case of the public official, receiving commission may be a normal part of the employee's compensation in the private sector. Agencies dealing with corruption in the country would therefore require proof that the employer did not approve of the additional material benefit.

What are the consequences of corruption to a society? Susan Rose-Ackerman (1997), a professor at Yale Law School, lists six consequences. First, it is possible that corruption leads to inefficient allocation of resources For example, government contracts and privatized firms may be offered to bidders who can afford to bribe government officers. The problem worsens if the successful bidders are unscrupulous leading to deterioration in the social welfare. The World Bank, a leading lending institution, recognizes this point. In the World Bank-International Monetary Fund Board of Governors Annual Meetings held in Singapore in September 2006, the institution sees the importance of curbing corruption as a means for more effective use of the aid. Accordingly, the institution established a new strategy which links the amount of aid provided to poor countries to the extent to which corruption is mitigated. The purpose of the initiative, as former World Bank President Paul Wolfowitz explains, is to increase the Bank's ability to provide 'usable resources, not to cut back on lending'. The World Bank stopped lending to

projects in Kenya and Chad and suspended health programs in India because of the alleged improper practices in these countries.

Second, corruption causes delays in business dealings. The briber seekers may deliberately cause delays in business transactions in an attempt to compel businessmen to pay them bribes so as to get things done quicker. In certain countries like Peru, the Philippines and Egypt, it is not uncommon to wait for more than one year just to get a business started (De Soto, 1989). Because some businessmen are not willing to bribe the officers, countries with serious corruption problems may see a decline in investments.

Third, corruption leads to inefficient use of the corrupt payments. In Rose-Ackerman's (1997, p. 43) words, "Illicit funds may be used for consumption by top bureaucrats, may be invested in legitimate businesses at home or abroad, or may be diverted into illegal businesses". The latter was more likely to take place since the money obtained was already illegal, and it would be more appropriate to keep them secret.

Fourth, corruption worsens the inequality problem in the country. Goods and services produced may be unfairly distributed, with a higher proportion of the goods and services allocated to persons who are relatively more well off. One reason is that more well off individuals are more capable of bribing public servants. Citing the corruption problems relating to the irrigation system in India and Pakistan, Rose-Ackerman noted that poorer farmers in these countries were worse off, having received smaller proportion of the total water supply from the irrigation system - inadequate even to support subsistence farming – as a larger proportion of the water was supplied to those who were able to offer bribes to government officers.

Fifth, corruption damages the political legitimacy of the governments. In a corrupt country, the government loses the respect from the people domestically and internationally in its ability to lead the country. In Thailand, for example, the military staged a coup on 19 September 2006 to overthrow the Thai Prime Minister Thaksin Shinawatra, a few months after it was disclosed that the Prime Minister has not paid taxes on the business deal which involved the sale of a 49% stake of Shin Corp to Singapore's Temasek Holdings Limited. However, some of the corrupted political parties may still be able to withstand the threat and criticism if it can gain support from the powerful and influential members of the society who benefit from the corruption system. This, however, comes at the expense of the community's interest.

Sixth, there is a negative relationship between economic growth and the severity of the corruption in the nations. A number of empirical studies support this conclusion (see Mauro 1997a, 1997b; Keefer and Knack, 1995).

It is worth noting that corruption could lead to greater intensity of underground activities (Sam, 2005). Frey and Schneider (2001) define the underground economy (UGE) as that part of the economy that fails to be included in the official estimations of the national income. For example, the public sector officers may be bribed so as to overlook unreported income intentionally, resulting in the loss of government's tax revenue. The reported national income will be less than the true (or actual) level of the national income. Based on a cross-section study of 43 countries, Johnson, Kaufmann and Zoido-Lobaton (1998b) found evidence that *a larger UGE is correlated with a higher corruption*. Using the size of the UGE calculated in Johnson, Kauffman and Shleifer (1997) and Johnson, Kaufmann and Zoido-Lobaton (1998a), the authors regressed the calculated UGE of these countries with the measure of corruption obtained from the Transparency International. The corruption measure was scaled from 0 to 10, where a higher score indicated less corruption. From the regression results, the authors concluded that a one-point increased in the corruption index implied a 5.1 per cent fall in the unofficial economy. Lacko (2000) reached a similar conclusion in her study on the UGE of the transition economies. Clearly, without corruption, the economies concerned can register higher growth in the national income since corruption leads to underreporting and/or non-reporting of income to the relevant government agencies.

If the UGE gets too large, problems can arise. For example, unrecorded economic activities have implications on the amount of tax revenue collected. Growing underground activities potentially lowers tax revenue, therefore creating unnecessary limitations to government expenditure policies. Also, unrecorded activities affect the quality of information and economic statistics. Official economic statistics like inflation, unemployment, government budget and national income would not accurately reflect the country's economic environment. Policies implemented based on these statistics are less likely to be effective.

**The Case of Singapore**

Singapore has been labelled as quintessential development state (Low, 2001) where the state's legitimacy is derived from its ability to develop the country economically. When the People's Action Party (PAP) took over the governance of Singapore in 1959, the economy experienced high unemployment rate (of 5%), rampant corruption, a high crime rate, a large budget deficit (of US$4.7 million), rapid population growth and public housing problem (50% of the population were living in squatters) (Quah, 2008). Faced with the prospect of infiltration and subversion of communist ideology in the early years, modern social policies and rapid economic development were perceived as the main ingredients to banish the danger of Communism. Economic growth was a priority with the attraction of MNCs seen as the crucial element to achieve success. Singapore is a very open economy, and is consistently transforming itself from a trading port of primary products in the early days to an international transportation and logistics hub, a financial

*entrepot*, a centre for international tourism, education and medical centres. Citizens were constantly reminded up to this day of the vulnerability of the 'little red dot' and the need to have a dominant one-party system, allowing the PAP to enjoy virtual monopoly of political power. Political support for the PAP has been overwhelming to the extent that the party is generally seen as synonymous with the state (Hill and Lian, 1995, 34-35).

The downside to it was the creation of the 'government-knows-best' society where the state is deemed capable to resolve problems and safeguard the assets to the extent that information pertaining to assets of some state enterprises is largely hidden from the public. State-owned business entities such as Singapore Government International Corporation (GIC) and Temasek Holdings in particular are not required to report their performance to the public and parliament. Consider the controversial sale by Temasek of Bank of America (BOA) shares in the first three months of 2009. In July 2008, Temasek announced that it would inject US$900 million in Merrill Lynch, raising Temasek's stake from 8.85% to over 10%. Merrill Lynch was subsequently acquired by BOA, translating to Temasek's 3% stake in BOA (holding of 18.8 million shares). Queries were raised as to why the sale of BOA was carried out despite the gloomy global outlook in the wake of the subprime crisis and the huge losses estimated between US$2.3 billion and US$4.6 billion that were expected from the sales. There were calls for Temasek to clear the air. Instead, they were met with the Finance Minister 'assurance' that Temasek had done better than its counterpart amidst the global financial crisis of 2008 after considering the portfolio performance of the investment agency as a whole. The ill-timed exit from BOA was never explained by Temasek except the fact that it was in line with the company's new strategy to focus more on Asia and the emerging markets with reduced emphasis on developed countries like the USA and Europe. The inability of Temasek to explain some of its decisions despite holding billions of dollars belonging to Singaporeans is a serious cause of concerned.

Comparatively speaking, however, the city state's public sector has not performed too badly. Rating agencies such as the International Institute of Management Development (IMD) have consistently given high scores in Singapore in 'Government decisions, 'Transparency', 'Bureaucracy', 'Legal and regulatory framework', 'Policy Direction', 'Bribery and corruption' and 'Public service' categories. The respondents regarded the legal and regulatory framework in the city state as friendly to business expansion. There was also a strong sense of public service independence from political interference. This is critical as the public sector is supposed to represent the general public and not the political party of the day that governs the economy.

The World Bank's 'Governance Matters' report has also rated the city state highly, putting it among the top 10 least corrupt countries (Table 1). Covering more than 200 countries, Singapore obtained a score of close to 100 for five of the six categories of the quality of governance. An

exception was the category measuring political, civil and human rights, which has been on a declining trend.

TABLE 1: GOVERNANCE MATTERS: SINGAPORE (1996 – 2010)

| Year/ Indicators | Government effectiveness | Regulatory quality | Control of corruption | Rule of law | Political stability | Voice and accountability |
|---|---|---|---|---|---|---|
| 1996 | 97.6 | 99.5 | 98.0 | 99.5 | 93.9 | 59.1 |
| 1998 | 100.0 | 99.5 | 97.1 | 98.6 | 85.8 | 42.5 |
| 2000 | 100.0 | 100.0 | 99.5 | 97.6 | 94.3 | 41.5 |
| 2002 | 100.0 | 99.0 | 99.5 | 92.8 | 89.2 | 63.8 |
| 2004 | 98.6 | 99.5 | 99.5 | 95.7 | 88.7 | 44.4 |
| 2005 | 99.5 | 99.5 | 99.0 | 95.7 | 84.0 | 38.2 |
| 2006 | 99.5 | 97.6 | 97.1 | 94.3 | 94.7 | 36.1 |
| 2007 | 100.0 | 98.5 | 96.1 | 95.2 | 89.9 | 35.1 |
| 2008 | 100.0 | 99.5 | 99.5 | 93.8 | 96.2 | 35.1 |
| 2009 | 100.0 | 100.0 | 99.0 | 92.5 | 90.1 | 34.1 |
| 2010 | 100.0 | 98.6 | 98.6 | 93.4 | 89.6 | 37.4 |

Source: Governance matters, The World Bank (http://info.worldbank.org/governance/wgi/index.asp) (accessed: 30 January 2012)

In terms of corruption in the public sector, international agencies have consistently ranked Singapore as one of the least corrupt countries in the world. In 2010, Transparency International ranked Singapore as the least corrupt economy. Singapore was ranked 5$^{th}$ in 2011. Hong Kong based Political & Economic Risk Consultancy (PERC) Limited has ranked Singapore as the least corrupt country since its inception in 1976 (Table 2).

TABLE 2: SINGAPORE'S RANKING ON CORRUPTION (1995-2011)

| | Transparency International | Political & Economic Risk Consultancy (PERC) Limited |
|---|---|---|
| Year | Ranking | Ranking |
| 1995 | 3 | 1 |
| 1996 | 7 | 1 |
| 1997 | 9 | 1 |
| 1998 | 7 | 1 |
| 1999 | 7 | 1 |
| 2000 | 6 | 1 |
| 2001 | 4 | 1 |
| 2002 | 5 | 1 |
| 2003 | 5 | 1 |
| 2004 | 5 | 1 |
| 2005 | 5 | 1 |
| 2006 | 5 | 1 |
| 2007 | 4 | 1 |
| 2008 | 4 | 1 |
| 2009 | 3 | 1 |

| | | |
|---|---|---|
| 2010 | 1 | 1 |
| 2011 | 5 | N/A |

Sources: http://www.cpib.gov.sg (accessed: 7 August 2009); http://www.transparency.org (accessed: 30 January 2012); http://www.asiarisk.com (accessed: 30 January 2012)

The anti-corruption strategy in Singapore is nevertheless not error proof. The fact remains that Singapore is *not the least corrupt* country in the world. The Transparency International and the IMD, for example, often consider Singapore to be relatively more corrupt than Finland. Tiihonen (2003) explained that in the case of Finland, appointment of someone from outside the public administration to high positions is unusual. This is not the case for Singapore. It is an established fact that the PAP actively scouts for talents in the private sector, a practice that could potentially lead to a conflict of interests. The rules of prudence as spelled out by the Prime Minister require that the Members of Parliaments (MPs) separate business and politics, for example, by stating it clearly at the outset that when they speak on behalf of companies, they do so in professional or business capacity, and not as an MP. However, drawing the line between MPs' private and public positions is not easy in reality. Monitoring such behavior in also difficult because of asymmetric information. The tendency for improper practices to take place in Singapore might be compounded by the fact that the residents are generally strong followers of the Confucianism school. Confucian values, which place paternalism over legalism and a strong emphasis on family loyalty appears to provide a justification for nepotism.

Despite the lack of disclosure in some aspects of the state enterprises and the caveats noted with respect to improper practices, it remains clear that the governance standard in the Singaporean public sector has outshined many other economies in the Asia Pacific region. Corruption, however, was not uncommon in Singapore in the early days. Thankfully, the strong political will to address the problem since gaining independence from British rule has yielded significant results. The following section provides some historical evidence of corruption in Singapore. The purpose is to show that the problem was prevalent in Singapore in the past, and that it is not undoable to combat corruption.

**Corruption in Singapore: Historical Evidence**

The earliest evidence of illegalizing corruption in Singapore was the enactment of the Penal Code of the Straits Settlement back in 1871. Corruption in the early days was prevalent among the European inspectors and the Malay and Indian rank and file as noted by the Commission of Inquiry. In 1886, a Commission appointed to study public gambling in the Straits Settlements found police corruption to be serious. For example, in the period between 1845 and 1921, a total of 172 cases of police corruption were reported in the local press with bribery being the most

common form of police corruption (109 cases reported) followed by police involvements in thefts and robbery (42 cases) (Quah, 1979).

Despite these problems, and the fact that corruption was made illegal as early as 1871, the first anti-corruption law was enacted only on 10 December 1937. Known as the Prevention of Corruption Ordinance (POCO), the law was enacted to prevent bribery and secret commissions in public and private businesses. However, the POCO was generally ineffective in curbing corruption. A short document (it contained only 12 sections), the punishments imposed on the offenders were not significantly severe to deter the potential offenders from engaging in corrupt practices. For instance, those found guilty of corruption were given up to a maximum of only two years in jail term and/or up to a maximum fine of S$10,000, or both. Also, the document provided limited powers of arrest, search and investigation of the police, as warrants were required before any arrests could be made. It took another nine years in 1946 before the maximum years of jail-term were increased to three years.

Police corruption in the colonial period continued to be rampant even in the post World War II period. In fact, the British Military Administration, which took over after the Japanese surrendered, was known as the 'Black Market Administration'. In the 1950 Annual Report of the administration, the Commissioner of Police was reported in saying that graft was rife in government departments in Singapore (Quah, 1978, p. 14). Corruption was also severe during the Japanese occupation (1942-1945). High inflation rate and low fixed salaries had made corruption a way of life for many people working for the government departments.

The agency responsible for tackling the problem of corruption in the early days in Singapore was the Anti-Corruption Branch (ACB) of the Criminal Investigation Department (CID) (pre-1952). One of the problems faced by the ACB was lack of manpower. The ACB consisted of only 17 officers on average. Being part of the CID, the ACB had to compete with the rest of the units in the CID for manpower and other resources. In addition, the ACB had problems dealing with corruption involving the police because of its close relationship with the police force. Corrupt police officers could escape being checked and caught because of their links with the ACB.

It was only with the appointment of a special team by the British Colonial (headed by a Malayan civil servant) to investigate the robbery of opium that the British colonial government realized the seriousness of police corruption in Singapore. The incident compelled the British colonial government to re-look into the matter and find solutions to the problem. The British recognized the importance of setting up an *independent* anti-corruption agency. Its main focus would be to eradicate corruption. This led to the demise of the ACB and the formation of the Corrupt Practice Investigation Bureau (CPIB) in 1952.

However, real improvements came about only after the People's Action Party (PAP) took over the domestic administrative affairs. When Singapore commenced self-control in 1959, the PAP made it a national priority to combat corruption. The ruling party recognized the importance of making Singapore corruption-free both in the government and business environments in its attempt to develop the country's economy. As the then Prime Minister Lee Kuan Yew said:

'All new governments want to prove themselves by passing many new laws and launching many new projects. We hit the ground running, before the phrase was coined. ….. Most important was a bill to give ourselves (the PAP) wider powers to combat corruption. It was the first of several that strengthened the law so that offenders could be charged and convicted in court. It led to the creation of a new agency, the Corrupt Practices Investigation Bureau (CPIB), which has helped to keep Singapore clean' (Lee, 1998, pg. 346).

The use of punishment to combat crime was deemed effective as Lee had observed during the Japanese occupation. As Lee noted in his memoir:

'The Japanese Military Administration governed by spreading fear…..Punishment was so severe that crime was very rare……As a result, I have never believed those who advocate a soft approach to crime and punishment, claiming that punishment does not reduce crime. That was not my experience in Singapore before the war, during the Japanese occupation or subsequently' (Lee, 1998, p. 74).

Because the nation was economically not very well off when the PAP took over the government in 1959, the PAP could not afford to raise the civil servants' salary. In fact, variable allowance was cut to minimize budget deficits with those in higher grades losing as much as S$400 per month. There was an urgent need to resort to other means to minimize corruption practices in the public sector, paying particular attention in reducing the opportunities of corruption in the public sector. Hence, the PAP replaced the Prevention of Corruption Ordinance (POCO) introduced in 1937 with the Prevention of Corruption Act (POCA) in 1960 to strengthen the legislation on corruption. In 1963, the POCA was amended to give more power to the CPIB officers to require the attendance of witnesses in aid of investigations which the CPIB was conducting. In 1966, two further amendments were made to the POCA. First, section 28 of the POCA noted that a person could be found guilty of corruption even if he/she did not receive the bribe. The intention to engage in corrupt practices sufficed to convict the person. Second, section 35 of the POCA empowered the CPIB to convict Singapore citizens who commit acts of corruption outside of Singapore in the same manner as those who committed the offence locally. The amendment was directed at those who worked for the Singapore government abroad. Changes in the legislation helped to curb corruption in the post independence period.

The CPIB, housed in the Prime Minister's Office, originally dealt with only the civil servants under the POCA. Today, it has expanded to investigate all corrupt practices including those that are committed in the private sector. More specifically, the functions of the CPIB include, first, to receive and investigate complaints alleging corrupt practices, second, to investigate malpractices and misconduct by public officers with an undertone of corruption, and third, to prevent corruption by examining the practices and procedures in the public service to minimize opportunities for corrupt practices. The CPIB is an independent anti-corruption agency where its director reports directly to the Prime Minister. The director does not report to any other members of the cabinet and members of parliament. The President of Singapore is tasked to appoint the CPIB director(s) and key officers. The President has the power to refuse the revocation of a director if he disagrees with the advice of the Cabinet. Under a provision in the Constitution, the Director of the CPIB is able to precede with his/her investigations "despite any direction to the contrary from the Prime Minister" (Ho, 2003, p. 269). The provision empowers the CPIB Director to investigate all suspected persons including the Prime Minister.

**The Role of Leadership**

Several authors have attributed Singapore's success in fighting corruption to the elitist strategy whereby only a few of incorrupt and brightest are capable of leading the country (Mauzy and Milne, 2002; Ghesqueire, 2007). The importance of having clean core leaders cannot be understated in any country's effort to curb corruption. According to Singapore's Lee Kuan Yew (2005), "if there is corruption at the highest levels of a government, the (corruption) problem can become intractable". Conversely, if the core leadership is clean, "corruption can be gradually eradicated". Since the earlier years of self-governance, the PAP had tried to build-up the mentality among the general public that having an efficient and clean administrative government is a must and not an option to build the country's economy. Lee Kuan Yew said in his opening address of the Political Study Centre to the civil servants on 15 August 1959:

"…whether an administration functions efficiently and smoothly in the interests of the people as a whole or in the interests of a small section of the people depends upon the policies of the Ministers. But it is your responsibility to make sure that there is an efficient civil service…. We the elected Ministers have to work through you and with you to translate our plans and policies into reality. You should give of your best in the service of our people. It is in our interest to show that under the system of one-man-one-vote there can be an honest and efficient government which works through an efficient administration in the interests of the people…." (quoted in Quah, 1996, p. 301-302).

In 1960, the mood for a strong anti-corruption policy was enhanced in the parliament. According to Chua Cher Yak, former director of the CPIB:

"the government is deeply conscious that a government cannot survive, no matter how good its aims and intentions are, if corruption exists in its ranks and its public service on which it depends to provide the efficient and effective administrative machinery to translate its policies into action…Therefore, the government is determined to take all possible steps to see that all necessary legislative and administrative measures are taken to reduce the opportunities of corruption, to make its detection easier and to deter and punish severely those who are susceptible to it and who engage in it shamelessly" (quoted in Chua, 2002).

The virtues of low corruption and doing the right things have become a norm in the public sector arena. The constant reminder on the importance of having incorruptible people working for the government has made the incorruptible virtue as part of the societal norm. Anyone who does otherwise is condemned for he/she has essentially violated the moral code of the society. This is an important element of an effective leader in fighting corruption; recognition of the fact that the leader could not curb corruption without the help of the people regardless of whether they are household members or public sector officials. Active involvement of the community must be present right at the beginning. Indeed, all MPs, ministers and public officers are expected to set good examples for others to follow. For example, PAP members are required to declare their family assets to the Prime Minister while the ministers (including the Prime Minister) declare their family assets to the President. Public value is strengthened through codes of conduct, detailing, for example, with the way Ministers and Members of Parliament (MPS) deal with gifts and how they should carry out their directorship duties in private corporations. Following the General Elections in May 2011, Prime Minister Lee Hsien Loong wrote a letter to all PAP MPs, effectively spelling out the ways to do things. For example, MPs were advised to conduct business with public officials in writing (instead of via the telephone), declare MPs pecuniary interest when they raise questions in Parliament related to their companies, check the background of the company before accepting directorship, refrain from lobbying statutory boards and ministries on behalf of someone and manage fiscal affairs prudently. He summarizes the PAP stand on MPs code on conduct this way.

'The PSP's reputation for clean, incorruptible government is one of our most precious assets. As PAP MPs, your standing in society reflects this high standing of the Party as a whole. I cannot stress strong enough that every MP must uphold the rigorous standards that we must set for ourselves, and do nothing to compromise them. Never give cause for accusations that you are misusing your position, especially your access to ministers. This would discredit both you and the Party'.

The political leaders have not hesitated to shame offenders, regardless of their status, to further raise the opportunity cost of engaging in acts of corruption (names and photos of offenders were often exposed to the public). The initiative imposes high cost to the offenders (and their family

members) and is particularly powerful in Asian countries because Asians are generally afraid to 'lose face'. Singapore is not an exception.

Some prominent cases include the one involving the then Minister of National Development, Teh Cheng Wan, who was accused of accepting two bribes amounting to S$1 million in 1981 and 1982. Teh was accused of accepting bribes from two developers to allow one of them to retain the land which had already been acquired by the government, and the other to purchase state land for private development. On the 12th day after the CPIB had launched an investigation, Teh committed suicide on 26 January 1987 by a lethal dosage of barbiturate pills. In 1991, the then Director of the Commercial Affairs Department (the anti-graft and investigate arm of the Ministry of Finance) and former public prosecutor, Glenn Knight, was charged and convicted of corruption in a business deal. He was discharged from the public service and suffered a massive heart attack in the process. In 2000, a Nominated Member of Parliament Chuang Shaw Peng was brought to court on at least three corruption charges. More recently, the chief executive of the National Trade Union Congress (NTUC) Choice Homes, Lim Geok Hwa, was under the investigation by the CPIB for using the money belonging to the NTUC Choice Homes to trade in the stock market. He was also accused of making company checks to himself (The Straits Times, 6 March 2003). In June 2003, Phey Mui Hoon, a first secretary of the visa section at the Singapore Embassy in Beijing pleaded guilty of two charges and was jailed for 10 months. Phey was found guilty of helping the approval of business visas for some Chinese nationals after she was paid 2,000 yuan. She also helped to speed up and approve the applications of tourist visas for another Chinese national after accepting a paid holiday in Shenzhen (The Straits Times, 20 June 2003).

The selection of leaders in the Singaporean public sector follows the principle of meritocracy. The methodology of selection is not confined to educational and professional qualifications as potential candidates have to go through high-powered interviews and written tests as part of the selection process to assess their character and attitude. In this regard, the selection process of Public Service Commission (PSC) scholars is a relevant illustration to show how public servants are recruited (the scholars are often groomed to take up leadership positions in the Singaporean public sector).

In a speech delivered to junior college students, PSC Chairman Eddie Teo listed integrity as the most "vital" quality of a public servant, pointing out that 'while pragmatism may be a key concept for governance in Singapore, it is dangerous to have Singapore governed by public servants who are unprincipled pragmatists'. A person with integrity according to Teo is someone who challenges the rule if they go against his values and principles although he stresses that "how he challenges the rules is also important, for it reveals how shrewd and street-savvy he is". To sift out persons with integrity, the PSC relies on the schools and psychologists, the latter in

particular, as they are trained "to determine whether the candidate has strong values which he is not afraid to express or uphold even against peer pressure". Trait theorists have similarly identified integrity as one of the most important traits associated with leadership. However, traits alone are not sufficient to identify effective leaders since traits ignore the interaction between the leaders and the group members as well the leaders' ability to make good decisions under various circumstances and situations (Kirkpatrick and Locke, 1991; Judge et al, 2002).

Selecting 'clean' agents is clearly essential and this remains a challenge regardless of whether one considers the public or private sector corporations. Equally important is the issue of recruiting capable persons. Corporate scandals in the 2000s and the recent global financial crisis revealed that strict compliance in the private sector corporations to recruit independent directors in their boards (as imposed on listed companies in Sarbanes-Oxley Act) had actually led to the appointment of less-than-qualified persons in the financial and accounting fields. Misrepresentation of financial statements was not spotted while risks were often miscalculated.

In Singapore's public sector, the appointment of key officers is largely confined to two categories of people. Firstly, there were the 'trusted' individuals from the civil service. Worthington's (2003) study, for example, found that the public sector in Singapore dominated directorship in the country's state owned enterprises (SOEs), accounting for more than 70% of the directorships in 1991. In 1998, the public sector representation increased as it accounted for 74% of the representation in the SOEs. Such an arrangement would have violated the United States law where a majority of the board members must be independent of the companies. Secondly, the Singaporean public sector casts its nets wide to identify and recruit capable persons from the private sector. Former Minister for Finance Richard Hsu was formally an executive at Shell in the early 1960s before he was recruited by the Monetary Authority of Singapore. Former Prime Minister Goh Chok Tong was with Neptune Orient before taking up positions in various ministries. Hamilton-Hart (2000) argued that the clean and efficient Singaporean government was attributed to the "mixed public-private sphere than makes up the governing elite", referring to elite private sector individuals such as S. Dhanabalan, Chandra Das, Ho Kwon Ping, Joseph Pillay and Michael Fam Yue Onn who had close association and a good understanding with the way the public sector works. These individuals moved back and forth between the public and private sectors, and were often found on the boards of the private and privatized SOEs firms on the Singapore Exchange.

The arrangement has produced some positive results. For example, based on a study of 30 Singaporean SOEs covering the period 1964 to 1998, Feng, Sun and Tong (2004) found no evidence that the SOEs under-performed as compared to non- SOEs of matching size. In addition, SOEs were found to perform as well as the market and industry averages even before share issue privatization took place. Using a sample ranges from nine SOEs in 1990 to 25 in

2000 and the corresponding number of non-SOEs from 68 in 1990 to 204 in 2004, Ang and Ding (2006) compared the financial and market performance of Singaporean SOEs with non-SOEs and found that the former had higher valuations and better corporate governance standards than a control group of non-SOEs. The authors argued that the higher standards of corporate governance in SOEs was attributed to effective monitoring role of Temasek, including the appointment of Board members who come largely from the civil service and SOEs, limiting the tenure of Board members to six years and fostering non-duality status.

It can be argued that the appointment of trusted individuals from the public and private sectors helps to facilitate the flow of quality information since many of them have experienced quite similar style of working, and a powerful source of reward and punishment since the information comes from individuals known personally (Granovetter, 2005). As Jackson (2001: 26) points out, "it is precisely the pooling of know-how over a range of actors encompassing public and private societal actors which comprises the advantage of networked systems over traditional, hierarchical decision-making structures". Handpicking personalities to lead public sector corporations does not seem to pose the usual problems of government owned enterprises, but in fact may have contributed to Singapore's success in general and the public sector in particular.

To recapitulate, the presence of capable leaders with strong moral values is undoubtedly a determining factor of organizational success. Asia, through Chinese classics such as Confucius and Lao Zi, has long focused on the person, the values and the character of the leader. The West, on the other hand, focuses on the functions, tasks and responsibilities of the leader by putting in place good corporate governance, controls and transparency (Wee, 2010). The corporate scandals in the 2000s and the financial tsunami that hit Wall Street showed that transparency and corporate governance could not stop massive cheating, frauds and scandals from taking place. The episode, as Wee (2010: 45) succinctly pointed out, told us that "it is not the sound structures, systems, processes and controls that caused the catastrophe" but "the lack of the integrity, moral values and character among corporate leaders that caused the disaster". In this regard, an understanding of Singapore's approach in selecting leaders may be a useful exercise since Singapore integrates the best of the East and the West. This section shows that the public sector assures itself of the integrity of key executives by appointing trusted individuals. The relevance to private sector organizations is that the process of incorporation into senior positions could be selective based on informal recognitions of the individuals' capability, supplementing the conventional indicators like performance in education or prior success in business.

**Conclusion**

Singapore is often hailed as one of the least corrupt countries in the world. This paper describes Singapore's experience in curbing corruption, recognizing the fact the corruption was not uncommon in the early days of development. The key motivator to mitigate the problem is

situated in the understanding that economic development and corruption intensity are inversely related. The drive for economic growth and development, in this regard, serves as a powerful motivating tool for the nationalist leaders to fight corruption in the best way possible. With political will and effective leaders in place, Singapore was able to overcome the problem. This is a good piece of news, indicating that the fight against corruption is not unwinnable.

## References


1. Ang, J.S. and David K. Ding. (2006). Government Ownership and the Performance of Government-Linked Companies: The Case of Singapore. *Journal of Multinational Financial Management,* 16(1), 64-88.
2. Berle, A. and Means, G. (1932). *The Modern Corporation and Private Property*. New York: MacMillan.
3. Buchanan, J. and Tullock, G. (1962). *The Calculus of Consent*. Ann Arbor: University of Michigan.
4. Chua, C. Y. (2002) "*Corruption Control: What Works*?" Speech delivered at the seminar on Promoting Integrity and Fighting Corruption in Guiyang, China, 19-21 November 2002.
5. De Soto, H. (1989) *The Other Path: The Invisible Revolution in the Third World*. New York: Basic Books.
6. De Speville, B. (2010). *Overcoming corruption: the essentials*. Kuala Lumpur: REFSA.
7. Erturk, I., Froud, J., Johal, S. and Williams, K. (2004). Corporate governance and disappointment. *Review of International Political Economy*, 11(4), 677-713.
8. Fama, E. (1980). Agency Problems and the Theory of the Firm, *Journal of Political Economy*, 88(2), 288-307.
9. Feng, F., Sun Q. and Tong W.H.S. (2004). Do Government-Linked Companies Underperform? *Journal of Banking and Finance* 28, 2461-2492.
10. Frey, B. and Schneider, F. (2001). Informal and Underground Economics. In Neil Smelser and Paul Baltes (Eds) *International Encyclopedia of the Social and Behavioral Sciences*. New York: Cambridge University Press.
11. Ghesquiere, H. (2007). *Singapore's Success: Engineering Economic Growth.* Singapore: Thomson Learning.
12. Goh, C.T. (1985). *The Gordian Knot: Is there an upper limit to our prosperity?* Singapore: Ministry of Communications and Information.
13. Granovetter, M. (2005). The Impact of Social Structure on Economic Outcomes, *Journal of Economic Perspectives*, 19(1), 33-50.
14. Hamilton-Hart, N. (2000). The Singapore state revisited. *The Pacific Review*, 13(2), 195-216.
15. Hill, M. and Lian K. F. (1995). *The Politics of Nation Building and Citizenship in Singapore*. London: Routledge.
16. Ho, P. K. (2003). Singapore's Integrity System. In Tay, Simon and Seda, Maria (Eds.) *The Enemy Within: Combating Corruption in Asia*, Eastern Universities Press, Singapore.
17. Jackson, P. (2001). *Business development in Asia and Africa: the role of government agencies.* New York: Palgrave.
18. Jensen, M. and Meckling, W. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3, 305-360.
19. Johnson, S., Kauffman, D. and Shleifer, A. (1997). The Unofficial Economy in Transition, *Brookings Papers on Economic Activity*, Fall 1997, 159-239.
20. Johnson, S., Kauffman, D. and Zoido-Lobaton, P. (1998a). *Corruption and the Unofficial Economy*. Washington D.C.: World Bank.
21. Johnson, S., Kauffman, D. and Zoido-Lobaton, P. (1998b). Regulatory Discretion and the Unofficial Economy, *The American Economic Review*, 88(2), 387-392.
22. Judge, T.A., Bono, J.E., Ilies, R. and Gerhardt, M.W. (2002). Personality and leadership: a qualitative and quantitative review, *Journal of Applied Psychology,* August Issue, 765-780.
23. Keefer, P. and Knack, S. (1995). Institutions and Economic Performance: Cross Country Tests using Alternative Institutional Measures, *Economics and Politics,* 7, 207-227.
24. Kirkpatrick, G. (2009). *The corporate governance lessons from the financial crisis.* OECD: Financial Market Trends.

25. Lacko, M. (2000). Hidden Economy – An Unknown Quantity?: Comparative Analysis of Hidden Economies in Transition Countries, 1989-1995, *Economics of Transition*, 8(1), 117-149.
26. Lee, K. Y. (1998). *The Singapore Story.* Singapore: Singapore Press Holdings and Times Edition.
27. Lee, K. Y. (2005). Ethical Leadership a Competitive Advantage. Address at the Asian Strategy and Leadership Institute's 'World Ethics and Integrity Forum 2005' at Kuala Lumpur on 28 April 2005.
28. Low, L. (2001). The Singapore Developmental State in the New Economy and Polity. *The Pacific Review*, 14(3), 411-41.
29. Mauro, P. (1997a). *Why Worry about Corruption?* Washington D.C.: International Monetary Fund,
30. Mauro, P. (1997b). *The Effects of Corruption on Growth, Investment, and Government Expenditure: A Cross-Country Analysis.* In Kimberly Ann Elliot (Ed.) Corruption and the Global Economy. Washington D.C.: Institute of International Economics.
31. Mauzy, D. and Milne, R.S. (2002). *Singapore Politics: Under the People's Action Party.* Singapore: Oxford University Press.
32. Niskanen, W. (1971). *Bureaucracy and Representative Government*. Chicago: Aldine Atherton.
33. Niskanen, W. (1991). A Reflection on Bureaucracy and Representative Government. In Andre Blais and Stephane Dion (Eds.) *The Budget Maximising Bureaucrat: Appraisals and Evidence*. Pittsburgh. University of Pittsburgh Press.
34. Quah, J. (1978). *Administrative and Legal Measures for Combating Bureaucratic Corruption in Singapore.* Department of Political Science, University of Singapore, Occasional Paper, No. 34: Singapore.
35. Quah, J. (1979). Police Corruption in Singapore: An Analysis of its Forms, Extent and Causes. *Singapore Police Journal*, 10, 7-43.
36. Quah, J. (1996). Transforming the Singapore Civil Service for National Development. In Asmerom, Haile, K. and Reis, Elisa, P. (Eds.) *Democratization and Bureaucratic Neutrality.* New York: St. Martin's Press.
37. Quah, J. (2008). Good governance, accountability and administrative reform in Singapore. *American Journal of Chinese Studies,* 15(1), 17-34.
38. Rodan, G. (2004). *Transparency and Authoritarian Rule in Southeast Asia: Singapore and Malaysia.* Oxon: RoutledgeCurzon.
39. Rose-Ackerman, S. (1997). *The Political Economy of Corruption.* In Kimberly Ann Elliott (Ed.) *Corruption and the Global Economy*. Washington D.C.: Institute for International Economics.
40. Sam, C. Y. (2005). Singapore's Experience in Curbing Corruption and the Growth of the Underground Economy. *Journal of Social Issues in Southeast Asia*, 20(1), 39-66.
41. Tiihonen, P. (2003). Good Governance and Corruption in Finland. *Virtual Finland*, May 2003.
42. Wee, C.H. (2010). Developing Asia's corporate leadership: challenges and moving forward. In D. Ulrich (Ed.) *Leadership in Asia: Challenges and Opportunities*, Singapore, McGraw Hill.
43. Worthington, R. (2003). *Governance in Singapore*. New York: Routledge-Curzon.



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# PERFORMANCE EVALUATION OF MUTUAL FUND SCHEMES (WITH SPECIAL REFRENCE TO SBI AND UTI SCHEMES)

* Harsh Vineet Kaur

**Abstract:**

***The mutual fund industry in India began with setting up of the Unit Trust of India (UTI) in 1964 by the Government of India. The primary objective at that time was to attract the small investors and it was made possible through the collective efforts of the Government of India and the Reserve Bank of India . The idea behind performance evaluation is to find the returns provided by the individual schemes and the risk levels at which they are delivered in comparison with the market and the risk free rates. The present study has been undertaken to evaluate and compare the performance of selected mutual fund schemes of Unit Trust of India (UTI) vis-à-vis selected mutual fund schemes of State Bank of India (SBI). Accordingly the study tries to accomplish the following objectives, to evaluate and compare the performance of mutual fund schemes of UTI and SBI using Risk Adjusted Measures of Sharpe, Treynor, and Jensen and to compare the performance of mutual fund schemes of UTI and SBI vis-à-vis the market.***

***Key words: Mutual fund, SBI and Unit Trust of India***

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## Introduction

The mutual fund industry in India began with setting up of the Unit Trust of India (UTI) in 1964 by the Government of India. The primary objective at that time was to attract the small investors and it was made possible through the collective efforts of the Government of India and the Reserve Bank of India . Unit Trust of India enjoyed complete monopoly when it was established in the year 1963 by an act of Parliament. UTI was set up by the Reserve Bank of India and it continued to operate under the regulatory control of the RBI until the two were de-linked in 1978 and the entire control was transferred in the hands of Industrial Development Bank of India (IDBI). UTI launched its first scheme in 1964, named as Unit Scheme 1964 (US-64), which attracted the largest number of investors in any single investment scheme over the years.

The Indian mutual fund industry witnessed a number of public sector players entering the market in the year 1987. In November 1987, SBI Mutual Fund from the State Bank of India became the first non-UTI mutual fund in India. SBI Mutual Fund was later followed by Canbank Mutual Fund, LIC Mutual Fund, Indian Bank Muatual Fund, Bank of India Mutual Fund, GIC Mutual Fund and PNB Mutual Fund. By 1993, the assets under management of the industry increased

seven times to Rs. 47,004 crores. However, UTI remained to be the leader with about 80% market share.

Securities and Exchange Board of India (SEBI), regulatory body for Indian capital market, formulated comprehensive regulatory framework for Mutual Funds in 1993 and allowed private corporate bodies to launch mutual fund schemes. Since then several mutual funds have been set up by the private and joint sectors.

The permission given to private sector funds including foreign fund management companies (most of them entering through joint ventures with Indian promoters) to enter the mutal fund industry in 1993, provided a wide range of choice to investors and more competition in the industry. Private funds introduced innovative products, investment techniques and investor-servicing technology. By 1994-95, about 11 private sector funds had launched their schemes.

The mutual fund industry witnessed robust growth and stricter regulation from the SEBI after the year 1996. The mobilization of funds and the number of players operating in the industry reached new heights as investors started showing more interest in mutual funds.

Inventors' interests were safeguarded by SEBI and the Government offered tax benefits to the investors in order to encourage them. SEBI (Mutual Funds) Regulations, 1996 was introduced by SEBI that set uniform standards for all mutual funds in India. The Union Budget in 1999 exempted all dividend incomes in the hands of investors from income tax. Various Investor Awareness Programmers were launched during this phase.

In February 2003, the UTI Act was repealed and UTI was stripped of its Special legal status as a trust formed by an Act of Parliament. The primary objective behind this was to bring all mutal fund players on the same level. UTI was re-organized into two parts: 1. The Specified Undertaking, 2. The UTI Mutual Fund .Presently Unit Trust of India operates under the name of UTI Mutual Fund and its past schemes (like US-64, Assured Return Schemes) are being gradually wound up.

The industry since 2004 has witnessed several mergers and acquisitions, examples of which are acquisition of schemes of Alliance Mutual Fund by Birla Sun Life, Sun F&C Mutual Fund and PNB Mutual Fund by Principal Mutual Fund. Simultaneously, more international mutual fund players have entered India like Fidelity, Franklin Templeton Mutual Fund etc. There were 29 funds as at the end of March 2006. This is a continuing phase of growth of the industry through consolidation and entry of new international and private sector players.

As per information available on the website of Association Of Mutual Funds In India the Total Assets under Management were Rs 417300 crs as March 2009.

## OBJECTIVES OF THE STUDY

The idea behind performance evaluation is to find the returns provided by the individual schemes and the risk levels at which they are delivered in comparison with the market and the risk free rates. The present study has been undertaken to evaluate and compare the performance of selected mutual fund schemes of Unit Trust of India (UTI) vis-à-vis selected mutual fund schemes of State Bank of India (SBI). Accordingly the study tries to accomplish the following objectives:

1) To evaluate and compare the performance of mutual fund schemes of UTI and SBI using Risk Adjusted Measures of Sharpe, Treynor, and Jensen.
2) To compare the performance of mutual fund schemes of UTI and SBI vis-à-vis the market.

### Data Description

Secondary data has been taken for ten mutual fund schemes each from SBI Mutual Funds and UTI Mutual Funds from the year 2005-06 to 2009-10. The schemes have been selected randomly. Daily values of the Net Assets Value of the selected schemes have been collected from the websites www.amfindia.com, and www.mutualfundsindia.com. The most popular and widely tracked BSE SENSEX has been used as a proxy for the market. The daily value of BSE SENSEX has been collected from the website www.bseindia.com. The reference period for the data has been March 2005 to March 2010.

The yield to maturity of 364 days treasury bills has been taken as risk free rate of return.

### TECHNIQUES USED:-

The various tools used in analysis are as follows:-

### Return

Monthly return on schemes

$$Rs = \frac{\text{Average NAV}_{t} - \text{AverageNAV}_{t-1}}{\text{Average NAV}_{t-1}} * 100$$

Where Average NAV $_{t-1}$ is the Average NAV of t month and Average NAV $_{t-1}$ is the NAV of t-1 month. Average NAV has been calculated from the mean of the daily NAV of the particular month

Monthly Return on market,

$$Rm = \frac{\text{Average BSE}_{t} - \text{Average BSE}_{t-1}}{\text{Average BSE}_{t-1}} * 100$$

Where Average BSE $_{t}$ is the Average SENSEX value of t month and Average BSE$_{t-1}$ is the Average SENSEX value of $_{t-1}$ month.

Arithmetic mean has been considered for average value of both the returns.

**Risk**

Beta value of the schemes has been calculated by running a regression between average monthly scheme returns and average monthly market returns. Higher values of β indicate a high sensitivity of fund returns against market returns; the lower value indicates low sensitivity. Higher β values are desired for the mutual funds during bull phase of the market and lower β values are desired during the bear phase to out perform the market.

**Sharpe's Index**

William F.Sharpe (1966) devised an index of portfolio performance measure, referred to as reward to variability ratio denoted by SI. He assumes that a small investor invests fully in the mutual fund and does not hold any portfolio to eliminate unsystematic risk and hence demands a premium for the total risk.

The SHARPE' S index for the scheme is calculated as follows:-

$$SI = \frac{\text{Risk Premium}}{\text{Total Risk}} = \frac{Rs - Rf}{\sigma_p}$$

Where Rs is the average return on the scheme and Rf is the risk free rate of return , $\sigma_p$ is the standard deviation of the monthly returns on the schemes.

Benchmark for Sharpe's index is calculated as follows:-

$$BMS = \frac{Rm - R f}{\sigma_m}$$

Where Rm is the average return on the market , Rf is the risk free rate of return and $\sigma_m$

is the standard deviation of the monthly returns on the market.

If SI of the mutual fund scheme is greater than that of the market portfolio, the fund has out performed the market.

**Treynor's Ratio**

Jack Treynor (1965) conceived an index of portfolio performance measure called as reward to volatility ratio, based on systematic risk. He assumes that the investor can eliminate unsystematic risk by holding a diversified portfolio. Hence his performance measure denoted as TI is the excess return over the risk free rate per unit of systematic risk, in other words it indicates risk premium per unit of systematic risk.

$$TI = \frac{\text{Risk Premium}}{\text{Systematic Risk Index}} = \frac{Rs - Rf}{\beta}$$

where TI = Treynor's Ratio, β = Beta coefficient for scheme.

The benchmark for Treynor's index is calculated as follows:-

$$BMT = Rm - Rf$$

If TI of the mutual fund scheme is greater than BMT, then the scheme has out performed the market.

**Jensen's Alpha**

Sharpe and Treynor ratios rely mainly on ranking of portfolios in comparison to the market portfolio. They are unable to answer question like: Has fund given more than/less than/ equal to expected returns? Hence there is a need for a better performance measure. Michael C.Jensen (1968) has given different dimension and confined his attention to the problem of evaluating a fund manager's ability of providing higher returns to the investors. He measures the performance as the excess return provided by the portfolio over the expected (CAPM) returns. The performance measure is denoted by $\alpha$ . He assumes that the investor expects at least CAPM returns.

The Jensen's alpha value is calculated as follows-

$\alpha$ = Portfolio Return- CAPM Return

= $Rs-\{Rf + (Rm-Rf)\ \beta\}$

A positive value of alpha indicates superior performance of mutual fund scheme. i.e. the scheme has provided a higher return over the CAPM return and lies above Security Market Line (SML) and a negative value would indicate it has provided a lower than expected returns and lies below SML. The Jensen model assumes that the portfolio is fully invested and is subjected to the limitations of CAPM.

**Fama's Senstivity Index**

Jensen's measure computes excess returns over expected returns based on premium for systematic risk. Eugene F Fama (1972) goes a step ahead, he suggests to measure fund performance in terms of excess returns over expected returns based on premium for total risk. In other words, the excess returns are computed based on Capital Market Line (CML).

Fama breaks down the observed return into four components:

| | |
|---|---|
| i) Risk-free return | Rf |
| ii) Compensation for systematic risk | $\beta(Rm- Rf)$ |
| iii) Compensation for inadequate diversification | $(Rm-Rf)\{(\sigma p/\sigma m)-(\beta)\}$ |
| iv) Net superior returns due to selectivity | $(Rs-Rf)-(\sigma p/\sigma m)\ (Rm-Rf)$ |

The second and third measures indicate the impact of diversification and market risk. By altering systematic and unique risk a portfolio can be reshuffled to get the desired return. Fama says the portfolio performance can be judged by the net superior returns due to selectivity. His performance measure is denoted by FP.

FP = Portfolio Return - Riskfree Return - Returns due to all risks

= ( Rs- Rf) – [(σp / σm) (Rm- Rf)]

where FP =Fama's measure for portfolio, Rs = return of the scheme , Rf =Risk free return, σp = standard deviation of the portfolio returns & σm =standard deviation of the market returns.

A positive value for FP indicates that the fund earned returns higher than expected returns and lies above CML, and a negative value indicates that the fund earned returns less than expected returns and lies below CML.

The purpose of performance evaluation is that it should be in a position to identify the mistakes and suggest a direction for the correction. A comparison of Sharpe's and Treynor's ratios will help the fund managers to correct their actions from risk angle and comparison of Jensen's and Fama's measures will help from return angle

**Methodological Limitations**

1. The NAVs used in the study are obtained from AMFI's website, which in turn is supplied by the members. Members in turn have not followed any uniform rule in its computation due to the flexibilities offered under SEBI regulations.

2. The study excludes the effect of entry and exit loads of the mutual funds

**Analysis and Findings**

It can be observed from Table 1 that average returns of SBI schemes were better in the year 2009-2010 as compared to the preceding years. All the schemes gave positive returns except SBI Magnum GILT LTP Fund. In the year 2009-10, SBI Magnum Mid Cap Fund posted the highest return (8.26%) followed by SBI Magnum Equity Fund Growth. Almost all of the schemes of SBI posted negative returns in the year 2008-07. Only one scheme, SBI Magnum GILT LTP gave positive return of 0.42. The average return of the SBI mutual funds was 1.40 in the year 2007-08.

The average returns of UTI schemes was 3.81 in the year 2009-10 which was a better performance as compared to the previous years. UTI Master Value Fund Growth Option gave the best return of 7.88% in the year 2009-10. In the year 2008-09 all the schemes of UTI posted negative returns in which UTI MIS Advantage Growth Fund gave the least negative return. In the year 2006-07 the average return was a negative return of 0.06 even though five schemes gave positive returns.

On an average the SBI Mutual Fund Schemes have performed slightly better than the UTI schemes. However, consistency seems to be missing in any of the schemes of SBI or UTI as those giving highest returns in one year don't perform the same in the next year.

Table 2 depicts risk in terms of Standard Deviation of Returns of the selected schemes of UTI and SBI. On an average the schemes of SBI were riskier than the UTI schemes. The variation in return is observed to be highest in SBI in the year 2009-10 and in the year 2008-09 in case of UTI. It was only in the year 2005-06 that SBI schemes faced higher risk than the market; otherwise the variation in return has always been less than the markets. In the year 2005-06 four schemes SBI Magnum Comma Fund Dividend, SBI Magnum Midcap Fund Dividend, SBI Magnum Index Fund Dividend and SBI Magnum Balanced Fund- Dividend were riskier than the average SBI schemes. In the year 2009-10 three schemes of SBI viz SBI Magnum Equity Fund – Dividend, SBI Magnum Midcap Fund Dividend, SBI Magnum Balanced Fund- Dividend were riskier than the market.

**Returns On Selected Schemes of SBI and UTI**
**Table: 1**

| **Return on selected schemes** | **Average Monthly Return** | | | | |
|---|---|---|---|---|---|
| | | | | | |
| **State Bank of India** | **2005-06** | **2006-07** | **2007-08** | **2008-09** | **2009-10** |
| SBI Magnum Equity Fund - Dividend | 4.73 | 0.16 | 1.27 | -4.17 | 5.30 |
| SBI Magnum Equity Fund Growth | 4.28 | 1.71 | 1.64 | -4.17 | 6.50 |
| SBI Magnum Comma Fund Dividend | 0.63 | 0.23 | 3.96 | -5.48 | 5.55 |
| SBI Magnum Midcap Fund Dividend | 5.40 | 0.05 | 1.14 | -7.62 | 8.26 |
| SBI Magnum Index Fund Dividend | 1.38 | 0.22 | 2.01 | -3.99 | 5.52 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | 0.09 | 0.23 | 0.04 | -0.07 | 0.19 |
| SBI Magnum Gilt LTP Fund | 0.29 | 0.43 | 0.53 | 0.42 | -0.19 |
| SBI Magnum Children Benefit Plan | 1.02 | 0.52 | 0.71 | -0.21 | 1.29 |
| SBI Magnum Balanced Fund- Dividend | 2.50 | 0.99 | 0.86 | -3.24 | 3.55 |
| SBI Magnum Balanced Fund Growth | 4.10 | 0.99 | 1.88 | -3.24 | 5.02 |
| **Average** | **2.44** | **0.55** | **1.40** | **-3.18** | **4.10** |
| | | | | | |
| **Unit Trust of India** | | | | | |
| UTI-Children Career Balanced Fund | 0.86 | -0.14 | 0.20 | -1.23 | 1.88 |
| UTI-Unit Linked Insurance Plan | 2.59 | -0.81 | 0.69 | -1.54 | 2.04 |

| | | | | | |
|---|---|---|---|---|---|
| UTI-MIS Advantage -Growth Plan | 1.68 | 0.40 | 0.93 | -0.14 | 1.75 |
| UTI-Retirement Benefit Pension Fund | 0.46 | 0.04 | 0.34 | -0.63 | 1.59 |
| UTI-Master Value Fund Growth Option | 3.29 | -0.29 | 2.30 | -4.65 | 7.88 |
| UTI-Master Plus Unit Scheme 91-Growth | 4.23 | 1.32 | 1.91 | -4.35 | 5.20 |
| UTI-Variable Investment Scheme -Growth Option | 1.66 | 0.34 | 0.46 | -3.10 | 3.13 |
| UTI-Balanced Fund Growth Retail | 2.67 | 0.50 | 1.58 | -2.88 | 4.78 |
| UTI-Equity Tax Savings Plan Growth Option | 3.93 | -0.11 | 2.18 | -4.08 | 5.27 |
| UTI-Opportunities Fund Dividend | 4.85 | -1.88 | 1.92 | -4.23 | 4.57 |
| **Average** | **2.62** | **-0.06** | **1.25** | **-2.68** | **3.81** |
| | | | | | |
| **Market Return** | **4.19** | **1.65** | **1.99** | **-4.23** | **5.89** |
| | | | | | |

On an average UTI-Opportunities Fund Dividend has been the riskiest of all the UTI schemes. UTI-Opportunities Fund Dividend faced higher risk than the market in three year viz 2006-07, 2007-08 and 2009-10. UTI-MIS Advantage -Growth Plan has been the least risky over the years in case of UTI funds. It has not only faced lesser return variation than the market but also has the least variation amongst the various UTI schemes. In the year 2006-07 , four schemes viz UTI-Master Value Fund Growth Option, UTI-Master Plus Unit Scheme 91-Growth, UTI-Equity Tax Savings Plan Growth Option, UTI-Opportunities Fund Dividend had higher variation than the market . In the year 2009-10, UTI-Opportunities Fund Dividend was the only scheme which gave higher variation than the market.

**Risk Of Selected Schemes of SBI and UTI**
**Table: 2**

| **Schemes** | **Average Monthly Return** | | | | |
|---|---|---|---|---|---|
| | **2005-06** | **2006-07** | **2007-08** | **2008-09** | **2009-10** |
| **State Bank of India** | □ | □ | □ | □ | □ |
| SBI Magnum Equity Fund - Dividend | 3.84 | 7.83 | 8.32 | 8.11 | 9.53 |
| SBI Magnum Equity Fund Growth | 3.72 | 7.67 | 9.36 | 8.11 | 7.97 |
| SBI Magnum Comma Fund Dividend | 9.48 | 9.93 | 9.26 | 7.99 | 7.78 |
| SBI Magnum Midcap Fund Dividend | 7.19 | 8.71 | 10.02 | 9.52 | 11.88 |
| SBI Magnum Index Fund Dividend | 8.64 | 6.26 | 7.19 | 7.80 | 7.57 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | 0.38 | 0.12 | 0.15 | 0.27 | 0.18 |
| SBI Magnum Gilt LTP Fund | 0.43 | 0.36 | 0.80 | 3.05 | 0.67 |
| SBI Magnum Children Benefit Plan | 0.82 | 1.22 | 1.12 | 1.37 | 0.87 |
| SBI Magnum Balanced Fund- Dividend | 4.56 | 5.61 | 5.86 | 5.68 | 8.08 |
| SBI Magnum Balanced Fund Growth | 2.77 | 5.61 | 5.91 | 5.68 | 6.12 |
| **Average Risk** | **4.18** | **5.33** | **5.80** | **5.76** | **6.07** |
| | | | | | |
| **Unit Trust of India** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| UTI-Children Career Balanced Fund | 3.23 | 2.90 | 3.53 | 2.90 | 2.16 |
| UTI-Unit Linked Insurance Plan | 0.98 | 3.82 | 3.68 | 4.54 | 3.63 |
| UTI-MIS Advantage -Growth Plan | 1.27 | 1.82 | 2.06 | 2.09 | 1.60 |
| UTI-Retirement Benefit Pension Fund | 3.69 | 2.84 | 3.54 | 2.68 | 1.75 |
| UTI-Master Value Fund Growth Option | 3.44 | 7.65 | 8.27 | 8.00 | 7.07 |
| UTI-Master Plus Unit Scheme 91-Growth | 3.93 | 7.85 | 7.38 | 6.78 | 6.76 |
| UTI-Variable Investment Scheme -Growth Option | 1.42 | 2.18 | 3.52 | 5.92 | 4.92 |
| UTI-Balanced Fund Growth Retail | 2.28 | 5.44 | 5.33 | 5.28 | 5.19 |
| UTI-Equity Tax Savings Plan Growth Option | 3.01 | 7.43 | 7.31 | 6.99 | 5.74 |
| UTI-Opportunities Fund Dividend | 2.62 | 7.11 | 8.18 | 7.99 | 9.17 |
| **Average Risk** | **2.59** | **4.90** | **5.28** | **5.32** | **4.80** |
| | | | | | |
| **Average Market Risk** | **3.53** | **6.67** | **6.91** | **8.20** | **7.97** |
| | | | | | |

**Beta Values Of Selected Schemes of SBI and UTI**
**Table -3**

| **Schemes** | **2005-06** | **2006-07** | **2007-08** | **2008-09** | **2009-10** |
|---|---|---|---|---|---|
| | **β** | **β** | **β** | **β** | **β** |
| **State Bank of India** | | | | | |
| SBI Magnum Equity Fund - Dividend | 0.95 | 0.79 | 0.95 | 1.00 | 0.91 |
| SBI Magnum Equity Fund Growth | 0.32 | -0.06 | 0.46 | 1.00 | 0.99 |
| SBI Magnum Comma Fund Dividend | 0.17 | 0.91 | 0.98 | 0.91 | 0.83 |
| SBI Magnum Midcap Fund Dividend | 0.30 | 0.86 | 0.89 | 0.95 | 0.94 |
| SBI Magnum Index Fund Dividend | 0.56 | 0.79 | 0.99 | 0.99 | 1.00 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | -0.06 | 0.38 | 0.51 | 0.28 | -0.67 |
| SBI Magnum Gilt LTP Fund | -0.05 | 0.42 | 0.29 | 0.02 | 0.00 |
| SBI Magnum Children Benefit Plan | -0.01 | 0.94 | 0.97 | 0.88 | 0.77 |
| SBI Magnum Balanced Fund- Dividend | 0.40 | 0.98 | 0.94 | 0.99 | 0.83 |
| SBI Magnum Balanced Fund Growth | 0.87 | 0.98 | 0.98 | 0.99 | 0.99 |
| **Average Value** | **0.34** | **0.70** | **0.79** | **0.80** | **0.66** |
| | | | | | |
| **Unit Trust of India** | | | | | |
| UTI-Children Career Balanced Fund | -0.28 | -0.27 | -0.06 | 0.91 | 0.39 |
| UTI-Unit Linked Insurance Plan | 0.14 | 0.41 | -0.26 | 0.93 | 0.71 |
| UTI-MIS Advantage -Growth Plan | 0.69 | 0.10 | -0.27 | 0.75 | 0.95 |
| UTI-Retirement Benefit Pension Fund | 0.25 | 0.89 | 0.17 | 0.95 | 0.64 |
| UTI-Master Value Fund Growth Option | 0.64 | 0.93 | 0.02 | 0.95 | 0.93 |

| | | | | | |
|---|---|---|---|---|---|
| UTI-Master Plus Unit Scheme 91-Growth | 0.92 | 0.99 | -0.14 | 0.99 | 0.99 |
| UTI-Variable Investment Scheme -Growth Option | 0.95 | 0.94 | -0.01 | 1.00 | 0.99 |
| UTI-Balanced Fund Growth Retail | 0.85 | 0.84 | -0.13 | 0.99 | 0.98 |
| UTI-Equity Tax Savings Plan Growth Option | 0.78 | 0.98 | -0.06 | 0.99 | 0.96 |
| UTI-Opportunities Fund Dividend | 0.81 | 0.80 | 0.03 | 0.83 | 0.95 |
| **Average Value** | **0.57** | **0.66** | **-0.07** | **0.93** | **0.85** |
| | | | | | |

Table 3 depicts the Beta values of the various schemes of SBI and UTI. Beta value of more than 1 indicates aggressive securities and less than one indicates defensive securities. The table clearly shows that on an average , both SBI and UTI schemes had been defensive from 2005-06 to 2009-10 as beta value is less than one. However the selected schemes of UTI have been more defensive as compared to those of SBI. In the year 2008-09 only two schemes of SBI viz SBI Magnum Equity Fund – Dividend and SBI Magnum Equity Fund Growth and one scheme of UTI viz UTI-Variable Investment Scheme -Growth Option have indicated beta value equal to one. On an average over the period of five years SBI Magnum Income Plus Fund-Savings Fund-Growth and UTI-Children Career Balanced Fund have been the most defensive securities.

**Sharpe's Index and Its Benchmark Values For Selected Schemes of SBI and UTI**
**Table: 4**

| Schemes | 2005-06 | | 2006-07 | | 2007-08 | | 2008-09 | | 2009-10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SI | BMS | SI | BMS | SI | BMS | SI | BMS | SI | BMS |
| **State Bank of India** | | | | | | | | | | |
| SBI Magnum Equity Fund - Dividend | -0.32 | -0.50 | -0.87 | -0.80 | -0.74 | -0.79 | -1.40 | -1.39 | 0.10 | 0.19 |
| SBI Magnum Equity Fund Growth | -0.45 | -0.50 | -0.69 | -0.80 | -0.62 | -0.79 | -1.40 | -1.39 | 0.27 | 0.19 |
| SBI Magnum Comma Fund Dividend | -0.56 | -0.50 | -0.68 | -0.80 | -0.37 | -0.79 | -1.58 | -1.39 | 0.15 | 0.19 |
| SBI Magnum Midcap Fund Dividend | -0.08 | -0.50 | -0.80 | -0.80 | -0.63 | -0.79 | -1.55 | -1.39 | 0.33 | 0.19 |
| SBI Magnum Index Fund Dividend | -0.53 | -0.50 | -1.09 | -0.80 | -0.75 | -0.79 | -1.43 | -1.39 | 0.15 | 0.19 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | -15.42 | -0.50 | -58.20 | -0.80 | -48.03 | -0.79 | -26.38 | -1.39 | -23.16 | 0.19 |
| SBI Magnum Gilt LTP Fund | -13.12 | -0.50 | -18.28 | -0.80 | -8.60 | -0.79 | -2.20 | -1.39 | -6.78 | 0.19 |
| SBI Magnum Children Benefit Plan | -5.99 | -0.50 | -5.33 | -0.80 | -5.98 | -0.79 | -5.37 | -1.39 | -3.51 | 0.19 |
| SBI Magnum Balanced Fund-Dividend | -0.76 | -0.50 | -1.07 | -0.80 | -1.12 | -0.79 | -1.83 | -1.39 | -0.10 | 0.19 |
| SBI Magnum Balanced Fund Growth | -0.67 | -0.50 | -1.07 | -0.80 | -0.94 | -0.79 | -1.83 | -1.39 | 0.11 | 0.19 |
| **Unit Trust of India** | | | | | | | | | | |
| UTI-Children Career Balanced Fund | -1.58 | -0.50 | -2.46 | -0.80 | -2.04 | -0.79 | -2.90 | -1.39 | -1.15 | 0.19 |
| UTI-Unit Linked Insurance Plan | -3.79 | -0.50 | -2.05 | -0.80 | -1.83 | -0.79 | -1.91 | -1.39 | -0.64 | 0.19 |
| UTI-MIS Advantage -Growth Plan | -3.36 | -0.50 | -3.63 | -0.80 | -3.15 | -0.79 | -3.48 | -1.39 | -1.63 | 0.19 |
| UTI-Retirement Benefit Pension Fund | -1.49 | -0.50 | -2.45 | -0.80 | -2.00 | -0.79 | -2.90 | -1.39 | -1.58 | 0.19 |
| UTI-Master Value Fund Growth Option | -0.78 | -0.50 | -0.96 | -0.80 | -0.62 | -0.79 | -1.47 | -1.39 | 0.50 | 0.19 |
| UTI-Master Plus Unit Scheme 91-Growth | -0.44 | -0.50 | -0.72 | -0.80 | -0.75 | -0.79 | -1.70 | -1.39 | 0.12 | 0.19 |
| UTI-Variable Investment Scheme - Growth Option | -3.03 | -0.50 | -3.05 | -0.80 | -1.98 | -0.79 | -1.73 | -1.39 | -0.25 | 0.19 |
| UTI-Balanced Fund Growth Retail | -1.45 | -0.50 | -1.20 | -0.80 | -1.10 | -0.79 | -1.90 | -1.39 | 0.08 | 0.19 |
| UTI-Equity Tax Savings Plan Growth Option | -0.67 | -0.50 | -0.96 | -0.80 | -0.72 | -0.79 | -1.61 | -1.39 | 0.16 | 0.19 |
| UTI-Opportunities Fund Dividend | -0.43 | -0.50 | -1.25 | -0.80 | -0.67 | -0.79 | -1.42 | -1.39 | 0.02 | 0.19 |

Table 4 reveals the Sharpe's Index and its Benchmark values for the years 2005-06 and 2009-10. It has been observed that only three schemes of SBI viz SBI Magnum Equity Fund – Dividend, SBI Magnum Equity Fund Growth , SBI Magnum Midcap Fund Dividend and two schemes of UTI viz UTI-Master Plus Unit Scheme 91-Growth and UTI-Opportunities Fund Dividend have outperformed the market during 2005-06. During 2006-07, two schemes of SBI viz SBI Magnum Equity Fund Growth, SBI Magnum Comma Fund Dividend and one scheme of UTI viz UTI-Master Plus Unit Scheme 91-Growth have outperformed the market. During 2009-10, two schemes of SBI viz SBI Magnum Equity Fund Growth , SBI Magnum Midcap Fund Dividend outperformed the market. None of the schemes of UTI performed better than the market.

Table 5 reveals the risk adjusted measure of Treynor and its benchmark value for the market from 2005-06 to 2009-10. In the year 2005-06 four mutual funds of SBI viz SBI Magnum Equity Fund – Dividend, SBI Magnum Income Plus Fund-Savings Fund-Growth, SBI Magnum Gilt LTP Fund and SBI Magnum Children Benefit Plan and two mutual funds of UTI viz UTI-Children Career Balanced Fund and UTI-Opportunities Fund Dividend performed better than the benchmark. In the year 2006-07 only one mutual fund each of SBI viz SBI Magnum Equity Fund Growth and UTI viz UTI-Children Career Balanced Fund could outperform the market. In the year 2007-08 majority of the mutual funds of UTI performed better than the benchmark while only one mutual of SBI could outperform the market. In the year 2009-10 two mutual funds of SBI viz SBI Magnum Midcap Fund Dividend and SBI Magnum Income Plus Fund-Savings Fund-Growth and only one mutual fund of UTI viz UTI-Master Value Fund Growth Option performed better than the benchmark.

Table 6 presents the values of Jensen's absolute measure i.e alpha for selected schemes of SBI and UTI. A positive value of alpha would indicate that the scheme has provided a higher return over the CAPM return and lies above Security Market Line (SML) and a negative value would indicate it has provided a lower than expected returns and lies below SML. In 2005-06 only one mutual find of SBI i.e. SBI Magnum Equity Fund – Dividend and five mutual funds of UTI i.e. UTI-MIS Advantage -Growth Plan, UTI-Master Value Fund Growth Option , UTI-Master Plus Unit Scheme 91-Growth, UTI-Equity Tax Savings Plan Growth Option and UTI-Opportunities Fund Dividend had positive alpha which means that they provided returns higher than CAPM. In 2006-07 none of the schemes of SBI or UTI could provide returns higher than CAPM as indicated by the negative values of alpha. In 2007-08 only SBI Magnum Comma Fund Dividend

**Treynor's Index and Its Benchmark Values For Selected Schemes of SBI and UTI**
**Table: 5**

| Schemes | 2005-06 | | 2006-07 | | 2007-08 | | 2008-09 | | 2009-10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TI | BMT | TI | BMT | TI | BMT | TI | BMT | TI | BMT |
| **State Bank of India** | | | | | | | | | | |
| SBI Magnum Equity Fund - Dividend | -1.30 | -1.77 | -8.63 | -5.36 | -6.51 | -5.43 | -11.37 | -11.38 | 1.03 | 1.53 |
| SBI Magnum Equity Fund Growth | -5.33 | -1.77 | 92.90 | -5.36 | -12.60 | -5.43 | -11.38 | -11.38 | 2.16 | 1.53 |
| SBI Magnum Comma Fund Dividend | -32.13 | -1.77 | -7.46 | -5.36 | -3.54 | -5.43 | -13.90 | -11.38 | 1.43 | 1.53 |
| SBI Magnum Midcap Fund Dividend | -1.87 | -1.77 | -8.05 | -5.36 | -7.06 | -5.43 | -15.60 | -11.38 | 4.13 | 1.53 |
| SBI Magnum Index Fund Dividend | -8.25 | -1.77 | -8.64 | -5.36 | -5.47 | -5.43 | -11.26 | -11.38 | 1.16 | 1.53 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | 93.21 | -1.77 | -17.79 | -5.36 | -14.41 | -5.43 | -26.06 | -11.38 | 6.25 | 1.53 |
| SBI Magnum Gilt LTP Fund | 120.59 | -1.77 | -15.66 | -5.36 | -23.67 | -5.43 | -354.17 | -11.38 | -1515.57 | 1.53 |
| SBI Magnum Children Benefit Plan | 379.71 | -1.77 | -6.87 | -5.36 | -6.94 | -5.43 | -8.33 | -11.38 | -3.96 | 1.53 |
| SBI Magnum Balanced Fund-Dividend | -8.60 | -1.77 | -6.18 | -5.36 | -7.00 | -5.43 | -10.53 | -11.38 | -0.97 | 1.53 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SBI Magnum Balanced Fund Growth | -2.14 | -1.77 | -6.18 | -5.36 | -5.68 | -5.43 | -10.53 | -11.38 | 0.66 | 1.53 |
| **Unit Trust of India** | | | | | | | | | | |
| UTI-Children Career Balanced Fund | 17.97 | -1.77 | 26.28 | -5.36 | 124.52 | -5.43 | -9.23 | -11.38 | -6.30 | 1.53 |
| UTI-Unit Linked Insurance Plan | -26.30 | -1.77 | -19.07 | -5.36 | 25.99 | -5.43 | -9.37 | -11.38 | -3.26 | 1.53 |
| UTI-MIS Advantage -Growth Plan | -6.21 | -1.77 | -66.10 | -5.36 | 23.69 | -5.43 | -9.75 | -11.38 | -2.73 | 1.53 |
| UTI-Retirement Benefit Pension Fund | -22.36 | -1.77 | -7.80 | -5.36 | -41.17 | -5.43 | -8.19 | -11.38 | -4.35 | 1.53 |
| UTI-Master Value Fund Growth Option | -4.20 | -1.77 | -7.82 | -5.36 | -243.78 | -5.43 | -12.36 | -11.38 | 3.80 | 1.53 |
| UTI-Master Plus Unit Scheme 91-Growth | -1.89 | -1.77 | -5.75 | -5.36 | 39.91 | -5.43 | -11.59 | -11.38 | 0.85 | 1.53 |
| UTI-Variable Investment Scheme -Growth Option | -4.51 | -1.77 | -7.08 | -5.36 | 535.36 | -5.43 | -10.26 | -11.38 | -1.25 | 1.53 |
| UTI-Balanced Fund Growth Retail | -3.87 | -1.77 | -7.77 | -5.36 | 44.95 | -5.43 | -10.14 | -11.38 | 0.43 | 1.53 |
| UTI-Equity Tax Savings Plan Growth Option | -2.59 | -1.77 | -7.27 | -5.36 | 93.61 | -5.43 | -11.35 | -11.38 | 0.95 | 1.53 |
| UTI-Opportunities Fund Dividend | -1.37 | -1.77 | -11.08 | -5.36 | -220.01 | -5.43 | -13.64 | -11.38 | 0.22 | 1.53 |

| **Table: 6** | **Jensen's Alpha for Selected Schemes of SBI and UTI** | | | | |
|---|---|---|---|---|---|
| **Return on selected schemes** | **2005-06** | **2006-07** | **2007-08** | **2008-09** | **2009-10** |
| **State Bank of India** | | | | | |
| SBI Magnum Equity Fund - Dividend | 0.44 | -2.60 | -1.02 | 0.01 | -0.45 |
| SBI Magnum Equity Fund Growth | -1.12 | -5.60 | -3.29 | 0.00 | 0.62 |
| SBI Magnum Comma Fund Dividend | -5.04 | -1.91 | 1.85 | -2.29 | -0.08 |
| SBI Magnum Midcap Fund Dividend | -0.03 | -2.33 | -1.45 | -3.99 | 2.45 |
| SBI Magnum Index Fund Dividend | -3.60 | -2.58 | -0.04 | 0.12 | -0.37 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | -5.98 | -4.74 | -4.60 | -4.07 | -3.15 |
| SBI Magnum Gilt LTP Fund | -5.75 | -4.33 | -5.31 | -6.51 | -4.55 |
| SBI Magnum Children Benefit Plan | -4.96 | -1.43 | -1.46 | 2.70 | -4.26 |
| SBI Magnum Balanced Fund- Dividend | -2.75 | -0.80 | -1.47 | 0.84 | -2.09 |
| SBI Magnum Balanced Fund Growth | -0.32 | -0.80 | -0.24 | 0.84 | -0.86 |
| **Unit Trust of India** | | | | | |
| UTI-Children Career Balanced Fund | -5.60 | -8.60 | -7.54 | 1.95 | -3.08 |
| UTI-Unit Linked Insurance Plan | -3.48 | -5.62 | -8.14 | 1.86 | -3.41 |
| UTI-MIS Advantage -Growth Plan | 0.49 | -0.34 | 1.79 | 3.72 | -2.72 |
| UTI-Retirement Benefit Pension Fund | -1.09 | -1.45 | 0.22 | 3.35 | -2.50 |
| UTI-Master Value Fund Growth Option | 0.38 | -1.84 | 2.53 | -0.64 | 2.35 |
| UTI-Master Plus Unit Scheme 91-Growth | 0.33 | -0.32 | 2.50 | -0.16 | -0.64 |
| UTI-Variable Investment Scheme -Growth Option | -2.36 | -1.22 | 0.76 | 1.13 | -2.70 |
| UTI-Balanced Fund Growth Retail | -1.00 | -0.89 | 2.14 | 1.30 | -1.02 |
| UTI-Equity Tax Savings Plan Growth Option | 0.50 | -1.74 | 2.58 | 0.10 | -0.42 |
| UTI-Opportunities Fund Dividend | 1.31 | -3.23 | 2.14 | -0.83 | -1.08 |

gave higher than expected returns. All except two mutual funds UTI-Children Career Balanced Fund and UTI-Unit Linked Insurance Plan gave lower returns than expected in 2007-08. In the year 2009-10, SBI Magnum Equity Fund Growth and SBI Magnum Midcap Fund Dividend could give returns above CAPM while in case of UTI only UTI-Master Value Fund Growth Option could generate returns above CAPM.

Fama's Measure , whose positive value indicates superior stock selection skills of the managers is presented in Table 7 for selected schemes of SBI and UTI. Fama says the

| **Table: 7** | **Fama's Net Portfolio Return Due to Sensitivity for Selected Schemes of SBI and UTI** | | | | |
|---|---|---|---|---|---|
| **Return on selected schemes** | **2005-06** | **2006-07** | **2007-08** | **2008-09** | **2009-10** |
| **State Bank of India** | | | | | |
| SBI Magnum Equity Fund - Dividend | 0.11 | 1.19 | 1.26 | -0.14 | -0.18 |
| SBI Magnum Equity Fund Growth | 0.09 | 0.80 | 2.06 | -0.13 | 0.00 |
| SBI Magnum Comma Fund Dividend | 9.00 | 3.32 | 1.18 | -0.33 | 0.03 |
| SBI Magnum Midcap Fund Dividend | 0.58 | 2.12 | 2.83 | 2.37 | -1.92 |
| SBI Magnum Index Fund Dividend | 6.63 | -0.42 | 0.22 | -0.55 | 0.06 |
| SBI Magnum Income Plus Fund-Savings Fund-Growth | -5.24 | -6.66 | -7.21 | -6.98 | -4.07 |
| SBI Magnum Gilt LTP Fund | -4.97 | -6.22 | -6.09 | -4.22 | -4.16 |
| SBI Magnum Children Benefit Plan | -3.78 | -5.30 | -5.62 | -6.13 | -2.73 |
| SBI Magnum Balanced Fund- Dividend | 1.02 | -0.96 | -0.99 | -3.20 | 0.01 |
| SBI Magnum Balanced Fund Growth | -0.40 | -0.96 | -0.79 | -3.20 | 0.15 |
| **Unit Trust of India** | | | | | |
| UTI-Children Carrer Balanced Fund | -0.43 | -4.04 | -3.53 | -5.42 | -1.81 |
| UTI-Unit Linked Insurance Plan | -2.69 | -3.35 | -3.14 | -3.88 | -1.26 |
| UTI-MIS Advantage -Growth Plan | -2.73 | -4.80 | -4.56 | -5.43 | -2.08 |
| UTI-Retirement Benefit Pension Fund | 0.25 | -4.00 | -3.46 | -5.24 | -2.16 |
| UTI-Master Value Fund Growth Option | -0.06 | 1.07 | 1.01 | -0.29 | 0.40 |
| UTI-Master Plus Unit Scheme 91-Growth | 0.20 | 1.01 | 0.38 | -2.00 | 0.13 |
| UTI-Variable Investment Scheme -Growth Option | -2.57 | -4.48 | -3.42 | -2.85 | -0.47 |
| UTI-Balanced Fund Growth RetailL | -1.17 | -1.20 | -1.33 | -3.58 | 0.15 |
| UTI-Equity Tax Savings Plan Growth Option | -0.30 | 0.81 | 0.30 | -1.66 | 0.25 |
| UTI-Opportunities Fund Dividend | -0.29 | 0.59 | 1.02 | -0.30 | -0.03 |

portfolio performance can be judged by the net superior returns due to selectivity. A positive value for Fama's Selectivity Index indicates that the fund earned returns higher than expected returns and lies above CML, and a negative value indicates that the fund earned returns less than expected returns and lies below CML. In 2005-06 , majority of the schemes of SBI and only two schemes of UTI indicate a positive value of Fama's measure. Over the years it can be observed that most of the times majority of the schemes of SBI and UTI have indicated negative Fama's value which means that the managers have not done superior stock selection.

**CONCLUSION:-**

The objective of this study was to evaluate the performance of Indian Mutual Fund

Schemes from 2005-06 to 2009-10 through Treynor's ratio, Sharpe's ratio, Jensen's measure, and Fama's measure. The conclusions are as follows:

**Average Return**

The average Return of SBI Mutual Fund Schemes was higher than that of UTI.

**Risk**

The average beta in case of both SBI and UTI over the span of five years is less than one indicating that both of the Mutual Fund Schemes have been defensive.

**Sharpe's Ratio**

Out of total 10 schemes of SBI- three, three, five and two outperformed the market in 2005-06, 2007-08, 2007-08 and 2009-10 respectively. In case of UTI- three, four, and one schemes outperformed the market in 2005-06, 2007-08 and 2009-10 respectively.

**Treynor's Ratio**

Out of total 10 schemes of SBI- four, one, five and four outperformed the market in 2005-06, 2007-08, 2008-09 and 2009-10 respectively. In case of UTI- two, seven, seven and six schemes outperformed the market in 2005-06, 2007-08, 2008-09 and 2009-10 respectively.

**Jensen's Alpha**

Out of total 10 schemes of SBI- one scheme in 2005-06 and 2007- 08 , six in 2008-09 and two schemes in 2009-10 have been able to give superior returns. In case of UTI- five schemes in 2005-06, eight schemes in 2007-08, seven schemes in 2008-09 and only one scheme in 2009-10 gave superior returns.

**Fama's Senstivity Index**

Out of total 10 schemes of SBI- six schemes in 2005-06 , four in 2006-07, five in 2007-08, one in 2008-09 and four schemes in 2009-10 have been able to give superior returns due to better selectivity of stocks. In case of UTI- two schemes in 2005-06, four in 2006-07, four schemes in 2007-08, and four schemes in 2009-10 gave superior returns due to selectivity.

## References


- Anand, S. and Murugaiah, V (December 18, 2006).., "Analysis of Components of Investment Performance - An Empirical Study of Mutual Funds in India" 10th Indian Institute of Capital Markets Conference. Available at SSRN: http://ssrn.com/abstract=961999
- Eugene Fama, "Components Of Investment Performance", Journal Of Finance, 27, (June1972), Pp. 551-567
- Gupta L.C, "Indian Share Owners: A Survey", Society For Capital Market Research And Development, 1991, P.92.
- Jack L. Treynor, "How To Rate Management Of Investment Funds", Harvard Business Review, 43, No.1, (January-February, 1965), Pp. 63-75.
- Jayadev, M (1996)" Mutual Fund Performance: An Analysis Of Monthly Returns", Finance India, 10(1).March Pp.73-84.
- Jensen, Michael C.(1967), "The Performance Of Mutual Funds In The Period 1945-1964", The Journal Of Finance , Vol 23, No.2, Pp 389-416
- Kothari, S.P. and Warner, Jerold B (August 1997)., "Evaluating Mutual Fund Performance". Available at SSRN: http://ssrn.com/abstract=75871 or doi:10.2139/ssrn.75871
- Panwar, Sharad and Madhumathi, R., "Characteristics and Performance Evaluation of Selected Mutual Funds in India". Indian Institute of Capital Markets 9th Capital Markets Conference Paper. Available at SSRN: http://ssrn.com/abstract=876402
- Sapar, Narayan Rao and Madava, Ravindran, "Performance Evaluation of Indian Mutual Funds". Available at SSRN: http://ssrn.com/abstract=433100 or doi:10.2139/ssrn.433100
- Shah Ajay And Thomas Susan, "Performance Evaluation Of Professional Portfolio Management In India", Center For onitoring Indian Economy, (Working Paper) April, 1994.
- Sharpe, W F (1966), "Mutual Fund Performance", The Journal Of Finance, June Pp.551-567
- Turan. M S Bodla, B S Mehta, Sushil Kumar (2001), "Performance Evaluation Of Listed Schemes Of Mutual Fund", Management Researcher, (July December.) Pp.38-66



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# VENTURE CAPITAL AND ENTREPRENEURSHIP DEVELOPMENT IN INDIA --AN ANALYTICAL VIEW

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**ABSTRACT**

***Venture capital is a unique financial instrument emerged in 19th century to promote new and innovative business proposals that can lead the high economic growth. The role of venture capital is quite different and distinguishable to traditional type of finance as venture capitalist participate not only in the capital but also in the management. The essential objective of Venture Capital is to achieve high returns on its investment, so, the role of venture capital need not be restricted by size and specific industries. Some of the ventures funded by Venture Capital funds over the world includes sale of antique remodeled jewellery, publishing of specialist books, the baby and health care market, retirement homes, distribution of indoor plants and plant arrangements to the major retail shops, even small houses and what not? In India, Venture Capital activity is expected to play a pervasive role in encouraging the new class of promoters, namely, innovators, professional executives and technocrats. Hence, the venture capital can lead the country to greater dispersion of economic power, and growth. So, there is a need to study the role play of typical venture capital organizations in development and promotion of business ventures of various entrepreneurs come from the first generation and technocrats having sound knowledge and creativity. The objective of present paper is to analyze the state and role of Venture Capital in promotion of Entrepreneurship Development in India in a detailed manner.***

***Key words: Venture capital, Financial* instrument *and Entrepreneurship Development***

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## Introduction

Entrepreneurship is the dynamic process of creating incremental wealth. Individuals who assume the major risks in terms of equity, time, and/or career commitment or provide value for some product or service create the wealth. The product or service may or may not be new or unique but the entrepreneur must somehow infuse value by receiving and locating the necessary skills and resources.

As evidenced by the many different definitions, the term entrepreneurship means different things to different people and can be viewed from different conceptual perspectives. However, in spite of the differences, there are common aspects: risk taking, creativity, independence and rewards. These commonalities will continue to be the driving force behind the notion of entrepreneurship in the future. One thing is clear that the future for entrepreneurship appears to be bright.

Various governments have also taken an increasing interest in promoting the growth of entrepreneurship. Individuals are encouraged to form new businesses and are provided such government support as tax incentives, buildings, reads, and a communication system – a strong government infrastructure – to facilitate this creation process.

The role of entrepreneurship in economic development involves more than just increasing per capita output and income; it involves initiating and constituting change in the structure of business and society. This change is accompanied by growth and increased output, which allows more to be divided by the various participants. What in an area facilitates the needed change and development? One theory of economic growth depicts innovation as the key not only in developing new products or services for the market but also in stimulating investment interest in the new ventures being created. This new investment works on both the demand and the supply sides of the growth equation: the new capital created expands the capacity for growth (supply side) and the resultant new spending utilizes the new capacity and output (demand side).

Although the entrepreneurial spirit was so considerable in global countries, specifically in India, the major problem that can be considered as a challenge for entrepreneur is finance. As it is true that the economic development of a country directly depends on the contributions of entrepreneurs through their innovative ideas generate from their creative abilities. Hence, most of the entrepreneurs were deterring starting on their enterprises due to lack of financial assistance. Not only that, the complex behavior of traditional investors away from new and innovative businesses due to high degree of risk and uncertainty. However, there was a big gap in financing the entrepreneur's ventures.

While suffering a lot in getting finance the entrepreneurs started looking at a new solution that can help them very highly in surmounting the problems of financing their ventures. Fortunately, in this direction a new financial instrument as well as a service emerged in the name of venture capital to cater to the needs of technocrats and budding entrepreneurs.

**The concept of venture capital**

Venture capital is a new financial service, the emergence of which went towards developing strategies to help a new class of new entrepreneurs to translate their business ideas into realities. As the name suggests it implies capital provided to start a new venture, it is known as venture capital. This new financial intermediary emerged in eighties. The term venture capitalist denotes institutional investors that provide equity financing to projects and play an active role in advising the managements. Venture capital is an important source of funds for technology-based industries, which contribute significantly to growth process. It helps entrepreneurs to actualize scientific ideas and inventions. Hence, Venture capital is a potential source for augmenting the supply of good securities with track record of performance to the stock market, which faces shortage of good securities to absorb the savings of the investors. However, Venture capital is

quite distinguishable to traditional bank and institutional finance as the feature of the Venture Capital is different from the traditional one.

Venture capital is one of the least-understood areas in entrepreneurship. Some think that venture capitalists do the early-stage financing of relatively small, rapidly growing technology companies. While true, this is a narrow definition; it is better to view venture capital more broadly as a professionally managed pool of equity capital. Frequently, the equity pool is formed from the resources of wealthy limited partners. Other principal investors in venture-capital limited partnerships are pension funds, endowment funds, and other institutions, including foreign investors. The pool is managed by a general partner – the venture-capital firm – in exchange for a percentage of the gain realized on the investment and a fee. The investments are in early stage deals as well as second- and third –stage deals and leveraged buyouts. In fact, venture capital can best be characterized as a long-term investment discipline, usually over a five-year period , in the creation of early-stage companies, the expansion and revitalization of existing businesses, and the financing of leveraged buyouts of existing divisions of major corporations or privately owned businesses. In each investment, the venture capitalist takes and equity participation through stock, warrants, and/or convertible securities and has an active involvement in the monitoring of each portfolio company bringing investment, financing planning, and business skills to the firm.

**Functions of Venture Capital**

Venture capital plays the crucial role in fostering industrial development by exploring vast and untapped potentialities. The key functions of venture capital are:

1. Venture capital provides finance as well as skills to new enterprises and new ventures of existing ones based on high technology innovations. It provides seed capital funds to finance innovations even in the pre-start stage. In the development stage that follows, the conceptual stage venture capitalist develops a business plan, which will detail the market opportunity, the product, the development and financial needs. In this crucial stage, the venture capitalist has to assess the intrinsic merits of the technological innovation, ensure that the innovation is directed at a clearly defined market opportunity and satisfies himself that the management team at the helm of affairs is competent enough to achieve the targets of the business plan. Therefore, venture capitalist helps the firm to move to the exploitation state, i.e., launching of the innovation. While launching the innovation the venture capitalist will seek to establish a time frame for achieving the pre-determined development marketing, sales and profit targets. In each investment, as the venture capitalist assumes absolute risk, his role is not restricted to that of a mere supplier of funds but that of an active partner with total investment in the assisted project. Thus, financier but also a skilled and multi-faceted intermediary supplying a broad spectrum of specialist services – technical, commercial, managerial, financial and entrepreneurial.

2. Venture capitalist fills the gap in the owner's funds in relation to the quantum of equity required to support the successful launching of anew business or the optimum scale of operations of an existing business. It acts as a trigger in launching new business and as a catalyst in stimulating existing firms to achieve optimum performance.
3. Venture capitalist assists the entrepreneurs in locating, interviewing and employing outstanding corporate achievers to professionalize the firm.
4. Venture capitalist's duty extends even as far as to see that the firm has proper and adequate commercial banking and receivable financing.

**Working of venture capital**

A promoter comes forward either with a new business as yet an untried product or process. He needs a financial backer to help him to set up his plans or buy out a part or the whole of an existing enterprise. He may not be able to go to the regular bank or conventional financial institutions foe one of the two reasons: the predict may be untried and there may be teething problem to overcome in its design and marketing. Alternatively, their promoter may have no previous track record as investor. In such cases, the financier (a venture capitalist) may come forward and lend him the money in the understanding that, if the enterprise proves successful, it will go public, i.e., it will make an initial public offer (IPO) of its share. The more successful the venture has been, the higher will be the profit made by the both the promoter and financier through sale of shares. So it is intended that the venture capital assistance should go mainly to the schemes with the objectives of encourage the indigenous technology and its commercial application, adopt and modify the applications of imported technology in such a manner that it will be appropriate to the Indian environment. The assistance is generally being provided for the purpose of Setting up of pilot projects, for technological innovations and modernization, for developing appropriate technology, and for meeting the cost of marking surveys and market promotion programmes.

**Review of the literature**

Venture capital is a financial innovation of the twentieth century became known after the famous legend of Apple Computers, which started out in U.S in 1977 with the Capital firm, Arthur Rock and Co. It has become the major topic of discussion and is attracting more attention at present than ever before due to globalization. There has been a plethora of literature on venture capital finance, which is helping the practitioner's viz., venture capital finance companies and fund managers and academicians for better understanding the role of VC in economic development.

There are number of studies on Venture Capital and activities of Venture capitalists in developed countries, Clark, 1987; Bygrave and Timmons, 1985 and 1992; Fried and Hisrich, 1988 and

1994; Macmillan et al, 1985 and 1987; Tyebjee and burno, 1984, Wan , 1991; Wilson, 1993 concentrated on the venture investment process and evaluation criteria.

There are few studies in the context of Asian countries: Ray 1991; Rayand Turynin, 1993; Pandey, 1995, they view that in the developing countries venture capital industry is at take-off it needs policy and other measures like developed countries to boost necessary development.

Those who have been most influential are the Americans like Bostern, James W, Gill.D, Green, Nilford, Henderson J.W, Klug, Jhon R, Lorens, Tony, Mc Graty, T.P, Oerez, Robert, Rogers.E.M, J.K.Harsen, Gampers, Raul, Mull, Frederick. H and Neher, Darwin V is of the view that, venture capital finance is a capital investment in a business enterprise that carries elements of high risk that is very significant to the development of new business.

Pratt and Pratt (Guide on Venture Capital, 1983 USA) views that venture capital is "the earkt stage financing of new and young enterprises seeking to grow rapidly'.

Dean, B.V. and Bakou, S.K. 1990 (Co-operations management in a venture capital fund: In Strategic Management-Methods and Studies); Glad Stone,D.1988(Venture Capital Hand Book); Henderson, J.W.1988 (Obtaining Venture Financing; Principles and Practices); Lorens, Tony, 1988 (Venture Capital Today); Mc Garthy, T.P 1989(Business plams that win Venture Capital) ; Mc Naughton, Rod B.1991 (Venture Capital – The developing literature) emphasized on Principles , Practices and How to get Venture Capital.

Venture Capital is the respinse of the market forces to fill the void between sources of fund for innovations and traditional lower cost sources of capital available to ongoing projects, BobZider, 1998 (How Venture Capital Works-Harvard Business Review);

Gompers, Paus, 1993 (Harward University); Mull Frederick, H.1990 (University of Geotfia) and Neher, Darwin, V. 1994 (Prinston University) concentrated in their Ph.D., thesis on the theory, structure and performance of Venture Capital.

Kucchal, S.C 1990, Verma, J.C view that the venture capital can promote well the Indian industry if the problems pertaining to venture capital industry are solved.

Guptha , O.Pm Verma, J.C, Pandey, I.M, Srivasthava, Hemanth patwsrdhan, Ganeshan, Nhattacharya, Pandya Mukul, Machi Raju and Prasenna Chandra, view that the venture capital captivity has just begun in India. It can play amore innovative and developmental role in a developing country like India by combining risk financing with management and marketing assistance. It can foster the development of entrepreneurship and transfer of technology. Moreover this venture capital is right solution to the industrial sickness and up gradation of technology in small-scale industries.

Venture Capital – withering and dying – Amy Cortege, 25th October 2001, The Hindu explains about the future of venture capital industry and the reduction of investment and closing or shutting-down of offices by new comers.

Venture Capital comes of Age – Sandhya Prakash – Indian Management capital in the developing country like India.

Sethi, Sudhir, 24th February 1999, Venture Capital and entrepreneurship, The Economic Times (Pg.8) discusses about the entrepreneurship through venture capital.

D. Mukhopadhayay – November 1995 – Venture Capital Fund – A Perspective – Management Accountant explains about the history, operation and management of venture capital funds and indicates a set of policy measures required for their effective functioning in India.

Venture capital niche exists because it addresses the problems and imperfections like asymmetry of information, adverse selection and agency problem in the capital market a unique and distinct manner, William 1990, NeherDarwin 1994, Sankir 1994, Hellman, 1993, Gompess and Paul, 1993, Jacob 1993, Hagan John Terry 1999, Hober 1990.

The road to success is not smooth. Getting venture capital is tough. Only ten in hundred get beyond pre-evaluation stage and only one gets funded. Getting money out of another person's pocket was never easy; what is really required is confidence in one's abilities and perseverance, Bikrmjeet S. Guram, Venture Forth, 2nd June 2001, The Economic Times.

Dotcoms may have brought down the credibility of venture capitalists but the future especially of the technology companies depends entirely on this form of funding, at ate Nagendra V. Chowdary and Dr. G.Ramakrishna Reddy, Venture Capital – A Beleagured Past and a Promising Future? , Indian Management, March 2001.

Venture Capital can play a more innovative and developmental role in a developing country like India. It could help the rehabilitation of sick units through people with ideas and turnaround management skills. Not only that, it can also play a significant role in service sector including tourism, publishing, health care and financial services etc of developing countries, Dr.T.Sathyanarayana Chary, Venture Capital Industry – Issues and Measures for Development, Pratibimba, 2nd August 2001.

Aspects of Venture Capital industry especially financing value addition and disinvestments mechanism may have far reaching implications for the development of the whole venture capital industry, Vishnu Varshney, Productivity, 3rd October – December 1999.

I. M.Panday's Venture Capital : Indian experience, deals with evaluation and experience of venture capital in India and various countries of the world well that covered problems and

prospects of venture capital in India with comparison of developed counties. Measures needed to boost the venture capital industry are also discussed.

It is very clear from the above review of literature on the subject that, research on venture capital is net limited but incomprehensive. Most of the studies dealt with only Venture Capital Finance in a broader way. Since, venture capital is quite different from conventional finance, venture capital investors need good skills in selecting and promoting risk oriented, high and unproven technological projects. Because, the success of entrepreneurs depends not only on themselves but also on the venture capitalist. So there is much impedance over the role of Venture Capital in Entrepreneurship Development. Therefore the present study makes a modest attempt to evaluate the role of Venture Capital in entrepreneurship development of India.

**Objectives and methodology of the study**

The prime objective of the study is to analyze the role of venture capital in promotion of entrepreneurism in India with the following specific objectives.

1. To find out the dependency and relationship of Venture Capital to Entrepreneurism and its impact on Entrepreneurship Development.
2. To review the state of Venture Capital industry in India.
3. To find out the contributions of Venture Capital in development and promotion of entrepreneurism in India.

As the present study is analytical one it used secondary data only collected from various sources, namely, literature of Venture Capital and Entrepreneurship, annual reports of Indian Venture Capital association. Data, thus, collected with regard to growth of Venture Capital, industry wise finance, sources of finance, methods of finance, investment by stages, investment by region and states in India was processed, analyzed and presented in a systematic way through various statistical tools.

**Scope and Limitations**

The study covers a rigorous analysis over the concept of Venture Capital and Entrepreneurship Development with special reference to India as a case problem. Where analysis was made with regard to evaluation of Venture Capital in India and growth of Venture Capital as well as role of VCL in promoting entrepreneurs in India. Though the study is a very comprehensive in nature, it is subjected to certain limitations, they are:

1. The findings of case analysis cannot be generalized to other countries or foreign Venture Capital funds, and,
2. Impact of Venture Capital is not studied form the perspective of various macro parameters except the selected one i.e. total finance extended to entrepreneurs through different sources of finance.

**Venture capital industry in india – An overview**

The committee on Development of small and medium entrepreneurs under the chairmanship of R.S. Bhatt first highlighted venture capital financing in India in 1972. It drew attention to the problems of new entrepreneurs and technologists in setting up industries. In 1975 venture capital financing was introduced in Indian by the All India Financial Institutions with the inauguration of Risk Capital Foundation (RCF) sponsored by IFCI with a view to encourage the technologists and the professionals to promote new industries. In 1976 the seed capital scheme was introduced by IDBI. Till 1984 venture capital took the form of risk capital and seed capital. In 1986 ICICI launched a venture capital scheme to encourage new technocrats in the private sector in emerging fields of high-risk technology.

Consequently, Government of India felt the need of venture capital funds in India in the context of structural development and growth of small-scale business enterprises. Because small-scale industries form the major constituents of the backbone of Indian Economy and economic prosperity and development of the state is rather impossible without adequate economic support of the small-scale industrial sector. 1986-87 is an eventful year for the venture capital industry in the country. A 5 percent cent was levied on all know-how payments to create a venture capital fund by IDBI. ICICI also started to become a partner of the venture capital industry in the same year. 'Necessity is the mother of invention' was apathy applicable to the industrial thought of the promoters of Indian venture capital funds in those days when the new and young entrepreneurs were facing difficulties to raise equity capital from the conventional market during 1988-89. Under the circumstances, the scheme to launch venture capital funds was formulated.

Initially, a fund under the nomenclature of venture capital fund (VCF) was required to be established with certain corpus for being invested in the new and young firms with high potential of returns. Government decided to allow them concessional treatment of capital gains arising out of liquidation of equity holding in the assisted firms. At present, several venture capital firms are incorporated in India and they are promoted either by all India Financial Institutions like IDBI, ICICI, IFCI, State level financial institutions, Public Sector Banks, or promoted by Foreign Banks/Private sector of financial institutions like Indus Venture Capital Fund, Credit Capital Venture Fund etc.

The development of Venture Capital is a recent phenomenon in India. It is still in the infancy stage and requires proper framework and promotional efforts for the fast growth. Unlike USA, where it is normal for an entrepreneur to set up a company or introduce a new product in the market by obtaining finance from VCFs, which are willing to share the risk in returns of future gains, in India risk financing is yet to pick up in a significant way. Although, we have financial institutions and banks, which provide conventional finance to conventional business, there is a lot of scope for these institutions to enter into the industry of innovation. Hence, there is a need for encouragement of risk capital in India, as this will widen the industrial base of, high-tech industries and promote the growth of technology. The initial step might be to permit the launch

of launch of mutual funds by all those banks authorized to conduct business in India, at the same time extending the investment range of such funds o embrace unquoted stocks.

Liberating the capital market would bring greater depth to the capital market as a whole, introducing more genuine investors of substance either long time horizons, provides avenues for the institutions to realize their equity portfolios more easily (freeing funds for more new investment), and generally improve market liquidity, which would improve equity cult and make a move towards a free and less regulated market to stimulate the entry of the private sector into risk capital formation.

**Pool of venture capital funds in India**

In Table-I an attempt has been made to analyze the growth of venture capital in India. It has moved from $ 20 million in 1996 to $ 10800 million in 2008. But when we look at the growth over the period from 1996 to 2005, there is a considerable decline in the growth except in the year 2000, 2004, 2005 and 2007. It is because the apprehension of the failures of the ventures, slow-down of the economy, lack of creativity in the entrepreneurs and the poor venture capital culture in India.

Table – I: Growth of Venture Capital in India

| Year | US Dollars (in Million) | No. of Deals |
|---|---|---|
| 1996 | 20 (-) | 5 |
| 1997 | 80 (300) | 18 |
| 1998 | 250 (212.5) | 60 |
| 1999 | 500 (100) | 107 |
| 2000 | 1160 (132) | 280 |
| 2001 | 937 (-19.224) | 110 |
| 2002 | 591 (-37.033) | 78 |
| 2003 | 470 (50.33) | 56 |
| 2004 | 1650 (80.383) | 71 |
| 2005 | 2183 (43.75) | 146 |
| 2006 | 7460 (-77.913) | 299 |
| 2007 | 14026 (88.01) | 439 |
| 2008 | 10800 (-23) | 399 |

Source: IVCA Reports * Figures in parenthesis's is growth

**Industry wise finance**

Table-II is an evident of industry wise finance of venture capital in India. It is clear that the Medical, Pharma, Clinical Research, IT, ITES, BPO, Financial Services, Manufacturing, Media and Construction as well as Real Estate industries attracted more venture capital and followed by Textile and Clothing, Transportation and others. But the IT and Biotech as well as consumer related industries together have got more venture funds comparatively than other industries, it is due to the innovations that are taking place vary rapidly in such areas. It gives a clear indication that the venture capital firms are very much interested to put their money in fast growing industries as technology wrested and service oriented as they are doing well in the new economy.

**Table – II: Industry wise Finance**

| Industry | % (Based on the Average figure computed through the data from 2000-07) |
|---|---|
| Medical / Pharma / Clinical Research | 34 |
| IT / ITES / BPO | 16 |
| Financial Services | 13 |
| Manufacturing | 10 |
| Media | 7 |
| Construction / Real Estate | 6 |
| Textile and Clothing | 5 |
| Transportation | 5 |
| Others | 4 |

Source: IVCA Reports from 2000-07

**Sources of finance**

In Table – III an attempt has been made to analyze the sources of finance for venture capital funds in India. The venture capital funds/ industry is able to procure 50.79 per cent of fund amount from foreign institutional investors followed by all India financial institutions 25.86, multilateral development agencies 7.69 per cent, banking sector 11.72 per cent, state financial institutions 1.22 per cent, non-resident Indians 1.05 per cent and mutual funds as well as insurance companies together 0.21 per cent. Hence it is very clear from the analysis that the major contribution comes for the industry is from foreign institutional investors and all India financial institutions.

**Table – III: Sources of Finance**

| Contributors | % |
|---|---|
| Foreign Institutional Investors | 50.79 |
| All India Financial Institutions | 25.86 |
| Multilateral Development Agencies | 7.69 |
| Other Banks | 5.72 |
| Other Public | 2.43 |
| Private Sector | 2.09 |
| Public Sector | 1.48 |

| | |
|---|---|
| Nationalized Banks | 1.45 |
| State Financial Institutions | 1.22 |
| Non-Resident Indians | 1.05 |
| Insurance Companies | 0.21 |
| Mutual Funds | 0.01 |
| **Total** | **100.00** |

Source: IVCA Reports from 2000-07

**Methods of financing**

From Table-IV it is evident that instrument wise finance of the venture capital industry in its portfolio companies/investee companies. To the maximum extent industry has invested its fund in terms of equity shares followed by redeemable preference shares, non-convertible debt, convertible instruments and other instruments. However the lion share was taken over by only equity itself.

**Table – IV: Methods of Financing**

| **Instruments** | **%** |
|---|---|
| Equity Shares | 63.17 |
| Redeemable Preference Shares | 21.54 |
| Non-Convertible Debt | 8.73 |
| Convertible Instruments | 5.80 |
| Other Instruments | 0.76 |
| **Total** | **100.00** |

Source: IVCA Reports from 2000-07

**Investment by stages of finance**

Table –V is obvious of investments of Venture capital industry by stages of financing. So far it has invested 48.76 percentage of fund amount in start-up companies followed by later stage as the venture capital is meant for promoting the new and innovative business ideas.

**Table – V: Investment by Stages of Financing**

| **Stage** | **%** |
|---|---|
| Start-up Stage | 48.76 |
| Later Stage | 22.80 |
| Other Early Stage | 16.21 |
| Seed Stage | 11.00 |
| Turnaround Financing | 1.23 |
| **Total** | **100.00** |

Source: IVCA Reports from 2000-07

**Investment by region**

From Table – VI is very vivid that the investment of venture capital by region. So far Indian Venture capital industry has invested 46 per cent of total fund amount in south India followed by West India 34 percent; North India 13.04 per cent, 4.04 per cent in Eastern part of the India and 2.92 percent has been invested outside India. This is because the entrepreneurship of the regions and the role of the government in promoting the entrepreneurship. Not only that, even the creativity of the entrepreneurs is also one of the major reasons for the concentration of venture capital industry in south and west part of India.

**Table – VI: Investment by Region**

| Regions | % | Rank |
|---|---|---|
| South | 46.00 | 1 |
| West | 34.00 | 2 |
| North | 13.04 | 3 |
| East | 4.04 | 4 |
| Outside India | 2.92 | 5 |
| **Total** | **100.00** | |

Source: IVCA Reports from 2000-07

**Investment by states**

Among the states, Maharashtra and Karnataka attracted investments from 15 venture capital companies each, Tamil Nadu was the venture capital investment destination for 14 venture capital companies and Andhra Pradesh for 12 venture capital companies. 8 venture capital companies invested in each of the states of Gujarat, New Delhi and West Bengal, 7 venture capital companies invested in Haryana and 6 in Uttar Pradesh. Other states and Union Territories attracted investments from fewer number of venture capital companies. In terms of amount of investment, the highest investment was in Maharashtra followed by Tamil Nadu, Andhra Pradesh, Gujarat, Karnataka and New Delhi in that order. While some states attract higher amounts of investment per project, some attract higher number of venture capital projects.

**Table – VII: Investment by States**

| States & Union Territories | Percentage of investment |
|---|---|
| Maharashtra | 22.94 |
| Tamil Nadu | 16.62 |
| Andhra Pradesh | 12.64 |
| Gujarat | 7.42 |
| Karnataka | 14.56 |
| New Delhi | 3.71 |

| | |
|---|---|
| Haryana | 2.75 |
| West Bengal | 3.16 |
| Uttar Pradesh | 3.57 |
| Madhya Pradesh | 1.65 |
| Punjab | 0.96 |
| Kerala | 2.06 |
| Rajasthan | 1.51 |
| Goa | 2.06 |
| Bihar | 0.55 |
| Orissa | 0.69 |
| Dadar & Nagar Haveli | 0.14 |
| Himachal Pradesh | 0.41 |
| Pandicherry | 0.27 |
| Overseas | 2.34 |
| **Total** | **100.00** |

Source: IVCA Reports from 2000-07

**Vc investment and number of deals in India**

Table – VIII reveals that the number of deals and Venture Capital investment in India. From the table it can be inferred that the average US dollars for each deal is fluctuating over the last decade. It can be further observed that it is more than 23 per cent in the years 2006 (25.08) and 2004(23.24). At the same time, all the remaining years in the last decade reported below 10 per cent except 2005(15.07). Hence, the least average of US dollar investment in a deal in the year 2000 4.14 per cent.

**Table – VIII: Venture Capital investment and No. of Deals in India**

| Year | No. of Deals | VC Investment (in U.S Dollars) | % |
|---|---|---|---|
| 2000 | 280 | 1160 | 4.14 |
| 2001 | 110 | 937 | 8.52 |
| 2002 | 78 | 591 | 7.58 |
| 2003 | 56 | 470 | 8.39 |
| 2004 | 71 | 1650 | 23.24 |
| 2005 | 146 | 2200 | 15.07 |
| 2006 | 299 | 7500 | 25.08 |
| 2007 | 98 | 543 | 5.54 |
| 2008 | 67 | 413 | 6.16 |
| 2009 | 27 | 117 | 4.33 |

Source: IVCA Reports from 2000-09

## Conclusion

Venture capital emerged as a unique financial instrument in 19th century to promote new and innovative business proposals put forth by the first generation and technocrat entrepreneurs in a big way. In fact, it is the outright solution for any country and means of finance in turning the creative ideas and abilities of the entrepreneurs into very fruitful and viable commercials aspects. Not only that, even venture capital can promise in a greater way the development of our country through promoting the entrepreneurs in a gigantic way as a driver and vehicle of entrepreneurship devolvement of the country. But, alas the venture capital industry of India, still at nascent stage and not able to assume the higher level of venture some, for that matter, not able to scale up the activity. It is due to so many varieties of problems, which spans over regulation, deal size, role play, culture of entrepreneurs and what not? So there is a need to the government and the regulator of venture capital funds including the various fund operators in the country to create a conducive environment to venture capital industry to get the hold of the take-off.

## References:


1. Zider & amp; Bob: How venture capital works? Hardward Business Review (Nov-Dec., 1998) (Ppl 131-139).
2. I M Pandey; Venture Capital: The Indian experience prentice Hall of India Pvt., New Delhi.1996.
3. Sandhya Prakesh: Venture Capital comes of Age, Indian Management, PPL 5-21(April 2000)
4. T. Satyanarayana Chary: Venture Capital in India- An overview, Management Researcher, 2000, Tiruvanathapuram.
5. T. Satyanarayana Chary: Venture Capital Industry-Issues and Measures for Development, Pratibimba, 2001.
6. T. Satyanarayana Chary: Venture Capital Industry, JIMS 8M, Nov-Dec 2001.
7. T. Satynarayana Chary: A Mission of Venture Capital in promotion of New Enterprises a study, Udyog Pragathi, January-March 2005, the Journal of Practising Management, NITIE, Mumbai.
8. T.Satyanarayana Chary: Venture Capital Concepts & amp; Applications, Macmillan India Limited, 2005.
9. J.C. Verma: Venture Capital Financing.
10. Annual Report of INDIAN VENTURE CAPTIAL ASSOCIATION (IVCA) 2000-09.



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ROR

# RISK MANAGEMENT FOR STEEL PROCURING COMPANIES -AN EMPIRICAL APPROACH

*** Prof. Parizad Dongore**

**Abstract:**

***The objective of this study is to assess the impact of hedging on steel futures trading. Demand & supply determinants reveal excess supply domestically and globally pressurizing the steel makers to reduce prices (under government pressure) which are later hiked again, making the market very volatile. As success of trading commodity derivatives depends upon the ability to predict future prices, the relation between future prices & expected future spot prices studied. The introduction of trading steel futures on Multi Commodity Exchange of India MCX is assessed to study the effect of derivative trading on spot prices. Time varying volatility & volatility clustering phenomena has been captured by the standard univariate Garch Model. Hedging strategies are developed by analyzing short maturity future contracts considering correlation between spot & future prices of steel. For companies dealing in various alloys of steel, cross hedge with Nickel is considered. The optimal number of contracts which the company should enter into for procuring Nickel is calculated in accordance with the hedge ratio. However deviations occur in accordance with requirements of contracting parties, rising and falling sensex.***

***Key Words: Indian steel industry, basis, future prices & expected future spot prices, MCX, Garch Analysis, hedge strategies***

**********

## Introduction:

Though steel is a basic industrial metal because of its high specific strength and relatively low cost per unit, the per capita consumption is not as high as that in the developed and a few developing countries. Moreover the industry was long protected with high import duties with price and distribution controls. As economic liberalization changed the way things worked, adjustment to the new regime led to slow down in demand and drop in realizations.

On May 16, 2008 the domestic Mandi Govindgarh market crashed making a price cut of Rs 2000 per ton across TMT bars and Rs 1000 per ton across galvanized corrugated sheets.

Since March 2008 the steel market has been very volatile. Steel prices are curbed due to two major reasons.

(A) Government interference -steelmakers pressurized to reduce prices.
(B) Sharp rise in inflation.

The major motivation for hedge is that:

- Price fixing hedge helps lock in the prices which are attractive relative to internal costs /budgets prices thus profits of the business.

- The basic purpose of hedging is to reduce the risk of a company & not make profits. Hedge offsets price volatility that has risen from a physical contract. Most companies have expertise in production & manufacturing & have little expertise in predicting variables such as interest rates, exchange rates, & commodity prices. By hedging they avoid unpleasant surprises such as sharp rise in future price of a commodity.

However the basic drawback is that if prices move contrary to expectation, there could be a loss on the futures position. E.g. if a company takes a short position & prices rise in the future, i.e. the basis weakens unexpectedly; the company looses on the gain in the spot market, & would have been better off not hedging. If the company takes a long position & prices decline in the near future margin calls will have to be paid on short dated future contracts.

As the direction of future prices cannot be determined, an attempt has been made to study the deviation of prices after introducing steel futures on the MCX, in order to design hedging strategies for Praj Industries & Tharmax Ltd.

**Review of Literature:**

The domestic steel industry was protected considerably post liberalization. However at the end of the 80's, severe economic crisis were created in India. New economic policies or liberalization policies made Indian producers more competitive in terms of productivity and techno-economic parameters in the globalized era. India becomes net exporter from a net importer country. In the post-liberalization era, Indian steel production accelerated mainly due to abolition of licensing and the entry of new green field units from the private sector, whose share is now 58% of total production.

The work of *Puran Mongia*states that the iron and steel industry witnessed negative total productivity growth ( - 0.91 % pa.) during the period of study 1973—1981 and 1981—1994. Until the end of the 1970s, the emphasis was on maximizing physical steel output, without necessarily due regard to profitability. After 1983, the integrated steel plants were allowed to increase prices for some categories of steel to cover costs and to generate profits. Higher prices enabled them to realize windfall profits due to prevailing shortages, which had been worsened

by import controls. These profits were, however, temporary and got competed away because of rapid buildup of the private sector capacity. The steel sector was decontrolled in 1992. This coupled with changes in trade policy that allowed liberal imports, led to the closure of many units in the secondary sector. This significantly brought down rates of growth of output and productivity in the later part of their study period.

Research reports reveal that the global steel market is very volatile. According to Elizabeth Broomhall "One minute, you're looking up, the next, you're looking down again". The fast-paced fall in prices to a low of US $490 in December 2009 was indicative of a reduced number of projects in the world's biggest markets. The steel prices which shoot up to US $570 per tonne in March 09 before falling to a record low of US $405 in June, has no explanation. The Indian markets are no different from their global counterparts. Steel consumption is being driven by India's rapid urbanization and key to this growth is the ready supply of raw materials. 2008 has seen the cost of producing steel in India increase by 60 percent leading to an increasing concern by the country's steelmakers. Rising steel prices have also become a major concern for the government as steel and steel products contribute 21% to inflation. (While analyzing the practicalities of trading future contracts it is unlikely that functioning of futures market remains within the theoretical framework which assumes a "rational investor behavior". The essence of futures trading is to create strong linkages between the futures market and the actual physical market for steel. Ironically, the derivative trading has, lead to a destabilization of price stability rather than providing any price support to commodities traded on the exchange. Commodity markets have been affected by external factors which justify the argument that future markets don't necessarily reflect the true expectation of future price change. The reflection in price due to sudden changes is based on investor perception of market conditions in various different sections, like the currency markets, government bond markets, etc. Moreover, speculators always dominate the volumes of trading in a futures exchange, because speculation is not made for the purpose of hedging risk but to gain profits in the form of risk (shifted by the hedgers onto the speculators) premium. In India, the impulse behind launching commodity futures was to provide a hedge for traders against commodity price fluctuations. To support this aspect option trading has been banned. Hence according to Dr. Narendra L Ahuja, there is a need to bring about regulatory changes and introduce commodity option trading in the country as hedging future contracts does not allow participation. While the future contract helps the participant (say farmer) to hedge against downside price movements, it does not allow him to reap the benefit of an increase in prices. However considering the volume of trade in commodities, the Indian platforms Multi Commodity Exchange of India & National Commodity & Derivatives Exchange Limited (MCX & NCDEX) lacks liquidity as compared to its western counterparts. Experts opine that the Indian platforms are still too naive to introduce option trading. Literature reviewed on strategies for hedging clearly opines that the direction of prices cannot be predicted. Losses could be incurred on hedging strategies if prices moved contrary to expectation. Hence an effort is made to study the extent of deviation on prices after introduction

of trading steel futures on the MCX. Karmakar, Madhusudan examines the price discovery process of (The Standard & Poor's CRISIL NSE Index 50) S&P CNX Nifty and Nifty future. The study also investigates how much of volatility in one market can be explained by volatility innovations in the other market and how fast these movements transfer between these markets. The Vector Error Correction Model (VECM) provides evidence to support the dominant role of Nifty future in price discovery i.e., futures prices tend to discover new information more rapidly than spot prices. A similar finding has been reported by Sathya Swaroop Debasish where Spot returns volatility is found to be less important in explaining spot returns after the advent of futures trading in NSE Nifty.

Mattu Kumar Mahalik has made a study of four futures and spot indices on the MCX. The data spanned over 12$^{th}$ June 2005 to 31$^{st}$ Dec 2008. Studying the effectiveness of the price discovery function by the Vector Error Correction model implied that the natural logarithm of agriculture future price index, energy future price index and the aggregate commodity index effectively serve price discovery function in the spot market implying that there is a flow of information from the future to the spot commodity market but the reverse causality does not exists. Also there is no co integrating relationship between metal future index and metal spot price index.

After studying the impact of future trading on the underlying spot market effort has been made to design hedging strategies to protect the procurer of steel from price fluctuations in the open market. Simon Benninga formulates a simple hedging rule where the price today is an unbiased predictor of the futures price in the next period and basis is independent of the spot price. Another literature developed by the same author states that the minimum variance hedge position is also the optimal hedge ratio which holds irrespective of the hedger's utility function. Sheeba Kapil's work emphasizes on the participation of commodity trading advisors who will provide expertise in commodity derivative trading to participants and help build the commodity inclusive portfolios with better return and lesser risk. Jacques Rolfo presents an optimal hedging strategy for a producing country that is subject to variability in both price and production of its output. He suggests that limited use of futures market is superior to a full short hedge of expected output when there is production variability. Carol Alexander has developed literature on the effectiveness of the minimum variance hedging. While surveying the trading characteristics in the US, Asian and south American markets he looks for spot – future co relation which he finds notable high except for Nasdaq 100 and Ibovespa. Finally, he proposes that since all the spot and futures prices are co- integrated according to the Johansen maximum eigen value test (at a 1% critical value of 6.65), error correction models for MV hedge ratios should apply. However he concludes that the MV ratios have offered no improvement on the naive futures hedge on index in these markets. His work has found no evidence to suggest that complex econometric models such as GARCH can improve on a simple (ordinary Least Square) OLS regression for estimating this hedge ratio. Moosa [2003] also concludes that "What matters for the success or failure of a hedge is the correlation between the prices of the un-hedged position and the hedging instrument. Low correlation invariably produces insignificant results

and ineffective hedges, whereas high correlation produces effective hedges irrespective of how the hedge ratio is measured".

This article fulfils an important gap in literature by examining two Indian companies who physically procure steel from the open market. Analyses of short term dynamics suggest that the steel prices are highly volatile, and hence hedge strategies have been developed to protect the procurer from price fluctuations.

The article is organized as follows: section I analyses the scenario of the international and domestic steel market, the second section deals with the Relation between Future Prices & Expected Future Spot Prices, the third section deals with Estimating Volatility in Steel Prices, the fourth section deals with developing hedging strategies, and the last section concludes.

## Section I

### 2.1) International & Domestic Steel Market Scenario

Despite India being the 10$^{th}$ largest steel producer in the world & steel possesses high specific strength & relatively low cost of production, the industry has been at the receiving end of recession. History has recorded that after the Second World War Russia dumped steel excessively in different markets across the globe crashing the prices of steel. During 1998 a large share of the US steel market was captured by Russia, Japan and Brazil. The American Iron and Steel Institute, a Washington-based trade group, reported in 1997 that, on an average steel dumping had increased from 23.123.1 million net tons a year from 1990 to 41 million net tons in 2008 Dick K. Nanto, Specialist in Industry and Trade Economics Division February 6, 1998 US steel producers accused their rivals of "dumping" and called for the introduction of quotas. Though many industry analysts feel that the success of foreign producers was triggered by the strong dollar, which made their products very cheap, the fact projects an excess of supply over demand in the world markets.

Expansions of trade by the Asian countries lead to large trade deficits & heavy external borrowings and currency overvaluation. The "Asian Financial Crisis" which began in 1997 had an adverse effect on the steel sector. About 10,000 steel workers lost their jobs, 3 companies went bankrupt, and few were on the verge of closure. Practically, all steel producers were adversely affected.

Recession in Indian markets continued despite the fact that performance had improved for the better in the international markets in the first half of FY2000. International prices had also looked up in early FY2000. In India however, the prices have not firmed up because of a recession in the end-user segments (for e.g. infrastructure projects are yet to take off) and an over-supply situation in the domestic markets. The outlook for domestic manufacturers remains

uncertain in the face of new capacities that are on the anvil with demand growth yet to make a strong turnaround.

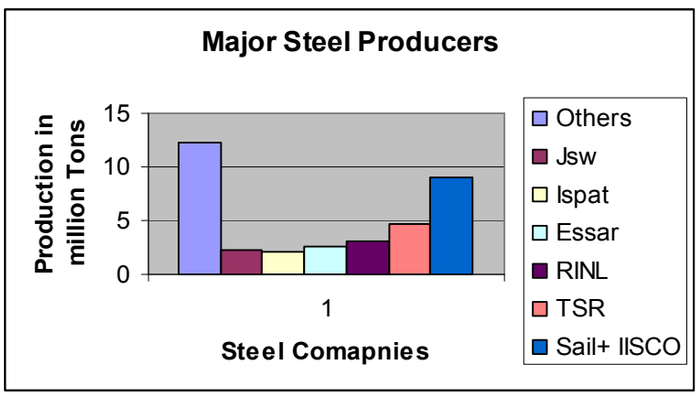
## Section II

### 2.2) Demand & Supply Determinants in the Indian Steel Industry:

*Graph 1: Demand Determinants of steel:*

Given below are the demand determinants in the steel markets. The graph alongside depicts industry wise demand for steel. Being a core sector, steel industry tracks the overall economic growth in the long term. Also, steel demand, being derived from other sectors like automobiles- 2.7 million tons, Capital Goods-3.7 million tons, consumer durables -1million ton and infrastructure-21 million tons **(Source: Tata Steel Estimates -Steel production Cost Reports & Database-2006-07)** packaging- 1.7million tons, others- 4 million, the destiny of the steel producers depends on the growth of these user industries.

**Graph II: Major Steel Producers:**




On the supply side, the major steel producers who comprise of 66% of the major production of steel are depicted in graph II.

**(Source: JPC team, Tata Steel Estimates)**

Analyzing demand & supply it is seen that the current demand (07-08) is 34 million tons & the projected demand (FY 2012) is 65 million tons. On the supply side the current supply is 42 million tons & the projected supply after installing additional capacity is

90 million tons. Hence a gap of 20 – 25 million tons is projected. This may lead to an excess supply situation in the country by the FY 2012.

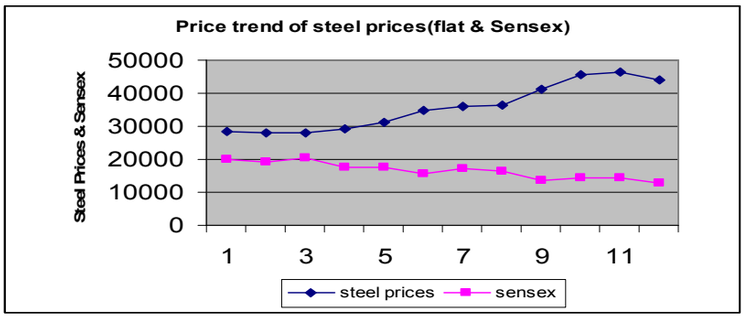
## Section III

### 3) Future Prices & Expected Future Spot Prices:

After analyzing the demand & supply of steel an attempt has been made to see if future prices could be determined on an unbiased estimate. Hence an attempt has been made to study the relation between the future prices & expected future spot price. One reason why there could be a relation between the spot & future price is that if more speculators are long than short, future prices will tend to be less than the expected future spot price. The reverse is true if speculators take a short position. This preposition is in anticipation that the future price converges to the spot price on maturity.

3.1*) The relation between the risk & expected return in the economy*: The estimation of the relationship between the risk & the estimated return in the economy also determines relation between future price & the expected future spot price. If the Capital Asset Pricing Model CAPM model is assumed to be true, the relation between future price & expected future spot price depends on whether the return on the asset is positively or negatively correlated with the stock market. The required rate of return depends on the systematic return of the investment. If the correlation is 0 the theoretical future price is equal to the expected future spot price where the required rate of return by the investor is equal to the market return on the investment & shows that future price is equal to expected future spot price.

3.2**) Graph III: Flat Steel price trends of & Sensex**




In an attempt to predict future prices & expected future spot price,**(Source: www.mcxindia.com & bseindia.com)**prices of steel & sensex are watched for a period of one year from Oct 07 to Sept 08.

3.3*) Interpretation of the graph*:

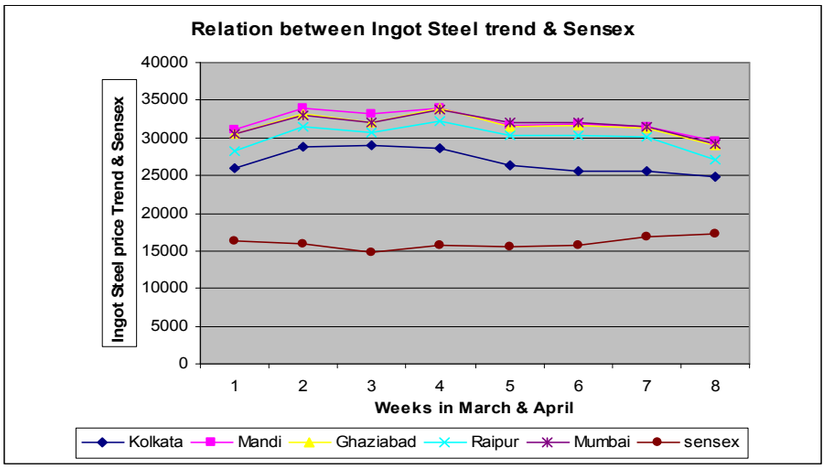
Since the expected future spot price is negatively correlated with the sensex (for a period of one year Oct 07 to Sept 08 as in the analysis) the investment has a negative systematic risk. In this case the required rate of return on the investment is less than the return on the investment & future prices will be higher than the expected future spot prices.

The contention is that hedgers are prepared to accept a negative expected profit because of risk reduction benefits they get from a futures contract. Except for the month of December 2007 and April 2008in the entire period of our analysis the Sensex has shown a decline. However the prices of steel are consistently rising during this period (Oct 07 to Sept 2008). Hence if the hypothesis that future prices will be higher than the expected spot price holds well, the trader should over a long period of time make positive profits from consistently holding short futures position because in the long run prices will drift downwards (excess supply situation anticipated in the long run) because it is supposed that the spot prices & future prices must be equal at the maturity of the future contract.

However it can reasonably be assumed that the market revises its expectations about future spot prices upwards or downwards. Empirical evidence has shown mixed results about the hypothesis under question. Hence if the prices move contrary to expectation, losses on the hedging strategies can result in a liquidity crunch initially & in huge losses if hedge positions are closed out. This problem was exhibited grammatically by Metallgesellschaft (MG) who had hedged its exposure of huge volumes of heating oil & gasoline of 5 to 10 years on a long position in short dated future contracts rolled over. Contrary to expectation oil prices fell & margin calls had to be paid. The hedge positions were closed out by the company leading to a loss of $1.33 Billion

**3.4)** ***Expectations about future prices & expected future spot price:***

**Graph IV: Ingot steel price trend in steel markets across India**




Graph IV longside depicts Ingot steel price trend in steel markets across India namely Kolkata, Mandi Govindgarh Market, Ghaziabad, Raipur, Mumbai. During the months (March 2nd week to **(Source: www.mjunction.in & bseindia.com)** April 4th week, 2008) it is seen that the sensex has shown an upward trend (15000 to 17000 monthly average closing prices). However steel prices across India are depicting a downward trend from Rs 28799 per ton (March 2nd week) to Rs 24757 per ton (April 4th week.)

During this period if the hedger takes a long position, he will suffer losses in the futures market. Hence it becomes difficult to predict in which direction the prices are expected to move in the near future. We could estimate price deviation by measuring volatility which has been attempted in the next section. However it must be mentioned here that volatility determines deviation from a price & does not determine direction.

## Section IV

### 4) Estimating Volatility in Steel Prices:

The essence of this section is to estimate commodity risk of steel traded on Multi Commodity Exchange of India MCX after the introduction of future trading in steel.

The autoregressive conditional heteroskedasticity (ARCH) model by Engle & generalized autoregressive conditional heteroskedasticity (GARCH) model developed by Bollerslev (1986) have been used to analyze the impact of future trading on the spot prices of steel. The sample data consists of daily closing price returns of spot steel prices from 1st Jan. 06 to 30th Dec 2010. To capture time varying nature of volatility & volatility clustering, the standard univariate Garch model has been used. Empirical evidence suggests that futures trading has had a tremendous impact on spot market prices.

**4.1) Data source:** Daily stock prices of steel for the period of 1st Oct. 07 to 30th September 2008 were downloaded from the MCX website. Daily stock return or price change at time t, R(t) was converted to daily compounded return taking the natural log difference. Return R(t) at time t is given by the following formulae

$R_t = \text{In} (P_t/P_t\text{-}1)$ where $P_t$ is the closing price for day t.

On MCX i.e. multi commodity exchange of India future trading in steel started on 11March 08. Hence the data was spilt up into two sets to study the nature of volatility on steel prices prior to and after the introduction of trading steel futures.

**4.2) Methodology:** The impact of the introduction of steel futures on the underlying spot market is analyzed with the help of the univariate Garch (1,1) model. Empirical literature on this account has shown that results could be unauthentic without taking into consideration the presence of unit roots in its variables. Hence the Augmented Dickey – Fuller Test and Phillips- Perron unit root tests are employed to test the integration of each variable.(Augmented Dickey Fuller) ADF unit root test is sensitive towards the lag length included in the regression equation. Hence lag length is chosen on the Akaike information Criterion (AIC). *Table II* shows the results of the unit root test. Data series is stationary after the 1st level of differencing at 5% level of significance.

**4.3) Garch Analysis:** To address the issue of volatility after the introduction of futures, the period under study has been subdivided into pre futures & post futures and Garch (1,1) technique has been estimated for each sub period separately. This implication makes easy the estimation of volatility in each period.

The Garch equation is as follows:

$\sigma^2 = \quad \acute{\omega} V_L + \alpha u^2_{n-1} + \beta\sigma^2_{n-1}$

Where ώ, α and β weight ages assigned respectively such that ώ, α and β = 1,

$\acute{\omega} V_L$ takes into account long run average volatility, $\alpha u^2_{n-1}$ gives latest volatility estimates,

$\beta\sigma^2_{n-1}$ indicates the daily % change. The Arch coefficient, $\acute{\omega} V_L + \alpha u^2_{n-1}$ shows the effect of the recent news on the market, whereas the Garch coefficient $\beta\sigma^2_{n-1}$ of the lagged variance term captures the effect of old news in the market.

**4.4) Interpreting the results**The results are reported in *table II*. This helps us to compare the nature of volatility in each period, prior to and after the introduction of future trading. It is seen that the arch coefficient before future introduction was 0.119389 & after introduction of futures trading was 0.189389. Hence it can be concluded that there is an impact of recent news on spot market volatility in the post future regime i.e. volatility has increased to an extent after introducing steel futures. The Garch Coefficient was 0.907720 in the pre futures period & has declined marginally to 0.874740 in the post futures period. This indicates that the effect of old news has declined in the post futures period.

## Section V

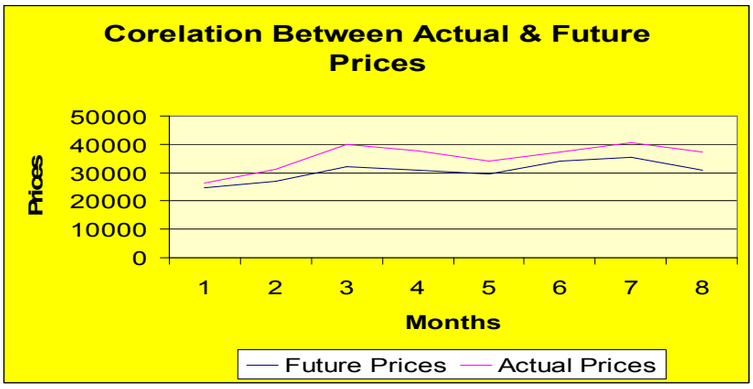
**5) Developing Hedging Strategies:**

In order to determine how hedging strategies help companies turn price fluctuations into a competitive advantage, the hedging strategies of two companies namely Praj Industries & Tharmax ltd. have been designed after collecting first hand information from Karvy Comtrade ltd, Pune.

**5.1) Hedging Strategy for Tharmax Ltd:** The company provides integrated Solutions in the areas of Heating, Cooling, Power, Water and Waste Management, Air Pollution Control and Chemicals.

In order to develop a hedging strategy a careful analysis has been carried out to see which of the available future contracts has future prices most closely correlated with the price of the asset being hedged. In the analysis carried out we find a correlation of **0.925892** between the spot & actual procurement price, Jan 08 to August 08 (Table III), & a correlation of **0.996043** between the spot &future prices Jan08 to Aug 08 of Thermax company (Table IV). & actual & future price of 0.937138 Thermax company (graph V) As is seen from the analysis the spot price, future price & the procurement price of the supplier move in tandem.

**Graph V: Correlation between actual & future prices of long steel 2008**




Also the spot & future prices have a high positive correlation. If there is hardly any correlation between the procurement price of the commodity to be hedged & future prices as dictated by market **(Source Karvy Comptrade Ltd.)** forces, hedging goes for a toss.

**Correlation Results:**

Correlation between average spot & actual prices-Long Steel,

(July 2005-Aug 2008) is **0.820341** (Table III)

Correlation between average spot and future prices- Long Steel,

(July 2005-Aug 2008) is **0.971868** (Table IV)

Hence, we go ahead with the hedging strategy.

The essence of this strategy is to provide liquidity to the company by entering into short maturity future contracts because sometimes the expiration date of the hedge is later than the delivery dates of the future contracts being used for the purpose of hedging. The basis risk increases as the time difference between the hedge expiration & the delivery month increases. Hence delivery months are chosen which are as close as possible but not later than the expiration of the hedge. For steel (long) in our example, the contract expiration months on the MCX are December, March, June & September. In the data analyzed, the strategy has been so designed that the February contract is chosen for the expiration month March. The spot market is watched from August 2007 to May 2008.The future spot price has short up considerably from Rs.20868.6 in August 2007 to Rs.29283 in August 2008.(table IV) Hence the procurer would have to pay Rs.8414.4 more a year later if he purchased long steel from the open market. So he takes a long futures position. He enters into long futures at Rs.21898.24 (October futures) & closes the contract at Rs.26797 February futures (closest to the contract expiration month of March) at Rs.21898.4 & earns a difference of **Rs.4898.76**. Anticipating rising prices he then rolls forward the contract in the month of April at Rs.30873.85 & closes at Rs.35414.13(July Futures) The difference he earns is **Rs.4540.28**. In this case the future contract

provides him a total gain of Rs.9439.04. This is a compensation for a price hike of Rs. 8414.4 in the spot market. This strategy also provides liquidity, which tends to be greater in short, maturity futures contracts. However if prices fall unexpectedly in the spot market the company will suffer losses on the hedge strategy & would have been better off not hedging

**5.2) Hedge Strategy For Praj Industries:**

**5.2A) About the Company:**

Praj Industries is a leading bio fuels technology company catering to processes & systems for biotechnology & Ethanol systems. Backed by years of research it provides end to end solutions to support the bio fuels industry.

**5.2B) Impulse Behind Hedging:**

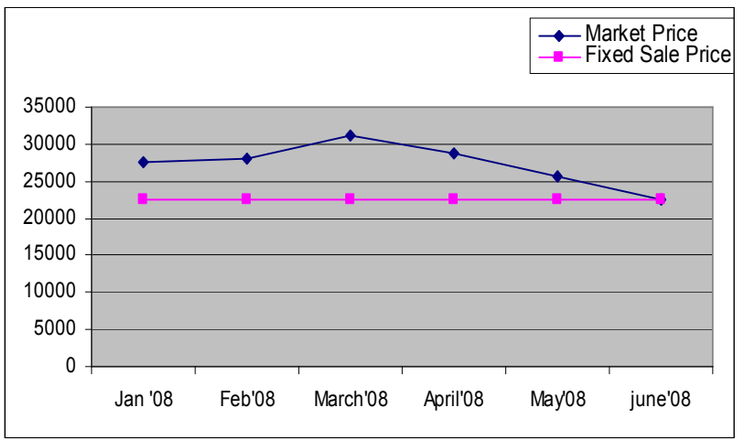
A typical hedging instance is taken from Praj industries, which deals in mild steel and decides to cross hedge the commodity against Nickel. The reason is that mild steel 304,305 is composed of only about 7% Nickel, but it comprises of almost 60-70% of the cost of mild steel.

Why Hedge?

The need for hedging is felt because:

- Company procures Nickel being fully exposed to the market fluctuations.
- Customer Selling Price is fixed annually at Rs.22,529 for the project period Jan2008 to June2008
- Buying (Procuring) price is on spot basis.

**Graph VI: Market Price & Fixed Sale Price:**




Graph VI clearly depicts, that the customer selling price is fixed at the level of Rs22,529 for the Six month period during Jan 08 to June 08 which does not correspond to the prices dictated by the free play forces of demand & supply in the **(Source: Karvy Comtrade limited)** market. Hence the company incurs heavy losses during

four out of five months where the market price (Procurement price) is seen well above the fixed selling price. The graph below depicts the correlation between the fixed sale price & the market price, depicting losses for the company, which can be avoided using a hedging strategy.

Price fluctuations can be turned into a competitive advantage instead of exposing the company and its' customers to unforeseen price fluctuations. The basic advantages of hedging are that the costing involved is very low as the spot prices & future prices can be compared resulting in a strategy close to a perfect hedge thus minimizing losses and avoiding complications in performing operational activities directly related to production.

**5.2C) Basic Mechanism for Hedging:**

The hedging mechanism works in the following manner.

If prices go up in the month of June compared to May a loss made in the spot market can be saved on the futures side. If prices in the spot market come down in the month of June compared to May a loss on the hedge is compensated from the gain in the spot market. Hence the basic purpose of hedging is that it does not bring profits to the company but protects it from downside risk.

**5.2D) Developing a Strategy:**

In order to develop a hedging strategy the minimum variance ratio is calculated. This ratio analyses the size of the position taken in the futures contract to the size of the exposure.

The hedging ratio that minimizes the variance of the hedger's position is given as:

$h = \rho^* \sigma_s / \sigma_f$

h = hedge ratio that minimizes the hedger's position.

$\rho$ = correlation coefficient between changing spot (ingot steel) & future (Nickle) prices.

$\sigma_s$ = standard deviation of price change of ingot steel.

$\sigma_f$ = standard deviation of price change of Nickel.

As the basic objective of hedging is to minimize the risk the optimal hedge ratio is not always equal to 1. Hence the optimal hedge ratio is calculated.

The data analyzed revealed the following results:

$\rho$ the coefficient correlation between the spot prices of Ingot steel & Nickel future prices for the period (Jan08 to Sept 08) is 0.697.

$\sigma_s$ of the spot price of Ingot steel is 0.32 and

$\sigma_f$ of future price change of Nickle is 0.46.

The hedge ratio according to the above formulae worked out to be 0.484

This means that about 50% of the spot position is sheltered from fluctuations in the future spot price. Moreover, it helps to identify and minimize the basis risk. As just about 50% of the contract is protected, the other 50% is still exposed to market risk. If the hedge ratio would be higher there would be lower potential profits if the commodity price moved as anticipated.

In order to calculate the number of contracts the firm should enter into for procuring Nickle we use the following formulae.

$N = h^* N^*/Q$

Where:

$N^*$= Size of the position being hedged (in units) 10,000 MT Ingot Steel of in our study

Q= Size of one future contract. 250 MT of Ingot Steel in our study

N = Optimal number of future contracts for hedging

$h^*$ = minimum variance hedge ratio ~ 0.5

The number of contracts, in order to hedge about 50% of the spot transaction according to the above formulae works out to be ~ 20

However, the number of contracts will differ according to the current needs of the contracting parties. Ideally, when the sensex is low the volume of the commodity hedged increases.

**Limitations:**

- It is very difficult or even at times impossible to predict the mood swings in a volatile market. Moreover there is no guarantee that past performance will be repeated in the future, on the basis of which the hedger formulates his strategy. Moreover, hedging strategies are short term agreements so that companies do not suffer from major price fluctuations. Though the hedger tries to minimize losses there is no reason for one to believe that the strategy will surely hold well. There would be instances when the hedger would be better off not hedging. Losses could also occur if the hedger enters into a long term hedge contract as with the case of Metallgesellschaft (MG) as discussed earlier.

- Mathematical formulas are only a guide in order to arrive at the quantity of commodity being hedged. Precedence in judgment is required after considering other factors such as market movements, individual requirements of the contracting parties, etc

**Conclusion**

Due to excess supply of the commodity in the Indian & global markets, the steel prices is subject to high volatility. Another factor responsible for volatility is the demand of the commodity from other end user industries on whose success the fate of the steel producer depends. Due to volatility in prices the producers as well as the end user industries are at the receiving end. Hence hedging strategies are devised in order to avoid unpleasant surprises arising due to volatility in the physical contracts. However much caution has is to be exercised in designing hedging strategies, and if prices move contrary to expectation, the company will suffer losses. In an attempt to predict future prices based on spot prices empirical evidence from reviewing literature gives mixed results. According to the present study the commodity price is negatively related to the sensex & the hedger would benefit by undertaking short futures position as excess supply is predicted in the long run. However if prices unexpectedly rise in the near future (prices are reduced due to government intervention & later hiked again) hedging would go for a toss. Though this paper gives a good idea to the exposure of risk associated with commodity (steel) trading, the fact remains that no fool concrete system can be developed to determine future price trends. However, the success of trading commodity derivatives & developing hedging strategies depends upon the ability to predict future prices. Measuring volatility by the univeriate Garch model & seeing to what extent market news affects commodity prices, could be of use to a certain extent in predicting the direction of future prices.

In the Indian context it is seen that there is no participation i.e. no room for speculation on commodity trading. Options on commodity trading are banned in India as there is hardly any liquidity available in commodity trading in the Indian markets. Moreover the volumes (in commodities) traded on the Indian platform are very low compared to the west. Hence hedging strategies based only on forward & future contracts serve to protect from volatility in prices. However like the west, option trading in commodity derivates could begin in future in India. Option strategies can be developed and a competitive advantage can be gained by analyzing how much protection & participation the player wants & how much he is willing to pay

## Tables

Table I

| Augmented Dickey – Fuller Test | | | Phillips- Perron Test | | |
|---|---|---|---|---|---|
| With intercept | Without intercept | With intercept & trend | With intercept | Without intercept | With intercept & trend |
| 0.265653(0)* | 0.092105(0)* | 0.238937(0)* | 0.265653(0)* | 0.092105(0)* | 0.238937(0)* |

*Data series is stationary after 1st level of differencing at 5% level of significance

Table II

Structure of Volatility after Introduction of steel Futures

| | Closing price returns | |
|---|---|---|
| Parameters | Pre futures | Post futures |
| Constant | 0.004006 | 1.823648 |
| ARCH(1) | 0.119389 | 0.189389 |
| GARCH(1) | 0.907720 | 0.874740 |

Dependant Variable: R(t)

Independent Variable: P(t)

**Thermax Company Ltd. Correlation between Spot & Actual Prices**

Table III

| **Long Steel** | | | |
|---|---|---|---|
| | **Correlation** | | |
| | **SPOT** | **Actual** | |
| Jul-05 | 16494.95 | 21781.11 | |
| Aug-05 | 17046.21 | 20730.89 | |
| Sep-05 | 17386.96 | 21574.92 | |
| Oct-05 | 16458.97 | 20528.56 | |
| Nov-05 | 15936.19 | 19815.57 | |
| Dec-05 | 15738.68 | 18641.06 | **0.783565** |
| Jan-06 | 16291.86 | 17988.77 | |
| Feb-06 | 16804.38 | 19156.53 | |
| Mar-06 | 17513.27 | 20385 | |
| Apr-06 | 18299.8 | 22529.75 | |
| May-06 | 17389.26 | 21731.97 | |

| | | | |
|---|---|---|---|
| Jun-06 | 16768.46 | 21345.61 | |
| Jul-06 | 17256.35 | 21704.99 | |
| Aug-06 | 17615 | 20288.65 | |
| Sep-06 | 18022.69 | 20887.94 | |
| Oct-06 | 18714.38 | 21862.04 | |
| Nov-06 | 18541.92 | 21807.12 | |
| Dec-06 | 18854.8 | 21743.53 | **0.714161** |
| Jan-07 | 19560 | 21946.83 | |
| Feb-07 | 19810 | 23111.7 | |
| Mar-07 | 20446.11 | 23764.95 | |
| Apr-07 | 21479 | 24442.29 | |
| May-07 | 20772.41 | 25250.67 | |
| Jun-07 | 21016.15 | 24823.84 | |
| Jul-07 | 20431.73 | 23992.34 | |
| Aug-07 | 20868.6 | 24309.33 | |
| Sep-07 | 21473.91 | 24562.73 | |
| Oct-07 | 21955.58 | 25743.02 | |
| Nov-07 | 22332.92 | 25111.93 | |
| Dec-07 | 22314.6 | 25369.18 | **0.857745** |
| Jan-08 | 24696.92 | 26313.41 | |
| Feb-08 | 26810.42 | 31295.67 | |
| Mar-08 | 32492.5 | 39781.21 | |
| Apr-08 | 30672.08 | 37654.77 | |
| May-08 | 29283 | 33986.73 | |
| Jun-08 | 34555.8 | 37400.41 | |
| Jul-08 | 35069.63 | 40566.47 | |
| Aug-08 | 30982.22 | 37347.41 | **0.925892** |
| | | | |

**Thermax Company Ltd. Correlation between Spot & Future Prices**

Table IV

| **Correl. Between Spot and Futures Price** | | | |
|---|---|---|---|
| | **spot** | **future** | |
| Jul-05 | 16494.95 | 16383.92 | |
| Aug-05 | 17046.21 | 17346.59 | |
| Sep-05 | 17386.96 | 17954.77 | |
| Oct-05 | 16458.97 | 16928.46 | |
| Nov-05 | 15936.19 | 16291.44 | |
| Dec-05 | 15738.68 | 15933.32 | **0.956067** |
| Jan-06 | 16291.86 | 16303.46 | |
| Feb-06 | 16804.38 | 17005.84 | |
| Mar-06 | 17513.27 | 17954.45 | |
| Apr-06 | 18299.8 | 18857.74 | |

| | | | |
|---|---|---|---|
| May-06 | 17389.26 | 17664.71 | |
| Jun-06 | 16768.46 | 16606.86 | |
| Jul-06 | 17256.35 | 17126.89 | |
| Aug-06 | 17615 | 17539.8 | |
| Sep-06 | 18022.69 | 18045.13 | |
| Oct-06 | 18714.38 | 18793.83 | |
| Nov-06 | 18541.92 | 18788.16 | |
| Dec-06 | 18854.8 | 18984.49 | **0.974034** |
| Jan-07 | 19560 | 19631.72 | |
| Feb-07 | 19810 | 19833.91 | |
| Mar-07 | 20446.11 | 20406.26 | |
| Apr-07 | 21479 | 21451.09 | |
| May-07 | 20772.41 | 20754.86 | |
| Jun-07 | 21016.15 | 20716.94 | |
| Jul-07 | 20431.73 | 20143.53 | |
| Aug-07 | 20868.6 | 20528.13 | |
| Sep-07 | 21473.91 | 21284.56 | |
| Oct-07 | 21955.58 | 21898.24 | |
| Nov-07 | 22332.92 | 21591.63 | |
| Dec-07 | 22314.6 | 22518.8 | **0.961326** |
| Jan-08 | 24696.92 | 24515.1 | |
| Feb-08 | 26810.42 | 26797 | |
| Mar-08 | 32492.5 | 32206.5 | |
| Apr-08 | 30672.08 | 30873.85 | |
| May-08 | 29283 | 29571.2 | |
| Jun-08 | 34555.8 | 33953.6 | |
| Jul-08 | 35069.63 | 35414.13 | |
| Aug-08 | 30982.22 | 30900.8 | **0.996043** |

**References:**


- Puran Mongia, Katja Schumacher &Jayant Sathaye "Policy reforms and productivity growth in India's Energy Intensive Industries" Energy Policy : Vol.29; July (2001) Pgs 715-724
- Elizabeth Broomhall "Still a steal" The American Iron and Steel Institute; October 3rd, 2010
- Archana "Steel price reduction - will it check inflation?" Steel research papers http://www.steelworld.com 21/12/2010
- Dr. Narendra L Ahuja "Commodity Derivatives Market in India Development Regulation & Future Prospects"
- Karmakar, Madhusudan. "Price Discoveries and Volatility Spillovers in S&P CNX Nifty Future and its underlying index CNX Nifty", Vikalpa. Vol. 34, No.2 (April-June 2009).
- Sathya Swaroop Debasish "Effect of futures trading on spot-price volatility: evidence for NSE Nifty using GARCH" Journal of Risk Finance, The, Vol. 10 Iss: 1, pp.67 – 77

- Mantu Kumar Mahalik, Debashis Acharya and M. Suresh Babu "Price Discovery and Volatility Spillovers in Futures and Spot Commodity Markets: Some Empirical Evidence from India"Fourth Annual International Conference on Public Policy and Management Indian Institute of Management Bangalore (IIMB)
- Indian Institute Of Banking & Finance "Commodity Derivatives" The Arcade World Trade Centre, Cuffe Parade, Mumbai.
- Darrat A.F. and RAhman, S "Has futures study activity caused stock price volatility?" Journal of Futures Market Vol.15.1995
- Chin Wen Cheong "Asymmetry and persistence Volatility Predictability of Malaysian Stock Market" The ICFAI Journal of Applied Finance Vol 13 No.10
- Karimullah "Derivating trading & its impact on the Indian Stock Market Volatility" Indian Stock Markets ,an empirical study.
- Javedh Aditya Mohan & Chakrapani Venkata Chaturvedula "Model for forecasting volatility in the Indian Stock Market: The volatility Index" The Icfai Journal of Applied finance Vol 14, no.7
- Pretimaya Samanta "Impact of futures trading on underlying stock market volatility – A Case of S&P CNX Nifty." Indian Stock Market, An Empirical Study. Amol publications Pvt. Ltd,. New Delhi
- Monika Chaudhary "The impact of commodity prices on the Indian stock market – An empirical Analysis" Indian Stock Market, An Empirical Study. Amol Publications Pvt. Ltd,. New Delh
- Sheeba Kapil, Kanwal Nayan Kapil, (2010) "Commodity trading advisors (CTAs) for the Indian commodity market", International Journal of Emerging Markets, Vol. 5 Iss: 2, pp.124 - 137
- Simon Benninga, Rafael Eldor, Itzhak Zilcha "Optimal hedging in the futures market under price uncertainty" Economics Letters, Volume 13, Issues 2-3, 1983, Pages 141-145
- Simon Benninga, Rafael Eldor, Itzhak Zilcha "The optimal hedge ratio in unbiased futures markets Journal of Futures Markets Volume 4, Issue 2, pages 155–159, Summer 1984
- Jacques Rolfo "Optimal Hedging under Price and Quantity Uncertainty: The Case of a Cocoa Producer" The Journal of Political Economy Vol. 88, No. 1 (Feb., 1980), pp. 100-116
- Carol Alexander and Andreza Barbosa "Effectiveness of Minimum-Variance Hedging-The impact of electronic trading and exchange-traded funds". The Journal of Portfolio Management Winter 2007, Vol. 33, No. 2: pp. 46-59
- John C Hull "Options Futures & Other Derivatives" Prentice Hall Of India, New Delhi 2004


- Indian Institute Of Banking & Finance "Commodity Derivatives" The Arcade World Trade Centre, Cuffe Parade, Mumbai.
- Darrat A.F. and RAhman, S "Has futures study activity caused stock price volatility?" Journal of Futures Market Vol.15.1995
- Chin Wen Cheong "Asymmetry and persistence Volatility Predictability of Malaysian Stock Market" The ICFAI Journal of Applied Finance Vol 13 No.10

- Karimullah "Derivating trading & its impact on the Indian Stock Market Volatility" Indian Stock Markets ,an empirical study.
- Javedh Aditya Mohan & Chakrapani Venkata Chaturvedula "Model for forecasting volatility in the Indian Stock Market: The volatility Index" The Icfai Journal of Applied finance Vol 14, no.7
- Pretimaya Samanta "Impact of futures trading on underlying stock market volatility – A Case of S&P CNX Nifty." Indian Stock Market, An Empirical Study. Amol publications Pvt. Ltd,. New Delhi
- Monika Chaudhary "The impact of commodity prices on the Indian stock market – An empirical Analysis" Indian Stock Market, An Empirical Study. Amol Publications Pvt. Ltd,. New Delhi.



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# EXPLORING RURAL MARKETING POTENTIAL: AN INNOVATIVE COMMUNICATION APPROACH

* **Dr Bharat Meghe**

**Abstract:**

***Innovation is the key to survival in this fast-moving generation where nothing is static except change. It is applicable to each and every aspect of human life irrespective of where you reside and what you do on this globe. You have to innovate, i.e., make proper adjustments and changes according to the growing needs and demands of the environment to be a part of this environment. Any development is not possible without taking the rural masses into account. In the case of India, where about 70% of the population lives in its villages, an innovation affects any developmental process. Agriculture and allied activities have been the mode of employment of over most of its rural population. The agricultural sector contributes around 30% of the country's GDP. Hence, it is quite obvious that for India to shine rural India must shine as well; otherwise the country's overall growth would fall well short of its potential. This research paper illustrates various rural innovations in the country. It further points out the need to have more frequent innovations in the rural sector to make India shine in the real sense.***

***Key Words: Innovation, Agriculture, and Rural India***

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## Introduction:

On one side are the fast-moving consumer goods (FMCG) and the consumer durables companies. On the other are consumers in rural India, potentially the largest segment of the market. Finally, the two are coming together.

The fact that this has not happened in the past is not for want of trying. In Mumbai and New Delhi corner offices, executives have long recognized that to build real sales volumes they will have to reach outside the big cities. In several categories, rural India already accounts for the lion's share. According to MART, a New Delhi-based research organization that offers rural solutions to the corporate world, rural India buys 46% of all soft drinks sold, 49% of motorcycles and 59% of cigarettes. This trend is not limited just to utilitarian products: 11% of rural women use lipstick.

Other numbers are equally revealing. According to the National Council of Applied Economic Research (NCAER), an independent, non-profit research institution, rural households form 71.7% of the total households in the country. Spending in this segment is growing rapidly and consumption patterns are closing in on those of urban India.

Several European multinational firms -- and a few U.S. firms -- have been making inroads into rural India for years. Companies such as Unilever, Phillips and Nestle have long been known to India's rustic *dukaandaars*, or merchants. Among U.S. firms, companies such as Colgate and Gillette have made considerable headway. According to Raju, marketing to rural customers often involves building categories by persuading them to try and adopt products they may not have used before. "A company like Colgate has to build toothpaste as a category, which means convincing people to change to toothpaste instead of using *neem* twigs to clean their teeth, which was the traditional practice," he says. "This is difficult to do and requires patience and investment by companies. It's not like getting someone to switch brands."

Companies that have figured this out are doing better in the villages than in the cities. Soft drinks giant Coca-Cola is growing at 37% in rural markets, compared with 24% in urban areas. According to Hansa Research, a market research firm that has published a *Guide to Indian Markets 2006*, the penetration of consumer durables has risen sharply in India's villages between 2000 and 2005. In color TVs, sales are up 200%; in motorcycles, 77%. In absolute numbers, however, the penetration is still low. Coke, for instance, reaches barely 25% of the rural market. This means the upside potential is huge for companies that develop effective rural marketing strategies.

According to NCAER, the low penetration rates can be attributed to three major factors: low income levels, inadequate infrastructure facilities and different lifestyles. But income levels are going up, infrastructure is improving and lifestyles are changing. Almost a third of the rural population now uses shampoo compared with 13% in 2000, according to Hansa Research.

FMCG and consumer durables companies have in the past tried tinkering with all the four 'P's -- product, pricing, promotion and place-- of the marketing mix. Hindustan Lever -- which is in the process of changing its name to Hindustan Unilever to reflect the fact that it is the Indian subsidiary of the Dutch conglomerate -- is among India's largest FMCG companies. It has been highly successful in marketing in rural India and has been a pioneer in reaching out to the smallest of villages with innovative products such as single-use packets of shampoo that sell for a penny. (The rural consumer uses shampoo on rare occasions; she does not want to invest in a bottle.) Independent agencies run media vans that show movies in distant villages. They have live promotions and demonstrations during breaks.

The area where innovation has moved to center stage is in the fourth P -- place (or distribution). Infrastructure has always been the bugbear of the Indian marketer. Distribution channels can make or break a company's rural marketing efforts. To sell in villages, products must be priced low, profit margins must be kept to the minimum and the marketing message must be kept simple.

Modern Marketing took its shape through organized network when marketing was addressed to the diversified needs of people at large of different geographical regions. Segments by geographic, demographic, psychographic and sociographic with several culture, subculture and cross-cultural influences through manufacture of different products of preferences, price, values and channels of distribution etc.,

It is by this Modern marketing became highly complex in nature. By the term modern marketing we often misconstrue with marketing with urban markets. It is often found much of the marketing was targeted to urban community and affluent class but much of the potential is still with the bottom of the pyramid (the opportunity) and rural market is still an unexplored area, which we will explore in this paper. As per year 2011 statistics the urban population was said to be 300 million and 750 million in rural ie.72 % population still dwells in villages.

If we try to analyze the occupation profile distribution Primary Occupation

| Occupation Profile | % distribution |
|---|---|
| Agriculture (This includes agricultural labour also) | 77 |
| Business | 10 |
| Non-Agro labor | 10 |
| Services (salaried) | 3 |

(Source: http://www.agritripura.in/Agriculture/Pages/pride.htm)

It reveals still huge market is available at rural sector.

Spread of Indian Rural Population

| Village population Profile | % No. of Villages distribution | % Population |
|---|---|---|
| < 500 People | 42 % | 10 |
| 500–1000 people | 25% | 17 |
| 1000-2000 | 20% | 26 |
| 2000-5000 | 11% | 30 |
| Above 5000 | 2 % | 17 |

(Source: http://articles.economictimes.indiatimes.com/2011-07-15/news/29777954_1_rural-areas-urban-areas-census-report)

From the above data it is evident that majority of Indian population live in small rural villages. Underdeveloped and remote areas and hence the rural market is untapped market .The reality of the fact is that there are nearly 5,80,000 villages which hold nearly 75 crore Indians.

FMCG companies consider localities with population below 20,000 are as villages and for Durable marketers, it is below, 50,000.

It is interesting to note that the Literacy levels

| Sl.No. | Gender | Rural | Urban |
|---|---|---|---|
| 1 | Male | 71% | 87% |
| 2 | Female | 47 % | 73 % |
| 3 | Total | 59 % | 80 % |

Comparison of Expenditure profile of Rural and Urban

| Particulars | Rs | Rs |
|---|---|---|
| Total Consumer Expenditure | 247 | 400 |
| Food Items | 160 | 223 |
| Non Food Items | 87 | 177 |
| Cereals | 65 | 59 |
| Milk | 23 | 41 |
| Meat/Eggs/Fish/ Fruits & Vegetables | 27 | 44 |
| Clothing & Foot Wear | 16 | 25 |
| Durable Goods | 9 | 17 |
| Misc. Goods & Services | 83 | 83 |

(Source: National Sample Survey)

The above data reveals that higher disposable income is with urban population. But rural consumers cannot not be brushed asides. Increase in disposable income need not always lead be proportionate increase in basic items but instead spending on luxury items and entertainment may increase.

The nature and need of the market should be understood and adopted when the market flourishes. Consider an item like foot wears where rural spending may not go for nationally branded footwear. They need more durable and rugged PVC shoes and Hawaii chapels. Demand for durable goods in urban areas will be for sophisticated TV's, Washing Machines; quartz watches etc. In rural areas it will change to Bi-cycles, Mopeds, Electrical goods, B&W TV's etc. Rural poor were not only denied access to products & services, but also to knowledge about what is available and how to use it.

Harish Bijoor addresses about Rural Markets that "There are two India's! Real India & Virtual India. Virtual India is where a most of us come from. Real India is a huge chunk of landmass where 742 million people live. Its populous, multi cultural & multifaceted.

Real India is today run by virtual India". Real India is fast morphing to the needs, wants, desires & aspirations discovered by the urban man. TV as a medium is fast building awareness creating a raging interest in brands, and a latent desire to consume and possess what appears on TV.

**I.T.AND RURAL DEVELOPMENT:**

The goal of using ICT with underprivileged group is not only about overcoming the shortcoming, but rather enforcing and passing the process of social inclusion to the next level, which is required for changeoftheenvironmentandsocialsystemthatreproducesscarcity.

I.T. has varied applications in it, through which the development of the rural area can be possible accurately.GovernmenthadintroducedanumberofprogramsthroughwhichthepeopleofruralIndia can come forward and use the I.T. enabled services and work more systematically. Some of the programsrunbytheGovernmentare:

- **E-Mitra:**

This service is launched by the RAJASTHAN Government for the first time for its rural citizens, so that they can deploy the I.T. enabled benefits to its fullest. E Mitra is State Government started projects, which soon become highly popular in the region. In year 2002, two projects came into existence namely; Lok Mitra and Jan Mitra.

Where Jan Mitra is an integrated electronic platform through which the citizens of Rajasthan can avail the benefit if getting the desired information regarding any Governmental Department at kiosks which is very near to their doorstep. These Initiative program of Rajasthan government have not only helped the Government by reducing the burden of attending every call, it has reduced the waiting time for the service and has lead to provide comfort to the citizens also, as with the inception of this service they can easily get the information required at their doorstep. Lok Mitr is an urban electronic Governance Project which was launched in Jaipur city in year 2002, which helps the citizens of Jaipur (now other cities also) to pay their bills online (land, Water, Bus Tickets and BSNL) leading the citizen to save the waiting time. This service also ensures people that their money is going directly to the Government and provides a feeling of

security related to their bills payment.

- **Community Information Centers:**

The program is designed especially for providing the internet access and I.T. Enabled services to the citizens through which the interface between the Government and the Citizens can be setup. These centers connect seven northeast states namely; Arunachal Pradesh, Assam, Manipur, Mehalaya, Mizoram, Nagaland and Tripura. The center helps to gain the connectivity at the time of unsuitable environmental conditions. The centers are commonly termed as CIC which are generally situated at the school, college or any governmental office. People can come for the Internet access, and for accessing the internet, a nominal amount is charged from the people through which the daily expenses of the centers are maintained.

- **Wi-fi Projects:**

One of the wi fi project under which few villages (of UTTAR PRADESH) are connected to internet is Digital Gangetic Plan (DGP). Through the use of DGP wireless network connectivity is created, this program helped the people residing in villages of India to have the access of internet through which the information on various issues can be collected ad used, at the same time the people living in rural India can be updated with the new technological changes and the innovative changes taking place in the national and the international markets. For instance; Bimari Jankari is a portal through which the information regarding every disease and health related issues is available and Digital Mandi is available as one of the portals where all the information regarding the agricultural commodities are available. This portal provides the information regarding the prices of the commodities and their relative value.

- **Drishtee:**

Drishtee is present in 5 States and is currently available in six districts. It is a private company, which was previously named as Cyber Edge, which has the main work of developing the modules. It is present in Bihar, Haryana, Madhya Pradesh, Punjab and Rajasthan. It is generally suited in the Panchayat or in the bazaars. They prepare the module for the poor section of the society who cannot understand the international language. The modules are designed for the rural and semi urban areas especially.

- **Gyandoot:**

It was established in January in year 2000. It is an e-governance based module designed for the rural citizens. The project was initially initiated by the Government of **MADHYA PRADESH**. Gyandoot caters the need of the villagers by providing the information related to the prevailing

rates of the agro based commodities and the rate of land. Each Gyandoot Info kiosks caters to approximately 15 panchayats and 30 villages. The module is designed with the aim to provide cost effective and sustainable delivery model to the people.

**Innovation and commercialization process:**

The rural consumer behavior exhibits certain behavior unique to rural settings and this makes it important for marketers to understand rural consumers through appropriate research. Rural consumers, for example, tend to lead a more relaxed lifestyle compared to the urban counterparts and exhibit little urgency. Consumers in rural markets tend to have greater trust in products and services endorsed by the government and its agencies. They tend to be more brand loyal, as habits once formed are difficult to change and they tend to feel a pride in getting a good deal rather than paying premium prices for products and services.

The Rural Network, an alliance of leading rural marketing organizations in the country, is spearheading a series of initiatives designed to put rural marketing issues squarely in the reckoning of corporate looking for new markets.

Rural communities tend to be closer than urban societies and reference groups have a greater importance. Relatives and people from the same caste are important reference groups. Joint families still exists in villages although the trend is towards the nuclear families. In rural areas, the consumption is driven to a large degree by the occupation and income of the consumers. Low income levels and inadequacy of credit facilities also affect the consumption patterns.

Another important factor that affects demand patterns in rural areas is the instability of the income of the farmers, which is linked to the seasonality of agricultural production as well as to the unpredictability of the harvest. Similarly, the landless laborers and daily wage earners get their remuneration on a day to day basis and therefore they purchase in smaller quantities of products at a time, mostly on a daily basis.

As compared to the urban counterparts, the rural consumers have different interpretations of colors, symbols, and social activities. The cultural values and norms have a strong influence in determining buying and consumption behavior in the rural areas. There are restrictions on the type of food and the type of intoxicants that can be consumed in the villages. Similarly, women occupy a more traditional place in rural areas and therefore western apparel may not be accepted in the rural markets. However, the rural youth are open to any new ideas, and influenced by the urban consumption patterns. As the exposure to mass media and information technology is increasing, rural consumers are being more informed about products and services and their dependence on traditional reference groups is waning.

**Conclusion**

It's true that India lives in her villages. Rural India holds great potential for development as it is the source of livelihood for more than two-third of the country's population. Exploitation by the private traders and middlemen accompanied with the farmers' lack of information on issues pertaining to their livelihood are serious obstacles on the path of rural development. There is a need to take strong steps so that the primary producers in agriculture could break the chains of the middlemen and become self-dependent and strong. Slowly, but steadily, the farmers are realizing the importance and potential of technology in their farming process.

The increase in the services provided to the rural people (in terms of various services offered) will result in the overall betterment of the society on one side by enriching the people with updated market information and providing latest technological developmental news and organizations on other side by creating more market opportunities for them and adjustment of the market prices. IT can build up the role of each governance pillar in rural development and scarcity reduction. It can facilitate rapid, transparent, responsible, efficient and effective interaction between the stakeholders. This not only promotes better administration and better business environment, but also saves time and money in transactions costs of government operations.

In this dynamic and ever-changing market environment, farmers in India should be abreast of the latest information for their agricultural inputs. One or two successful stories won't solve the purpose. It needs a revolution in the rural sector. Greater transparency in the farming process is the need of the hour. The faster the government and farmers understand and realize it, the better for them and more importantly for India to shine properly.

**Reference:**


- Ahluwalia, M.S., It is Time Reforms Touched the Farms, The Economic Times, October 19, 2006, p.16.
- Asokan, S.R. and Arya, A., Indebtedness of Farmers: Is Contract Farming a Solution?, Productivity, 46(2&3), 240-2444(2005).
- Aiyar, M.S., Panchayati Raj is a Silent Revolution, India Today, August 14, 2006, p.25.
- Bhatt, E., What has worked in Sewa: Second Freedom. In 'Ideas That Have Worked', Viking, New Delhi, 2004, p.141-162.
- Chidambaram, P., ET Awards for Corporate Excellence, The Economic Times, October 9, 2006.
- Deveshwar, Y.C., Inclusive and Sustainable Growth: ITC's Enduring Contribution (Based on Speech delivered at 94 th AGM), India Today, 2005.
- Badi R.V & Badi N.V (2004), Rural Marketing ( Edition), Himalaya Publishing House, Mumbai
- Gopalaswamy T.P., (1997), Rural Marketing: Environment, Problems and Strategies, Wheeler Publication, Allahabad

- Gupta Dipankar., (2005). 'Whither the Indian Village: Culture and Agriculture in 'Rural' India', Economic and Political Weekly, February 2005, pp. 751-758
- Prahalad C.K. and Allen Hammond, (2002), 'Serving the World's poor profitably', Harvard Business Review, September 2002
- Management goes to bottom of the pyramid By Kalpana Pathak, Business standard, June 28, 2006
- Marketing the BOP in India By Shailesh Dobhal, The Economic Times, June 21, 2006
- At the Bottom of the Pyramid: Responsible Design for Responsible Business, By Nirmal Sethia, Design Management Review, June 1, 2005
- Winning the Indian Consumer, By V.T. Bharadwaj & Gautam M. Swaroop, et al, McKinsey Quarterly, 2005 (Subscription Required)
- SHG-Bank Linkage Program in India: An Overview By Hema Bansal, Journal of Microfinance, Vol. 5, No. 1; , March, 2003
- Serving the World's Poor, Profitably, By C.K. Prahalad & Allen Hammond, Harvard Business Review, September, 2002
- The Fortune at the Bottom of the Pyramid By C.K. Prahalad & Stuart L. Hart, Strategy+Business, January, 2002 (Issue 26, First Quarter 2002)
- Hindustan Lever Limited (HLL) and Project STING A, By Patricia H. Werhane & Michael E. Gorman, Darden Case No.: UVA-E-0266-SSRN, 2005
- India's New Retailers, Outlook Business, July 11, 2009.



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