Indian Institute of Management Indore

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Editorial

International Journal of Management Practice and Contemporary Thought (IMPACT), a dream turned into reality, is entering the second year of its publication. At this point in time, I must acknowledge that the seasoned and dispassionate directions of our esteemed readers through their warm responses helped us in strategically placing our Journal within the exclusive array of research journals. Though our Journal is at formative phase, with its unique blend of conceptual and empirical research papers, case studies and book reviews, it has created a position for itself among academic and business fraternities. Appreciation of our efforts is reflected concurrently in the form of increasing subscription and increase in the number of research paper submissions. While it is satisfying to look back and get encouraged, the bigger challenge is to work further and build this Journal as a truly international brand. This is only possible through the sustained encouragement of all the stakeholders. While management as a discipline has slowly started maturing, yet we need to keep abreast of the emerging and contemporary domains in the filed of management. The endeavour of the Journal is to move towards the foundation of a platform for dissemination of this new information of management thought and practice to propel the growth of new paradigms in management.

The present issue brings together eight research papers, one case study and one book review, demonstrating viable and beneficial factors in managerial research to organisations. In the changed management scenario, researchers in a range of management disciplines and allied fields address various managerial topics and substantiate their perspectives through hardcore research analysis.

The opening paper, **Consumer Psyche & Online Branding, The Indian Context – An exploratory Study,** by Dr. S.Ramesh Kumar and Kartik Srinivasan, closely examines the effect of web advertising, deemed as the new form of advertising, on the perception of branding. An effective online advertising produces vivid and profound impression on the young target group and reinforces the brand building over the traditional forms of advertising. Towards the development of brand associations and right brand positioning, here the authors propose how synergizing of online and offline advertising can be done based on search quality, experimental quality and credence quality associated with products and services. When business concerns are vying with one another to build up strong online presence to have greater sway on customers, the outcome of the research will contribute to develop the right Internet marketing strategy for building brands.

The second paper, **Short and Long-run Performance of Bookbuilt IPOs in India,** by Dr. S S S Kumar looks at the functioning of Initial Public Offerings (IPOs) made accessible through the book building process in India during the period, 1999-2006. The author surveyed 156 firms that issued shares through the book building method on NSE. Under the mechanism of book building, which intends the effective price discovery, both the long-run and short-run performance of IPOs are measured, to bring out the findings of the study. The result points to the information that the IPOs are under-priced, validated the positive listing day returns and go beyond the expected performance in the market for the following twenty four months.

The third paper of the Journal, **`IT-system and Filtration of Knowledge'**, by Dr. Stefan Holgersson illustrates the beneficial use of IT solutions to law enforcement officials. Stefan Holgersson is a police officer and a high-profile police researcher of Sweden, who holds

Ph.D in Information Systems. He conducted study amongst diverse strata of police personnel in all 21 police districts in Sweden and interviewed 2000 officers, holding different ranks and also with varying level of performance in the police force. The author here differentiates the two perceptions in police work practices, viz. the street-level perspective and the theoretical perspective and in the both knowledge views, how the interpretations of data are multifarious and dissimilar. The benefactions of IT are various and function of IT is pivotal in comparison to other information sources in decision-making and analysis.

The fourth paper, **Employee Engagement: A Comparative Study on Selected Indian Organisations,** relates to employee engagement, based on the comparative analysis of three organizations in different sectors. Top performers are proved assets to an organization and for this reason; organizations employ different strategic retaining measures to boost the retainability of the critical employees among the workforce. The organizations are required to develop distinct proceedings to comply with the expectations of their employees. Authors are of the opinion that companies can take advantage of the information regarding the employee's objectives to devise undemanding and inexpensive opportunities to build an engaged work force in the interest of the organization. Further, the higher engagement level among the employees found in a charitable organization is attributable to the sense of accomplishment; the employees get from their selfless work for the deprived sections of the society.

The fifth paper, **The Relative Efficiency for Benchmarking Advertising Expenditure– An Alternative Approach,** proposes a framework to measure the technical efficiency of advertising outlay so as to evolve best practices and set benchmark for business concerns to derive the most advantageous outcome from advertising. Being the key determinant of profitability, business establishments lay considerable stress on the advertising costs. Companies are inclined to over advertising on various grounds like, the failure to distinguish the effective media, preference to stay on safe side and following the previous plans etc. are just to mention a few. To put into practice the oft-quoted phrase `advertising is salesmanship' in the new idealized marketing conditions, methodical studies on media allotment decisions are to be executed to determine the accurate budget allocations in the right direction for triggering the trade.

The sixth paper, **Motivators at Work: An Equity Sensitivity Perspective,** appraises the employee motivating factors, taking into account both financial and non-financial aspects, to find out the preferred motivator of people at work. The author carried out an open-ended survey among senior and middle level Indian executives from public sector unit with distinct designation. The best motivating factor forms the basis for selection of variables for the study. The results of the study indicate that employees are inclined towards the benevolent preferences on equity sensitivity dimensions and afterward the results are deliberated to find the effectiveness of an organization in keeping the motivation of employees higher by giving rewards.

The seventh paper, **A Conceptual Model to Study the Impact of Managerial Communication Styles on Employee Outcomes,** is centered on the premise that the current dictums emphasizing the importance of people in organisations, has effected basic changes in managerial communication. The authors put forward a conceptual model to ascertain how the employees' attitude and behaviour are influenced by the managerial communication style. The effective communication style combined with the apparent management support give communication satisfaction to human resources, boosting their self-respect and confidence and alongside, increases the performance level with decrease in absenteeism.

The eighth paper, **Organizational Identity and Sustainable Competitive Advantage: Combining Resource Based View and Configuration Approach,** puts forward a proposal for conceptual development in offering quality of configuration as a source of sustainable competitive advantage. Given that the people are viewed as the basis of sustainable competitive advantage, the paramount challenge confronting the organizations is to incite and retain brilliant employees. According to the author organizational identity is to be perceived as one of the attributes that provide motivation of sustainable competitive advantages on the stipulation that it furthers positive identification in tune with the reality that the identification is to be imparted higher value by the employees. With the aim of developing propositions for organizational identity as a source of sustainable competitive advantage on various characteristics, author applies the concepts of organization identity to configuration and resources based approaches of sustainable competitive advantage.

The case study, **MIS Implementation at Construction Project: An Experience,** recounts the implementation of MIS at a construction concern, recognised as the first construction company in India, executing the MIS implementation project. Authors argue that the investment in Optimised Resources Planning system and other related technological innovations brought about immense impact on the brand equity of the company, to follow-on better profitability and more projects.

The journal concludes with the book review of Dr. Pramod Pathak. He critically reviews **`India's contribution to Management'** authored by Shri Pravir Malik. In a conscientious attempt toward the establishment of a direct linkage between the contemporary management praxis and the ageless erudition encompassed in the Indian philosophy, the author brings into focus the transcendence of Indian thought and conventions. Dr.Pathak's review rightly reflects the true essence of the Book.

I always appreciate constructive suggestions for improving the content and spirit of IMPACT. I wish to express my thanks to Ms. Ambika Harikumar and Mr.Mukesh Choudhary at Research & Publications Office for their support towards the publication of the Journal.

Dr. Tapan K. Panda

Contents

Consumer Psyche & Online Branding, The Indian Context – An exploratory Study

S.Ramesh Kumar* **Kartik Srinivasan****

Abstract

The digital media in India is likely to have a huge potential, given the fact that a huge population is below the age group 15 years to 25 years. Even if a small percentage of this huge population starts using the web in future, it will amount to a large target for the digital media. There have been a few studies conducted in the Indian context on the impact of Internet on brand associations. This exploratory study attempts to investigate the impact of online advertising on brand awareness/ brand recall and brand recognition. The authors have done a literature survey before formulating the actual study. The study also incorporates a few aspects of psychographics to emphasize the importance of psychographics on online branding. After assessing the results of the study, authors provide recommendations on how offline and online advertising can be synergized to develop brand associations.

Key Words : Brand Awareness, Brand Recall ,Brand Recognition , Internet Advertising, Marketing Communication.

In a changing environment like the Indian context, marketing communication needs to adapt itself to the changes in consumers' lifestyles and media usage. The challenge of such an emerging environment is that consumers are in a transition stage across several dimensions of their lifestyles – ranging from usage of brands to media usage habits. This transition has the consumer adapting to emerging trends while being rooted in traditional habits and purchases. Consumption of fast foods and the daily routine of traditional consumption with regard to eating, using SMS in mobiles and e-mail but still using the conventional telephones in office, a raising demand for trendy women's apparel while most women also buy traditional ethnic apparel and online surfing by consumers while shopping as in the past are some of the examples that can be derived from the transition of consumer lifestyles. One of the off-shoot areas of the transition of

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consumer lifestyles is the manner in which consumers pay attention to offline advertisements and online advertisements. While the expenditure on online advertisements may be on the increase, it is still a miniscule percentage of the overall advertising expenditure in the Indian context. The traditional advertising in television and print media continue their dominance over the attention they get from consumers.

Given this situation, brands, especially those are youth-centric need to adapt their strategies combining online and offline advertising without losing focus on brand associations in terms of consistency. This challenge requires marketers to probe into the effectiveness of both offline and online advertising before formulating a strategy combining both these strategies. The basic concepts associated with branding need to be applied to online advertising to provide a basis for the impact of online advertising in a specific category. For example, soft drinks have been traditionally been advertised on the television media but given the youth orientation towards digital devices and online surfing (at least in the urban context), brands in the category need to reorient their strategies to ensure both effectiveness and contemporary cues. Brand awareness, brand recognition and brand recall are some of the fundamental aspects that also lend themselves amenable to online advertising.

Mckinsey's 2007 Survey on Online Marketing Trends

A McKinsey survey of global executives in 2007 indicates that companies are moving online across the spectrum of marketing activities; from building awareness to after sales service and they see online tools as an important and effective component of their marketing strategies. In addition to established online tools such as emails, information rich websites & display advertising, survey respondents show a lot of interest in the interactive and collaborative technologies collectively known as Web 2.0 for advertising, product development and customer service. These include blogs, online games, podcasts, social networks, virtual worlds, web services, widgets and wikis. 65% of the respondents in the hi-tech industry feel that online marketing is essential while only 32% in manufacturing feel so. One third of the companies that advertise online are already spending more than 10% of their advertising budgets online. Search advertisements are considered to be the most efficient but they rank only third in usage. While they were developed to generate a direct response, survey respondents feel that they are equally good in brand building. The barriers to the brand building also seem to be very high, primarily due to insufficient metrics and capabilities of the professionals.

*The State of Online Advertising in India

On a global level, there have been recent acquisitions of online advertising companies by traditional ad agencies or Internet giants signaling that the bigger players understand its potential (DoubleClick – Google; Right Media – Yahoo; aQuantive – Microsoft; Real Media – WPP).

There is the imminent acquisition of Yahoo by Microsoft (in February 2008) that may produce a formidable competitor to Google. Online advertising in India is worth Rs. 450 crore and is likely to increase to Rs. 2250 crore in 2009. With domestic Internet populace more than 42 million, advertisers are seeing a greater potential in this area. Marketers need to focus on the measurement of Internet advertising. According to Bhatt, Bevans and Sengupta (2002) web measurement can be organized around these major objectives:

1. Popularity of the website or the ad - Page impressions, top pages requested, peak activity, hits, visits, unique visitors, ad impressions, clicks and click through rates
2. Ability to attract and hold user's attention - Average time per visit, average time per visitor, repeat visitor percentage, frequency, recency and stickiness
3. Relevance of the message to the user - Unique visitors, top entry page, top exit page and path analysis
4. Co-marketing opportunities - Clicks and Duplication
5. Efficacy of user targeting - Visitor's profile, country and previous behavior

Advantages of Internet Advertising

- Promises advertisers a sophisticated audience
- Provides a chance to precisely target their advertisements
- Ad copy testing is easier than an ad for a traditional media
- Many models collects money on the basis of performance (click-through) and not promise, as done by traditional media

*Source: Joshi, P., "Online advertising takes off, finally", Business Standard, January 09, 2008
http://www.business-standard.com/common/storypage_c.php?leftnm=10&autono=310121 (Accessed on 11th January 2008)

- The role of an agency is minimized in the advertising process
- Costs less
- Internet provides the capacity to advertise, transact and also distribute.

Literature Survey

Poh, D., (2005) discusses the relationships between attitude towards the ad and aspects of the advertising hierarchy of effects model in the online marketing context. He suggests that the traditional advertising hierarchy of effects model is relevant in the online marketing environment also. Based on this model, he hypothesizes the following and through a research proves them - Attitude towards the website is related to the attention to the ad; Attitude towards the website is related to the attitude towards the ad; Attitude towards the website is related to brand attitude and Attitude towards the website is related to purchase intention. The most important message coming out here, viz., the kind of website that one advertises has its effect all the way up to the purchase intention. For an online marketer, this finding is significant because he needs to choose the websites carefully where his advertisements would appear. When the online marketer manages his own site, he should take care of the design of the website itself because the amount of liking a user has towards a website directly affects the liking the user will have towards the product. When the marketer has his advertisements carried by other websites (whose design cannot be influenced by him), he needs to make sure that the website has a design likable by the user. This proves why the 'context' based advertising provided by Google Ads may prove counter- productive. For example, a shampoo advertisement might be placed by Google Ads in a site that carries an article on usage of shampoos but if that website is poorly designed, it may affect the liking a user may have towards the shampoo brand. The other major learning that comes out this is that it says that online advertising is more aligned to direct response marketing and evaluation of the investment made involves lifetime value of individual customers rather than short-term measures such as purchase intentions.

Broussard, G., (2000) presents the findings of a study conducted on how advertising frequency (using banner ads) affects the advertising effectives in terms of two different aspects – direct response and brand awareness. Direct response is tracked by the number of customers who click on the ad and reach the advertiser's website. Brand awareness has been measured through a survey on a few of the visitors to the site. Here are some important findings. Direct Response - On a single site, best advertising results, in terms of cost per lead, were achieved when the frequency of banner exposure was low. When a schedule of the weight of exposures was made with the sites with high potential having a higher frequency of the exposure, the overall cost per lead is reduced. Overall, direct response campaigns require a lower level of advertising frequency to achieve campaign objective compared to branding programs. Brand Awareness - Brand advertising had its greatest impact between one and seven exposures. 80% of the effect was achieved by the time the site visitors had seen 7 ads. After 7 repetitions, awareness and product attributes continued to improve, although the rate of growth tailed off. Thus, online advertising can achieve two separate objectives – direct response to increase sales in the short term and brand building that will help in increase of sales in the long term. The same banner ad in a website may help in achieving both of these objectives but the frequency of the ads exposure cause different effects. When the objective is towards a direct response, it is easy to measure through the number of visitors who click the ad and reach the advertiser's website whereas it is not as easy to measure in case of the brand building objective. To achieve direct response, a marketer should make a media schedule of the frequency of the ads in different sites. Lower the frequency, lower the cost per lead but that does not mean that the frequency should be kept low. The weight of the exposure should be made high in high potential websites and low in low potential websites thereby achieving the optimal cost per lead. For building a brand, the frequency of ad can be as low as 7 and then the increase in awareness decreases, so the marketer should make sure that the banner ads are rotated or replaced once every 7 exposures for a particular user in a website.

Drèze, X., and Hussherr, F., (2003) argue that the click-through rates are not effective measures of online advertising. A larger part of the surfer's processing of the banners occurs at a pre-attentive level. So advertisers should rely on more traditional brand equity measures such as brand awareness and advertising recall. Since the banner ad competes for space along with more important (from the surfer's perspective) information on the screen, the first task is to grab a surfer's attention and the second is to induce the surfer to click on the ad. Not only do the surfers do not look at the banners, but they also seem to purposefully avoid looking at them; they are able to avoid because most banner ads are typically of the same size and they occur in typical places (like the top of the screen). Some of the hypotheses from Drèze and Hussherr (2003) are as follows: Banner ads will have a positive impact on aided advertising recall, unaided recall; brand recognition and brand awareness. Advertising effectives increases with the frequency of exposure. Larger banner ads will be more effective than smaller banner ads. Banner ads laid out vertically are more effective than that are laid out horizontally. The effectiveness of a banner ad depends on its environment. The medium of Internet advertising resembles most is the outdoor billboard. A surfer would visit a website on his interest to read the main content in the website. When he encounters a banner, he would consciously avoid looking at the ad and concentrate on the main content. So, the advertiser should concentrate on the content they advertise and not rely on bigger or animated ads to compensate for ineffective content. Since Internet can be compared to outdoor billboards, advertisers should understand that such advertisements influence recognition, recall and awareness even if they only rarely prompt the customer to take immediate action. The advertisements should be designed such that - First they grab the attention of the surfer – not through the size or intrusion but through effective messages; Then they induce the surfer to click the ad which may lead to further information processing or a purchase itself; While the first task alone is sufficient in terms of achieving brand recognition and awareness, success in the second task also means that immediate results are also obtained.

Rappaport, S., (2007) outlines three new models of online advertising – on demand; engagement and advertising as a service. Online advertising contributes most to brand performance when it is planned into the brand campaign from the outset, not used as just another experiment. 'On demand model of advertising' works on the premise that most of the customers in an online environment are content aggregators, filterers, schedulers, exposers and disposers. So brand marketers should not just stimulate demand but also stimulate interest among consumers to include their brand in the choices they make about what they see, read or listen to. 'Engagement model' works on the idea that the brand should be made highly relevant to the consumer than a mere purchase and towards the development of an emotional connect between the consumers and brands. With this model, the marketers build specialized sites for the products, let the consumers visit and exchange views and also provide personalized content to its consumers. 'Advertising as a service' model is described as first identifying the services and information consumers' need and then creating the messages and experiences relevant to those needs. While an online marketer places an advertisement in a website, it would not be an isolated event in the branding strategy. It should be consistent with the overall branding strategy and for sure, the online branding strategy of the company. The interrelationship among these three models should be used by the online marketer. Marketers need to start taking the time and energy to transition their models to take full advance of the desires and competencies of the Internet users to reach the right people with the right message, instead of most people with the same message. An online marketer should decide on which model or which combination of the models he would choose to employ.

Hoffman, D., Novak, T., Chatterjee, P., (2003) develop an analytical approach to modeling consumer responses to banner ad exposures at a sponsored content web site that reveals significant heterogeneity in click proneness across consumers. Within a session, a negative and non-linear effect on click probability due to wear out was noticed. That means earlier ads had a higher probability of being clicked than ads that were exposed later. Across sessions, it was found that longer intersession times in prior sessions, more banner exposures in previous sessions and more time taken since last click in prior sessions led to higher click probabilities in the current session. Click probability decreased with increase in the number of sessions. There will be greater gains in repeating banner ads for consumers that have low click-proneness coefficients in a given session and consumers that in general do not click much on average. Though banner exposures do not immediately lead to a click, it may still lead to enduring communication outcomes. The effect of an ad exposed in an earlier session affects the behavior of a user in the next session. It is possible that the banner ad exposed in one place may lead to clicking in another place or to a similar ad in TV or in the point of purchase.

Wang, C., Zhang, P., Choi, R., and D'Eredita, M., (2002) build upon the findings of the literature on the factors that contribute to the consumer's perceptions of ads (online & offline) – entertainment, irritation, informativeness, credibility and demography. They argue that *'Interactivity'* is also a major factor that contributes to consumer's perceptions. Although online ads can function as a gateway to the next stage of transactions of purchase, they focus on the informing stage of advertising. From an advertiser's perspective, each ad also has a brand building function since it has certain qualities (e.g., a symbol/icon or brand name) that add to brand recognition. From a consumer's perspective, an ad may not motivate further action if it is not perceived to be relevant to his or her current needs, but unique qualities of the ad might result in brand building. In traditional media, the attitude towards the medium and the attitude towards the advertisement in that medium are the same while in the web, the attitude towards web as a medium could be different from the attitude towards the advertisement. When there is more interactivity in a website, it may lead to better brand building along with the other factors like irritability, informativeness, credibility etc.

Goldsmith, R., and Lafferty, B., (2002) present a study of advertising effectiveness over the Internet. It is a test of 4 hypotheses - Consumers who have a positive response to websites will be more likely to recall brands advertised on the Web than those who do not respond positively; Consumers who have a positive response to a website will see more advantages to advertising on the Internet than those who do not respond positively; Consumers who have a positive response to a website will see few disadvantages to advertising on the Internet than those who do not respond positively; There will be no difference in the valence of response to ads recalled from the Internet compared to ads recalled from commercial media. Consumers who felt that visiting a website improved their view of the brand could recall more brand names than those who felt that visiting a website had no effect in their view of the brand. It was found that the consumers who have a positive response to a website found equal or more disadvantages than those who do not respond positively. While most TV, newspaper and magazine ads were liked; fewer than half of radio and Internet ads were liked. The online marketer should understand that the ads in the websites are not liked as much as ads in TV or a magazine. Therefore more efforts should do into making the ads likable - Since about one-thirds of websites evoked a positive response towards a featured brand, websites seem to be doing a good job in enhancing the brand. The response to a website directly affects the attitude towards the brand advertised in it. So the marketer should choose the websites carefully.

Gordon, M., and Turner, K., (1997) examine how Internet users make trade-offs among attributes associated with Internet advertising policy. They use the learning from the social contract framework previously used to describe direct marketing. It identifies 5 attributes that will govern an interaction between an advertiser on the web and the customer as these – access to advertisements (who is in more control – advertiser or the consumer), placement of advertising (mixed with content, content & ad in the same page like print media or content and ad separated like a TV ad), message (entertaining or informative), influence of fees (like newspapers being cheap due to subsidy from ad revenue) and information collection (privacy issues). A survey was conducted to test if these 5 attributes hold good. The results showed that these indeed hold good & the consumers make implicit trade- offs between these attributes. Consumers do not object to advertisements as long as they are clearly identified; prefer that advertisement be target specific. They accept the idea that their click streams be tracked – because it helps in targeting effectively. They also prefer entertaining ads than informative ads. There is a social contract involved in the relation between an advertiser and the consumer in Internet advertising, similar to the direct mail. The advertiser should be careful enough to create a give & take policy on these attributes. For example, if there is an advertisement shown to the user, it better be entertaining than being informative and if it is disturbing his 'flow', then the service better be free than being charged; Online marketers should target their advertisements very effectively. When they do that genuinely, the customers would not even mind their privacy being lost a bit in the process

Coyle, J., and Thorson, E., (2001) present the findings of an experiment that examined the interactivity and vividness in commercial websites. The following hypotheses were tested - Towards interactivity: Perceived tele-presence will increase as levels of interactivity in a website will increase; Attitude towards websites that are more interactive will be more positive than those toward less interactive sites; Attitude behavior consistency related to websites that are more interactive will be higher than attitude-behavior consistency related to websites that are less interactive. Towards vividness: Perceived tele-presence will increase as levels of vividness in a website will increase; Attitudes towards websites that are more vivid will be more positive than those towards less vivid sites; Attitude behavior consistency related to websites that are more vivid will be higher than attitude-behavior consistency related to websites that are less vivid; Attitude towards websites that are more vivid will be more enduring than that are less vivid. Interactivity and vividness are two most important aspects of a website that should be considered by a marketer before he chooses a website to advertise – because these factors affect the perceived tele-presence of the user. Since it is proven that the attitude towards the website affects the attitude towards the ad and consequently the brand being advertised, the marketer should make sure that the websites and the advertisements are interactive and vivid

Danaher, P., and Mullarkey, G., (2003) examine the following factors – viewing mode, duration of page viewing and web page context factors (including text and page backgrounds) and the style of banner advertisements. The following are the hypotheses that are proposed - Longer web page exposure duration will result in higher recall and recognition of advertising content contained in web pages. Goal directed web page viewing results in lower recall and recognition than exploratory web page viewing. Web firms supported largely by advertising revenue should design their sites to be sticky, where the user will remain in the site for 40 or more seconds; Even though website context effects affect the attitude towards the site and the advertisement, it does not affect recall or recognition; The mode of the user when in a website affects the advertising recognition – he sees and remembers an advertisement when in surfing mode than when in a goal oriented mode. So ads are better placed in a site that can retain a user for more time than one that does not retain users; Ads are better placed in sites where the user is in a surfing mode than in a goal oriented mode. This means that the advertisements are more effective in a site that is visited when the user is in a relaxed state of mind than when he is 'on-the-job'.

Simmons, G., (2007) builds upon three pillars in the branding literature, viz. understanding the customer, marketing communications and continuous interaction with consumers. To these, the content; he adds a fourth dimension, integrates all dimensions and presents a framework for online branding. The four pillars of branding should be integrated well for the branding communication to be effective. Since there is interactivity with the customers, marketing communication can be inserted into it so marketing communications and interactivity pillars have a link. Content and understanding customers are linked this way – an understanding of customers is essential to have the appropriate content. Online content can be effectively customized to suit different customer needs too. Also, an interactive content drives a consumer to visit the site regularly and also induces to make related purchase decisions. Thus content and interactivity are linked too. Effective communication through aspects like viral marketing can be done through good content Therefore, the four pillars of branding presented here should be integrated well for the branding exercise to succeed; Content plays a vital role in this – since marketers might advertise in third party websites, they need to be careful about the content; Marketing communication can be effected through viral marketing and a lot of caution is in order here; Companies that have a stronger offline brand are more capable of leveraging the power of the four themes than otherwise.

Summary of the Literature Survey

The major insights from the literature survey are captured as below.

The awareness level of brands that

- Are advertised in websites liked by the user is more than that of brands that are advertised in websites not liked by the user?
- A user is exposed more frequently is more than that of brands that a user is exposed less frequently?
- Whose ads attract the attention of a consumer is more than that of brands whose ads do not attract the attention of a consumer?
- Are advertised in home pages of websites are more than the awareness level of brands that are advertised in other pages?
- Are advertised in interactive web sites are more than the awareness level of brands that are advertised in non-interactive websites?
- Are advertised in websites where a user spends more time is more than the awareness level of brands that are advertised in websites where a user spends less time?
- Are advertised in websites that a user visits to relax is more than the awareness level of brands that are advertised in websites that a user visits to finish a task?

The researchers formulated the objectives of the study taking into consideration the limitations of the literature survey besides the fact that very little exploratory research on online branding has been in the Indian context.

Objective of The Study

Replicating every insight from the literature to the Indian context would be a cumbersome exercise, given the scope and nature of this project. This project tries to validate a few hypotheses about online advertisements in India at a generic level and future research may try to validate specific concepts in this area. Therefore, the objective of the project is – *"To test if online advertisements contribute to brand awareness, recognition and recall among Indian Internet users and provide recommendations to an online marketer based on the insights from the literature survey."*

The definitions of Keller, (1993) for brand awareness, recognition and recall as provided in this paragraph are used for the purpose of this project. **Brand Awareness** is related to the strength of a brand node or trace in memory, as reflected by the consumer's ability to identify the brand under different conditions. **Brand recognition** relates to the consumer's ability to confirm prior exposure to the brand when given the brand as a cue. **Brand recall** relates to the consumer's ability to retrieve the brand when given the product category, the needs fulfilled by the product category or some other type of probe as the cue. Further, the model suggested by Aaker (1991) shows the relation between brand awareness, recognition and recall as follows. At the lowest level, one is unaware of the brand. As the exposure increases, recognition, recall and top of the mind recall happen. For example, a customer not aware of a brand, say, Coca Cola is at the 'unaware' state. Once the brand is introduced to him, (by whatever means) a trace or a node is created in his mind and he becomes *'aware'* of the brand. Further, if a cue of Coca cola is given to him (by mentioning it, showing a coke bottle etc), if he is able to recollect that he is aware of Coca cola, it means that he *'recognizes'* the brand. At the next level, if he is able to recollect Coca cola through other cues (like 'soft drinks'), it means that he *'recalls'* the brand. At the final level, if at the mention of soft drinks, Coca cola is the first brand he recollects, that is '*top of the mind* recall'

Methodology

This research was performed as a single, cross sectional descriptive research. The results from the research are expected to be useful to a marketer in advertising over the Internet towards building a brand.

<u>Website Selection</u>: A website was chosen based on the following criteria – This website caters to the online consumers in India and has (sticky) banner advertisements in their home page. Sticky banner ads are those ads that do not change with the content of the pages (that is, not context based) and remain in the same position till the time the page is redesigned by the web master of the site.

Five websites, popular among the population of this research are identified

- Rediff (www.rediff.com)
- Indiatimes (www.indiatimes.com)
- Cricinfo (www.cricinfo.com)
- NDTV (www.ndtv.com)
- CNN IBN (www.ibnlive.com)
- Yahoo (www.yahoo.co.in)

These websites were tracked for a period of 3 days to ensure that there are enough advertisements that are sticky at their home page. None of the websites actually had advertisements that were sticky forever. NDTV and IBN Live had one advertisement that stuck for three days but just one advertisement would not be enough for the survey questions. However, there was no change in the advertisements on a single day in IBN Live. So, the survey was done based on the IBN Live site between 21st and 31st January 2008.

<u>Sampling:</u>

- <u>Population:</u> The common characteristics of the population for this survey (both sets of respondents) are these:
  - ❑ Indians
  - ❑ IT Professionals
  - ❑ Browse > 20 hours a week
  - ❑ Are between 25 and 40 years old
  - ❑ Belong to an urban background
  - ❑ Live in a city with a population of > 1 million
  - ❑ Belong to SEC-A category of the country's population
  - ❑ Visit sites like Yahoo & Google at least 4 times a week
- <u>Sampling Unit:</u> The sampling unit is same as the sample itself
- <u>Sampling Frame:</u> The sampling frame is the email directory of IIM-Bangalore, REC, Jaipur and Samsung India Software Operations
- <u>Sampling Technique:</u> A judgment sample was used from the sampling frame. 40 people from the sampling frame were informed in advance about the research and survey administered a week later.
- <u>No. of respondents:</u> In all, 60 respondents were chosen to participate in the survey.
- <u>Limitations</u>
  - ❑ The sampling is done on convenience & judgment on a non-probabilistic basis, the results would be more exploratory in nature
  - ❑ A more thorough research through a probability sampling may be done and the results can be verified. If found similar, the recommendations hold good

<u>Questionnaire Design & Scaling</u>

- Sections: The questionnaire contains three sections:
  - ❑ Questions related to Brand Awareness: Product Category Recall; Brand Recall; Brand Recognition; Message Recall;

Message Recognition and Feedback on the website

- Psychographics through Activities, Interests and Opinions of the target segment
- Demographics of the target segment

- Scaling: The nature of this research demands that a mix of comparative and non-comparative scaling techniques be used. Each question may have different scaling technique. The respondents are not informed of any scale and that is done after the survey is complete. The survey questions to the respondents do not contain a scale to measure. The researcher's subjective discretion would be used to assign a scale to each respondent's answers.

The survey questions are present in the appendix I.

The respondents were selected based on the procedure explained in the sampling section (Malhotra,1999) . The respondents were told to visit the homepage of the website (www.ibnlive.com) and spend about 5-10 minutes (they were not told that there would be questions on the advertisements in the page). After that, they were requested to answer a few questions related to brand awareness, recognition and recall of the advertisements in the home page (sample questions are in the appendix). While answering the questions, the respondents were strictly told not to look back into the website. There was no scale provided in the survey questionnaire for the questions on recognition and recall. If provided, the difference in awareness, recognition and recall would need to be informed to the respondent and that might become incomprehensible to the respondent. There were 4 advertisements that were 'sticky', that is, did not change based on time or context.

These 4 advertisements were chosen as the reference for questions on recall and recognition

- Airtel
- Dr. Batra
- Progress Infrastructure Solutions
- Carazoo used cars buying website

The data collection was done online, over the survey site of IIM-Bangalore. Since the survey was not published to many and the sample was based on judgment, the researcher was able to track every response separately. The survey was sent to 60 respondents. 54 of the respondents submitted their responses. 4 responses were rejected. After every response, researchers assigned a weightage to the responses for recognition and recall separately. For example, if the respondent wrote down 10 brands they could recall, the researcher would classify them as brands from text based ads, dynamic banner ads and sticky banner ads. Brands that were not advertised at all were ignored. There were respondents whose browser had blocked advertisements, respondents who had not filled the survey with the spirit of it (they could reproduce all ads, that means, they had visited the site again) etc. Those responses were discarded. Once the survey was complete, the responses were exported to a Microsoft XL sheet for further analysis.

From the individual responses to the survey questions, the following values were calculated

1. Mean value of product category recall (No of product categories recalled)
2. Mean value of product category recognition (No of product categories recognized)
3. Mean value of brand recall (No of brands recalled)
4. Mean value of brand recognition (No of brands recognized)
5. Mean value of message recall (No of messages recalled)
6. Mean value for the site design rating (1-5)
7. Mean value of the involvement in each of the online activities identified (1-5)
8. Mean value of the involvement in each of the offline activities identified (1-5)
9. Mean value of the interests in each of the areas identified (1-5)
10. Mean value of the opinion on each of the statements identified (1-5)

Detailed results from the survey have been added to the appendix II.

Following were the discretion of researchers in the methodology:

- Choice of the website: No scientific methodology was employed for the choice of the site. The site, most comfortable (with more sticky banner ads) was chosen. The survey results could have been different for another site
- Sampling: A judgment sample of the author's acquaintances was used. This could have skewed the survey results
- A-I-Os: The psychographics related questions were based on the typical activities, interests and opinions the author assumed of the target population. There was no field for the respondents to enter anything other than those
- Scaling for brand awareness questions: The

scaling for brand awareness questions were decided by the author. For brand recall, the field was open to respondents to enter as many brands. Relevant brands were identified by the author and the number of brands was identified. For brand recognition, the number of brands the respondent chose from the list was identified & the number assigned.

- For choosing the statistical hypothesis, the 30% and 50% brand recall and recognition was chosen at the discretion of the author, without any scientific basis

The brands CNN IBN, Airtel, Dr. Batra's, Carazoo and Progress Infrastructure solutions are used purely for an academic study. The survey results and the recommendations may not reflect the status of the brand. No prior permission was obtained from these owners for the study.

Analysis

Hypotheses Testing

Based on the literature survey, the following hypotheses were made. They were verified through the survey results.

Research Hypothesis

The research hypotheses are as follows

H1 : "Online advertisements contribute to brand recall among Indian consumers"

H2 : "Online advertisements contribute to brand recognition among Indian consumers"

H3 : "Online advertisements contribute to brand awareness among Indian consumers"

This is a test of association. The association between the presence of online advertisements and brand awareness, recognition & recall was tested.

Statistical Hypotheses (Malhotra,1999)

H1: After a browsing session, on an average, consumers can recall (unaided) 30% of the brands that they see getting advertised on a website

That is,

Null Hypothesis: Consumers can recall 30% of the brands

H0: $\mu = 0.3$;

Alternate Hypothesis: Consumers can recall only less than 30% of the brands

Ha: $\mu < 0.3$

H2: After a browsing session, on an average, consumers recognize (aided recall) 50% of the brands that they see getting advertised on a website

That is,

Null Hypothesis: Consumers can recognize 50% of the brands

H0: $\mu = 0.5$;

Alternate Hypothesis: Consumers can recognize only less than 50% of the brands

Ha: $\mu < 0.5$

H3: Though brand awareness means that the respondents should be able to remember a brand under different conditions, for the purpose of this project, even if one of H1 and H2 are proven, H3 automatically gets proven. If both H1 and H2 are not proven, H3 automatically is not proven.

"When the sample size is large (>30) and sample mean is used as the statistic, the z-test is the most appropriate for this kind of a research" (Black, K., 2006). So, for these brand awareness measures, z-statistic is used. The Type-1 error rate (α) is set to be 0.05.

Testing Hypotheses

<u>Statistical Hypothesis #1</u>: After a browsing session, on an average, consumers can recall (unaided) 30% of the brands that they see getting advertised on a website

That is,

H0: $\mu = 0.3$; Ha: $\mu < 0.3$; Confidence: 0.95

<u>Test for z statistic</u>:

$\mu = 0.3$; $x = 0.355$ (from the survey result); $s = 0.23$; $n = 50$; $z = 1.691$

Critical Value: NORMINV (0.05, 0, 1) = -1.645

Region of non-rejection: $z \geq -1.645$

So, do not reject H0. ('z' exceeds critical value)

<u>Statistical Hypothesis #2</u>: After a browsing session, on an average, consumers recognize (aided recall) 50% of the brands that they see getting advertised on a website

That is,

H0: $\mu = 0.5$; Ha: $\mu < 0.5$; Confidence: 0.95

<u>Test for z statistic</u>:

$\mu = 0.5$; $x = 0.51$ (from the survey result); $s = 0.26$; $n = 50$; $z = 0.27$

Critical Value: NORMINV (0.05, 0, 1) = -1.645

Region of non-rejection: z ≥ -1.645

So, do not reject H0. ('z' exceeds critical value)

H3: " Online advertisements contribute to brand awareness among Indian consumers"

As indicated in the hypothesis definition, since H1 and H2 have been proved, H3 automatically stands proved, so no separate survey needs to be created for that.

Thus all the hypotheses made in this study have been validated.

Conclusion

This project attempted to find out the influence of online advertisements on branding among Indian consumers. Of the different means of online advertising, banner ads were chosen to be tested. Based on the survey of scholarly and trade literature, three hypotheses were developed. The hypotheses were tested amongst the young, affluent, urban, Internet savvy people at Bangalore. The z-test on the mean of the brand recall and recognition confirmed that the hypotheses are correct.

While the brand recall and recognition was as expected, message recall was very less at around only 10%. Where there were some traces of the message left, it was on the negative, with advertisements annoying the respondent' s browsing experience. For example, the pop-up banner ads that were displayed in the tested site during the first page load annoyed 25% of the respondents. Many respondents claimed to have closed it without even looking at it.

The study also indicated that more the number of hours spent on the Internet (savvier the user with the Internet), less the possibility of the user noticing an advertisement. Two users in the survey who spend many hours every day on the site that was tested, reported lesser number of brands. They seemed to have learnt the knack of skipping the advertisements and concentrating only on the news item in the site. Two users in this study reported to have seen no advertisements. It was later found that their browser (Fire fox) settings had all advertisements to be blocked. With the browsers getting sophisticated, this could come as a significant warning to the advertisers to go for creative ways of advertising on the web.

Banner ads had a better recall than text-based ads. Text-based ads from Google are probably more relevant in a search scenario than a news website. Banner ads were the main focus of this study and so text based ads were not studied in detail. However the results and recommendations (provided in the next section) may be also applicable to text advertisements. The reason for the inclusion of psychographics in this study is discussed under "Implications to managers"

Managerial Implications

Strategies to Synergize Online and Offline Branding Associations

The study explores certain important and interesting dimensions for marketers. India has a huge population consisting of youth (larger than markets) forming the target segment for several product and service categories. While the penetration of Internet may be low as compared to several developed markets, large number of websites among youth provides a unique opportunity for brands to use online advertising in synergy with offline advertising. Branding associations and brand personality associations need to be developed over a period of time. The authors recommend a synergy of online and offline brand building efforts based on search quality, experiential quality and credence quality associated with products and services (Kotler and Keller, 2006). While this concept was originally used for marketing services, it can be used for synergizing online and offline brand building efforts. Search quality refers to the quality that consumers will be able to evaluate even before buying product category. Several categories like soaps, apparel, television and cars are some examples. A variant of this approach is to consider brands instead of categories. An established brand is one, which has a specific and focused perception among consumers; they know the functional aspects and benefits of the brand. Such a brand needs to reinforce the successful associations it has built up over a period of time. In this context, there is some discussion also required on experiential quality. By the original definition, it refers to the ability of consumers to evaluate a category after consumers experience the category. Such categories can be typical services like hotels, banking services, vacation resorts and hospitals. Experiential can also mean hedonism, the fantasy or consumption pleasure associated with brands. With such an approach the taste of Cadbury chocolate can also be associated with hedonism. Hence extending search or experience qualities to categories will depend on the brand' s proposition. Besides, search qualities need not necessarily mean functional attributes or tangible brand benefits. It can mean psychological aspects like having a social identity or self-identity. The search quality of a brand like Fastrack or Raga is very different from a brand that offers functional performance. A number of brands across product categories convey psychological proposition. Psychographics plays an important role in the formulation of search/experiential qualities associated with the brand. The study probed into psychographics to emphasize its importance. Credence quality refers to those quality of a product or service that cannot be judged by a consumer even after consuming the product or service. Even in such product service categories like psychological counseling and medical diagnosis, a brand can build strong search qualities like trustworthiness and credibility.

Having discussed the application of various qualities that can be associated with products or services, the authors provide a few examples of how the various kinds of qualities can be associated with brands.

- A well-known brand of soap that has a germ-killing proposition may like to reinforce such associations. If the brand's imagery in the mass media reflects the family's well-being based on the brand's benefit, the brand's website can have articles on how germs affect health when consumers are exposed to the harsh physical environment may reinforce the brand's association. An occasional family context revolving around "germ-free" home also reinforces the family imagery associated with the brand.

On the contrary a new brand of male soap targeting youth may require an online presence like Axe deodorant, backed up by macho brand associations in its offline advertisements. The brand may also have an "adventure game" on the web. Developing an online brand community may be the ultimate objective of the brand. A brand of baby powder or detergent can provide useful information on how the brand conveys the functional benefit. This will enhance the search quality associated with the brand.

- Soft drinks, coffee, tea, snacks, biscuits and chocolates offer a vast scope for capturing the experiential qualities associated with brands. Most of these product categories target youth and the hedonistic orientation can be captured by several aspects of online and offline associations. Coke's website is a good example of how the target segment can relate to "cool and refreshing" aspects that happens to be the proposition of the brand. Red Bull's website is another example of how the energy proposition of the brand is projected through several visuals associated with extreme adventure sports. Associations of energy in synergy with extreme sports associations form a dominant part of the brand's association. The pleasure/hedonic orientation can have a direct connection with the brand's proposition or can be sustained with appropriate metaphors. In categories like entertainment, the basic proposition is hedonism and websites can use a variety of creative ways to capture hedonism. Hedonism need not necessarily be associated with the brand's proposition. A brand of coffee or tea or chocolate having a strong imagery of romantic happiness portrays hedonism by associating itself with "happy moments". 5-Star several decades back had the "togetherness proposition" targeting youth. Online advertising requires a theme or imagery that will reinforce and sustain the brand associations created by offline advertisements, when brands use hedonism or experiential qualities to develop associations.

Service categories like medical diagnosis and psychological counseling relate to credence qualities. Even in such categories a brand can build a positive word of mouth through online communities. The effective brand proposition of trustworthiness, need to be built up over a period of time. In such qualities, a brand will be able to develop "search qualities" only through a consistent performance over a period of time. Satisfied customers spread the good word of mouth. Online advertising is useful to create brand recognition when the brand is new and brand recall when the brand establishes itself through its performance.

With the exception of impulse product categories, that to a large extent rely on brand excitement, created through offline and online advertising, most categories require brands to fulfill the expectations of consumers in terms of functional or psychological needs. The digital approach to brand recognition/recall enables marketers to plan and nurture synergies with off-line advertising.

Limitations & Future Research

- The research hypotheses made in this study were made with an assumption of 30% brand recall and

50% brand recognition. More sophisticated methods to find out the recall, recognition and awareness need to be employed

- The survey was limited to one website and the questionnaire was administered immediately after the site was visited. Similar studies have had sites designed for such surveys with advertisements placed at appropriate places, as the study needs. Such a study would be needed to validate the results from this study
- Cross tabulation of different results have not been done. Cross tabulation and chi square testing need to be done
- This project has been at an exploratory level of branding effectiveness of the Internet. It focused on the branding aspect of Internet only at a very high level. Further aspects, as noted in the literature survey can be tested in the Indian context

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Appendix - I

Survey Questions

Part 1: Online Brand Recall

A sample question for the IBN Live as of 1400 hours on 11th January 2008

Product Category Recall

1. What all categories of products did you see getting advertised?

Product/Service Recognition

2. Did you see any insurance related advertisement in the web page?
   a. Yes
   b. No
3. Was there any ad related to paints?
   a. Yes
   b. No
4. Did you notice an ad related to selling cars?
   a. Yes
   b. No
5. Did you observe a homoeopathy clinic's ad?
   a. Yes
   b. No
6. Was there an ad related to investment banking?
   a. Yes
   b. No

Brand Recall

7. What all brands did you see getting advertised in the site?

Brand Recognition

8. Choose the brands that you saw getting advertised in the web page
   a. Asian Paints
   b. Nerolac
   c. HP
   d. Maruti

Message Recall

9. Do you recall what else message about the product/service was conveyed by an advertisement? (Choose any advertisement and explain)

Message Recognition

10. What do you remember about the ads?
    a. A list of messages would be provided

General

11. The ads in the website were
    a. Annoying
    b. Interesting
    c. Informative
    d. Confusing
    e. No opinion
12. What do you feel about the site?
    a. Good ... Bad (Semantic Differential scale)

Part 2: Psychographics

Scaling:

A Likert scale is used to capture the psychographics. This is a rating scale that requires the respondents to indicate a degree of agreement or disagreement with each of a series of statements. Typically, each scale item has five response categories ranging from "strongly agree" to "strongly disagree" (Malhotra, 1999). In this case, a Likert scale was considered to be most appropriate, as the measurements would be more easily captured through a scale that provides the exact attributes and asked for agreement in accordance with the respective activities, interests and opinions.

Activities

Listed below are different activities over the Internet that you may be associated with or like. Please indicate how strongly you agree or disagree with each as one of your favorite pastime activity by using the following scale:

1. Strongly disagree
2. Disagree
3. Neither agrees nor disagrees
4. Agree
5. Strongly agree
   1. Chatting : ____________
   2. Social Networking (Orkut/ Facebook): ____________
   3. Shopping: ____________
   4. Reading: ____________
   5. Simple browsing without a focus: ____________
   6. Sports: ____________
   7. Games: ____________

Following are some activities that you may be associated with offline. Please indicate in a scale of 1 to 5 as below.

1. Strongly disagree
2. Disagree
3. Neither agrees nor disagrees

4. Agree
5. Strongly agree
   8. Playing Cricket : ____________
   9. Playing other sports : ____________
   10. Social Work : ____________
   11. Go to resorts for relaxing : ____________
   12. Trekking/Adventure sports : ____________
   13. Hang out at malls & multiplexes : ____________
   14. Shopping : ____________

Interests

Listed below are interests that you may have in general that may find its way to your online behavior. Please indicate how strongly you agree or disagree with each as one of interest to you by using the following scale:

1. Strongly disagree
2. Disagree
3. Neither agrees nor disagrees
4. Agree
5. Strongly agree
   15. Music : ____________
   16. Reading Fiction : ____________
   17. Reading Non Fiction : ____________
   18. Writing : ____________
   19. Movies : ____________
   20. Current affairs : ____________
   21. Personal Development : ____________
   22. Cricket : ____________
   23. Other sports : ____________
   24. Lifestyle shows : ____________
   25. Shopping : ____________
   26. Adventure : ____________

Opinions

Listed below are some opinions you may have on Internet & online & offline advertisements. Please indicate how strongly you agree or disagree with each as one an opinion you have by using the following scale:

1. Strongly disagree
2. Disagree
3. Neither agrees nor disagrees
4. Agree
5. Strongly agree
   27. Websites that have more interactivity are preferable : ____________
   28. Spending time on the Internet makes me feel good : ____________
   29. India-based websites cater to me better than US-based ones: ____________
   30. Advertisements in websites entertain me: ____________
   31. Seeing some advertisements to get free services is acceptable : ____________
   32. Spending time on the Internet is a waste of time : ____________
   33. Advertisements in websites are relevant: ____________
   34. I remember most of the advertisements I see on the Internet: ____________
   35. Advertisements are a necessary evil in any medium: ____________
   36. Internet is set to become the primary medium of entertainment : ____________
   37. Online shopping is safe: ____________
   38. Internet is an information-only medium, unsuitable for commerce: ____________
   39. Ads in Internet influence my purchase decisions (online/offline): ____________
   40. Internet has changed my lifestyle: ____________
   41. Internet helps me relax: ____________
   42. Internet helps me learn: ____________

Part 3: Demographics

1. Gender : ____________
2. Profession : ____________
3. Age : ____________
4. City living in : ____________
5. Number of hours spent in Internet every day: ____________
6. What is your annual household income: ____________

Appendix - II

Survey Results

Recognition/ Recall

Product Category Recall

- On an average, respondents remembered 1.58 product categories from the 4 selected advertisements
- From the overall advertisements, respondents remembered 3.3 product categories, on an average

Product Category Recognition

- Product categories (of the 4 targeted advertisements) were shown to the respondents and asked if they recognize seeing it. Respondents remembered 2.06 of them. This is higher than the 1.58 that the respondents could recall.

Brand Recall

- On an average, respondents remembered 1.42 brands from the 4 selected advertisements. This is lower than the 1.58 product categories that they could remember.
- Apart from the brands from the 4 targeted advertisements, there were many other banner and text based ads also in the site
    - Respondents remembered 1.1 brands from dynamic banner ads over and above the advertisements targeted
    - Respondents remembered 0.24 brands from the text ads also
- In all, respondents remembered 2.75 brands

Brand Recognition

- A list of brands (from the 4 targeted advertisements) were shown to the respondents and asked if they recognize seeing it. Respondents remembered 2.04 of them, on an average. This is higher than the 1.42 that the respondents could recall.

Message Recall

Message Recall was very insignificant. There was only a recall of annoyance from the respondents on the flash pop-up that was coming up during the first visit to the page.

The following table summarizes this section

Table I : Recognition / Recall

Product Category	Recall			Recognition	
	Target (4)	Overall		Target (4)	Overall
	1.58	3.3		2.06	NA
Brand	Target (4)	Ban	Text	Target (4)	Others
	1.42	1.1	0.24	2.04	NA
Message	Not Significant			NA	

Site Design

- The average rating given to the site design was 3.52 (on a scale of 5).
- So the design can be considered as 'Average to Good'
- On a scale of 1 to 5, the respondents were told to rate each of certain aspects of the site – annoying, irritating, informative, interesting and confusing. Results are as below

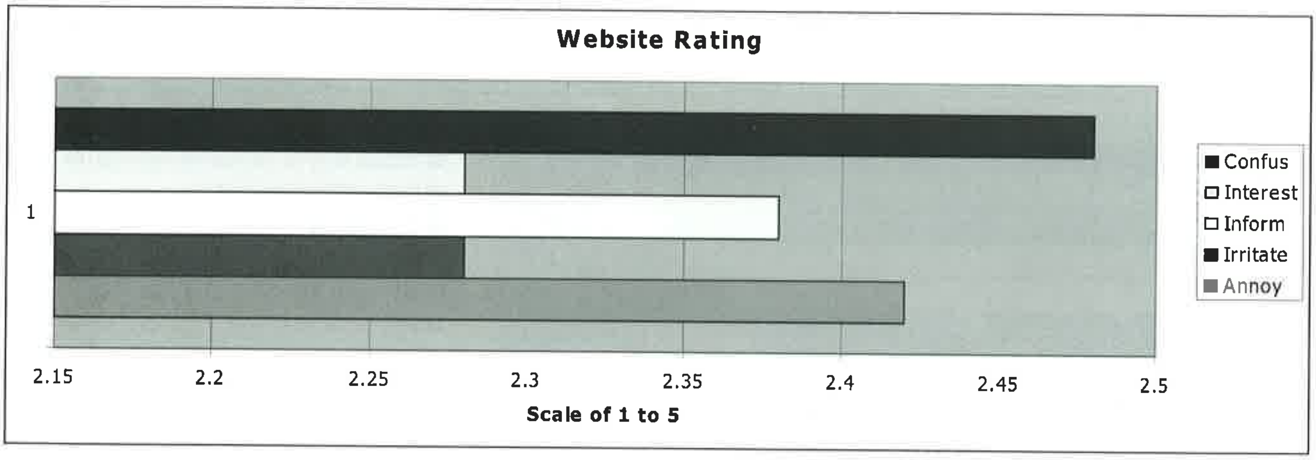


Figure I : Website Rating

Psychographics

Table II : Activities (Online)

Sl. #	Activity	Average Score (out of 5)
1	Chat	2.9
2	Social Networking	2.78
3	Shopping	2.56
4	Reading	3.9
5	Just browsing	2.84
6	Sports	3.5
7	Games	2.3

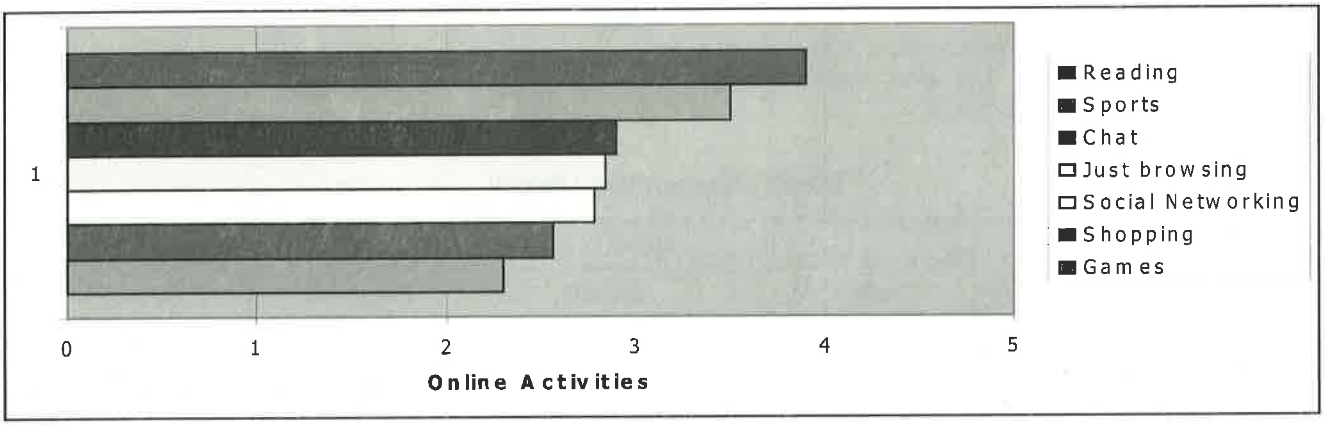


Table III : Activities (Offline)

Sl. #	Activity	Average Score (out of 5)
1	Play cricket	2.32
2	Play other sports	2.82
3	Social Work	2.28
4	Go to resorts	2.48
5	Trekking/Adventure	2.7
6	Hang out in malls & multiplexes	2.9
7	Shopping	2.74

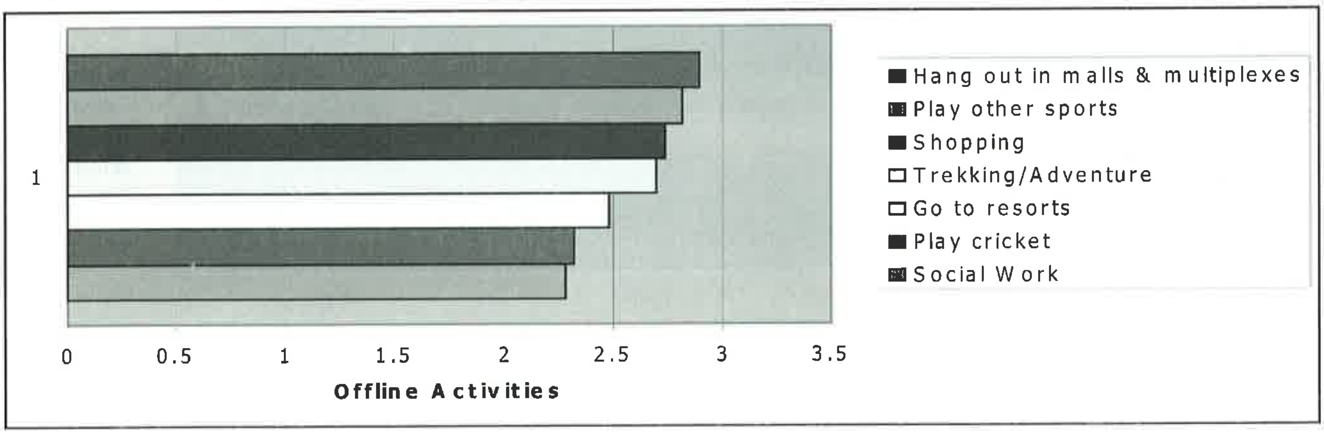


Table IV : Interests

Sl. #	Activity	Average Score (out of 5)
1	Music	3.7
2	Reading (Fiction)	2.82
3	Reading (Non Fiction)	3
4	Writing	2.46
5	Movies	3.48
6	Current Affairs	3.9
7	Personal Development	3.56
8	Cricket	3.22
9	Other Sports	3.06
10	Lifestyle Shows	2.06
11	Shopping	2.76
12	Adventure	3.02

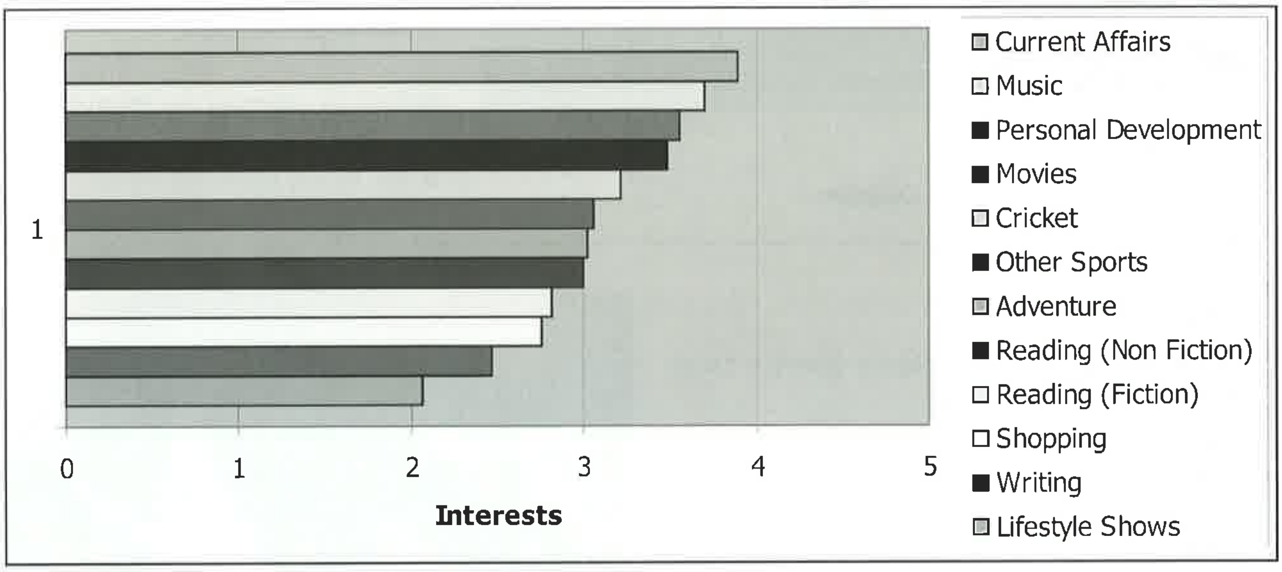
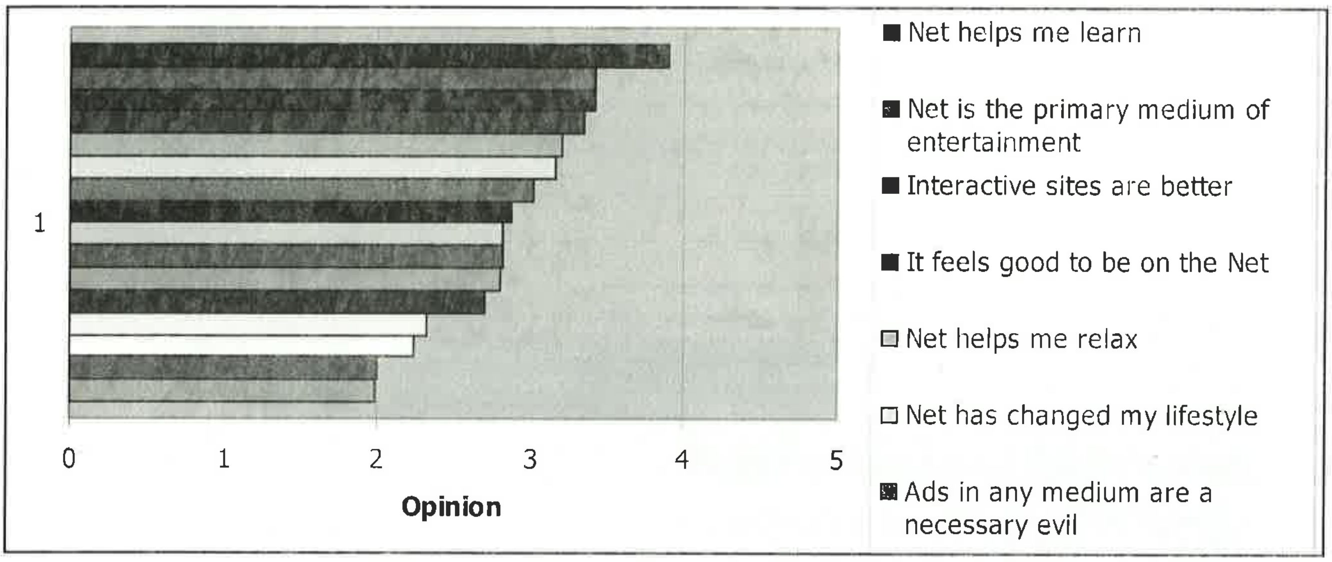


Table V : Opinion

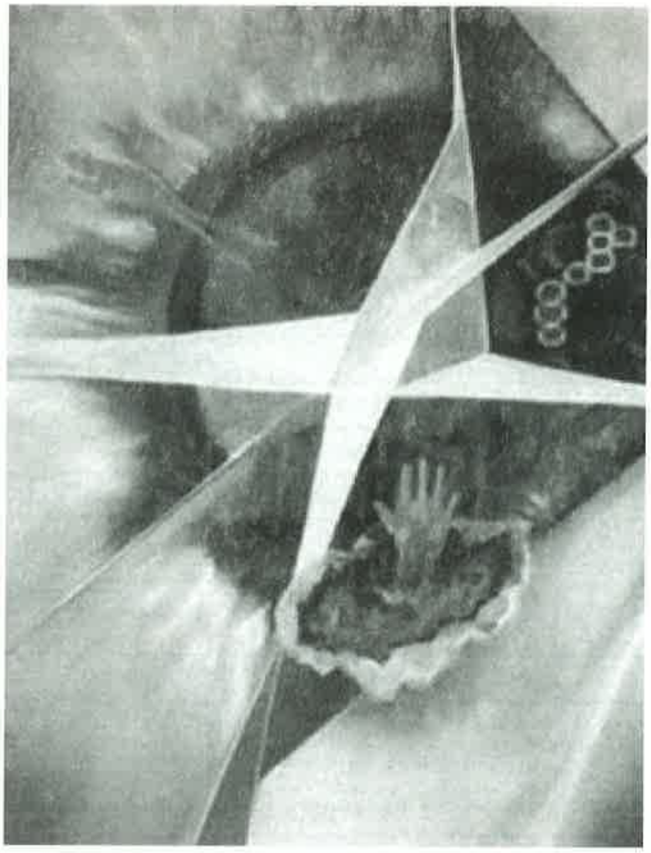
Sl. #	Activity	Average Score (out of 5)
1	Interactive sites are better	3.42
2	It feels good to be on the Internet	3.34
3	India based sites are better than US based ones	2.82
4	Ads in websites entertain	2.24
5	Being shown Ads for free service is acceptable	2.7
6	Internet is a waste of time	2
7	Ads in websites are relevant to me	2.88
8	I remember most ads that appear in websites	2.32
9	Ads in any medium are a necessary evil	3.02
10	Internet is the primary medium of entertainment	3.42

Sl. #	Activity	Average Score (out of 5)
11	Online shopping is safe	2.8
12	Internet is an information only medium; No commerce	1.98
13	Ads in the Internet influence purchase	2.82
14	Internet has changed my lifestyle	3.16
15	Internet helps me relax	3.2
16	Internet helps me learn	3.9



Demographics

- On an average, the respondents spend 4 hours every day on the Internet
- The average annual household income is 11.75 l.p.a
- The average age of the respondents was 27.7 years
- There were 7 female and 43 male respondents.



Short and Long-run Performance of Bookbuilt IPOs in India

S S S Kumar *

Abstract

One of the important reforms Indian markets witnessed in the recent past is the introduction of issuing shares through the book building process which aims at efficient price discovery. The paper attempts to see how the IPOs issued through book building process fare both in short-run as well as in long run. Results indicate that the IPOs are under-priced as is evidenced by the positive listing day returns and are out performing the market in the subsequent months almost up to twenty four months. However, after two years of listing they generate negative returns. This finding is consistent with the IPO performance literature from the other countries but is in contrast with the first long run study on IPOs in the long run in India.

JEL Classification: *G12, G14, G15*

Key Words : IPOs, Book Building, Under-pricing, Fixed Price Regime

Introduction

Indian securities market had witnessed introduction of some important institutional mechanisms in the early part of this millennium in the realms of primary market, secondary market as well. These initiatives were aimed at bringing in the best practices and making the Indian capital market comparable to the global markets. An important reform in the primary market sphere is the introduction of Book Building process of issuing shares. Book Building involves soliciting from the professional investors how many shares they are willing to buy and at what price. On the basis of the resulting demand curve, the firm and its investment bankers determine the IPO offer price. Book building is an established process of public issue of securities in many markets interalia Argentina, Brazil, China, Finland, France, Germany, New Zealand, Japan, and the U.S. Book building process helps the issuer not only to determine the demand but also aids the process of 'price discovery' i.e., the price at which shares shall be issued will be determined by the demand and supply forces of the

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market. In this paper we attempt to see short and long run price performance of the book-built IPOs.

This paper is organized as follows: Section 2 traces the different regimes that existed in India for public issue of shares; Section 3 reviews the empirical literature on the performance of IPOs in the short and long run; Section 4 describes the data sources and research methodology; Section 5 presents the results and discussions and in section 6 concludes the findings of the study with directions for further studies.

Issue Pricing Regimes in India : Flotation of new shares in India had so far seen three distinct regimes starting with a thoroughly regulated regime that existed prior to 1992 to the current regime of laissez-faire. In the following paragraphs we briefly explain the salient features of the different regimes.

The CCIs Formula Pricing Regime : The antediluvian Capital Issues (Control) Act, 1947, enforced through the Office of Controller of Capital Issue (CCI) required the companies to obtain approval from CCI for raising capital. During the period prior to 1992 new companies were allowed to issue shares only at par while existing companies with substantial reserves could issue shares at a premium that too to be calculated in accordance with CCI norms. These regulations are aimed at protecting the investors from erring issuers provide no lee way for companies realize their true market price.

The Fixed Price Regime : The CCI guidelines were abolished in May 1992 and Securities & Exchange Board of India (SEBI) was formed under the SEBI Act, 1992. The role of SEBI is something similar to SEC in the U.S. context. Under the new regime eligible companies have the freedom to issue shares at a price determined by themselves in consultation with the lead manger and giving justifications for the proposed premium by disclosing all the relevant information such that the investor can make an informed choice. During the period 1992 to 1999 the regulator played no role in the determination of the price and is solely left to the issuer but the investors have the choice to invest in it or leave it. In case of over subscriptions the allocation will be made on a pro-rata basis. The major disadvantage of this method is the price is determined solely by the issuers and the lead managers well in advance (atleast 2-3 months prior to the offering) and is quite difficult for the lead manager to gauge the market clearing price. To compound the problem, if the issue is under-priced it will lead to oversubscription resulting in huge refunding costs. While in case of over-pricing, the issue may not be fully subscribed leading to devolvement and the lead manager's future business prospects will also be hampered.

Issuing Shares Through Book Building Mechanism: The Malegam Committee in 1995 recommended the introduction of book building as a mechanism to gauge the issue price from the market that is determined by demand and supply forces. However, it was in 1998 that SEBI brought forward the guidelines for issuing shares through the book building process. SEBI defines "book building as a process undertaken by which demand for the securities proposed to be issued by a body corporate is elicited and built up and the price for such securities is assessed for the determination of the quantum of securities to be issued by means of a notice, circular, advertisement, document or information memoranda or offer document". Under book building method a company can issue shares to the public in the following ways :

- 100% of the net offer to the public through book building process or
- 75% of the net offer to the public through book building process and 25% of the net offer to the public at the price determined through book building process.

The process starts off with the issuing company appointing the lead manager for the issue who in turn will enter into an agreement with a set of underwriters called as syndicate members who will elicit bids from prospective investors. The bids from the investors have to be in a price band determined in the following way. The company in consultation with the lead managers specifies a minimum acceptable price known as the floor price. Once the floor price is fixed the upper price of the issue is automatically capped at 120% of the floor price as per regulation. Ofcourse,the floor price could be revised by 20% upwards or downwards but subsequently the ceiling price will also gets revised and the books shall be open for a minimum period of three days consequent to the revision subject to the condition that the total bidding time will not exceed thirteen days. Therefore it appears a little restrictive but book building gives ample opportunities for price discovery. All the institutional investors have to place limit orders while retail investors[1] can place their bids at the cutoff price to be determined later.

Once the bidding process is complete the lead manager and issuer will determine the cut off price or the market clearing price and shares will be allocated on a uniform price basis to all successful bidders. Allocation to the retail investors is to be made on a proportionate basis while allocation to institutional investors is at the discretion of the lead manager. But in the revised

[1]At present, definition of retail investor is 'the one who applies for shares worth not more than Rs. 1 lakh'

guidelines that came in to force from November 2005 this flexibility is also withdrawn for the lead managers and allotment to them is also to be made on proportionate basis. The first company to issue shares under the book building mechanism was Hughes Software Systems Limited in September 1999. However, even today the fixed price route of issuing shares is still available to the issuers.

Past Studies

Performance of IPOs in the long run and short run is a well researched area in the capital markets literature. Reilly and Hatfield (1969) reported underpricing to the extent of 11% from their study of the IPOs in US during the period 1963-65. Subsequently Ibbotson (1975), Reilly (1977), Aggarwal and Rivoli (1989), Ritter (1991), Loughran and Ritter (1995), Ritter and Welch (2002), Ljungqvist and Wilhelm (2003) all document underpricing in the U.S. market. Jog and Riding (1987) report the same for the Canadian market; Ljungqvist (1997) for the German market; Gong and Sekhar (2001) for the Australian market also report under pricing. Wong and Chiang (1986) for the Singapore market; Chen et al (2004) for the Chinese market and Yong and Isa (2003) provide evidence on underpricing of IPOs in the Asian markets. It is clear that most studies agree that IPOs leave some money on the table where the money left on the table is the difference between the listing day's close price and the offer price multiplied by the number of shares outstanding.

Under-pricing of IPOs is explained by various researchers in different ways and the same may be classified as under:

Information Asymmetry Hypothesis : According to Rock (1986) investment community is characterized with two kinds of investors informed and uninformed investors. When a new issue comes to the market by virtue of their knowledge informed investors keep away from poor quality issues or will be investing only if the after market returns are positive. While uninformed investors subscribe to all issues both good as well as poor quality issues and in all likelihood they will get higher allocation in the later type of issues. This may lead the uninformed investors to keep away from the new issues market. Therefore by underpricing these investors will be lured to participate in the new offerings. Koh and Walter (1989) working on the Singapore market directly tested this hypothesis and their results corroborate this hypothesis.

Signaling hypothesis : Allen and Faulhaber (1989) propose that a good quality issuer by underpricing the IPO will subsequently return to the market with a seasoned offering and raise money at better terms. Welch (1992) finds evidence that almost a third of the new issuers returned to the market with a seasoned offering.

Other explanations include Tinic (1989) who suggested that underpricing discourages investors to file lawsuits against the issuer and Benveniste and Spindt (1989) propose that investors with more information ill be enticed to reveal more information by underpricing the IPOs.

In the Indian context Shah (1995) documents a phenomenal 105.6% excess return over the offer price in a study of 2056 new listings over the period January 1991 to May 1995. However,this study provides evidence on the short run performance only while Madhusoodanan and Thiripalraju (1997) from a study on IPOs offered on BSE during the period 1992 to 1995 shows that underpricing was higher than the international experiences in the short run and in the long run too they yield higher returns compared to the negative returns recorded from the international markets. Krishnamurti and Kumar (2002) working on a sample of IPOs that hit the market between 1992 and 1994 demonstrate that the underpricing is to the extent of 72.34% (market adjusted returns). Kakati (1999) analyzed the performance of a sample of 500 IPOs that came to the market during January 1993 to March 1996 and documents that the short run underpricing is to the tune of 36.6% and in the long-run the overpricing is 40.8%.

From the literature review the following inferences can be made :

- Short-run underpricing of IPOs is an international phenomenon and in the long-run the evidence is mixed.
- Underpricing in the Indian market is quite high compared to the international experiences
- So far all the studies done in India were based on data pertaining to the post CCI regime and prior to the introduction of book building process. The IPOs in that period are priced by the issuers and were offered to the investors on take it or leave it basis, in other words the issue prices were purely determined by the sellers (issuing companies) but not by both buyers and sellers dealing with each other at arms length. Therefore it is possible that the IPO market was characterized by adverse selection and moral hazard problems. From 1999 onwards most of the IPOs were issued through the book building process hence it will be of interest to examine the price performance of bookbuilt IPOs.

Sample and Research Methodology

The sample in this study includes all the new equity issues offered through book building route on the National Stock Exchange (NSE) from 1999 till May 2007. The entire list of public offers made through NSE are available on their web site (www.nseindia.com) however we have excluded all the offer for sale issues, follow on public offers, those the exclusions we were left with a sample of 156 IPOs (see Appendix) for the short run analysis. Over this period these sample companies raised a sum of Rs 56,666.95 Cr. For the listing day and the next day (second day) we collected the opening price and closing price of the IPO from the NSE's web site. Thereafter the monthly adjusted closing prices (adjusted for dividends, stock splits and bonus issues if any) were obtained for the same from Capitaline database.

In this study we examined the price performance of the IPOs both in the short-run as well as in the long-run where short-run means the behaviour of initial returns up on listing. As in other studies on this theme we computed the return realized over the period from the offering of the shares to the first trading day on NSE, called as offer-to-close return. Following Barry and Jennings (1993) we extend the short-run analysis by examining offer-to-open returns which will give a fair idea of how much the IPOs gained or lost up on opening trades and an intra day return on the listing day defined as the open-to-close returns on the listing day. We also analyze the next day (second day) returns in a similar manner with reference to the first day's closing price.

IPO long run performance is gauged by examining the returns beyond the second day of their listing at monthly intervals till May 2007 subject to a maximum of 60 months. Therefore for those listed in January 2000 monthly returns will be observed till December 2004 encompassing 60 monthly returns however for a stock listed in May 2006 we could analyze its performance for a maximum of one year.

We estimate simple returns as well as market adjusted returns to capture the market movements during the period between offer closures to listing. Simple returns are computed as:

$$R_{It} = \left(\frac{P_{It} - O_I}{O_I}\right) \times 100$$

Where P_{it} is the opening/closing price of stock 'i' at time 't' and O_i is the offer price of the i^{th} stock. These returns measure whether an investor gained (or lost) by buying the shares during the IPO at the offer price and selling at the prevailing price on the opening day. If R_{it} is positive one can infer that the issue is under-priced; if R_{it} is negative it may be inferred that the issue is over-priced and if R_{it} is zero it means the issue is aptly priced. As there is a lag between the offer day and listing day (varying from) the price observed in the market on the listing day may be different from the offer price as a result of the overall market movements, we also computed market adjusted returns of the IPOs for the same period. This adjustment is made first by computing the returns on the market index (Nifty) during the same period :

$$R_{mt} = \left(\frac{I_t - I_o}{I_o}\right) \times 100$$

Where It is the Nifty index closing/opening value on day't' and Io is the closing level of Nifty on the last day of the IPO offering. If R_{mt} is positive it means the market on the whole has moved up; if it is negative it may be considered that there is a decline in the over all market and if it is equal to zero it may be concluded that market remained unchanged during the interval between IPO offering to its listing.

Now the market returns will be deducted from the IPO's returns and the resultant returns are called as excess returns:

$ER_{it} = R_{It} - R_{mt}$

If ER_{It} is positive one can infer that the issue is under-priced after adjusting for the market movements in the intervening period and a negative value for ER_{It} indicates that the issue is over-priced and it is equal to zero it may be concluded that the issue is fairly priced.

IPO performance in the long run is examined by using two measures buy and hold market adjusted returns (BHAR) and monthly market adjusted returns (MMAR) which are computed as follows :

$$\mathbf{BHAR} = \left(\left(\frac{P_{It} - P_{II}}{P_{II}}\right) - \left(\frac{I_t - I_I}{I_I}\right)\right) \times 100$$

$$\mathbf{MMAR} = \left(\left(\frac{P_{It} - P_{Io}}{P_{Io}}\right) - \left(\frac{I_t - I_o}{I_o}\right)\right) \times 100$$

Where P_{It} is the closing price 't' months of the i^{th} IPO after its listing

P_{il} is the closing price of the of the i^{th} IPO on its listing day

P_{io} is the offer price of the i^{th} IPO

I_t is the closing Nifty index value 't' months after IPO's listing

I_l is the closing index value on the listing day

I_o is the closing index value on the last day of the IPO's offer

Results and Discussions

Table I presents a snapshot of the IPO activity from the beginning of the millennium.

Table I :IPO Activity in India During 1998-2006

(Rs. crore)

Year	No. of issues	Amount
1998-99	18	404
1999-00	51	2719
2000-01	114	2722
2001-02	7	1202
2002-03	6	1039
2003-04	21	3434
2004-05	23	13749
2005-06	79	10936
Total	**319**	**36205**

(Source: Handbook of Statistics on the Indian Securities Market 2006, Table 12)

It can be noted there are a total of 319 issues till March 2006 and the number represents IPOs issued following the Book building route as well as Fixed Price Offer route though a majority of them might had been through the book building method.

IPOs in the short-run : In Table II, we present the results of the price performance of IPOs on the listing day and the second day of listing. It may be noted that on an average IPOs listed with a 26.35% premium over the offer price and the median premium is around 18%. To account for the possibility of outlier effect we considered the average trimmed mean (5% i.e., ignoring 5% of the observations or 8 observations extremely high and low data points) opening returns and the average returns decrease only marginally to 25.93% thereby confirming that underpricing of IPOs is not caused by a few outliers. When the performance is measured with reference to the closing price the average gains increase to 27.26% and the median returns also increase by around 0.4%. We also tested whether the average returns are statistically significant by constructing a cross-sectional't' statistic and the corresponding 'p' values indicate that the listing day excess returns were statistically significant. From row number 9 we can also note that out of 156 IPOs sampled 134 IPOs listed with a positive return while the rest opened at a discount to the offer price. It may also noted that not all IPOs that opened with gains also closed the day with positive returns in fact some of them closed at a discount to the offer price by the end of the day hence we observe that the number of IPOs that ended the day at a premium are lower than the IPOs that opened at a premium. Then we examined the intra day returns, i.e., if an investor buys the shares at the opening price and sells by the end of the day at the closing price, here we observe that there is a negative returns statistically not distinguishable from zero therefore we may also infer that IPOs listing do not provide economically significant trading opportunities for day traders.

Table II :Average IPO Returns Upon Listing and on the Next Day

	Listing Day			*Next Day*		
	Offer-Open	**Offer-Close**	**Open-Close**	**Offer-Open**	**Offer-Close**	**Open-Close**
Mean	26.35%	27.26%	-0.77%	0.03%	0.64%	0.67%
5% Trim mean	24.52%	24.27%	-0.98%	0.27%	0.68%	0.49%
Median	18.09%	18.48%	-0.32%	0.00%	0.59%	0.40%
SD	0.346	0.458	0.189	0.033	0.074	0.076
T	9.58	7.49	-0.51	0.10	1.09	1.11
p-value	0.0000	0.0000	0.6108	0.9186	0.2775	0.2692
N	156	156	156	156	156	156
N>0	134	107	75	77	83	83
Binomial Prob	0.0000	0.0000	0.0569	0.0630	0.0464	0.0464

We also examined how much of the average initial IPO returns (based on closing prices) are due to the opening returns we ran a regression with opening returns as the deterministic variable as under:

$$R_{OC} = \alpha + \beta R_{OO} + \varepsilon$$

Where R_{OC} is the returns based on closing price and R_{OO} is the returns based on opening price of the IPO. The regression output indicates that the intercept term is negative but statistically not different from zero (intercept term is -0.01491 and t-value is -0.5586) while the slope coefficient is 1.088 (t-value is 17.501 and the corresponding p-value is 0.0000) and is statistically not different from 1.00 at ordinary levels of significance. Also the R2 of the regression is 81% therefore the regression results indicate that the offer to open returns explains the variation in offer to close returns to an extent of 80% and the unexplained portion is not statistically significant.

The second day's return analysis shows that all the IPO investors gain on the listing day's performance and the returns on second day are not statistically distinguishable from zero in other words if any trader buys the IPOs on the listing day at opening/ closing price, on the listing day with an intention of profiting from liquidating the position on the next day at opening/ closing levels on second day they will not be able to earn any economically significant returns. This is also true for any day trader aiming to profit from the opening and closing prices on the next day.

We performed a cross sectional regression with the initial returns as dependent variable and the following as the independent variables to explain the underpricing:

Size: The natural log of the issue size is rupee terms is included as an independent variable and we premise that larger the issue size less will be underpricing because larger issues will be less risky as they are followed and analyzed by a large set of analysts. Since they are less risky lesser they will be fairly priced.

Before market conditions: In the run up to the opening of the issue if the general market conditions are buoyant the issue may draw more investors and this may lead to a higher demand. Since the number of shares is limited and the demand is not fully met, upon listing there may be lot of buying interest that may lead to the issue listing at a premium to the offer price. We introduce a dummy variable that assumes a value of zero if market has declined in atleast half of the trading days in the month prior to the IPO opening and it will assume a value of 1 if the market has moved up.

Offer price quotient: Higher the listing day gains means more is the demand for the stock. If the demand was properly gauged in the market before the issue is opened then the offered price will be very close to the upper price limit. Therefore, we introduce the quotient of offered price to upper price limit as another independent variable to explain the underpricing.

The Regression results are presented in Table III below: From the regression results we may observe that only how close the offered price to the upper price limit is found to be significant and the remaining variables are not found to be statistically significant. Ofcourse the R^2 of the regression is rather low at 0.016852 (Adj. R^2) which is not unusual in cross sectional regressions.

Table III :Cross Sectional Regression Results

	Intercept	Issue size	Offer price Quotient	Before market conditions
Coefficients	-0.98	0.01	0.96	0.05
t Stat	-1.34	0.45	2.29	0.60
P-value	0.1830	0.6550	0.0232	0.5463

IPOs in the long-run:

Results from the long run analysis were presented in Tables IV and V. In Table IV we capture the long run IPO performance using the MMAR metric computed over 3, 6, 9, 12, 24, 36, 48 and 60 months from listing, for comparison sake we have standardized the returns by annualizing them. It may be noted that the IPOs beat the market after two years of listing also but thereafter the IPOs under-perform however we are not categorical about the underperformance in the long-run, particularly about the performance over two years, since our sample size shrinks substantially hence we state that there is prima-facie evidence of underperformance of IPOs after two years of listing. This is a finding consistent with that reported in the western markets literature. The results of buy and hold returns show that this strategy of buying IPOs on the listing day and holding them is not going to generate superior returns. This finding is again consistent with those reported form other countries. For instance Brav, A, et al (2000) report that the after market performance of the IPOs in the U.S. offered during 1975-92 generated an average total return of -44.2% from the listing date to three years. While Ljungqvist (1997) report -12.1% for the IPOs in Germany over a three year period and Cai and Wei (1997) document -27.0% for the Japanese IPOs. Again compared with international evidence the after market performance of the Indian IPOs over a three year period is -14.69% which is not very dissimilar to that reported from other countries.

Table IV : Long Run Performance of the IPOs: Based on Offer Price

Sample size		Index		MMAR		
	Months from listing	Annualized returns	Trimmed mean (5%)	Annualized returns	Trimmed mean (5%)	Excess MMAR (annualized)
91	3	25.39%	5.82%	159.47%	26.92%	134.08%
91	6	25.20%	11.89%	78.47%	33.59%	53.27%
91	9	33.08%	23.91%	66.43%	46.53%	33.35%
91	12	31.17%	31.17%	52.35%	52.35%	21.18%
38	24	28.17%	64.26%	40.06%	96.16%	11.89%
21	36	23.60%	88.84%	19.72%	71.59%	-3.89%
11	48	15.85%	80.14%	28.28%	170.76%	12.42%
10	60	18.40%	132.64%	2.88%	15.28%	-15.51%

Table V : After Market Price Performance of IPOs

Sample size		Index		BHAR		
	Months from listing	Annualized returns	Trimmed mean (5%)	Annualized returns	Trimmed mean (5%)	Excess BHAR (annualized)
91	3	25.39%	5.82%	-3.45%	-0.87%	-28.84%
91	6	25.20%	11.89%	8.26%	4.05%	-16.94%
91	9	33.08%	23.91%	19.19%	14.07%	-13.89%
91	12	31.17%	31.17%	17.49%	17.49%	-13.68%
38	24	28.17%	64.26%	22.97%	51.22%	-5.20%
21	36	23.60%	88.84%	8.92%	29.21%	-14.69%
11	48	15.85%	80.14%	26.25%	154.06%	10.40%
10	60	18.40%	132.64%	2.54%	13.36%	-15.86%

However evidence of IPO performance in the long-run from earlier studies conducted in India is rather mixed. Kakati (1999) reports under-performance in the long run while Madhusoodhanan and Raju (1997) report that Indian IPOs have given higher returns compared to the negative returns reported from other countries. From our analysis it may be observed that IPOs generated positive returns even after two years of listing but subsequently they under-perform. However we again caution that the present study suffers from a small sample limitation particularly in the time frame after twenty four months.

An important finding from this study is the amount of over performance in the short-run and the quantum of underperformance in the long run have come down significantly compared with that reported in earlier mentioned studies The same is reported in the following Table VI. One can also note that the decrease in underpricing in the short-run and over performance in the long run has decreased probably due to the introduction of book building process as that is an important change that the public issue process has witnessed from the early nineties to the present study however the same may be confirmed by empirical examination. Our inference is based on the logic that the earlier studies that documented underpricing have examined a sample of IPOs that were issued following the fixed price route while the present study's sample comprises IPOs that were issued only through the book building route hence we attribute the reduction in underpricing to the process of book building. We make this inference at the risk of sounding a little arbitrary but the same may be confirmed or otherwise by an empirical examination by further studies with a sample that pans both the regimes- fixed price regime as well as book building regime.

Table VI : IPO Performance Across Time Periods

Study	Period	Short run (Listing day returns)	Long run	Sample size
Krishnamurti and Kumar (2002)	1992-1994	72.34% (un-annualized)	Not analysed	386
Madhusoodhanan and Raju (1997)	1992-1995	294.80 (annualized)	16.33 (annualized)	1922
Kakati (1999)	1993-1996	34.9% (un-annualized)	-39.1 (un-annualized)	500
Present study	1999-2006	26.35% (un-annualized)	-3.89% (annualized)	156 (short run) 21 (long run)

However evidence of IPO performance in the long-run from earlier studies conducted in India is rather mixed. Kakati (1999) reports under-performance in the long run while Madhusoodhanan and Raju (1997) report that Indian IPOs have given higher returns compared to the negative returns reported from other countries. From our analysis it may be observed that IPOs generated positive returns even after two years of listing but subsequently they under-perform. However we again caution that the present study suffers from a small sample limitation particularly in the time frame after twenty four months.

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Conclusions and Directions for Further Research

This study examines the performance of IPOs issued through the book building process in India over the period 1999 2006. The sample comprises 156 firms that offered their shares through the book building route on the NSE. Upon listing the IPOs on an average offered positive returns (after adjusting for market movements) to investors and a large part of the closing day returns on the listing day were accounted for by the opening returns. In the long run the IPOs offered positive returns up till twenty four months but subsequently they under perform the market. However we cannot be emphatic about our later finding as our sample size comes down substantially because majority of the IPOs in the sample were issued in the last three years hence they do not have a five year track record. The excess buy and hold returns from IPOs are not positive both in the short term as well as in the long run. Further studies can examine the pricing efficiency of bookbuilding process by comparing the excess returns from fixed price offerings during the same period.

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Appendix

1	3i Infotech Limited	41	Ess Dee Aluminium Limited
2	Abhishek Mills Limited	42	Euro Ceramics Limited
3	Accel Frontline Limited	43	Everest Kanto Cylinder Limited
4	Action Construction Equipment Limited	44	Evinix Accessories Limited
5	Adhunik Metaliks Limited	45	FIEM Industries Limited
6	Advanta India Limited	46	Firstsource Solutions Limited
7	AIA Engineering Limited	47	Fortis Healthcare Limited
8	Akruti Nirman Limited	48	Gateway Distriparks Limited
9	Allcargo Global Logistics Limited	49	Gitanjali Gems Limited
10	Allsec Technologies Limited	50	Global Broadcast News Limited
11	Amar Remedies Limited	51	Global Vectra Helicorp Limited
12	AMD Metplast Limited	52	GMR Infrastructure Limited
13	Atlanta Limited	53	Godawari Power and Ispat Limited
14	Aurionpro Solutions Limited	54	Gokaldas Exports Limited
15	Autoline Industries Limited	55	Gujarat State Petronet Limited
16	Balaji Telefilms Limited	56	GVK Power & Infrastructure Limited
17	Bannari Amman Spinning Mills Limited	57	Gwalior Chemical Industries Limited
18	Bartronics India Limited	58	Hanung Toys and Textiles Limited
19	Bhagwati Banquets & Hotels Limited	59	HCL Technologies Limited
20	Bharati Shipyard Limited	60	House of Pearl Fashions Limited
21	Binani Cement Limited	61	HOV Services Limited
22	Biocon Limited	62	HT Media Limited
23	Blue Bird (India) Limited	63	ICRA Limited
24	Bombay Rayon Fashions Limited	64	Idea Cellular Limited
25	Broadcast Initiatives Limited	65	I-Flex Solutions Limited
26	C & C Constructions Limited	66	IL&FS Investmart Limited
27	Cairn India Limited	67	India Infoline Limited
28	Celebrity Fashions Limited	68	IndiaBulls Financial Services Limited
29	Cinemax India Limited	69	Indian Bank
30	Creative Eye Limited	70	Indoco Remedies Limited
31	Datamatics Technologies Limited	71	Indraprastha Gas Limited
32	Deccan Aviation Limited	72	Indus Fila Limited
33	Deccan Chronicle Holdings Limited	73	Info Edge (India) Limited
34	Development Credit Bank Limited	74	Infrastructure Development Finance Co. Ltd.
35	Dishman Pharmaceuticals & Chemicals Ltd.	75	INOX Leisure Limited
36	Divi's Laboratories Limited	76	Insecticides (India) Limited
37	D-Link (India) Limited	77	J. K. Cement Limited
38	Educomp Solutions Limited	78	Jagran Prakashan Limited
39	Emkay Share and Stock Brokers Limited	79	Jai Prakash Hydro-Power Limited
40	Entertainment Network (India) Limited	80	Jet Airways (India) Limited

81	JHS Svendgaard Laboratories Limited	120	Raj Television Network Limited
82	Kernex Microsystems (I) Limited	121	Redington (India) Limited
83	Kewal Kiran Clothing Limited	122	Reliance Petroleum Limited
84	L.T.Overseas Limited	123	Repro India Limited
85	Lanco Infratech Limited	124	Royal Orchid Hotels Limited
86	Lokesh Machines Limited	125	Ruchira Papers Limited
87	Mahindra & Mahindra Financial Services Ltd.	126	S.A.L. Steel Limited
88	Maruti Udyog Limited	127	Sadbhav Engineering Limited
89	MIC Electronics Limited	128	Sasken Communication Technologies Ltd.
90	Mid-Day Multimedia Limited	129	Shoppers Stop Limited
91	MindTree Consulting Limited	130	Shree Ashtavinayak Cine Vision Limited
92	MRO TEK Limited	131	Shree Rama Multi Tech Limited
93	Mudra Lifestyle Limited	132	Shree Renuka Sugars Limited
94	National Thermal Power Corporation Limited	133	Shri Ramrupai Balaji Steels Limited
95	Nectar Lifesciences Limited	134	Shringar Cinemas Limited
96	New Delhi Television Limited	135	SMS Pharmaceuticals Limited
97	Nissan Copper Limited	136	Sobha Developers Limited
98	NITCO Tiles Limited	137	Solar Explosives Limited
99	Nitin Spinners Limited	138	SPL Industries Limited
100	Orbit Corporation Limited	139	Sun TV Limited
101	Oriental Trimex Limited	140	Suzlon Energy Limited
102	Page Industries Limited	141	Tanla Solutions Limited
103	Parsvnath Developers Limited	142	Tata Consultancy Services Limited
104	Patni Computer Systems Limited	143	Tata Teleservices (Maharashtra) Limited
105	Petronet LNG Limited	144	Tech Mahindra Limited
106	Piramyd Retail Limited	145	Technocraft Industries (India) Limited
107	Plethico Pharmaceuticals Limited	146	Transwarranty Finance Limited
108	Pochiraju Industries Limited	147	Triveni Engineering & Industries Limited
109	Power Finance Corporation Limited	148	Tulip IT Services Limited
110	Power Trading Corporation of India Limited	149	Unity Infraprojects Limited
111	Pratibha Industries Limited	150	Uttam Sugar Mills Limited
112	Prime Focus Limited	151	UTV Software Communications Limited
113	Prithvi Information Solutions Limited	152	Vardhman Acrylics Limited
114	Pritish Nandy Communications Limited	153	Visa Steel Limited
115	Provogue (India) Limited	154	Voltamp Transformers Limited
116	Punj Lloyd Limited	155	XL Telecom Limited
117	PVR Limited	156	Yes Bank
118	Pyramid Saimira Theatre Limited		
119	R Systems International Limited		

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IT-System and Filtration of Knowledge

Stefan Holgersson *

Abstract

This paper explains in what manner the IT-system contribute to the filtration of knowledge in an organisation. This filtration has an impact for the quality of decision making and analysis, especially when information from IT-system play a central roll comparing to other knowledge sources. The paper describes some of the consequences in an organisation when knowledge filtrated by IT-system is used for decision-making and analysis.

Key Words : IT-system Filtration, Knowledge Management, Output Analysis, Decision-making, and Street-level

Introduction

- A company gets lower order stock because the salesmen are forced to visit a defined number of clients

- On the square in the suburb of a big city a boy gets killed in a brawl. The police didn't prevent the mishap though they've got the information of an approaching tussle.

The two real examples above seem to be totally different, but they have a joint denominator: IT-system and filtration of knowledge.

Individual in an organization can interpret and describe conditions differently. Descriptions vary often between different groups of actors. In a small organization it's not unusual that the same actors do most of the tasks. If the organization grows, it will be natural with a specialization (Bruzelius/Skärvad, 1989) – for example one or more personnel work with only IT related matters.

Accordingly, the risks are obvious when separate groups interpret the organization when it's goals and problems are different (ibid.) The probability for this diversifying view will likely to increase when the organization is in existence for long time. In a new

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organization, which is fully fledged, there is a possibility that actors in different positions have been involved with most of the tasks before there was a specialization. Therefore, the conditions will be better and different groups of actors will have a similar understanding.

IT has got a more central role in the distribution of information (Andersson, 1999). Eriksson (2000) points that it is important to see an information system[1] in a communicative perspective. He sees the information system as a social agent who can be both a sender and a receiver of information. Eriksson means that information system has a central role at the quality of the communication between the sender and the person who tries to interpret the information (Hultgren and Eriksson, 2005; Sjöström and Goldkuhl, 2003).

Brunsson (1993) notes that actors working in the production line may have more information comparing to the decision makers about alternative solutions and the consequences of different decision will have for the production. Other researchers have come to the same conclusions and emphasize the importance to use knowledge from the actors working near the clients or the production line (Holgersson, 2005).

There is however, a clear tendency to see the IT-system as an image of the reality (Lyytinen, 1983; Sundgren, 1992; Holgersson, 2001; 2005). Instead of going out and watching the existing reality , an opinion is enough to use IT-system (Goldkuhl, 1993; Holgersson, 2001; 2005).

Jenner and Hoppe Jakobsson (1995) mean there is a special sort of knowledge acquired through work in practice. When information is distributive, the lack of a common language makes the receiver of the information complicated to understand what the sender really means (ibid.). Communication problem is often about different previous knowledge (Rolf, 1995). Prior knowledge between actors in the production line/near the clients and decisions makers on a high level in an organization and analysts have a great impact on the capability to understand information in IT-system.

Output from an IT-system gives almost a precise and reliable impressions (Cronholm, 1994; Holgersson, 2001; 2005) and it's often easy to get information from an IT-system comparing to collect knowledge about an activity in other ways. There are two reasons why IT-system relatively one-sided is used to decide the outcome from a work (Holgersson, 2001).

Decision makers make decisions according to the knowledge they have about upcoming situations (Holgersson, 2005). What are the consequences for the quality of basis for decisions analysis and in the end the decisions, whether the decision maker mostly sees the information from the IT-system nearly as a model of the reality?

Research Methodology

To be able to answer the research question there is a need for deep understanding of a work practice. The police organization in Sweden is used to explain the phenomena. A study of the police in Sweden started in the beginning of 1998 and ended in April 2005 (Holgersson, 2005). It involved more than 6000 hours of participant observation as a police officer. The research included various categories of police officers: new recruits, experienced officers, officers with a special interest in some kind of activity, officers known by other police officers as lazy/high performing, and officers known as "normal" (Patton, 1990). The study was made in all (21) police districts in Sweden, from the biggest city in Sweden, Stockholm, with 1.5 million citizens, to snow scooter patrolling in the mountains in the North (Holgersson, 2005).

More than 2000 interviews were done. The interviews included police officers in all (21) police districts in Sweden and decisions makers as well as analyst on different levels in the organization (ibid.). Most interviews had an informal structure (Patton, 1990), where the interviewed person gets ample opportunity to talk freely about the work or an upcoming situation. Bryman (1997) has found that unstructured interviews are effective to use in combination with participative observations because then it is possible to obtain a deeper understanding of a phenomenon.

Specific decisions, for example the attempt to centralize the communication centrals, were also studied and tried to find the reasons for a specific strive by decisions makers. Critical questions and opinions from employees were presented to decisions makers, where they had to argue about the basis of a decision. A lot of output from IT-system and reports/statements were studied. This information was compared to information collected through participate observation and interviews (Holgersson, 2001; 2005).

Different Perspectives in an Organization

It's common with different perspectives in an organization and a number of researchers have pointed at that phenomena (Brunsson, 1989; Goldkuhl, 1993; Axelsson, 1998; Ekman, 1999; Sannerstedt, 2001; Holgersson, 2001; 2005).

[1]Eriksson uses information system synonymous with computerized information system.

In the police work practice[2] two perspectives are clearly crystallized. Manning (1980) who was studying the police in London points at two segments in the organization, caused by the position he or she has in the organization. High ranking officials come across a totally different reality compared to police officers at the street-level. Reuss-lanni (1993), also studying the police in England, found a conflict between police officers on the street and their superiors. Ekman (1999) describes the police in Sweden and writes that police officers have the opinion their superiors live in a totally different world, mostly put interest in economic issues, and not have enough insight in police work.

In this paper, researcher calls the two perspectives in the police work practice as the street-level perspective and the theoretical perspective (Holgersson, 2001; 2005). People with the street-level perspective are working near the clients and delivery of the information is mostly through IT-system.

It seems that people with the theoretical perspective nearly always have an academic education and usual work at a high level in the organization, but they might also be information technology personnel or administrators. They put a lot of attention into theoretical perspectives and get mostly their information from IT systems and different types of reports (Holgersson, 2001; 2005).

The difference between the two perspectives is fundamental. People with the theoretical perspective often look at the reasons for upcoming situations and organization needs a total different way comparing to the street-level perspective (Ekman, 1999; Holgersson, 2001; 2005), which will shown to be an important factor in the filtration of knowledge. Due to the difference in perspectives they also have different opinion on how data from the IT-system should be interpreted

Filtration of Knowledge

In an organisation there are couple of reasons why knowledge from the street-Level perspective never reaches the theoretical perspective. IT-system plays an important role in this filtration of knowledge because it's common with a high focus on information from IT-system comparing to other knowledge sources. Factors, which the researcher has found to be important for the filtration of knowledge in an organisation will herby, be explained (Holgersson, 2001; 2005).

Direct Vs. Indirect Access to Knowledge

Direct access to knowledge about a special incident will of course increases the chances to create a deep insight in the person about that particular matter. If there are only descriptions of a situation it will perhaps lead to that the receiver of the information will interpret the information in another way than the sender intended.

Personal with the street-level perspective will come in direct contact with plenty of knowledge important in the police work practice. It's the personal with the street level perspective that mostly have contact with the clients and who are involved in performing police work at the streets, in receptions and in interrogation room and also usually are the one who put information into IT-system. These actors have therefore direct access to knowledge about different situations registered in the systems in contrast to personal with the Theoretical perspective (Holgersson, 2005).

Different Previous Knowledge

Previous knowledge (Rolf, 1995) is important to understand the facts. In an ideal situation a person who interpret information from an IT-system will get the same knowledge as if he or she has the opportunity to observe the described situation.

Sundgren (1992) pointed out that one person's knowledge is usually diverse from another person's knowledge and therefore two persons can interpret the contents of the same information differently. For this reason, Sundgren means, that it's not enough with the information itself, there is also a need of Meta data in the IT-system - a description of what the data stands for. Goldkuhl (1993) has criticized this way of looking at an IT-system as a model of the reality. Instead of going out and look at the reality, there is an existing opinion to use IT-system.

There is a big difference in previous knowledge between the street-Level perspective and the theoretical perspective (Holgersson, 2005). It will have a large impact on the opportunities for persons with the theoretical perspective to interpret information from IT-system using in the police work practice in a good manner.

Lack of Good Communication Climate in an Organisation

There is a lack of good communication climate in the police work practice between personal on a hierarchy low level, with a street-level perspective, and decisions maker on a hierarchy high level/analyst with a theoretical perspective (Holgersson, 2005). It was possible to distribute knowledge from the street-level perspective to person with the theoretical perspective if

[2]Work practice (see Goldkul & Röstlinger, 2003; Goldkuhl, 2005)

the communication was working. Ekman (1999) points at informal backstage discussions, for example in the coffee room, as an important factor for the understanding of different phenomena and can influence police officers' to act in a special way according to the different rules and goals that are interpreted. He means that superiors in the police organisation participate in informal discussion with police officers' far too little (ibid.).

Because of the lack of good communication climate in the police organisation between the street-level perspective and the theoretical it has a negative influence on the theoretical perspectives previous knowledge about different phenomena in the organisation, which was described above as an important factor for the possibility to utilize knowledge from the IT-system. The effect of the lack of good communication is also that the theoretical perspective finds it easier and more trustable to use information from the IT-system rather than try to pave a way for a fruitful dialogue with persons with the street-level perspective. Information in the IT-system will therefore get an entirely too central role for the knowledge development in the theoretical perspective (Holgersson, 2005).

Defectives in IT-system

IT-systems in the police work practice have many defectives. A heterorgenic user interface makes them complicated to use in a proper way. RRV (2000):

"Police officers' use in their daily works a large number of IT-systems, where many are relatively difficult to use even for experienced users. The IT-systems put high demand on the users' capability to remember codes and keyboard sequences which are different between different systems"

The police officers' also usually have to register the same information in different IT-system. For instructions regarding how the information should be registered, the police officers' have to get into different information channels. It can be for example, intranet, loose slip, from a superior or by `mouth to mouth' between colleagues (Holgersson, 2001; 2005). The police officers are exposed for a high mental pressure (mental load, Preece et.al. 1994)

According to the factors above, the police officers easily register wrong information, register information with a low worth or simply forget to register some important information. The way the information gets structured (Holgersson, 1999) in the IT-system has also a negative influence on the information quality in the IT-systems.

Lack of Motivation by the Personnel to Register Information in a Correct/Sufficient Way

The users experience that an IT-system,which is difficult to use can undermine the motivation to register information in a correct/sufficient way. Users may find easy way to register information rather than trying to get high quality as possible in the information. It is also not unusual , information is noticed at all because the routines are too circumstantial. Documentation of some type of intervening the police officers' fulfil was under ten percent in one police department (Holgersson, 2005).

It's also been found that as per the users, registered wrong information (Holgersson, 2001; 2005), usually means, when superiors try to control something, which is not possible to control:

"... If they say from above, we must have more foot patrol they will get it in the system and then they get satisfied, but in reality nothing is changed. We are working likely as before, but we register more foot patrol in the system... Then we get aware of criticism."

The police work practice is difficult to control. Lipsky (1980) writes that for example police officers' are street-level bureaucrats, which means that they have high autonomy because their distance to their superior and the direct contact with the clients, where their work are unpredictable and difficult to control by some one else than the actors themselves (ibid.) To get qualitative information in the IT-system is therefore important that the users are motivated to register correct and sufficient information, but there is a lack of motivation in that area (RRV 1996; 2000; Holgersson, 2001; 2005). It's also so that personal at a low hierarchy level in the organisation get direct order to record a particular result because superior has a pressure to be able to show up a specific outcome (Holgersson 2001; 2005). Of course this will have a negative impact on quality at the information in IT-system.

Some Knowledge is Difficult to Formulate in Such a Way that It is Fit to be Put Into an IT-System

There are two major conditions when knowledge is registered in an IT-system, which the researcher finds important to have in mind. The first circumstance it's that knowledge record in an IT-system is about exposed knowledge. The second is that there are facts that were put into IT-system (Walsham, 2004; Hassel, 2005). Adequacy of knowledge generated by the personnel with the street-level perspective has often an additional character (Holgersson, 2005).

Josefson (1991) describes that a language can been seen as pictures on how the reality can be illustrated. Computer languages are artificial languages, which are built at symbolic logic, the part of the mathematics called Boolean algebra. The characteristic for these languages is: IF... THEN or how it will be mentioned in a medical situation: IF the patient has a special symptom THEN it can be that disease. The strength of the computer is a logical precession and therefore it's an extraordinary assistant in some situations. Josefson (ibid.) particularly point that there is a big difference between the language of the computers and the logic of social language.

When using IT-system too is one sided in an organisation , it is found that a lot of knowledge about a practice simply missing according to the arguments above.

Changes in the Working Process etc.

Persson (1972) presents that it's important to observe source of errors like changes in administrative routines, quantitative and qualitative changes in the police work, changes in the law if the statistic will be usable. He founds that the crime in a statistics way increases highly when the police realized structural changes in the organisation (ibid.). Researcher also comes to the same conclusion. For example, when it is routine to make a report for a specific crime in a police district were changed, the police officers avoided to report that type of crime because their apprehension was that the routines was too circumstantial. When the old routines were restored they began to report that specific crime again (Holgersson, 2005).

New laws, changes in laws and insurance terms may have great impact of the crime rate. It may be problematic to compare output from IT-system from different periods because of external changes for the work practices are important factors. Internal changes in an organisation can also, which the researcher describes above, influence the usability of the information in IT-system. The police organisation has more or less continually being under reconstruction for a long time and it's the same with a lot of the routines in the organisation. These circumstances in combination with new laws, directives and priorities make the risk high for misleading information when using data from IT-system.

IT-System is Anonymous to the Reality Behind the Information

The murder of the Prime Minister Palme in Sweden was solved using statistics, even if it was not solved in the court system. That's because judgement in district courts are the one, which was counted in the statistics. IT-system is anonymous to the reality behind the information and it's therefore easy that information from IT-system is seen as a model of the reality. Usually these are not the specific cases in focus when information from IT-system was used. But all information in the IT-system is about specific cases and if too many cases are misleading the whole information will then be deceptive. For example, in one police district there was a question whether civil personnel made it easier for the police officers' and whether they influence the effectiveness. An analyst took out information from IT-system about cases distributed to the persecutors. He found that civil employees have no effect on the number of distributed cases. This information indicated that there weren't no reason to continue to have civil personnel employee for that reason. More or less as a coincidence, a police officer at the police station where the information was collected from, questioned the output from the IT-system. He meant that if there were focuses on individual cases it would be shown that police officers' have to do more in each case comparing to the situation before when it was more civil personnel employee. Because of this the police officer pointed at that he and his colleagues couldn't be out in the street so much and that they spend less time at other important activities, as victim support. This was not shown in the output from the IT-system (Holgersson, 2001).

There were a couple of complicated cases and special circumstances which can influence the statistics, as if a reception has shorter opening times, that an active police officer had to quit or begin at a station (Holgersson, 2001; 2005), will not be known when using information from IT-system. A lot of knowledge will be filtrated when there is a generalization of the information and there is a big risk that quantity matters instead of quality matters will be in focus. For a police organisation, where there are a lot of factors which are difficult to measure, this view will have a very bad impact because the centre of attention and the following priority will easily be on elements, which are uncomplicated to evaluate.

Output From IT-System Gives the Impression of Being Precise and Reliable

Outputs from IT-system, often colourful and presentable graphical arrangement easily give the impression of being precisely and reliable (Holgersson, 2001; 2005; see also Cronholm, 1994). Output from an IT-system which looks exactly as 17.2 % and 15.4 % could anyhow be wrong and misleading, but it's easy to get the apprehension that this information are reliable because of the formal and accurate form (Holgersson, 2001; 2005). Hence there is a risk that the importance of this information is valuated higher than other more vague information.

Information Easily Gets Filtered When it has to Pass through Hierarchy Level in an Organisation

Information has a tendency to get filtered in the police organisation (Holgersson, 2001; 2005). The two main reasons for that there are persons who tend to avoid presenting negative messages. (O'Reilly, 1978) and the more the hierarchy level, the more the information has to pass in an organisation and more the information seems to be arranged to suit (Bradley, 1978; Browning, 1978; Manis, Cornell and Moore, 1974; Holgersson, 2001; 2005).

Information from IT-System has a Dominant Role when the Result of a Work will be Evaluated

There are some reasons why information from IT-system has a domineering role when the result of a work will be evaluated. First of all it's easy to get out information from an IT-system and the output, as the researcher described above, gives the impression of being precise and reliable. There is a risk that the need for other information sources to attain knowledge will be underestimated.

Second use of output from IT-system correspond to a basic attitude how police work should be management. Quantitative management was popular. Ivarsson-Westerberg (2004) points those norms for economist in the police more often formulates what is good policing nowadays. Hence new types of demand are on the agenda and therefore the work is to measure and defines in another way than before. Seldom the goal will be quantitative and adjusted. Ivarsson-Westerberg means that the administration forms the direction of the work instead of the opposite. He points at comments from one of the creators of this type of evaluation in the Swedish police, which nowadays are critical to this system, who means that it's wrongly exists as a basic assumption that it's possible to find objective measure which can say whether the police work is good or not. It's also a desire from the top level in the organisation to get rid of making valuations, instead be able to establish that if the output says 87 then the result is bad, but if it's 102 then it's very good (ibid.).

The third and the final reason why information from the IT-system has a dominate role is because information easily get filtered when it has to pass through the hierarchy level in a organisation and therefore it's not so much left of the original information when it reaches the decision makers at a high level in the organisation. In combination with the lack of a good communication climate in the police organisation, where persons with the theoretical perspective and persons with the street-level perspective too rarely get involved in fruitful dialogues, it leads to a situation where information from IT-system will get into a central position.

Defective Data Quality Because the Information in IT-System are wrong/Incomplete/Difficult to Interpret

Defectives in IT-system, lack of motivation by the personnel to register information in a correct/sufficient manner, information, which is difficult to formulate in such a way that it fits to put into an IT-system and changes in the working process etc. will lead to defective data quality in the IT-system because of omitted, wrong, and incomplete information that are difficult to interpret.

Knowledge of Personnel from a Low Hierarchy Level in the Organization are Rarely Used to Interpret the Information In the IT-System

Walsham (2004) writes that knowledge is not an object, which can be captured, stored and transferred. Information in IT-system will be interpreted and in this regard, he points at the importance to enable effective interaction between people with different tacit power and understanding (Hassel, 2005).

The police organisation uses rarely personnel from a low hierarchy level to support the interpretation of information in IT-systems (Holgersson, 2001; 2005). Persons with the street-level perspective record the information in the system and have direct access to specific situations and they do have mostly another previous knowledge comparing to the theoretical perspective. Previous knowledge, as the researcher described earlier, is useful for the ability to interpret information in IT-system.

Statements/Reports from Researchers/Analysts and Output from IT-System are Virtually Seen as Separate Information Sources Even If the Information Often Come from the Same Source (The IT-Systems)

It's common that statements/reports from analyst are built on the output from IT-system (Holgersson, 2001). The Swedish Nation council for crime prevention (2001) found that when the problem oriented work was evaluated, only output from IT-system were used.

It's problematic when statements/reports from researchers/analysts are seen as a separate information source in relation to the output from the IT-system when it's not. If both the statements/reports and the output from the IT-system pointed to the same direction, which is of course natural when it's built on the same data, the result will get a strong position comparing to other sources. For example, the personnel's eventual objections and point of views according to a specific introduced result risk to easily getting disregard.

The Effect of Filtration of Information

Molander (1996) writes about "the hermeneutic circle", which shortly can be described as a previous knowledge in many situations and is a prerequisite for a deeper understanding. To be able to solve a problem there must be knowledge on how to tackle the problem. An increasing previous knowledge will lead to a development of the original previous knowledge. The increasing previous knowledge makes the chances bigger for additional previous knowledge and so on. Gummesson (1985) means that it's merely right to call the hermeneutic circle a hermeneutic spiral (Ödman, 1979).

If personnel with the theoretical perspective have lack of previous knowledge about a phenomenon, their chances will be low in succeeding to interpret information from an IT-system on the subject of this phenomenon. Researcher argues that information in IT-system can be defective, misleading and often need to be interpreted. Hence there is a risk that persons with the theoretical perspective apprehend and make wrong assumptions from "facts" collected from IT-system. It will cause a condition that can be interpreted and valuate information and the next analyse/evaluation will be worse. A negative hermeneutic spiral occurs.

One example of a negative hermeneutic spiral within the police is the routines for reporting a crime. Personnel with the street-level perspective have a long time claim that the routines are too demanding and time ineffective. The management has however decided to put the priority to other areas rather than fixing this problem. One reason was that the decision makers didn't know how irrational the routines actually were. They have had a defective previous knowledge. One area, which was prioritized by the management, was to create IT-system to be able to evaluate the work. In this, IT-system was a focus for easy quantitative information. The attempt was to be able to evaluate and show how the organisation succeeds in reaching different production goal, which the management and the IT-personnel who created the system know it was possible to quantify. The focus on easy measurable production goal therefore is increasing. The ineffective routines for reporting a crime couldn't be shown in this direction. The management took therefore the claim about demanding and time ineffective internal routines less in consideration (Holgersson, 2001) and instead the energy was concentrated to be able to follow up the work in a more quantitative way. The "fill in information" routines were the result of the management new information that needs more extensive for the officers' because they, among other things now also had to fill in information needed by the IT-system focusing on quantitative evaluations. For example, they had to fill in information about how they had spent the time working towards different goals under a working day. The time for filling in this information was not possible to register in the system. So the officer could spend over fifteen minutes, every day to fill-in information, which proposed to make the organisation more effective, but instead it resulted in more internal administration and infectiveness. The registered information was furthermore of low quality.

Ackoff (1967) points at that decision makers often have too little knowledge to be able to identify which output they wish to get out from a system. There is a risk, according to Ackoff, that the decision makers say that they want to get so much information as possible when they get the question from system constructors. Ackoff describes that the main problem isn't that the decision maker gets little relevant information. The major problem is that they've got too much irrelevant information (ibid.). Even if there is a long time since Ackoff presented this thoughts. His conclusion has not been less relevant because of the opportunities the information technology open.

When personnel with the street-level perspective have different opinion than the personnel with the theoretical perspective it's common that the information from the street-level perspective are seen as whining and badly substantiated beliefs. Persons with the theoretical perspective have often get information especially from IT-system and there is these "facts" they fall back to. The IT-system filtrating knowledge is taking too little in consideration. Outputs from IT-system are more or less used as a truth. One person with the theoretical perspectives comments over the output from IT-system (Holgersson, 2001; 2005):

"It's the best facts we have at the moment..." (ibid.)

The consequences of filtration of knowledge, where IT-system plays an important role, are that some problems never will come up to the surface and therefore there are the conditions to get rid of them. There is a risk that basis for decisions will be misleading, defective and difficult to interpret, which makes it hard to make good decisions and to do effective priorities. The risk for deceptive information will be especially large when the management strives to formulate easy defined production goal and there are difficulties to get correct and sufficiently easy quantified information for evaluations. This is especially critical in organisation with contradictory goals, which often are the case in the public sector (Holgersson, 2001; 2005).

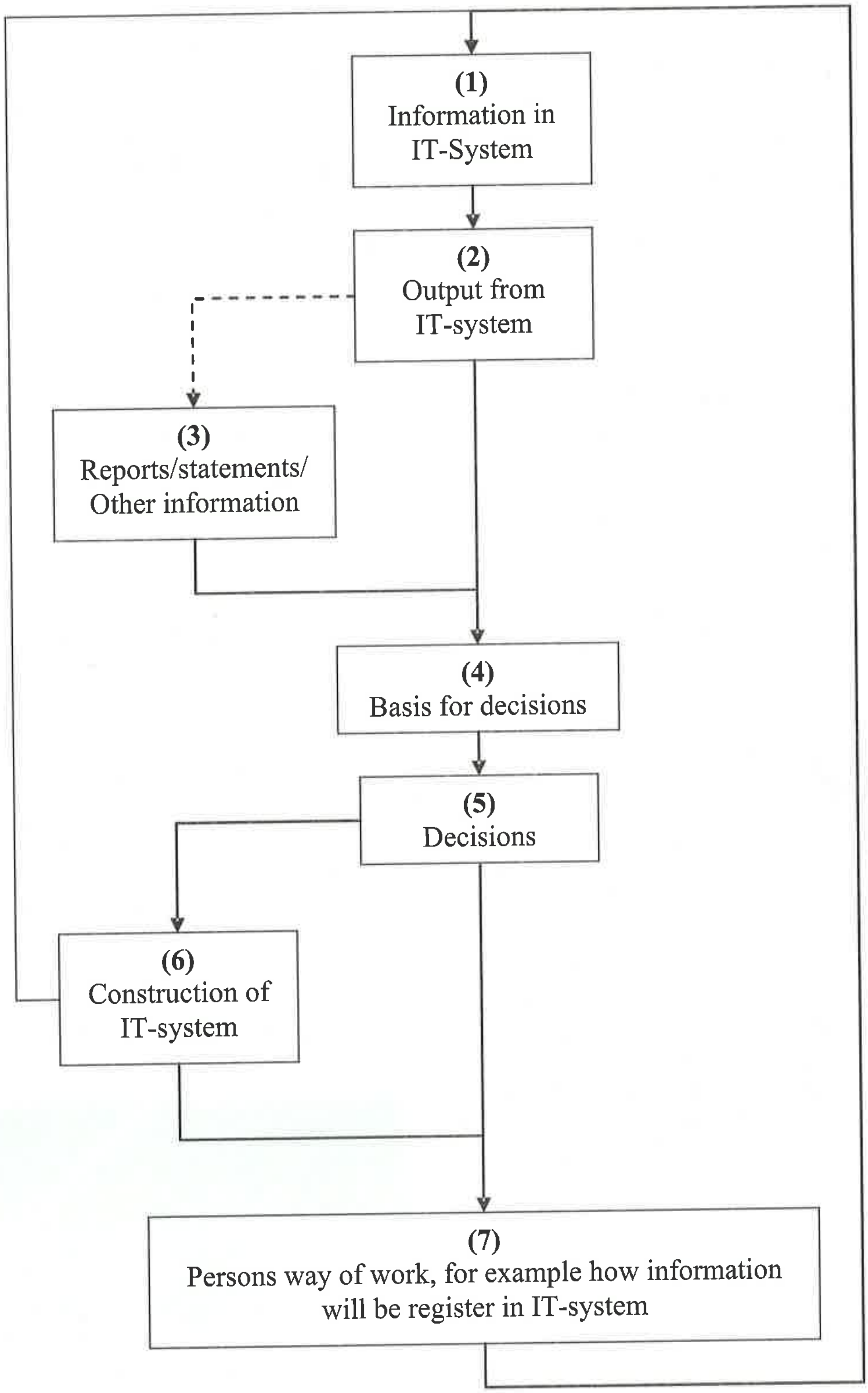


Figure I : IT-System Plays a Central Roll in the Filtration of Knowledge

Information (1) in the IT-system leads to different output (2) and sometimes this information is used to formulate reports (3). Output from IT-system and reports/statements and other information are used as basis for decisions (4). The basis of decisions influences the decisions (5). The decisions can result in construction of IT-system (6). The decisions have a big impact on how personnel will work. The constructions of the IT-system have a vital importance for which information will be assessable. The IT-systems also influence people in their working, especially regarding the register of information.

According to the figure above it's simple to understand how a negative hermeneutic spiral can occur. IT-system plays a central role in decision making and the importance and the effects of the filtration of knowledge, which have been described in this paper, are uncomplicated to imagine.

Because of the main focus on information from IT-system, knowledge from the street-level perspective will be in the background. The negative hermeneutic spiral causes an increasing polarisation of the knowledge and the opinions between persons with the theoretical perspective and the street-level perspective and makes the situation problematic. Gummesson (1985) writes that very limited number of persons in the organisation both understand what's needed to do and are willing to try to initiate changes. Only one or a couple of persons have actual power to decide and achieve this changes and it's important that they establish the work. Often work purposes to make changes failed because the persons who understand; do not have the power, while the persons who have power; don't understand (ibid.).

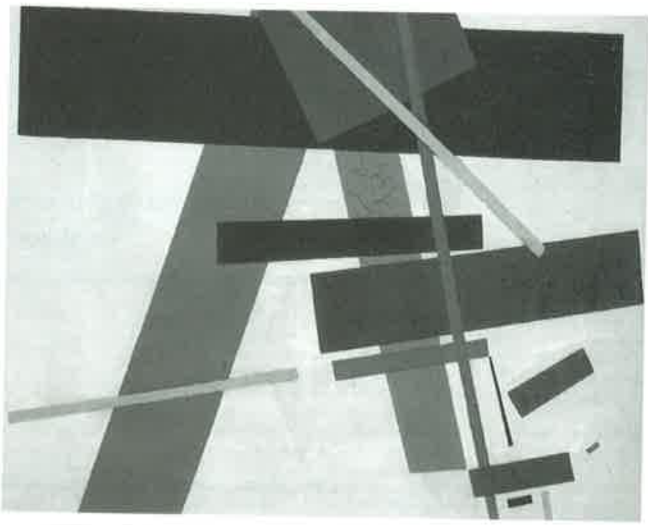
An important question is how to minimize the risk of filtration of knowledge in a work practice. At the moment the tendency in the Swedish police organisation is straightforward and it is in the direction of avoiding the problem. When the researcher had contacted the persons working in other organisations they have indicated that this problems are not unique for the Swedish police organisation. Therefore, there is really a need to lift up and discuss this matter and also to do more research in other organisations to make this phenomenon more understandable, concrete and well known.

Summary

When a person is involved in an event, he or she has direct knowledge about the situation. If a person had to describe the situation for another person there is of course a risk that the receiver of the information will interpret the information in another way than the sender intended (Jenner and Hoppe, 1995; Holgersson, 2001; 2005). If the sender and the receiver have different previous knowledge (Rolf, 1995) it will create misunderstanding. A good dialogue between the sender and receiver about the information can minimize this risk. The lack of a good communication climate in an organisation can therefore be problematic (Ekman, 1999; Holgersson, 2001; 2005).

If the user interfaces in an IT-system is heterogenic it can lead to a low quality of information in the system. Besides, the user's experience that an IT-system is difficult to use can undermine the motivation to register information in a correct/sufficient way. Anyhow some knowledge is difficult to formulate so it should be fit to put into an IT-system (Josefson, 1991; Holgersson, 2005)

IT-system is anonymous to the reality behind the information. For example, the person who uses information from the IT-system will not easily know a change in the working process. The anonymous outputs are mostly in focus, not the quality of the input and the unique situations behind the often precise and reliable looking information (Cronholm, 1994; Holgersson, 2001; 2005). It's often effortless to get information from an IT-system in comparison to collection of knowledge about an activity in other ways. Information from IT-system has a dominate role when the result of a work will be evaluated and statements/reports from analyst and output from IT-system almost are seen as separate information sources even if the information often comes from the same source (the IT-systems). IT-system plays a central role in the filtration of knowledge and influence the quality of the decisions. The filtration of knowledge can lead to a negative hermeneutic spiral occurs. The risk is obvious that this filtration will have a large negative impact on the possibilities to reach an acceptable level of the knowledge management in the organisation.



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Employee Engagement: A Comparative Study on Selected Indian Organisations

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Abstract

This comparative study on the Employee Engagement, in profit and non-profit organizations from different sectors, examines the correlations between different factors of engagement and their impact on the engagement. In doing so it also prioritizes the possible areas where these organizations need to work upon by fulfilling the expectations of the employees which vary according to the organization. Through this research the employees are asked what they want from work and whether they are getting it. With this information in hand, many simple and inexpensive opportunities can be tapped to create an engaged work-force.

Key Words : Engagement, Employee, Satisfaction, Motivation, Commitment

Introduction

Engagement means the extent to which people value, enjoy, and believe in what they do. Employees are engaged when they are motivated, satisfied, and effective. Engaged employees are committed to their organization and its bottom line; have tremendous pride and job ownership; put more discretionary effort in terms of time and energy; and demonstrate significantly higher levels of performance and productivity than those who are not engaged. Engagement overlaps with the concepts of commitment and organizational citizenship behavior, but there are also differences. In particular, engagement is two-way: organizations must work to engage the employee, who in turn has a choice about the level of engagement to offer the employer. Rafferty et al. (2005) indicates that this concept originated from consultancies and survey houses rather than academia. Engagement goes further than 'commitment' and 'motivation' in the management literature (Woodruffe,

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2006 as cited in CIPD, 2006a). As pointed out in Rafferty et al. (2005), employee engagement has as its foundation, the two concepts of employee commitment and organizational citizenship behaviour.

Commitment

Silverman (c.f., Robinson et al., 2004) notes that recent research on organizational commitment stresses its multidimensional nature that implies it cannot be realized through one single human resource (HR) policy. People are motivated by a range of factors, which differ from person to person. Commitment and engagement are not considered to be the same. While commitment is an important element of engagement, engagement is considered to be much more. Tamkin (2005) reviews commitment in the literature and highlights an early model by Allen and Meyer (1990), which defines three types of commitment:

· Affective commitment - employees feel an emotional attachment towards an organization;

· Continuance commitment - the recognition of the costs involved in leaving an organization; and

· Normative commitment - the moral obligation to remain with an organization.

As noted by Tamkin (2005), not all of these forms are positively associated with superior performance - employees who feel high continuance commitment for whatever reason, but lower levels of affective and normative commitment are unlikely to produce huge benefits for the organization. The closest relationship with engagement is 'affective' commitment as explained by Silverman (c.f., Robinson et al., 2004, Appendix 1). It emphasizes the satisfaction people get from their jobs and their colleagues, and the willingness of employees to go beyond the call of duty for the good of the organization. It also goes to capture the two-way nature of the engagement relationship, as employers are expected to provide a supportive working environment. This point is expanded upon by Meere (2005), who highlights that organizations must look beyond commitment and strive to improve engagement, as it is engagement that defines employees' willingness to go above and beyond designated job responsibilities to promote the organization's success.

Organizational Citizenship Behaviour (OCB)

The review of OCB literature by Barkworth (c.f., Robinson et al., 2004, Appendix 2) defines its key characteristic as behaviour that is discretionary or 'extra-role', so that the employee has a choice over whether they perform such behaviour. These behaviours include voluntarily helping of others, such as assisting those who have fallen behind in their work, and identifying and stopping work-related problems in the first place. As these types of behaviour are not normally part of the reward system, absence of such behaviours is therefore not punishable by the organization but performance of them should lead to effective running of it.

Effect of Organizational Environment

Two lines of research study the effects of organizational environment on workers' quality of life and performance. The first line studies effects of stress and health represented by person-environment fit theory (French, Caplan & Van Harrison, 1982). It argues that performance and quality of life are hindered by strain (too much challenge) or boredom (too little challenge). The second line of research originates with the behavioral, cognitive and health benefits of positive feelings and positive perceptions (Isen,1987: Warr, 1999) . Proponents of this perspective argue that the presence of positive emotional states, positive appraisals and healthy relationships within the workplace improve performance and quality of life. When environment provides interesting, meaningful, and challenging tasks, individuals in these situations are likely to have what Csikszentmihalyi (1997) has described as optimal states. J. K. Harter, F. L. Schmidt and C. L. Keyes (2002) have concluded that the well being perspective is applicable to business and as managers focus on satisfying basic human needs in the workplace clarifying desired outcomes and increasing opportunity for individual fulfillment and growth they may increase the opportunity for the success of the organization.

Engagement

It appears that engagement, although sharing strong characteristics with each of the two concepts is about more than commitment and/or OCB on their own. Rafferty et al. (2005) draw the distinction on the basis that engagement is a two-way mutual process between the employee and the organization. Sharpley (c.f., Harrad, 2006) also points out that it is important to distinguish between motivation and engagement, as it is possible to be motivated in one's job without necessarily feeling an attachment to the organization. In Sharpley's (c.f., Harrad ,2006) definition of engagement there must be a mutual feeling of support between the employee and the organization.

Despite conventional wisdom, employee satisfaction and bottom-line results are weakly correlated. But Gallop has overwhelming empirical evidence of measured employee engagement and desirable organizational outcomes (e.g. profit, productivity, safety, retention and customer satisfaction) over the years

(Buckingham and Coffman, 1999). The new task for human resources and executives alike is to improve the level of engagement, centered on the employees who matter the most, and view satisfaction as a fortunate side effect. According to Nicholas J Higgins and Graeme Cohen (2007), assessing employee engagement as a more complex demand than simply measuring opinion on certain potentially (un)connected matters, which has tended to be the norm carried out in industry. It is this aspect that also demands more understanding of factors of employee engagement and their relationships.

Objective

The main objective of the study was to find the engagement levels across various organizations. Additionally it was aimed at;

- Understanding the relationship between various factors affecting employee engagement.
- Understanding the possible reasons for difference in engagement levels.
- Prioritizing the various factors that need to be worked upon depending on the type of organization and employee expectations.

Methodology

Organization

The Employee Engagement Survey was conducted in 3 different organizations representing information technology, power and non-profit organizations. These organizations are arguably the best in respective industry type in term of size, performance (financial and otherwise) and unique human resource practices.

- Unitech Technologies Limited : - It is a multinational information technology Services Company headquartered in Bangalore, India. It is one of India's largest IT companies, with nine development centers in India and over 30 offices worldwide. Unitech and its subsidiaries employ over 80,501 professionals (as of September 30, 2007)
- Marigold Electricals Ltd. :- It is a gas and steam turbine manufacturer in India. It is one of India's nine largest Public Sector Undertakings or PSUs, known as the navratnas or 'nine jewels'. MEL is a key player in the power sector through the construction, commissioning and servicing of power plants all over the world. MEL has around 14 manufacturing divisions, four power sector regional centres, over 100 project sites, eight service centres and 18 regional offices.
- Age Home India: - An NGO working to protect the rights of India's elderly and provides relief to them through various interventions.

Samples

Nearly 200 respondents were contacted in Unitech, 100 in MEL and 50 in Age Home India. The success rate was nearly 60 percent in all these organisations and the figure105, 40 and 25 executive level employees from Unitech, MEL and Age Home India represent the usable questionnaire.

Instruments

The instrument comprises of 2 sections A and B. Section B includes 12 statements representing engagement (Gallop Q12 questions), all of which collectively comprise a single indicator of engagement. This is measure on five point scale, with "1" being strongly disagree and "5" being strongly agreed.

The section A consists of 37 items. Each item represents one of the 9 factors which are growth opportunities, compensation & rewards, quality of work, culture, leadership, work-life balance, empowerment, communication, brand equity & CSR. Section A has a reliability coefficient of 0.83 and content validated. Each item measures the engagement level on a five point scale, with "1" being strongly disagree and "5" being strongly agreed.

Positive responses to the engagement statements indicate :

- A positive attitude towards, and pride in, the job, co-workers and organization as a whole.
- Belief in the organization's products/services.
- A perception that the organization enables the employee to perform well.
- An understanding of the bigger picture and a willingness to go beyond the requirements of the job.

Procedure

A short anonymous questionnaire was administered personally and online to a cross-section of

Employees, who were prepared to fill in and the confidentiality was maintained.

Analysis and Results

Results for Unitech

Engagement Levels

The three levels of engagement shown by Unitech employees along with the respective percentages of number of respondents at each level are as following:-

a) Disengaged i.e. having engagement values less than 3.

24.76% of respondents fall in this category.

b) Middle level i.e. having engagement values from 3-4.5

64.76% of respondents fall in this category.

c) Engaged i.e. having engagement values from 4.5-5

9.50% of respondents fall in this category.

This shows that a major chunk of employees (64.76%) fall under the middle level engagement category. While a significant number of employees are disengaged (24.76%), only a small fraction (9.5%) are engaged.

Correlation Study

Out of the 37 items of Part A of the questionnaire which were considered to be important for employee engagement, only 16 showed significant correlation (with R-values greater than 0.5) with the 10 items of Part B which actually measure the engagement levels. These 16 items are following (according to the order of priority to be given based on decreasing order of gaps) :-

1. Career advancement opportunities are satisfactory
2. The work that I do matches my knowledge and skills
3. I find my values and that of my organization's values are similar
4. The prevailing compensation structure is in line with the industry trends.
5. The rewards and incentive plan is implemented largely on performance basis
6. Everyone in this organization believes that s/he can have a positive impact.
7. Roles and responsibilities of employees are clearly communicated
8. My supervisor/superior encourages employees to participate in important decisions
9. My organization is always open to new ideas and initiatives from employees
10. I am comfortable with the way of life in this organization
11. I have confidence in the decisions made by my manager.
12. Employees are provided valuable feedback regarding the performance.
13. My job allows me to identify with the final product/service.
14. Feel proud to be associated with the organization.
15. My family and friends consider this to be a great place to work.
16. I know what is expected of me at work.

Reasons

For understanding the reasons of this high level of disengagement of Unitech employees, a look into the psychographic profile and expectations of a typical respondent is necessary. They are the young (in their early twenties) engineering graduates with a high need for achievement who are very ambitious and want a fast-track career growth. Moreover they have a heightened sense of inequity when they compare their pay-structures and job profile with others from SAP, Adobe or Microsoft. So their expectations regarding career growth opportunities, job profile and compensation are not fulfilled which makes them disillusioned. Moreover, the level of expectations of family and friends from Unitech is generally high due to its strong brand image.

Gap Analysis and Prioritizing

The gap between the actual value and the ideal value on the above sixteen attributes was calculated and priority was given to areas having highest gap. Some salient features of the priority listing were :-

- The biggest concern of the HR department should be the career advancement opportunities which are regarded non-existent by a large number of employees.
- The second on the list is the mapping of the employee skill set with that required for the job which they perceive is not there.
- Compensation structure and incentive plans are other areas to be worked on.
- One of the lowest in the list i.e. which has a high rating is the perception of family and friends about the company which is corroborated by the fact that Unitech enjoys a very good brand image in India.

Hence, an action plan needs to be formulated according to the given priorities:

1. Growth Opportunities
2. Quality of Work
3. Compensation and Rewards
4. Empowerment
5. Culture

Results for MEL

Engagement Levels

The three levels of engagement shown by MEL employees along with the respective percentages of number of respondents at each level are as following:-

a) **Disengaged** i.e. having engagement values less than 3.

   10% of respondents fall in this category.

b) **Middle level** i.e. having engagement values from 3-4.5

   45% of respondents fall in this category.

c) **Engaged** i.e. having engagement values from 4.5-5

   45% of respondents fall in this category.

This shows that a major chunk of employees fall under the high level and middle level engagement category, while only a small fraction (10%) are disengaged.

Correlation Study

Out of the 37 items of Part A of the questionnaire which were considered to be important for employee engagement, 33 items showed significant correlation (with R-values greater than 0.5) with the 10 items of Part B which actually measure the engagement levels. These 33 items are following in the order of priority:-

1. I am involved in decisions affecting me
2. Employees are provided valuable feedback regarding the performance.
3. Career advancement opportunities are satisfactory
4. Appraisal systems are transparent.
5. I am happy with the job rotation policy.
6. The organization gives the employees an opportunity to make a difference to the society.
7. I find my values and that of my organization's values are similar
8. The organization takes initiative in addressing the social issues of the community at large.
9. The organization helps me balance my personal and professional life.
10. My organization is always open to new ideas and initiatives from employees
11. The company helps me build up by skill-sets by providing me with adequate training that is valuable to me.
12. My supervisor/superior encourages employees to participate in important decisions
13. Everyone in this organization believes that s/he can have a positive impact.
14. The culture of my organization supports the overall strategy and vision
15. I receive adequate recognition for my contributions/accomplishments to the company
16. My family and friends consider this to be a great place to work.
17. My job provides a lot of skill building avenues
18. Roles and responsibilities of employees are clearly communicated
19. The pace of my workday is such that the related stress is manageable.
20. I am comfortable with the way of life in this organization
21. I have confidence in the decisions made by my manager.
22. Goal setting is done mutually by me and my supervisor/superior.
23. It is an enriching experience to work with my colleagues.
24. The work that I do matches my knowledge and skills
25. My job allows me to identify with the final product/service.
26. I have to work beyond conditioned hours to keep up my workload
27. My supervisor stands by his commitments.
28. I have access to all the employee related policies.
29. I do assignments crucially important for the organization
30. I feel proud to be associated with the organization.
31. I enjoy sufficient autonomy in the work that I do.
32. I know what is expected of me at work.
33. My supervisor/superior is available if I need.

Reasons

A high number of items in part A showed a high correlation with engagement levels. It means that the employees have a larger and more diverse expectation set which needs to be fulfilled for them to be engaged. The main reason for this can be the life-cycle stage of the respondents, all of which are in their fifties, are much more experienced, are at a higher level of organizational hierarchy with a decent salary and most importantly can evaluate things from a higher context. So, what matters more to them is empowerment, open communication, job rotation policies etc. than compensation and rewards.

Gap Analysis and Prioritizing

The gap between the actual value and the ideal value on the above sixteen attributes was calculated and priority was given to areas having highest gap. Some salient features of the priority listing were:-

1. As is often the case with PSUs the biggest concern of the HR department should be to make the employees feel empowered.
2. The second on the list is the need for open communication.
3. Growth opportunities and compensation structure are other areas to be worked on.
4. The lowest in the list i.e. those having a high rating are leadership and clear knowledge of job expectations etc.
5. One major reason for this difference in priorities between Unitech and MEL maybe that the respondents from Unitech were much younger for whom growth opportunities are much more important.

Hence, an action plan needs to be formulated according to the given priorities:-

1. Empowerment
2. Communication
3. Growth Opportunities
4. Compensation and Rewards
5. Brand Equity and CSR

Results for Age Home India

Engagement Levels

The three levels of engaged shown by Age Home India employees along with the respective percentages of number of respondents at each level are as following:-

a) Disengaged i.e. having engagement values less than 3.

   0% of respondents fall in this category.

b) Middle level i.e. having engagement values from 3-4.5

   50% of respondents fall in this category.

c) Engaged i.e. having engagement values from 4.5-5

   50% of respondents fall in this category.

This shows that an equal chunk of employees fall under the high level and middle level engagement category while nobody is disengaged.

Correlation Study

Out of the 37 items of Part A of the questionnaire which were considered to be important for employee engagement, 16 items showed significant correlation (with R-values greater than 0.5) with the 10 items of Part B which actually measure the engagement levels. These 16 items are following in the order of priority:-

1. Goal setting is done mutually by me and my supervisor/superior.
2. The organization helps me balance my personal and professional life.
3. I am paid in proportion to the work I do
4. My job allows me to identify with the final product/service.
5. I enjoy sufficient autonomy in the work that I do.
6. I receive adequate recognition for my contributions/accomplishments to the company
7. Roles and responsibilities of employees are clearly communicated
8. My job provides a lot of skill building avenues
9. The culture of my organization supports the overall strategy and vision
10. I know what is expected of me at work.
11. I have access to all the employee related policies.
12. My organization is always open to new ideas and initiatives from employees
13. I am comfortable with the way of life in this organization
14. I find my values and that of my organization's values are similar
15. I do assignments crucially important for the organization
16. I feel proud to be associated with the organization.

Reasons

A striking difference in Age Home India from other organizations is the absence of any disengaged employees. Even though the sample taken is too small to be considered as a representative sample, yet the reasons for this high level of engagement should be probed into. The dimensions on which it scored high are pride in association, feeling of doing important assignments, fit with organizational values etc. So we can safely say that being a part of a small organization working for the elderly, the employees feel proud, important, valued and have a sense of accomplishment. A very important reason for which people join an NGO at the first place is this feeling of doing something for others. So their expectations are fulfilled to a large extent.

Gap Analysis and Prioritizing

The gap between the actual value and the ideal value on the above sixteen attributes was calculated and priority was given to areas having highest gap. Some salient features of the priority listing were:-

1. The biggest concern of the HR department should be the mutual goal-setting between the worker and the manager. The employee should identify with the final result or the change he had made in the society.
2. Proper work-life balance is one area where the employees feel work needs to be done.
3. Compensation structure and incentive plans are other areas to be worked on.
4. The lowest on the list i.e. which has a high rating is the pride in being associated with Age Home India working for improving other's lives.

Hence, an action plan should be formulated according to the given priorities.

1. Leadership
2. Work life balance
3. Compensation and Rewards
4. Quality of work
5. Empowerment

Comparison Across the 3 Organizations

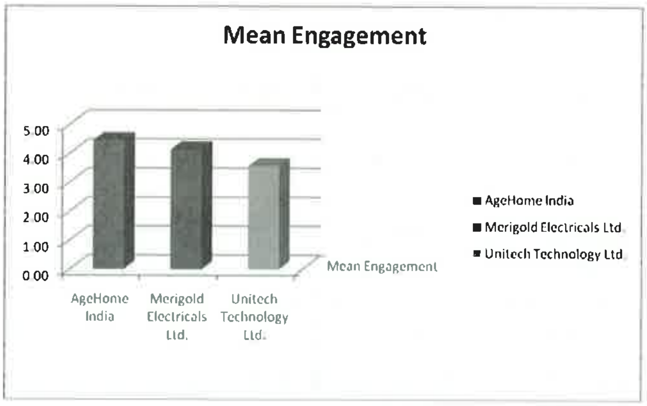

Figure I : Evaluation of 3 Organizations

- Both Unitech and Age Home India had a high rating in proud to be associated with the organization while Unitech also had a high rating in positive perception of the family about the organization.
- Career advancement is one area where Unitech is lacking more than MEL. This maybe the result of a higher ratio of younger respondents from Unitech who are more career-oriented.
- Age Home India employees want improvement in their work-life balance which is not the case with Unitech or MEL. One reason maybe excessive workload due to shortage in manpower. Another reason maybe absence of 'Fun at Work' initiatives which are usually present in profit-making organizations.
- Though 'career advancement' does not seem to be a high priority area to be worked upon for Age Home India but 'compensation' is.
- The mature and more experienced employees of MEL are more concerned about their empowerment, open communication, job rotation etc. than monetary benefits whereas compensation is given high priority by Unitech employees who are much younger.
- The Age Home India employees seem to value mutual goal-setting, identification with final outcome and greater autonomy in their work.

Seeing the three organizations as representative of private, public and non-profit making sector, it can be concluded that for younger go-getters in private sector, career advancement and compensation matters the most which if not provided may lead to disengagement. For mature experienced employees working in public sector, non-monetary factors like empowerment, open communication matter the most. The employees of a non- profit making organization are generally satisfied with the kind of work they do as they have a feeling of accomplishment that they are making a difference to society but what they need is higher compensation and better work-life balance.

Conclusion

By comparing the results across the three organizations, the main reason for disengagement appears to be an absence of analysis of needs and expectations of employees which vary from organization to organization. The psychographic profile and thus, the needs of employees are different in Unitech as compared to MEL or Age Home India.

✓ Unitech employees who are relatively younger value career advancement and compensation a lot. The engagement is low because of disillusionment due to expectation mismatch.

✓ More experienced employees of MEL value empowerment, open communication and job rotation etc. more than compensation.

✓ Age Home India employees want work-life balance, better compensation and more autonomy to make a difference to society. The engagement level is high due to the sense of accomplishment they get from working for others and seeing the actual result of their work.

So engagement building measures differ from organization to organization and a proper need analysis is necessary for each organization because expectation management plays an important role in building an engaged workforce.

Limitations

- The sample sizes were small for MEL and Age Home India and they cannot be considered representative samples.
- A quantitative analysis of different expectations of employees of different organizations, different age-groups etc is not done and can be scope for future research.
- The length of the instrument may have led to disinterest on the part of respondents.
- The employees from each organization belonged to only one hierarchical level.

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The Relative Efficiency for Benchmarking Advertising Expenditure-An Alternative Approach

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Abstract

Efficient use of advertising expenditure is critical in determining the profitability of many companies because advertising leads to increase in sales volume. If the sales volume is not proportional to advertising expenditure, it may be viewed that a good share of advertising expenditure goes waste. Therefore, challenges before today's advertisers are to identify and eliminate the sources of advertising inefficiency. In order to identify advertising inefficiencies, it is absolutely necessary on the part of advertisers to measure the advertising efficiency. However, in the process of measuring advertising efficiency, managers face extreme difficulties in defining an efficiency score as it involves multiple inputs and outputs. This paper uses a non-parametric technique known as Data Envelopment Analysis (DEA) to measure the technical efficiency of advertising expenditure. A sample of leading forty-eight companies is taken for the analysis. The methodological demonstration is made by using the data for two consecutive years i.e. 2003 and 2004, collected from the secondary source. A comparative analysis is also made between the results. The paper also aims to find the best practices and benchmark for each company in context of advertising expenditure.

Key Words : Advertising Expenditure; Data Envelopment Analysis (DEA); Efficiency; Benchmark; DMUs

Introduction

The efficient use of advertising expenditure is critical element in determining the profitability of many companies. The right media mix and proper budget allocation to each of these mixes can lead to increased sales and profits. The recent trend shows a general decline in the manufacturing expenditure whereas the marketing cost is going up (Sheth and Sisodia, 1995). However, in difficult economic climate and budget constraints among the first expenses to be reduced are marketing spending (Weber, 2002). From marketing perspective, marketing cost usually refer to advertising and promotion (Ambler, 2000). Some empirical

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evidence suggests that in long term, advertising has a positive effect on differentiation and brand equity, while this is not the case for promotion (Boulding et al., 1994; Jedidi et al., 1999). So from the marketer's perspective advertising is more important. It is a known fact that a good pie of the advertising expenditure goes waste and for some companies, the level of waste can go up to 407% of the net income (Bass and Frank, 1979). It is rightly said by famous retailer, John Wanamaker, that "Half of every dollar spent on advertising is wasted; the problem is I just don't know which half" (Cheong and Leckenby, 2006). The statement shows the need for measuring the advertising efficiency and identification of sources of inefficiency. The previous study shows that advertising works, but problem is on overspending in advertising. MPA (Magazine Publishers of America) and Hudson River Group ***(www.magazine.org)*** in their release about media mix measurement study found that the brands that spent a higher percent of their marketing budgets on advertising, as evidenced by their media spending, received a higher return on their overall marketing investment. So the scenario is, consumers are becoming more demanding seeking quality products at lower prices, thus placing emphasis on efficiency in marketing; on the other hand, marketing managers are usually evaluated in relation to the efficiency/productivity of their functional area (Bush et al., 2002).

As huge amount of money is spent on advertising and advertising has long term impact on brand establishment marketers are concerned about the inefficiency in advertising expenditure. Companies are interested to know the effectiveness of each media used for advertising, identifying the possible sources of inefficiencies, setting the benchmarks for performance improvements. This paper uses a non-parametric method known as Data Envelopment Analysis (DEA) to find the technical efficiency of advertising expenditure made by top forty-eight U.S. companies. The purpose of the paper is to demonstrate DEA as a methodology for measuring the advertising efficiency. DEA has been chosen as appropriate technique for the analysis because it can deal with the concern in the marketing literature that advertising expenditure decisions are often made with competitors in mind (Rust et al., 2004). Sheth and Sisodia (2002) call for a design for a marketing system that covers both efficiency ("doing things right") and effectiveness ("doing the right things"). Moreover, they claim, the efficiency of marketing expenditures must be measured relative to competitors in the industry as well as benchmarks established in similar industries. The result also shows the sources of inefficiencies and benchmark unit for each of the company.

Literature Review

The starting point of the efficiency is Farrell's (1957) paper on the concepts of efficiency and their computations (Farrell, 1957; Forsund and Sarafoglou, 2000). Michael James Farrell's paper gave insight to two issues i.e. how to calculate the benchmark technology & efficiency measures. The story of data Envelopment Analysis began with Edwardo Rhodes Ph.D dissertation research at Carnegie Mellon University School of urban and public affairs (Now the H. J. Heinz III School of public policy and management) under the supervision of W. W. Cooper (Despotis and Smirlis, 2002). This work was on estimating the relative efficiency of schools involving multiple inputs and outputs. This paper leads to formulation of a model now popularly known as CCR model (Charnes, Cooper & Rhodes, 1978). Charnes et al. used the developments made in the linear programming techniques to generalise the Farell single output/input technical efficiency measure to the multiple input-output cases by constructing a single virtual output to a single virtual input relative efficiency measure. The advantage is, CCR model is readily computable using the standard LPP. The literature review on the applications of DEA suggests many applications in efficiency analysis in service organization but not many applications were found in measuring the advertising efficiency. Luo and Donthu (Luo and Donthu, 2001) had used Data Envelopment Analysis (DEA), to measure and benchmark advertising efficiency. The paper also highlights on, how the ranking of the advertising campaigns can differ based on the output. Slack analysis was also presented to show the diagnostic power of DEA. Cheong et al. (Cheong and Leckenby, 2006), analyze the efficiency of advertising expenditures on six media Magazines, Newspapers, Outdoor, TV, Radio and the Internet, using DEA. The results reveal inefficiencies with each medium, relative to the advertisers' expenditures, and also indicate less efficiency for Radio and Outdoor advertising for these advertisers than for expenditures on Magazines, Newspapers, TV and the Internet. Stewart and Koslow (Stewart and Koslow, 1989) in their paper replicated the study of the influence of executional factors on advertising performance. Jin et.al. (Jin, Zhao and Soontae , 2006) have used a field study to investigate the effects of publicity messages related to the commercials aired during three Super Bowl games. The paper found that publicity had a positive impact on the memory of subsequent advertisements for both recall and recognition, but publicity effects were more evident in recall than in recognition. Sheth (Sheth, 1974) has examined three aspects of effectiveness of advertising communication, first how a specific advertising communication get distorted in consumers mind, second how the advertising influence consumer choice process and third how does the advertising influence the consumption behaviour. Dertouzos and Garber (2006) have taken U.S. army data from 1981 to 1984 and found that army advertising was very productive in producing enlistments; response functions for television, radio, and magazines are consistent with widespread advertising practice; lag patterns differ substantially over media; and the army's allocation of spending across media was nearly optimal. Stankey. J.Michael (1988), observed that over advertising represents major misallocation of resources and contributes to lower profit margins for companies that engage in it. The paper recommends for increasing advertising media efficiency, and provides the suggestions for reducing the advertising expenditures, increase advertising efficiency, and subsequently-increases the financial health of their organizations.

Among the major suggestions for future research found in the above-mentioned literature survey points towards: to focus on specific industry (or product category); to use longitudinal data to measure advertising efficiency since advertising effects wear out over time. Overall, more research on benchmarking advertising efficiency is needed in order to gain better knowledge of possible ways of improving the efficiency of advertising expenditures.

Data Envelopment Analysis

Data Envelopment Analysis is a non parametric method for evaluating the relative efficiency of Decision Making Units (DMUs) on the basis of multiple inputs and outputs (Charnes, Cooper & Rhodes, 1978). The Data Envelopment Analysis approach to measure efficiency is based on Farrell's seminal paper (Farrell, 1957). The discussion and application in the name of Data Envelopment Analysis (DEA) were initiated after the work of Charnes et al and subsequent evidence can be found in the works of Banker and Cooper (Banker et.al. 1984; Cooper et.al.1999). The application of DEA is increasing day by day; a useful review is done by Luo (Luo, 2004) on three important books on DEA.

DEA is a multi factor productivity analysis model for measuring the relative efficiencies of a homogeneous set of DMUs (Talluri, 2000). DEA becomes very important when it comes to the performance evaluation of a unit in presence of multiple inputs and outputs. The problem becomes more difficult if there is complex relationship between the inputs and outputs and unknown tradeoff between them. In real life problems in such situations are common and usual statistical methods like regression analysis, central tendency etc does not provide satisfactory solutions. The efficiency score in presence of multiple input and output can be calculated using the "weighted cost approach" given by

$$\text{Efficiency} = \frac{\text{weighted sum of outputs}}{\text{weighted sum of inputs}}$$

The problem with this is that it assumes that all the weights are uniform, but DEA allows the DMUs to choose weights, which show them in most favorable light. The basic DEA model for n DMUs each with m inputs and s outputs is given by Charnes et.al. as follows

$$Max \quad \frac{\sum_{k=1}^{s} V_k Y_{kp}}{\sum_{j=1}^{m} U_j X_{jp}}$$

$$s.t. \quad \frac{\sum_{k=1}^{s} V_k Y_{kp}}{\sum_{j=1}^{m} U_j X_{jp}} \leq 1 \quad \forall\, i$$

$$V_k \,,\, U_j \geq 0 \quad \forall\, k, j$$

v_k = Weight of the given output k

u_j = Weight of the given input j

y_{ki} = Amount of output k produced by the DMU I

x_{ji} = Amount input j utilized by the DMU i

The above problem is a fractional programming problem, which can be formulated as the Linear Programming Problem and can be solved.

DEA can give very useful results to the user by providing insight to the problem and its solution like efficiency score of each of the DMUs, slack of each input and output, benchmarks for each of the DMUs. So the results from DEA can provide the advertisers useful information about how to adjust their inputs and outputs to make it efficient. In contrast to this parametric approach optimizes a single regression plane through the data, DEA offers a reference for each unit comparing it to the efficient frontier.

Data Definitions and Descriptive Analysis

Advertising expenditure data for the fifty leading advertisers during the year 2003 and 2004 was obtained from Advertising Age as given in their website (http://adage.com/dataplace). Company profiles include advertising expenses by media-such as magazine, television, internet, outdoor and sales and operating earnings reports for 2003 and 2004.

We have taken top 50 companies for our DEA application but since there are two companies with missing information about sales so we have omitted it from the analysis. Thus the effective sample size for our analysis is 48. The data considered for analysis is given in Appendix.

Though various media are used for advertising, we have the current study has considered four media Print, Broadcast, Outdoor and Internet, which is considered to be important based on the expenditure made by companies included in the sample on these media. The print media includes advertisement made in newspaper, magazines, special issues etc., the outdoor media includes advertisement through billboard, posters, banners, hoarding etc., the broadcast includes usage of television, radio etc for advertisement and any web based advertisement is included in internet media. The parameters and the abbreviations used in the paper are shown below.

The Parameters Used and There Abbreviations.

PRT : Expenditure in Print media
BCT : Expenditure in Broadcast
ODR : Expenditure in Outdoor
INT : Expenditure in Internet
SLS : Annual Sales of the company

The correlation between the variables is calculated for both the year 2003 and 2004. The value of correlation gives a fair idea about the relationship between the variables. The correlation matrix for the year 2003 & 2004 is shown in Table–I and Table-II respectively.

Table I :Correlation Matrix for the year -2003

2003	PRT	BCT	ODR	INT	SLS
PRT	1	0.49*	0.22	0.45*	0.17
BCT		1	0.27	0.18	0.35*
ODR			1	0.23	0.06
INT				1	0.23
SLS					1

** Significant at 0.05% level*

Table II :Correlation Matrix for the year -2004

2004	PRT	BCT	ODR	INT	SLS
PRT	1	0.58*	0.34*	0.34*	0.29*
BCT		1	0.27*	0.16	0.35*
ODR			1	0.33*	0.14
INT				1	0.24
SLS					1

** Significant at 0.05% level*

It is interesting to note that for both years, there is average or less than average degree of correlation between the variables. For the year 2003 the highest value of correlation is 0.49, which is between PRT & BCT, the same is repeated for the year 2004. This may be a reflection to the fact that spending of companies in print media and broadcast media are in proportion. The most important factor for the advertisers is sales, for the year 2003 the highest value of correlation under SLS column is 0.35 which is between SLS and BCT, interestingly the same is repeated for the year 2004. This shows that expenditure in Broadcast has highest impact on sales figure. The lowest value in the correlation matrix for the year 2003 is 0.06, which is between SLS and ODR; similarly the lowest value of correlation for the year 2004 is again between SLS and ODR. This shows that expenditure in outdoor advertising has least impact on sales figure.

Next the Descriptive Statistics of the variables under consideration is calculated. The descriptive statistics for the variables is tabulated in Table- III

Table III : Descriptive Statistics

	2003				2004			
	MEAN	MEDIAN	IQR	SD	MEAN	MEDIAN	IQR	SD
PRT	273032.708	219364.00	225796.25	209283.7	301426.417	237754.500	283694.000	222373.5
BCT	518578.938	416760.00	403716.50	399967.7	576515.625	445610.000	407239.000	433492.9
ODR	9530.958	2706.000	13718.750	13552.80	12611.000	4042.500	19180.000	16985.5
INT	24198.208	15950.500	30904.250	28270.55	35320.292	19893.500	40893.500	39585.14
SLS	53295.917	40031.500	48432.750	52200.18	58918.063	41438.000	56513.750	58500.11

The descriptive statistics gives a fair idea about the data distribution; it is interesting to note here that there is fair amount of increase in all modes of the advertising expenditure. Considering the MEAN column it is seen that there is 10.3 % increase in expenditure on PRT, 11.1% increase in BCT, 32.3% increase ODR, 45.9% increase in INT, 10.5% increase in SLS over 2003 to 2004. It is observed that the largest increase is on advertising expenditure on Internet, which is the medium gaining popularity. The interquartile range (IQR) and Standard deviation gives an idea about the spreadness of data. The large value of IQR and SD, shows that the data is more dispersed and presence of heterogeneity in the values of variables.

Input-Output Definition

The most important consideration in DEA application is the selection of input and related output variables. The criteria of selection of inputs and outputs are quite subjective; there is no specific rule for determining the procedure for selection of inputs and outputs (Ramanathan, 2001). However to give a broad outline any factor used as the resources by the DMUs for producing something of value & also, any environmental factor that bears a strong effect on how the resources are consumed can be considered as the input. Similarly any factor, which describes the amount of goods, services, or any other outcomes obtained as a result of the processing of resources can be taken as output. Also, any factor, which describes the qualitative nature of the resulting outcome, can be considered as the output.

So for our study we have taken all the expenditure PRT, BCT, ODR, INT as input and SLS as the output.

Analysis and Results

The analysis in this application consists of running the DEA software for calculation of efficiency score for both the years 2003 & 2004. Based on the efficiency score the new ranks are assigned to each of the DMUs. A comparison is made between ranks of 2003 and 2004.

The general output maximization CCR DEA model is used to solve the problem and get the efficiency score. We have used DEAP (Data Envelopment Analysis Programme) version 2.1 to solve the model.

The result for the year 2003 is tabulated in Table-IV and for the year 2004 is tabulated in Table- V. The first column "DMU" refers to the various companies which is considered for analysis, Column 2"Eff." lists the technical efficiency score of the DMU, Column 3 refers to the new rank through DEA analysis, the fourth column "Peers" gives the bench mark or the DMU that shall be referred by that particular DMU for improvement, the fifth column "Peer Weight" gives the weightage or importance that shall be given to these benchmarked companies, the sixth column "Peer Count" gives the peer count i.e. the number of institutes referring that particular DMU for improvement

Table-IV :Results from DEAP Version 2.1
(Output orientated DEA, Scale assumption: CRS) 2003

DMU	Eff.	New Rank	Peers	Peer Weight	Peer Count	DMU	Eff.	New Rank	Peers	Peer Weight	Peer Count
1	0.062	43	39	11.722	0	32	0.195	25	47 39	0.211 0.610	0
2	0.034	46	47, 39	2.559 4.573	0	33	0.237	18	39 47	0.272 0.582	0
3	0.062	44	47 39	2.679 2.066	0	34	0.030	47	47 39	0.164 1.326	0
4	0.644	6	21 24 39	2.334 0.277 0.020	0	35	0.253	13	47 39	0.849 0.511	0
5	0.068	41	47 39	3.869 1.703	0	36	0.562	7	47 39	1.308 0.296	0
6	0.249	16	47 39	1.059 2.272	0	37	0.083	38	47 39	0.789 0.773	0
7	0.276	11	47 39	1.714 2.044	0	38	0.074	40	24 39	0.437 0.402	0
8	0.047	45	47 39	1.633 1.960	0	39	1.000	3	39	1.000	44
9	0.203	22	39	1.296	0	40	0.205	21	47 39	0.195 0.640	0
10	0.084	37	24 39	0.486 1.910	0	41	0.019	48	47 39	0.016 0.657	0
11	0.206	20	47 39	0.697 1.273	0	42	0.065	42	47 39	0.048 0.846	0
12	0.197	24	47 39	0.513 1.194	0	43	0.968	5	47 39	0.480 0.234	0
13	0.326	8	47 39	1.190 1.395	0	44	0.112	35	47 39	2.218 0.108	0
14	0.239	17	47 39	0.914 2.038	0	45	0.252	14	39	0.130	0
15	0.155	29	47 39	0.894 1.468	0	46	0.257	12	47 39	0.007 0.282	0
16	0.151	30	47 39	0.900 1.498	0	47	1.000	4	47	1.000	34
17	0.299	9	39	1.062	0	48	0.127	32	47 39	2.291 0.098	0
18	0.118	34	39	0.566	0						
19	0.190	26	24 39	1.359 0.221	0						
20	0.173	27	47 39	0.542 1.016	0						
21	1.000	1	21	1.000	2						
22	0.099	36	21 39	0.795 0.982	0						
23	0.251	15	47 39	0.481 0.929	0						
24	1.000	2	24	1.000	4						
25	0.074	39	47 39	1.137 0.907	0						
26	0.199	23	47 39	0.386 1.275	0						
27	0.137	31	47 39	0.343 0.689	0						
28	0.123	33	47 39	0.083 0.550	0						
29	0.159	28	47 39	0.575 0.032	0						
30	0.287	10	47 39	0.500 0.807	0						
31	0.223	19	47 39	0.480 0.238	0						
Mean Efficiency = 0.266											

**Table V :Results from DEAP Version 2.1
(Output Orientated DEA, Scale Assumption: CRS) 2004**

DMU	Eff.	New Rank	Peers	Peer Weight	Peer Count	DMU	Eff.	New Rank	Peers	Peer Weight	Peer Count
1	0.363	20	29 23 39	0.067 1.133 0.387	0	32	0.407	17	39	0.129	0
2	0.261	30	23 39	0.680 0.006	0	33	0.240	34	39	0.086	0
3	0.072	45	23 39	0.148	0	34	0.162	39	23 39	0.001 0.039	0
4	0.341	22	23 39	0.115 0.155	0	35	0.288	27	39	0.164	0
5	0.109	41	29 23 39	0.521 0.075 0.113	0	36	0.785	3	39	0.280	0
6	0.548	12	29 23 39	2.006 1.184 0.330	0	37	0.103	42	29 23 39	0.119 0.009 0.072	0
7	0.420	15	29 23 39	1.023 0.407 0.477	0	38	0.519	13	39 24	0.020 0.107	0
8	0.086	44	29 23 39	0.140 0.079 0.085	0	39	1.000	1	39	1.000	41
9	0.178	38	39	0.250	0	40	0.662	8	23	0.512	0
10	0.251	31	39 23	0.140 0.101	0	41	0.286	28	23	0.050	0
11	0.784	4	29 23 39	0.573 0.530 0.133	0	42	0.420	16	23 39	0.118 0.022	0
12	0.383	18	12 39 23	0.062 0.520	0	43	0.466	14	39	0.302	0
13	0.549	11	13 29 23 39	0.641 0.410 0.446	0	44	0.357	21	39 23	0.014 0.142	0
14	0.746	6	29 23 39	0.956 0.547 0.375	0	45	0.857	2	23 39	0.031 0.024	0
15	0.229	36	29 23 39	0.064 0.357 0.152	0	46	0.312	23	29 23 39	0.107 0.088 0.043	0
16	0.767	5	23	1.092	0	47	0.092	43	24 39	0.047 0.169	0
17	0.307	24	39 23 29	0.289 0.063 0.415	0	48	0.278	29	39	0.055	0
18	0.296	26	23 39	0.207 0.014	0						
19	0.729	7	39 23	0.014 0.186	0						
20	0.382	19	29 23 39	0.255 0.220 0.115	0						
21	0.245	33	23 39	0.144 0.062	0						
22	0.301	25	23 39	0.269 0.034	0						
23	1.000	1	23	1.000	32						
24	1.000	1	24	1.000	3						
25	0.149	40	29 23 39	0.210 0.063 0.059	0						
26	0.619	9	23 39	0.639 0.107	0						
27	0.248	32	29 23 39	0.652 0.136 0.048	0						
28	0.183	37	39 24	0.062 0.030	0						
29	1.000	1	29	1.000	16						
30	0.553	10	29 23 39	0.216 0.246 0.178	0						
31	0.231	35	39	0.069	0						
Mean Efficiency = 0.428											

The table –IV, shows that DMU-21, 24, 39 & 47 has efficiency score of unity and comes in the first place in the year 2003. All the DMUs with efficiency score of unity brings in a tie situation, the tie breaking can be done based on the numbers of DMUs refereeing that particular DMU for improvement. Based on this DMU34 which is referred by maximum number DMUs i.e. DMU44 can be rated as best. The mean efficiency score is 0.266 which is 26.6 percent which means that, based on the DEA analysis, there seems to be a lot of capital resources wasted on advertising by the top advertisers during the 2003. The least efficiency score is .019 which is for DMU41. DMU41shall make DMU47 and DMU39 as its benchmark and shall attach a weightage of 0.016 & 0.657 respectively to these two units for improvement.

The efficiency score distribution for the year 2003 is shown in Figure – I below. There are only four DMUs which is operating efficiently. DMU43 is coming close behind with 96.8 percent efficiency. The other companies which are crossing 50 percent efficiency are DMU4 and DMU36. Rest of the companies are operating at less than 50 percent of technical efficiency.

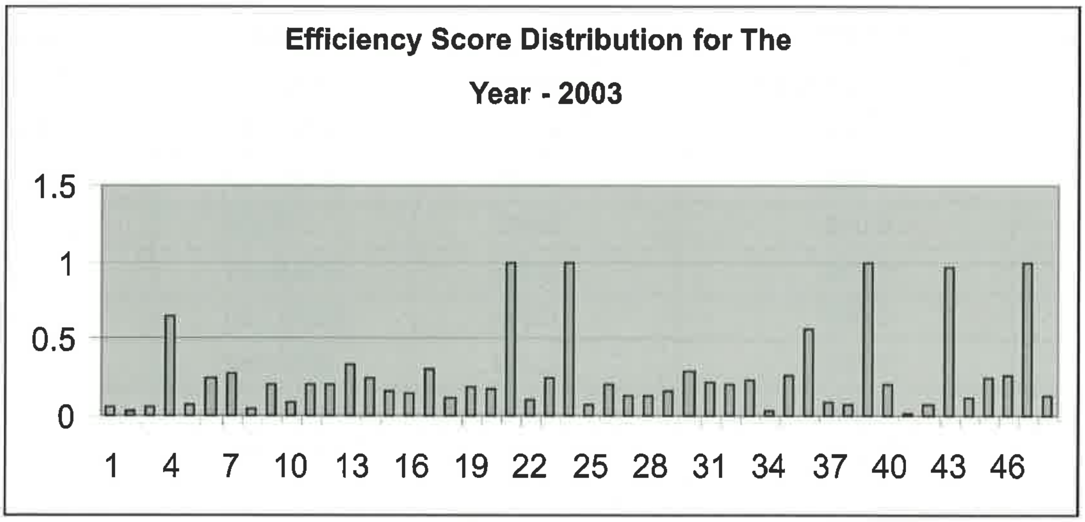


Figure I : Efficiency Score Distribution- Year 2003

An average degree of correlation is observed between the new ranks for the year 2003 and 2004. The correlation value is found to be $r = 0.45$ and is significant ($p < 0.005$).

H_{01}: *DEARANK-2004 = DEARANK-2003*
H_{11}: *DEARANK-2004≠DEARANK-2003* E_2

To know whether there is any significant difference between the ranks assigned based on the efficiency scores of the DMUs over two years, both paired sample t-test and sign test is conducted. The result is as shown below

	t - Value	Sig.(two tailed)	Sign statistic	Sig.(two tailed)
Comparison between Rank of 2003 and 2004	-1.37	0.1782	18	0.1839

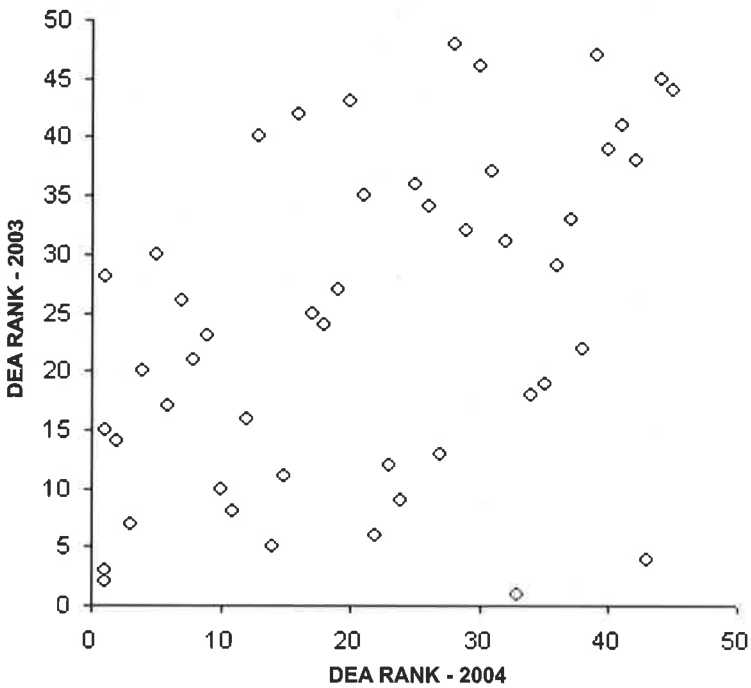


Figure II : Average Degree of Correlation Year 2008-2009

Next the slack analysis for the year 2004 is done and is shown in Table – VI. The output slack for all the companies is zero indicating that all the DMUs shall concentrate on reducing the advertising expenditure rather than increasing the sales. The slack entries in the Table implies that advertising spending in various media is in excess compared to the efficient advertisers. The slack values suggest that the management could have reduced a lot of the advertising expenditures to obtain the same output—sales thus improving the advertising efficiency.

Table VI : Slack Analysis for The Year 2004

Firm/ Input	1 (PRT)	2(BCT)	3 (ODR)	4(INT)
1	0.00010067	118.538	27566.107	40167.107
2	0.000	0.000	1799.281	8923.281
3	0.000	0.000	34498.893	149850.893
4	0.000	0.000	0.000	11412.000
5	0.000	0.000	17954.076	41635.076
6	0.000	0.000	13015.710	19782.710
7	0.000	0.000	8536.987	23051.987
8	0.000	0.000	26622.190	42769.190
9	0.000	33202.594	27681.417	31928.417
10	191198.209	0.000	0.000	8903.000
11	0.000	0.000	1794.437	12593.437
12	170064.729	0.000	0.000	24477.000
13	0.000	0.000	12236.247	46382.247
14	0.000	0.000	15171.618	68399.618
15	28593.213	0.000	0.000	44265.000
16	0.000	0.000	31068.649	31068.649
17	0.000	117875.757	3139.360	35139.360
18	0.000	330270.392	41362.415	41362.415
19	84099.848	0.000	0.000	0.000
20	0.000	0.000	28.614	28.614
21	0.000	0.000	0.000	0.000
22	0.000	831833.195	0.000	0.000
23	0.000	0.000	1695.564	1695.564
24	0.000	0.000	0.000	0.000
25	0.000	0.000	18189.138	18189.138
26	0.000	0.000	1881.246	1881.246
27	0.000	0.000	2482.746	2482.746
28	122782.421	0.000	0.000	0.000
29	0.000	0.000	262.210	262.210
30	0.000	0.000	150.199	150.199
31	0.000	0.000	25089.646	25089.646
32	182667.860	0.000	0.000	0.000
33	43090.520	0.000	0.000	0.000
34	0.000	0.000	370.787	370.787
35	0.000	0.000	1577.233	1587.23
36	0.000	0.000	490.166	490.166

Firm/ Input	1 (PRT)	2(BCT)	3 (ODR)	4(INT)
37	0.000	0.000	11768.830	11768.830
38	15812.147	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000
40	0.000	0.000	249.754	249.754
41	0.000	0.000	6741.911	6741.911
42	0.000	0.000	58752.963	58752.963
43	0.000	0.000	9026.357	9026.357
44	0.000	0.000	2033.926	2033.926
45	0.000	589880.693	5657.634	5657.634
46	97598.074	0.000	0.000	0.000
47	0.000	0.000	0.000	0.000
48	0.000	0.000	353.984	353.984
Mean	19498.063	249378.774	8526.048	17269.256

It is clear from the above table that all the efficient DMUs have input slacks zero i.e. the four efficient advertisers have not wasted their advertising budget and hence all their slack is zero for each of the four parameters.

DMU18 would have to reduce $1,000 in print, $2,190,000 in broadcast, and $26,419,000 in outdoor spending and still obtain the same net sales and operating income in order to be called an efficient advertiser when compared to the 63 advertisers in the sample.

Regression Analysis

To have a deeper understanding of the relationship between the sales of the company and the various heads of advertising expenditure, regression analysis has been conducted. The results are summarized in Table- VII and VIII. In the regression equation there are two variables, namely, independent variable and dependent variables.

Independent Variables: The various medium of advertising is taken as the independent variables for the regression equation. The medium are 'Print' (X_1), 'Broad Cast' (X_2), 'Outdoor' (X_3), 'Internet' (X_4).

Dependent Variable (Y): The overall sale is taken as dependent variable.

The mathematical representation of the regression equation can be written as follows :

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 \quad \text{................}(1)$$

Where,

b_0 = Constant, Value of dependent variable when value of independent variables are zero

= Also called intercepts, because it determines where the regression line meets the Y-axis.

b_1...... b_4 = Coefficients, that represents the estimated change in mean value of dependent variable for each unit change in the independent variable values.

Table VII :Relationship Between Overall Sales and Various medium of Expenditure- 2004

Independent Variables	Coefficients	Std. Error Coefficient	P
Constant	22636.6716	15328.3795	0.1470
X_1	0.0169	0.0479	0.7258
X_2	0.0395	0.0233	0.0968
X_3	-0.0867	0.5306	0.8710
X_4	0.2691	0.2268	0.2420

Note: R-Sq = 0.16% R-Sq (adj) = 0.08%

Table VIII :Relationship Between Overall Sales and Various Medium of Expenditure- 2003

Independent Variables	Coefficients	Std. Error Coefficient	P
Constant	27144.5020	13459.2338	0.0500
X_1	-0.0275	0.0441	0.5359
X_2	0.0501	0.0214	0.0239
X_3	-0.2556	0.5681	0.6551
X_4	0.4191	0.2926	0.1594

Note: R-Sq = 0.16% R-Sq (adj) = 0.09%

Now, considering the values from the Table VII ,the regression equation for the year 2004 will be in the following form

$$Y = 22636.6716 + 0.0169X_1 + 0.0395X_2 - 0.0867X_3 + 0.2691X_4 \qquad \ldots\ldots\ldots\ldots(2)$$

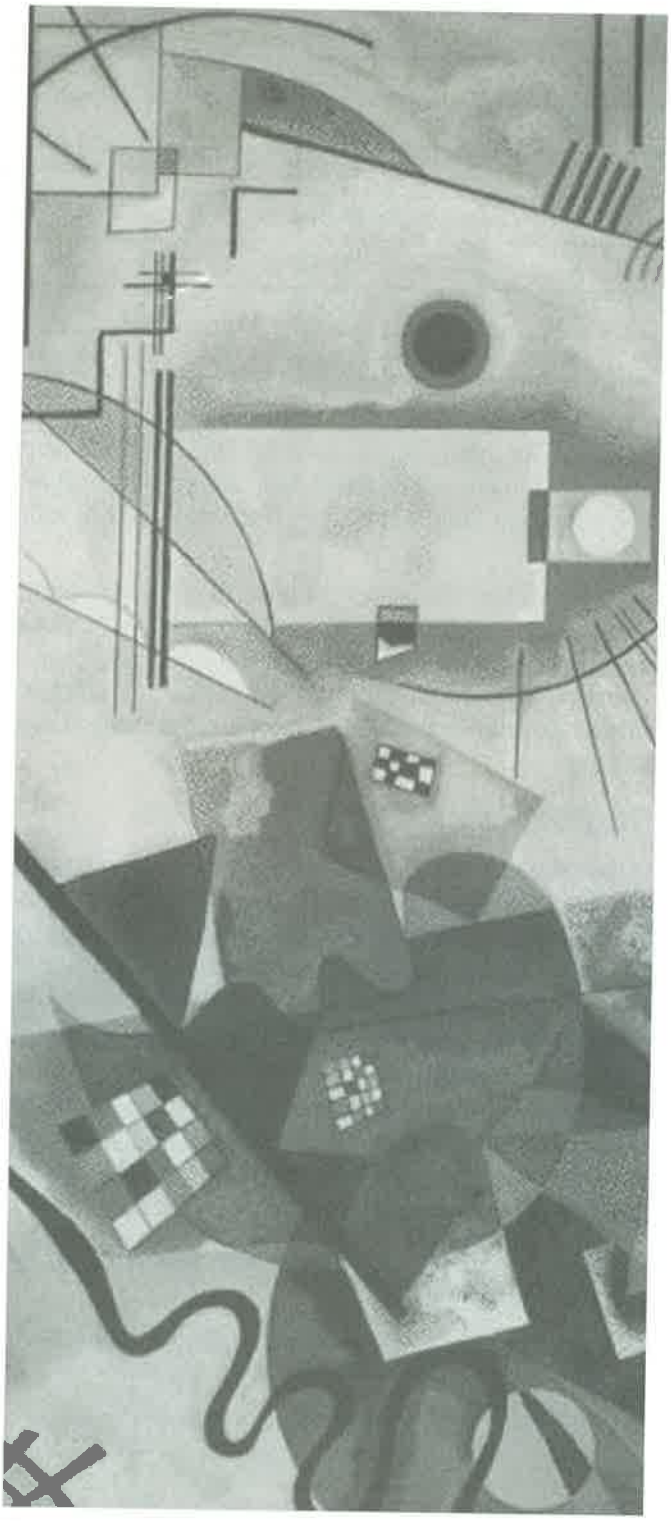
Similarly the regression equation for the year 2003 will be in the following form

$$Y = 27144.5020 - 0.0275X_1 + 0.0501X_2 - 0.2556X_3 + 0.4191X_4 \qquad \ldots\ldots\ldots\ldots(3)$$

It is observed from both the above Table VII and VIII that only the variable X_2 is statistically significant at 95% confidence level ($p<0.05$). This is an indication that broadcast is the medium which contributes most to the output i.e. sales.

Conclusion

A company goes for the advertising is to improve on its sales and profits. The recent study shows that large number of companies tends to over advertise, the reason may be numerous – inability to identify the media which may be effective, tendency to remain on the safe side by port foiling with various media etc. Many marketers base their media plans on minor adjustments from last year's plan, which in turn are based on minor adjustment from the previous year. Such approach lacks analytic rigor to justify media budgets. The only defense to such an approach is that "it's worked for us in the past," but such appeal to tradition would not succeed in many areas of business decision-making. Instead, a careful analytic study of marketing success drivers and media allocation decisions should be the guiding light for budget allocations. Many of the marketing scholars have pointed towards the inefficiency in advertising expenditures. This paper uses Data Envelopment Analysis a non parametric method to calculate the efficiency of advertising expenditure relative to each other and setting the benchmark for each company. The study analyzes the advertising expenditures of 48 leading advertisers in four mediums 'Print', 'Broad Cast', 'Outdoor', and 'Internet' for two consecutive years 2003 and 2004, and determines the capability of each of the advertisers to generate sales, relative to their expenditures. The data is subjected to basic statistical analysis to know the characteristics of the data. This study has several limitations. DEA is sensitive to missing observation and in our analysis not all the companies in the industry are included. It is recommendable therefore to replicate the models for all companies. Moreover, the results of our study could be country-specific and therefore, it is desirable to do comparative studies across countries. Another possible extension is the estimation of cost efficiency. In this paper we outline one way for benchmarking company's operations to those of other companies (successful or "best performers") in the industry. This could be a useful tool for managers and an appropriate methodology for researchers in the field of marketing.



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APPENDIX

DMU No.	Media Spending for Two Years									
	2004					2003				
	Print	B' Cast	Outdoor	Internet	Sales	PrintB'	Cast	Outdoor	Internet	Sales
1	564112	1681748	48307	66093	193517	533649	1506192	32384	44985	185837
2	790370	2199422	3650	12185	51407	799947	1995273	5306	12430	43377
3	742130	979890	70858	145304	42089	713722	929467	37052	152404	39565
4	287893	1469673	846	23851	52516	268080	749353	90	11502	44736
5	864647	885485	20535	56326	40787	972473	796776	21115	44796	40498
6	884963	1194817	23805	40302	192319	348329	987535	14623	21390	155719
7	574609	968727	17771	61193	171600	489417	902328	10467	24982	164300
8	440433	856649	39659	53264	30752	466818	864972	28466	44613	27061
9	684430	665746	41391	124576	71283	589914	585272	28214	32461	67468
10	382259	979886	1026	29375	47348	360243	904762	797	9700	41862
11	216379	353720	1995	11525	79905	219176	555200	2761	13560	73061
12	315956	626631	2028	13817	55800	343040	518244	817	25294	64377
13	336977	698536	18132	43863	160959	338617	616053	13566	47712	132791
14	328043	548255	24039	28454	152363	304302	885248	16591	69819	134187
15	317485	905321	12104	39484	69767	302213	641888	1172	45437	64021
16	332103	726206	28977	6038	79818	276412	654928	32257	5020	63641
17	495471	562710	1830	48106	89610	448364	570492	3576	25594	81320
18	106510	539836	38444	5273	19065	25762	571365	41595	1035	17140
19	370595	392249	372	2017	17522	323895	349466	125	1112	16589
20	202348	377040	5696	17599	50417	171624	442913	791	5218	48997
21	105237	458299	1652	15052	28247	94398	295061	32	3370	24864
22	139815	703841	8398	9349	29261	119742	1484720	4290	24136	26971
23	147140	374886	1396	4241	73094	153442	404589	2383	2842	64813
24	267875	205037	12	8283	22939	169086	187773	25	3071	22486
25	292512	383000	27060	21789	22526	304208	407482	19285	17248	20828
26	164734	603515	1990	12947	77232	147420	550243	2651	7136	68286
27	470750	369012	4685	12923	27428	110660	299890	2984	7544	26197
28	191457	194881	284	46657	18424	167101	235754	279	35857	17786
29	142989	27225	560	372	5790	134382	24375	641	180	5096
30	144945	330597	4435	17998	70114	152378	353206	800	16373	65301
31	58193	142538	28451	51903	19785	121927	110307	25493	12140	18015
32	176029	150746	3004	153674	36835	259223	263967	385	62977	32187
33	185639	170697	628	32735	24616	190138	126447	482	27749	22225
34	116703	502865	203	11865	11070	98315	567753	1020	1348	10506
35	220576	270400	6179	29075	46839	219552	233292	2327	19542	42025
36	239059	169409	2163	137453	79905	316112	150141	1444	69625	73061
37	230226	395246	20329	35337	21761	217590	343682	12588	26399	19250
38	58359	329163	35	6714	8272	107935	253121	176	4404	8334
39	73618	474861	829	49495	285222	45524	426038	411	17595	256329
40	126488	432921	3247	3282	37437	74336	276128	637	989	35275
41	38519	315089	7349	737	3635	33546	280287	7022	1465	3149
42	45326	398799	58811	3785	14934	49521	361395	59131	3497	14147
43	236450	308236	11203	54479	86190	121700	108683	9428	52910	77442
44	470494	198092	588	3670	14441	517956	86685	3489	4168	13343
45	7313	643134	5704	1521	9011	5911	645199	5711	717	8380
46	101110	181298	855	8168	19380	111946	120182	120	3911	18653
47	271145	1232870	1528	119507	49205	231289	183853	636	79729	41444
48	508054	93546	2285	13718	15630	534235	83809	1851	15528	15264

Motivators at Work: An Equity Sensitivity Perspective

Sumita Rai*

Abstract

This paper examines what motivates people at work in terms of preferences including financial and non-financial. Regression analysis was carried out on factors analytically derived dimensions of equity sensitivity dimensions of equity theory of motivation and job satisfaction among 236 employees of Public Sector Unit (PSU) of India. It was found that employees tend towards the Benevolent preferences on equity sensitivity dimensions; job satisfaction and climate of the organization were significantly correlated with the Benevolent dimensions of equity sensitivity. The results thus derived are discussed toward the effectiveness of organization and human resources keeping the motivation of employee higher by providing the fair amount of reward.

Key Words : Equity Sensitivity, Job Satisfaction, Benevolents, Entitleds

Motivation: An Unending Quest

The basic quest of motivation studies emerges with the idea that why do people behave as they do? There is no clear-cut answer to this question. Motivation has been defined in various ways. There is one stream that views motivation incorrectly in the forms of trait that some people have it and others don't. Following the same ideology these managers give label to others that he or she is lazy or with no or low desire to work etc. but this is not true and not the right way to make judgment as the same individual may give different results if you change the nature and context of job. Hence, motivation is subjective context oriented and there could be several other factors, which are responsible. In a formal manner motivation can be defined as the process that accounts for an individual's intensity, direction and persistent effort towards attaining a goal.

The construct of motivation has drawn the attention of organizational theorists and practitioner in a major way, resulting in a considerably large body of theoretical treatments and empirical studies. The range and scope of the studies encompass the needs and motives both of biological as well as social origin. The concept of motivation is invariably linked with a notion of

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reinforcement or reward. It has been noted in the literature that the rewards can come from sources external to the organisation as well as from within. The value and impact of variables like autonomy, satisfaction, a feeling of being in control, and making meaningful contributions, can all come from within, and may serve as powerful reinforcement or rewards for the individual making him or her to sustain the motivated level of work performance.

What Motivates People?

Why do people work and how they can give more productive results to organization? The question in itself is quite difficult, management expert have tried to answer this question for several years. It's difficult to find out why workers work a number of studies has been conducted to find out the real truth. Major findings of the studies shows that "interesting work" is one of the most important criteria for hard work, but the question remain here is it possible to make all of the work in organization interesting? Then we can definitely get more productive employees who are very sincere to their job demands and don't quit organization quickly. Unfortunately, not all jobs can be made interesting because what is interesting to one person may not be interesting to someone else (Kovach, 1987).

Kovach conducted a number of studies to find out what motivates people and he found that younger workers with low incomes in non-supervisory positions were most concerned with money while older workers with higher incomes and higher organisational positions were motivated more by the work and its quality (interesting work, job security and being appreciated for their efforts) (Rai 2004.)

A list of the factors that was important is presented below.

Exhibit I : The Most Important Motivational Factors

Year	Most Important Motivational Factor
1946	Appreciation
1980	Interesting work
1986	Interesting work
1992	Good wages
1997	Good wages, full appreciation of work done

Sources: Kovach, K A, 1987, 'What Motivates Employees? Workers and Supervisors Give Different Answers', *Busniess Horizons,* Sept-Oct, 58-65; Wiley, C, 1997, 'What Motivates Employees According to Over 40 years of Motivation Surveys', *International Journal of Manpower,* Vol 18, No 3, 263-280.

Taking the similar kind of pattern the author has tried to find out what exactly motivates people in Indian scenario. The responses are mentioned according to the pattern are given in Exhibit Two.

Several cross-cultural studies also reported that interesting and challenging work inspire people to perform more than what is required from them to perform. They exert additional effort in order to experience sense of fulfilling their potential and accomplishing worthwhile ends (Herzberg et al, 1959; Hackman & Oldham, 1975). There is a set of qualities which is attached to the intrinsically motivated employees; for example they will be concerned with expressive aspects of work (i.e., interesting work, autonomy, advancement) financial reward may not be very important because these rewards are not related intrinsically with the motivating jobs. Also if employees are concerned with the expressive aspects of work their tendency to remain in the job would be high but for any reason if the needs are not gratified over a period of time then employees may cultivate negative attitudes that lead to inexpedient behaviours.

Social Equity Theory of Motivation : Context of Fair Reward

Equity theory (Adam, 1963, 1965) is used to explain human behavior in both the organizational and interpersonal settings. The basic idea of equity theory emerged from social comparison process (e.g., Festinger, 1954). According to the theory, an Individual compares his/her input and outcome ratio with comparable others. On the basis of this comparison, the theory suggests that people have a perception of being under-paid or over-paid. In other words, equity theory offers the prediction about how an individual will react to perceived over-rewarded and under-rewarded situations.

In the context of how workers respond to under-reward situations, there are number of research works that provides insight that the base of equity theory is very strong (Greenberg, 1982, 1987, 1990; Mowday, 1991). People choose different alternatives and react to situations where they feel they are under-rewarded, such as reducing their work inputs or attempting to increase their outcomes. Conversely, people may use cognitive response to reduce feeling of inequity such as selecting other person to use their referent or mentally justifying the state of under-reward and trying to feel satisfied with whatever the outcome (rewards) they receive in an organizational setting (Allen, R.S.; Takeda, M. & White C.S. (2005).

In an article O'Neill and Mone (1998) have elaborated upon the emergence and importance of equity theory and its theoretical basis. At one time equity theory was hailed as being among the foremost middle-range motivation theories but later some researchers noted the inability of the theory to differentiate who would react in the manner prescribed by its notions (Major & Deaux, 1982; Miner, 1980; Mowaday, 1991). After a few years, some researchers again took interest and started working in this area, and equity theory has resurfaced as a theoretical basis underlying the research in organizational justice and rewards (Greenberg, 1990, Folger, 1987) and individual differences in justice behavior (Brockner, 1985, O'Neill and Mone, 1998). One of the important reasons for revitalized interest in the study of equity theory is development of the equity sensitivity construct, which has increased the predictive utility of the theory (King & Miles, 1994; King, Miles & Day, 1993). Huseman, Hatfield and Miles (1987) have contributed to the development of the equity sensitivity construct. The construct holds that "Equity Sensitivity is an individual difference that characterizes how individuals react to situations perceived to be equitable or inequitable" (O'Neill and Mone, 1998).

Concept of Equity Sensitivity

Equity sensitivity the new concept of equity theory proposes that individuals can be categorized into three different groups: equity Sensitives, Benevolents and Entitleds. Concept of equity sensitivity has given a wide dimension to understand the work motivation philosophy and employee attitude towards rewards, the concept of equity sensitivity has been supported by large number of research in subsequent years (Huseman & Hatfield, 1990; Goodwin, 1990; Harder 1991, 1992; Moorman, 1991; George, 1994; Van Wijck, 1994; Glass and Wood, 1996; Chan et al 1997; Mui 1995; O'Neil and Mone, 1998; Ambrose & Kulik, 1999; Bing 2001; Colquitt, 2004; Patti et al., 2004; Shore, 2004; Usman et al., 2004; Kickul et al., 2005; allen et al., 2005). Equity sensitive employees prefer to be in a state where they feel the kind of reward they are getting from the organization and the kind of effort they will be putting for their work is similar to any other employee of the organization, who is really comparable to the concerned employee.

Individual Differences in Equity Sensitivity

Equity sensitivity is an important construct to point out the individual differences (Miles, Hatfiled & Huseman, 1989). It is also helpful to predict which type of norm a particular individual will follow in allocating reward.

Individuals differ in their preferences and perception for getting reward. Equity sensitivity is an important construct that is based on the assumptions that individuals are equally sensitive to equity; that is, the general preference is that outcome/input ratio to be equal to that of the comparison (Huseman, Hatfield & Miles, 1987).

Now the question arises how individuals perceive and distribute outcomes among receivers. There are different norms. There are certain rules which individual might employ when allocating the outcomes to others. The rule might be (a) the contribution (equity) rule, where others are perceived to be rewarded in proportions to their input (b) the need rule, where others are rewarded based upon their legitimate needs, and (c) the equality rule, where other person receive equal outcome irrespective what he is contributing and irrespective of his contribution (Leventhal, 1976).

Huseman and his colleagues (1985, 1987) argue that there are three types of individuals who have varying degrees of sensitivity to equity: (a) Benevolents, (b) Equity Sensitives, and (c) Entitleds. Miles et al. (1994) have asserted that the concern for the relationship between the employer and employee and the desire for outcomes differentiates one type of individual from another.

At one end of the spectrum are the ***benevolents*** who place their emphasis on the relationship with their employer. Benevolent individuals find satisfaction when they give their talents and expertise to the organization.

At the opposite end of the spectrum are the ***entitleds*** who believe that their personal outcomes are of primary importance when dealing with their organizations. Entitleds are constantly looking for ways to improve their situation and maximize the rewards given by the organization.

In the middle of both ***benevolents*** and ***entitleds*** are the ***equity sensitives*** who place the same emphasis on having a good employment relationship and achieving desired outcomes.

Major findings in the Area of Equity Sensitivity Research

Research investigating the equity sensitivity construct has shown that individuals can differ in their responses to inequity situations (King & Miles, 1994; King et al., 1993; Miles et al., 1989, 1994). Researchers have addressed several issues related to equity sensitivity. The main focus has been upon finding out the relationship of equity sensitivity with various constructs. Exploration has been centered on issues concerning how individuals differ in preferring the Input/output ratio in terms of the three specific different categories (Huseman, Hatfield & Miles, 1987). It has been pointed out that Benevolents work harder for lesser pay, they actually prefer lower outcome/input ratio than their equity sensitive and entitled counterparts (Miles, Hatfiled and Huseman, 1989). Individuals seek rewards in consonance with their perceived contribution according to equity norm, but effectiveness of performance-based systems is also a function of equity sensitivity of the individual. Therefore, some individuals may not like the pay for performance system (Parnell & Sullivan, 1992).

In a validation study by King and Miles (1994), the equity sensitivity construct was found positively related to organizational commitment, job satisfaction, and negatively associated with intentions to leave the organization (i.e., higher scores represented more benevolence while lower scores represented more entitlement). In a similar study, King et al. (1993) found that benevolents had higher levels of satisfaction than entitled ones and equity sensitive individuals in situations where they were under rewarded. King et al. argued that benevolent individuals have a greater tolerance for situations in which they are under-rewarded. "This tolerance for under-reward can spring from the same sources suggested to be the root of benevolence: Calvinistic heritage, altruism, empathy, or disguised self-interest" (p. 303). Finally, Miles et al. (1994) found that entitleds prefer extrinsic tangible outcomes (e.g., pay, benefits, and job security). Additionally, they found that benevolents placed higher importance on intrinsic outcomes related to the nature of the job and work (e.g., doing meaningful and challenging work, a sense of accomplishment, a feeling of achievement, and personal worth). However, Miles et al. did not find support that any of the equity sensitivity groups differed regarding the importance placed on intrinsic tangible outcomes (e.g., appreciation of others, a feeling of belonging, and recognition for good work). Apart from the interest in equity sensitivity and outcome performance McLoughlin & Carr (1997) have proposed a concept called 'double demotivation', according to which inequity would create discrepancies of two kinds, it will discourage lower paid person from working hard and encourage higher paid persons to overrate their own capacities, thereby it would be demotivating for both groups. Kickul and Scott (2001) extended the idea of testing relationship of equity sensitivity with outcome variables by using equity sensitivity as a moderator between psychological contract breach and employee attitude behavior.

Taking into consideration most of the researches that have been conducted related to Equity sensitivity construct, from the organizational domain especially in terms of outcome the number of researches are less in number. It appears that in the beginning, the emphasis was laid on how to define the concept. After that various types of relationship equity and individuals' reaction to a particular situation were explored. Recent empirical work examining the equity sensitivity construct has found that it increases the explanatory power of the equity theory (O'Neill and Mone, 1998).

This study has been designed and conducted to understand the equity sensitivity and motivational preferences of people In Indian context. This work is an effort to understand the choice and preference of employees in terms of what motivates them most and also to have an idea of equity sensitivity in Indian employees and the association of Equity sensitivity with the Job satisfaction and climate of their organization. Apart from equity sensitivity other main variables in the study are as follows.

Job Satisfaction

Job satisfaction has been considered as a function of perceived relationship between what one expects and obtains from one's job and how much importance he or she attributes to it (Kemelgor. 1982, Mobley and Locke, 1970). According to Greenberg and Baron (1990), job satisfaction may be defined as individual's cognitive, affective and evaluative reactions towards their jobs. Some other researchers have suggested that the level of satisfaction depends upon the correspondence between an individual's personal expectations, aspirations, and needs and the extent to which the organization fulfills these needs and matches these expectations and aspirations (Klien and Maher, 1968;).

In earlier studies, job satisfaction has been viewed as a uni-dimensional concept. However, it is now widely accepted that job satisfaction is multi-dimensional and its multiple dimensions should be related to specified independent variables. Scarpello and Campbell (1983) investigated the usefulness of single – item global measure of job satisfaction and suggested that global rating of overall job satisfaction may be more inclusive measure of overall job satisfaction than summation of many facet responses as the measure of overall job satisfaction.

What are the determinants of satisfaction and the underlying process, which makes people to fully satisfy with their job? To respond to these questions two influential approaches have been proposed. ?(a) Herzberg's two-factor theory, and (b) Locke's value theory. Herzberg developed his theory with the notion that there are two dimensions of job satisfaction "hygiene" (or maintenance) and motivators. Motivators are main source of satisfaction.

Locke's value theory claims that job satisfaction exists to the extent that the job out-comes (such as rewards) an individual receives, matches those outcomes that are desired. The more people receive outcomes they value, the more satisfied they will be; the less they receive the less satisfied they will be. Hence, satisfied workforce may not make a one-to-one contribution to the productivity as such, yet the importance of job satisfaction may not be undermined. A satisfied workforce is desirable in its own right as dissatisfaction and frustrations may get reflected in ways that would affect the organizational effectiveness in various ways. In any case, job satisfaction may be a major contributor to employee *retainability* – a major concern in modern times for the management due to increase in the options for the contemporary work force.

Facilitating Climate

Climate denotes the characteristic behavioral process in a social system at one particular point in time. These processes reflect the members' values, attitudes, and beliefs, which thus have become part of the construct (Payne & Pugh, 1976). Campbell et al., 1970 also offered a definition, and usefully described four major dimensions of organizational climate. They were (a) individual autonomy; (b) degree of structure imposed on the position (c) reward orientation, and (d) consideration, warmth, and support. (Payne & Pugh, 1976). Theorists have defined organizational climate as summary perceptions of organization members (Schneider, 1975; Woodman & King, 1978). In early research, the "organizational" climate was the only concept of climate that was studied. Later on, the other two aspects (a) psychological, and (b) sub-system, have also been included. Glick (1985) argued that multiple units of theory and analysis in climate research are appropriate and at least individual, organizational, and subsystem units of theory and analysis should be recognized. Above mentioned views state that climate is a multi-terminal concept. Concepts such as equity (1965), open mindedness (Payne & Mansfield, 1973) that were originally considered to be independent of the climate consideration, have been recognized as climate dimensions.

The multi-dimensional nature of climate may be treated as a positive rather than negative characteristic of the modern climate concept, because it allows the concept to encompass numerous organizational as well as psychological dimensions.

It appears that the conceptualization of the climate and its appropriate measurement strategies is still going through the process of refinement. Without going into such intricacies of the appropriateness of definition, approaches, and measurement methods, the present wok was more concerned with was the simple fact that some organizational climate lead to favorable outcomes for organizational members, and on the other hand some climates may lead to unfavorable outcomes.

Domain of the Present Study

The present study was conducted to understand (a) motivation (to remain in the organization and to contribute to its well-being), (b) the role of organizational rewards and employee preferences of motivating factors (factors that motivate people to work and that make them to stay in an organization), job satisfaction (c) the perception of equity/inequity, and relationship with equity sensitivity and job satisfaction.

Therefore, the purpose of this research study was in three folds.

- What motivates people in a more general term? If they have to select equally important motivating factor what would be the trend?
- Taking equity sensitivity into account what would be the trend in Indian organizations, considering the two important aspects Benevolent and entitled dimensions of equity sensitivity.
- To find out impact of equity sensitivity on job satisfaction, and also to have an idea about the role of climate on job satisfaction.

Research Design

The study was designed and conducted in an exploratory survey research format followed by regression analysis with a view to gain on the following counts:

Quasi-experimental and action research are excluded as they may not be available as viable methods of explorations to the present researcher on account of constraints of time, status, and resources,

Opportunity to explore a relatively unexplored territory in real life setting similar to the one in which the research findings may finally find application,

Methodology

Instruments/ Measures. Most of the measures used in this study were either reliable or valid instruments or they have been used in the modified version of the original source. The broad description of measures follows.

Measure 1 : Equity. *Equity Sensitivity* measure was based on the available instrument for measuring equity sensitivity (Huseman, Hatfiled & Miles).

Measure 2 : Job Satisfaction. This measure was based on the work of Cammann, Fichman, Jenkins and Klesh (1979); and Seashore, Lawler, Mirvis, and Cammann (1982). It consists of three items.

Measure 3 : Organizational climate and social facilitation questionnaire.

Measure 4 : Motivating factor. What motivates people? This method follows several items that researcher has taken from the various authors' work. However, predominantly ideas were adapted from the work of Kovach (1987).

Sample

Two hundred and thirty six Senior and Middle level Indian executives from public sector unit (organization) with difference in designation were selected as respondents: The mean age of the participants was 37 years. The location of this study was three locations of India, but participants were from various demography as far as their native place is concerned since they worked for a particular unit.

Procedure

Owing mainly to the constraints of time and other resources purposive sampling was used. Data were collected mainly during office hours from three major cities following two states of India. An attempt was made to have them fill the questionnaire in the physical presence of researcher but on certain occasions the instruments were returned later.

In the present study the selection of variables is based on the best motivating factor.

Initially, the selection of variables were made on the basis of (a) literature review, and (b) a pre-pilot survey in the field setting supported by (c) the first hand information obtained from a overall number of prospective respondents from the local organizations. The final questionnaire was prepared keeping in view the insights and experiences gained during the pilot run. The researcher has made the items scrutinized mainly with a view to keep the questionnaire clear to understand for the respondents, and to maintain a fair degree of content validity. Initially, it was planned to keep an equal number of respondents from each organization in the sample. This however, was not possible due to constraints like overall number of executives available with one organization.

Social desirability may bias the responses if the subject responds to conform to a socially acceptable or a socially desirable characteristic. The investigator has taken reasonable amount of pains to assure the respondents that their true responses would be of utmost value and that there was no typically right or wrong answers possible to any of the questions.

Presuming that the social atmosphere during data collection would not be vitiated with any pressures toward conformity, the investigator is reasonably convinced that the obtained data would be by and large free from the contamination arising out of (a) researcher's own biases, (b) social desirability factor, and (c) non-cooperation of the respondents.

Results and Conclusion

In the present work researcher has taken mainly open-ended survey followed by the percentile ratio and regression analysis method. All the instruments (that may be amenable) were subjected to Factor Analysis. Factor analysis helps in data reduction and identification of meaningful underlying dimensions of the constructs under investigation. Only those dimensions or subscales were retained that show Cronbach's alpha reliability coefficient (for internal consistency of items) equal to or more than 0.70 (as per Nunnally's (1978) recommendations). Regression analysis helped the researcher in ascertaining the strength of association of the predictor variables with the criterion variables. To get the most preferred motivating factor researcher has taken the help of getting average and highest preferred factor with the help of mode.

The result mentioned in Exhibit **Two** describes that out of 236 executives 22% feel recognition is the factor that motivates them most. Though they do not get recognition most of the time, but given a chance to perceive and think the best motivating factor from the job would be Recognition, that is also correlated with contribution, feeling of giving boost the morale. (The question was directly asked “according to you what motivates people at work, give ranking highest to lowest”. This was the open-ended question.)

Exhibit Two also shows the factors that are very less motivating for individual, for example, security and friendship at work place has taken the least preference in the list of motivating factor, which itself describes the objective of professional thinking at work place. It also shows the sincerity and believing in the fair and just processes at work place. These results do not confirm the notion that public sector unit in Indian scenario still inculcate and nurture personal relationship at work. Rather it shows that climate of public sector unit is also changing keeping in line with the multinational organization that are flourishing in India.

To find out the equity sensitivity among employee ESI instrument were implemented.

Exhibit three describes that the maximum number of people turned out to be in the benevolent category, entitleds were supported by the equity sensitive. To proceed further an analysis has been done to calculate the regression to have an idea that how benevolent and entitled feel for their job *per se*. what kind of satisfaction they have from their work and how the climate of their organization is making them to feel satisfied.

Results mentioned in **Table one** describe that in the final categorization of ***benevolent, and entitled, benevolent*** feel a greater level of job satisfaction in the dimension of contribution to organization and overall job satisfaction the β score 0.26 and adjusted R^2 was 0.23 that was also significant and it proved the point. Whereas entitled do not feel satisfaction from the job and overall satisfaction is also negative, the score of entitled on the dimension of taking benefit from the organization was high and it was a matter of job satisfaction for the entitled. The β score was -0.47 and adjusted R^2 was 0.22, hence entitled behavior got an association but in negative manner. Further, the analysis points out that social facilitation and climate also play an important role to the job satisfaction. Each level the strength of association is positive. The climate dimension, of opportunity to grow was significantly associated with overall job satisfaction, the significant β and adjusted R^2 0.42 and 0.20. While in the sense of contribution dimension with self-satisfaction it was 0.21 and adjusted R^2 was 0.42.

The pattern of results of **Table one** denotes that entitled benevolent reacts differently towards their job; it may e related to the different level of preferences towards motivation. The findings of this study confirm the notion of the previous researches in the area of equity sensitivity that proposes that Benevolents will have the highest level of job and pay satisfaction, significantly they will contribute towards higher level for the growth of the organization, whereas entitled would always look towards organization for gaining and taking maximum benefit to feel more satisfied. In terms of perceived motivating factor respondents selected recognition would the best motivator that can be directly correlated with sense of contribution. Findings of this study also highlight the issue that benevolent are more tolerant of under-reward than others, and are more satisfied than entitled and equity sensitives regardless of reward level; entitled would be highly dissatisfied with their job when they are under- rewarded. Moreover, there is remarkable learning in terms of finding that there were no significant aspects for the original theory of equity, which say that people are more satisfied when their outcome/input ratio is equal. In this study the researcher found that people were satisfied and happy when they were being over-rewarded or under rewarded and feeling of equity sensitivity emerged when they were in benevolent and entitled.

This study also adds a significant insight that employees in public sector unit see contribution as most significant motivator and contribution prevail at the higher level. This could be significant associated with the loyalty towards organization, there could be one argument and important logic that may propose that they do not have much opportunity to change the organization very frequently for their own reason, another could be the reward pattern in Public sector unit is very fixed and slow in nature than the private sector enterprises and MNCs, hence the attitude is more towards on the Benevolent side and over a period of time the expectation in terms of reward and outcome have become low.

Limitations of the Study and Suggestion for Future Research

There are not many research findings available on equity sensitivity concept consequently, on the criterion of "Who cares" (Whetten, 1989). Since there is no significant research in this area and particularly in Indian context, the chances of falsifiability may not be very high. Another important problem is related to the sample size, particularly for testing behavior in the equity sensitivity continuum may create some complications, and also it would be difficult to precisely describe the nature of task in the organizations of choice. Besides, the three aspects of continuum of equity sensitivity dimension may not be very clear in terms whether it is state or trait. In this kind of study structured interview schedules originating in some other culture are commonly used for research. Barrett (1972) states, "although there may be a number of substantive reasons why different researchers arrive at varying conclusions, perhaps the greatest difficulty in conducting survey research is assuring the accuracy of measurement of the constructs under examination". As mentioned above this study examines the equity sensitivity aspects among public sector unit employee, it is very much desired to study the employee motivators and there equity sensitivity dimension in the context of MNCs operating in India.

Till date, including the study like present one people use equity sensitivity as independent variable, there is a need to find study equity sensitivity as dependent variable and researchers should try to find out the variables at consequence level; the factors that are responsible independently. Though this study focuses on the motivating factor among employee but there is also an important need to find out that what kind of motivating factors and preferences are associated with entitled, benevolent and equity sensitive individuals, it is desirable to study the relationship between the two. Given the lack of empirical work in such areas, it may be treated as a worthwhile endeavor anyway in spite of its limitations, as there could be no denying the fact that equity is one of the most potent predictors of employee motivation to contribute to the organizational endeavors.

Exhibit II: The Most Important Motivational Factors (Indian Context)

Year (2006)	Most Important Motivational Factor
1st	Recognition (22%)
2nd	Good wages (21%)
3rd	Interesting work (18%)
4th	Promotion and advancement (15%)
5th	Flexibility from employer (10%)
6th	Doing meaningful work (8%)
7th	Job security (4%)
8th	Friendship on my job (1%)
9th	Poximity with my home town (1%)

(What motivates at work: sample size 236 based on the survey conducted at the year 2006 for present study)

Exhibit III: Maximum Turned out in the Benevolent Category - Entitleds Supported by the Equity Sensitive.

Equity Sensitive Sensitive Fair	Benevolent Equity Sensitive	Equity Entitled
54.25%	9.75%	36%
128 persons	23 persons	85 persons

Categorizations of equity sensitivity construct: sample size 236.

Table I :Summary of Regression Analysis Results with Equity Sensitivity Predicting Job Satisfaction

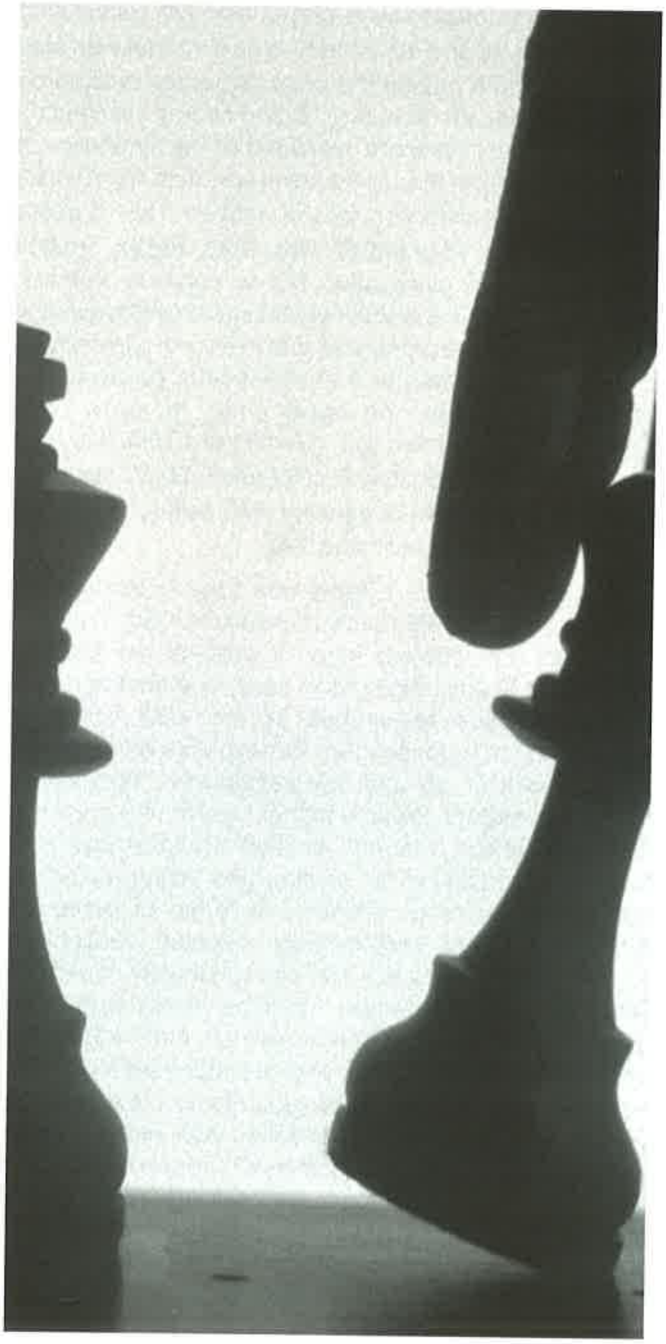
Equity Sensitivity Dimensions	β Weights and R^2	Job Satisfaction
Benevolent: Contribution to Organization	β = 0.26** Adj.R^2= .22	Overall Job satisfaction
Benevolent: Feeling of Giving to Organization	β= 0.45* AdjR^2= .28	Overall self satisfaction: context of Job
Entitled : Benefit from the organization	β= -.47** Adj.R^2= .22	Overall Job Satisfaction
Entitled: sense of receiving from the organization	β= -.23** Adj.R^2= .14	Overall self satisfaction: context of Job

Note: *p<0.05; **p<0.01

Table II: Summary of Regression Analysis Results with Facilitating Climate and Social Facilitation

Climate dimension		Job satisfaction
Opportunity to grow	β= .42** AdjR^2=.20	Overall Job satisfaction
Sense of contribution	β= .21 Adj.R^2= .42	Overall self satisfaction context of job
Acceptance of ideas at greater level	β= .38 * AdjR^2= .18	Overall Job satisfaction

Note: *p<0.05; **p<0.01



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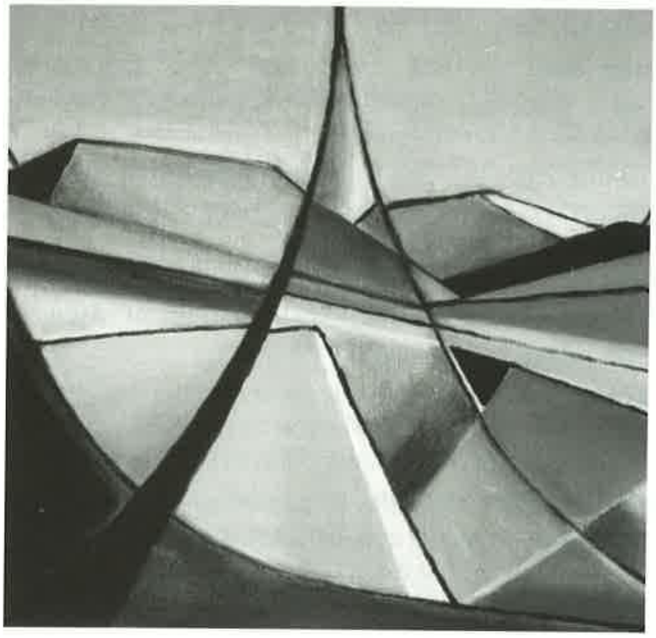

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A Conceptual Model to Study the Impact of Managerial Communication Styles on Employee Outcomes

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Abstract

In organizations today, the drive "people are our greatest asset" has led to a fundamental shift in the way managers communicate with employees. Recent research has emphasized the importance of 'behaviour' rather than 'content' as part of the communication process. This paper proposes a conceptual model to examine the impact of 'managerial communication styles' on employees' attitudes and behaviour. This model aims to identify the managers' communication style through the perceptions of subordinates and examines the influence of managerial communication styles on employees' attitudes and behaviour. The paper proposes that an effective communication style with perceived supervisory support provides communication satisfaction to employees, raises their organization-based self–esteem. This, in turn, increases performance, commitment, and decreases absenteeism, turnover intentions.

Key Words : Communication Styles, Performance, Commitment, Absenteeism, Turnover Intentions.

Introduction

Management is a process working with and through others to achieve organizational objectives in an efficient manner (Lwehabura et al., 2000). The manager's job has also been defined as planning, organising, controlling, co-ordinating, communicating and commanding. The impact of managerial communication styles on employees is becoming increasingly important to business successes. And in terms of communication functions in organizations, the human functions seem to be the most important. The human function of communication includes any communication affecting members' feelings of self-worth and quality of organizational relationship.

A historical overview of managerial communication

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styles shows that the way in which managers communicated with subordinates in the past is markedly different from how they do today. The traditional emphasis on communication content for the creation and transmission of effective messages has shifted to contemporary emphasis on behaviour as part of the communication process. Communication includes the total behavior of two or more people engaged in the process of interaction. The interpretation by the receiver depends not only on "what" is being said but also on "how" it is being said. The way in which one verbally, non-verbally and para-verbally interacts to signal how literal meaning should be taken, interpreted, filtered or understood, is known as one's communication style (Norton, 1983).

Communication Styles: Between the style extremes of passive and aggressive, is an effective, winning management approach – the assertive style (Arredondo, 2003). Assertive doesn't mean overbearing, pushy or autocratic; it is a behavior that enables a person to act in his own best interest and to stand up for himself without denying the rights of others. It is an aspect, which facilitates a good management atmosphere (Lwehabura et al., 2000) and is characterized by honesty, objectivity, openness, accuracy, respect for self and others, reasonable tolerance, and self-expression. The assertive 'sender' respects the needs of the intended audience, goes through the mental process of assessing what they need to know and how. The assertive 'receiver' has the skill and confidence to challenge ambiguity and misunderstanding. Successful managers carry on open dialogue with employees to perform effectively. This is because communication is valued when both parties, the sender and the receiver, are respected. Assertiveness engages both parties for this valued communication. It hinges on achieving mutual understanding and satisfaction with outcomes. Assertiveness has been historically promoted as an effective approach to conflict resolution. It also has a place in maintaining positive relationships (Sonnanburg, 1995). (Refer Table I)

Consequences of Assertive Style of Communication The assertive communication style enables a manager to:

a) Express his opinions and thoughts in a direct way – without attacking or alienating others,
b) Refuse an unreasonable request without feeling guilty,
c) Give employees "constructive feedback" instead of "constructive criticism",
d) Give recognition and praise to the employees at the right time and create a motivational climate,
e) Deliver firm messages by asking "questions" through a clever approach or ask effective questions to probe for facts and provoke for ideas,
f) Handle conflict with employees, peers and bosses the smooth, non-combative way, and
g) Apply emotional intelligence (EI) at work and create an atmosphere for proactivity.

Assertive Communication, Perceived Supervisory Support (PSS), Perceived Organizational Support (POS) and Communication Satisfaction (CS): Contemporary behavioral science provides a wealth of evidence that people learn from the structure of their environment and react the way the environment suggests they snould. It is imperative for management to create a nurturing work environment, a more humane, caring and fulfilling work environment, which helps to bring out the best in all employees by empowering them from within. Most management groups and managers seem to have little awareness of how to use energy in an organization to its fullest advantage. Successful managers use communication strategies to transform negative thoughts and feelings into positive ones. Honest and straightforward communication is a key to creating and maintaining positive energy (Beck and Hillmar, 1992). The Assertive Style Managers, through a supportive behaviour and communication style empower their employees by:

(a) Fostering subordinate participation in decision making,
(b) Expressing confidence in subordinates and having high expectations,
(c) Providing autonomy from bureaucratic controls,
(d) Setting motivational and meaningful goals,
(e) Feedback/rewarding performance, and
(f) Modeling.

Positive energy enables people to rise to new levels of accomplishment and self esteem in a fulfilling and supportive environment (Beck and Hillmar, 1992). Communicating support and respecting employees (e.g. mistakes dealt with in a non-coercive manner) and a positive valuation of their contribution to the organization, on the part of the manager reduces the effect of 'them and us' attitudes. This, in turn contributes to the high trust necessary for flexible behaviour. The flexibility can be gained through employee involvement (Cotton, 1993).

Supportive supervisory behaviour and a generally

Table I : Comparison of Different Communication Styles

Passive Communication	Assertive Communication	Aggressive Communication
Verbal	**Verbal**	**Verbal**
Apologetic words, hidden meaning, hedging, failure to come to the point, disconnected, at a loss for words, failure to say what one really means.	Statement of wants, needs, desires, honest statement of feelings, objective words, direct statements which say what one means ("I message")	Loaded words, accusations, subjective terms, commanding, dominant, superior words; blame or put-down ("you message")
Non-Verbal	**Non-Verbal**	**Non-Verbal**
a) General	**a) General**	**a) General**
Actions instead of words, hoping someone will guess what one wants, looking as if one doesn't mean what one says.	Attentive, listening, generally assured manner, communication of caring and strength.	Exaggerated show of strength, flippant, sarcastic style, an air of superiority.
b) Specific Voice is weak, hesitant, safe, sometimes wavering, eyes are averted downcast, teary, pledging, posture is stopped; there is excessive head nodding and tilting. Hands are fidgety and fluttery.	**b) Specific** Open, frank, direct eye contact.	**b) Specific** Voice is tense; shrill, loud, shaky, cold, "deadly quiet", demanding and authoritarian. Posture is stiff and rigid.
Feelings	**Feelings**	**Feelings**
Hurt, anxious. Disappointed in self at that time and possibly later.	Confidence, Self-respect,one feels good about self at that time and later.	Angry, then righteous, superior, possibly guilty later.
Outcome	**Outcome**	**Outcome**
Does not achieve desired goal, does not get needs met, accumulates anger, and feels non-valued.	Achieves goals both long-term and short-term. Improves self-confidence, needs are met and relationships are free.	Achieves desired goal by hurting, alienating and intimidating others.

facilitative organizational climate may be subsumed under a variable entitled "Perceived Organizational Support" (POS). Employees who experience a strong level of POS theoretically feel the need to reciprocate favourable organizational treatment with attitudes and behaviour that in turn benefit the organization (Eisenberger et al., 1986; Eisenberger et al., 1990).

Past research has shown that individuals are motivated not only by their extrinsic needs, but also by positive job-related factors such as task clarity and social interactions. If they are not sufficiently motivated by communication, employees may lose interest in occupational achievement. This indicates that not only is communication necessary for work competition, but it is also necessary on a personal level for the employees' job satisfaction (Villegas and Cerveny, 2004).

Supervisors play an important role in structuring the work environment and providing information and feedback to employees. Communication satisfaction occurs when ideas are interchanged within a climate characterized by trust, respect, support, honesty, constructive feedback and mutual understanding. Communication satisfaction is a component of job-satisfaction, and thus, it is directly proportional to job-satisfaction. Emmert and Taher (1992) also found social environment and job related feedback are important determinants of job satisfaction for employees at all levels. Both job satisfaction and work motivation are positively affected by the quality of communication within a firm.

Participative management that incorporates effective supervisory communication can enhance an employee's job satisfaction. When an employee finds his supervisor recognizing his worth and ensuring his dignity and self-esteem, s/he works harder to achieve better job performance in the organization. Where the supervisor and the organization have no regard for the workers' dignity and self-worth, the workers do not work hard enough and the level of job performance becomes comparatively low.

Communication Satisfaction (CS) and Organizational Based Self-esteem (OBSE): Needs satisfaction is very essential to employees. They form the cardinal reason for working in life. Failure to have such needs satisfied therefore leads to frustration, nonchalant attitude to work and rebellion.

Needs, in this context, are divided into five areas according to Maslow (1970) – the physiological needs, the security needs, the social needs, the self-esteem needs and the self-actualization needs. The self-esteem of employees is often associated with the assertiveness of managers. This is so because we develop self-esteem from interacting in an interpersonal world. At the interpersonal level, satisfaction with communication interaction contributes to the feelings of worth, job-satisfaction and job-performance.

Researchers have distinguished among several types of esteem, including global-self esteem (an individual's overall evaluation of worth), role-based self-esteem (worth derived from incumbency in a particular position), task-based-self -esteem (worth based on self-efficacy) and organization based self-esteem (OBSE), which reflects the degree to which employees perceive themselves as important, meaningful, effectual and worthwhile within the organizational setting.

The construct of organization-based self-esteem encompasses the fundamental definition of self-esteem whereby individuals make and maintain an assessment with regard to themselves in relation to the environment(s) within which they exist (Coopersmith, 1967; Korman, 1976; Wells and Marwell, 1976). More specifically, organization-based self-esteem is the self-perceived value individuals have of themselves as members of organizations acting within the context of those organizations (McAllister and Bigley, 2002). Also, organization based self-esteem carries with it both determinants and consequences. The determinants of organization-based self-esteem include managerial respect, organizational structure, and job complexity. Some consequences influenced by organization-based self-esteem include job-performance, intrinsic motivation, general satisfaction, citizenship behaviour, organizational commitment, and satisfaction (Hui and Lee, 2000; McAllister and Bigley, 2002; Pierce et al., 1989). McAllister and Bigley (2002) reaffirm this conclusion stating that:

Self perceived competency and self-evaluation may be assumed to be a function of social learning experience and the value a person has come to place on himself as a function of his interaction with others. Thus organizations and their environments, and their actors may be viewed in terms of the self-evaluations that such environments cultivate. (p. 894)

Thus, managerial behaviour and the surrounding environment(s) play a critical role in guiding employees' behaviour towards the development of organization-based self-esteem and institutional belongingness.

Organization Based Self-Esteem (OBSE) and Job-Performance: Job performance of the employee can be determined by various human and technical factors. The factors that affect job performance include ability and motivation. There is a well-accepted truism that performance is a function of Motivation X Ability (Campbell et al., 1993). The simple logic behind this is that ability in the absence of motivation or motivation in the absence of ability is insufficient to yield good performance. Ability involves knowledge and skill while motivation is influenced by individual's needs, physical and social conditions.

Effective managers become aware of key elements in the work environment and gain an understanding of the characteristics of a productive work environment (Bolt and Rummler, 1992). Employees perform most effectively under the following circumstances:

- The task or job is clear. They know what is expected of them.
- The resources required to do the job are readily available, including information, time, money and the proper tools.

- The individual has the capacity, skills, and knowledge required to do the job.
- The individual receives frequent feedback about how well s/he is doing vis-à-vis the job expectations.
- The individual is satisfied by the consequences or rewards that follow successful performance of the job.

These factors are interdependent on each other. Performance is likely to be less than expected if any of these are weak. For example, even if the task is clear, the individual's performance is likely to be substandard if s/he lacks the necessary resources or tools. Or, even if the task is clear, the necessary resources are available, and the consequences are acceptable, performance will be substandard if the individual has not been properly trained and motivated.

The manager's role vis-à-vis performance is to:

- Clearly specify what is expected and when it is expected,
- See that the performer has or obtains the necessary capability (knowledge and skills),
- Know what resources are needed and provide them,
- Determine what feedback is critical to sustain performance and make such feedback available frequently,
- Modify or influence the consequences (rewards/incentives) to support the desired performance to determine which link of the performance chain is failing, requires attention and take corrective actions,
- Show confidence in employees, and
- Set high performance standards.

According to modern behavioural science, people react the way the environment suggests they should. Self-image, in other words, is the key to human behaviour and sets the boundaries for individual performance and career progress (Goddard, 1992). Honest and straightforward communication of managers holds the key to inducing positive attitudes in the employees that enhances their self-esteem, which in turn boosts their performance. Often, poor performance attributed to bad attitudes stems from lack of motivation, minimal feedback and lack of trust in management (Nelson and Quick, 2001).

Effective managers are judicious in the use of punishment and consider extinction coupled with positive reinforcement as an alternative for shaping employee behaviour. The strategic use of training and educational opportunities and recognition awards are instrumental to successful organizational reward systems. Goal-setting activities are valuable to managers in bringing out the best performance from employees. Management by Objectives (MBO) has become a very popular and effective goal-setting programme based on interaction and negotiation between employees and managers, thus encouraging employee participation at the time of goal setting. Encouraging employee participation enhances their self-esteem and ultimately leads to high performance.

Organization-Based Self-Esteem (OBSE) & Employee Commitment: Commitment to the organization is, in part, a function of the treatment that employees receive from their supervisors. Social exchange theory posits that employees are willing to exchange loyalty for support in their interaction with employers (Eisenberger et al, 1986; Hutchison, 1997). Therefore, how employees are treated affects their commitment towards their supervisor and the organization. Research shows a positive relationship of employees' perception of being valued and cared about by the organization with (a) conscientiousness in carrying out conventional job responsibilities, and (b) expressed affective and calculative involvements in the organization in the absence of direct reward or personal recognition (Eisenberger et al, 1990). It is helpful to regard commitment as multidimensional and focus on the two types of commitment that dominate recent literature in this area:

Attitudinal or Affective Commitment: Probably the most popular method of examining the concept is through an individual's attitudes and feelings towards his/her employing organization (Legge, 1995). Featured in the works of Buchanan (1974) and extended by Porter et al. (1974) and Mowday et al., (1982), attitudinal commitment is, the relative strength of an individual's identifications with and involvement in a particular organization" (Porter et al. 1974, p. 604). It is characterized by three components namely: identification, involvement and loyalty. These translate to: an understanding and strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization, or to "go the extra mile" for the good of the company and; a strong desire to maintain membership in the employing organization, or the aspiration to remain in the employ of the organization.

Continuance or Instrumental Commitment: Some researchers prefer to define commitment in calculative terms. This involves the number of investments an employee makes as a result of their employment with an organization and the associated costs of leaving the current organization, together with the perceived availability of other job alternatives (Shepherd and Mathews, 2000).

When individuals are offered better alternatives with other organizations which they choose to decline, it may be that this is a result of sets of rewards or side bets associated with their present job, which make it difficult for them to move (Becker, 1960). Thus, their current employing institution is secured by binding mechanisms (Shepherd and Mathews, 2000).

Attitudinal or Affective Commitment: driven by emotional attachment employees remain because they want to (Brown et al., 1995).

Continuance or Instrumental Commitment: driven by perceived rewards or punishments employees remain because they need to (Meyer et al., 2002).

Employee Commitment and Human Resource Management: Commitment is an internalized employee belief, often associated with "soft HRM" and a high trust organizational culture. Wood (1995) has "preferred to talk in terms of high commitment policies as a working substitute for HRM" (Storey, 1995) and high commitment management as a mechanism for generating commitment so that employee behaviour is "primarily self-regulated rather than controlled by sanctions and pressures external to the individual and relations within the organization are based on trust" (Wood, 1996, p. 41). That is the reason why assertive communication style has great significance in modern organizations.

HRM has been described as a philosophy centred on emphasizing the mutuality between employer and employee in the work place (Farnham and Pimlott, 1990, Legge, 1995 ; Walton, 1985). It has increased in popularity in recent years since the aim of managing people at work, "no longer appears to be containment and compliance [oriented] but competence and commitment" (Farnham and Pimlott, 1990, p. 354).

Relation of Organization Based Self-esteem (OBSE) with Absenteeism and Turnover Intentions:

Absenteeism: Absenteeism has been defined as "non-attendance when an employee is scheduled to work "(Price and Muller, 1986, p. 27). Therefore non-attendances due to annual and other approved leave are not generally viewed as absenteeism (Mueller et al., 1987). Voluntary and involuntary absences are usually differentiated, so that when employees do not intentionally create the conditions which produce the absence (e.g. illness), then these are typically considered as involuntary absenteeism (Mueller et al., 1987; Savery et al., 1998).

The employees, who feel good enough about themselves, are more effective in their organizational roles and are more committed to their careers. Voluntary absences, controlled by the employee are more likely to reflect truer relations with job satisfaction (Sagie, 1998). Organizational commitment and job satisfaction are strongly related to the number of occurrence and duration of voluntary absences (Villegas and Cerveny, 2004).

The areas of greatest employee satisfaction are the supervisory communication and subordinate communication (Downs and Hazen, 1977). Communication satisfaction is positively and significantly related to job satisfaction (Clampitt and Girard, 1993; Varona, 1988). Personal feedback, communication climate and supervisory communication are the three factors that have had the strongest correlation with job satisfaction (Downs et al., 1988) and organization based self-esteem. When employees are dissatisfied and their OBSE is lowered, they exhibit a higher frequency of absence. The explanation most frequently offered for this correlation is the likelihood that people escape, if only temporarily, from unpleasant work circumstances (Bakker et al., 2003).

Turnover Intentions: Turnover is the rate at which employees leave a job or company. Having some amount of turnover within an organization is normal and is sometimes beneficial for the company. The reason for this is that new people prepared in new technologies and bringing new ideas help the organization keep its flow. The goal of a successful retention program is not zero turnover (Marwin, 1994). Excessive turnover, however, creates instability in the workforce, raises personnel costs, and diminishes organizational performance.

More explicitly, involuntary turnover is understood as a separation initiated by the organization (such as discharge). And voluntary turnover is often when the firm prefers that the individual remain on the job. Examples include resignation, transfers, and in some cases, retirement (Hom and Griffith, 1995). Voluntary turnover means losing people you did not want to lose when you did not expect to lose them (Marwin, 1994).

The causes of turnover are numerous. On reviewing the works of different authors – Marwin (1994), and Richardo (2001), it has been found that there is a complex mix of reasons that cause turnover. Some of the most important causes that may be relevant in this study are:

(a) Poor communication,

(b) Lack of recognition or reward,

(c) Lack of motivation,

(d) Incompatible management style,

(e) Stress,

(f) Lack of training,

(g) Lack of respect,

(h) Lack of feedback, and

(i) Negative attitude.

Raising OBSE level of employees by allowing them greater latitude (through increased empowerment, job enrichment and constructive feedback) lowers their absenteeism and withdrawal intentions. On the other hand, this implies that when OBSE of employees is lowered and they are dissatisfied, they are more likely to miss their work and leave their jobs.

Possible Gap Areas: Review of literature shows that very little efforts have been made to study the impact of communication styles of managers/supervisors on employee attitudes and behaviour in the Indian context. There are not many studies available where communication style of managers has been used as an independent variable to measure the impact on employee outcomes. Finally, literature also lacks the study of supervisory communication support and organization based self-esteem (OBSE) of employees and its impact on their attitudes and behaviours in Indian organizations.

Research Objectives: The objective of the proposed study is to examine the effect of communication styles of managers (from India) on employee attitudes and behaviours. The proposed study would also examine the relationship of managerial communication style with: (a) perceived organizational support (POS), (b) communication satisfaction (CS), (c) organization based self-esteem (OBSE), and (d) employee outcomes which would include performance, commitment, absenteeism and turnover intentions.

Conceptual Framework: This study proposes to take up communication styles of managers/supervisors as the independent variable for employee attitudes and behaviours. The dependent variables identified for the

study are the employee outcomes, which would include performance, commitment, absenteeism and turnover intentions. The moderating variables identified are: (a) perceived organizational support (POS), (b) Communication satisfaction (CS) and (c) organization based self-esteem (OBSE).

Measures: Managerial communication style will be measured by an original set of questionnaire on a five point Scale. Perceived organizational support including perceived supervisory support will be measured by Eisenberger et al. scale (1986, 1990). Communication satisfaction is to be measured by a modified Downs and Hazen scale (1977) and Pearce II scale (1997). OBSE will be measured by OBSE scale by Pierce and his colleagues (1989). Performance will be measured by Abrainis's job performance scale (1985). Commitment and turnover intentions are to be measured by Allen and Meyer scale (1990). Lastly, absenteeism will be measured by a single question on a five-point scale.

Methods: The sampling method would do the survey. The data would be collected from around 400 employees from different hierarchical levels from both private as well as public sector organizations in India. And thus the authors propose to test the conceptual model proposed in this research paper.

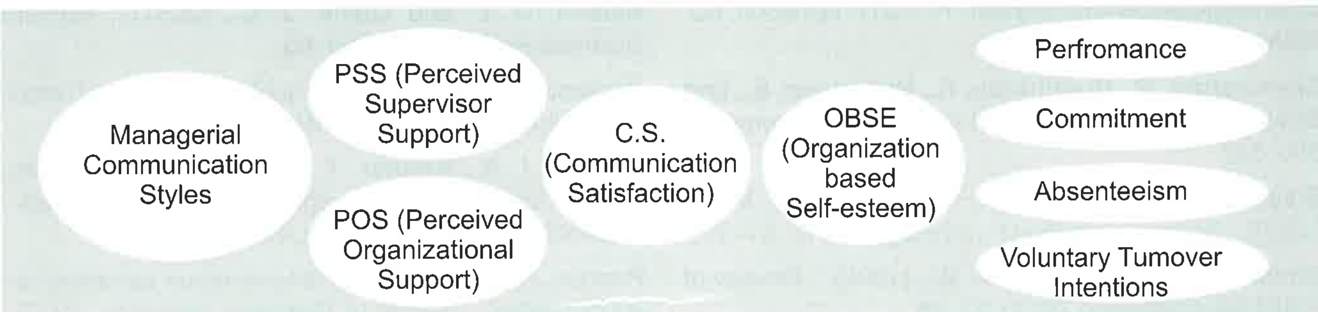

Figure I : Conceptual Framework

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Organizational Identity and Sustainable Competitive Advantage : Combining Resource Based View and Configuration Approach

S. Jeyavelu *

Abstract

Researcher applies the organization identity concepts to configuration (Miller, 1987 & 1996) and resource based approaches (Barney, 1991 & 2002) of sustainable competitive advantage and develops propositions for organization identity (Albert & Whetten, 1985; Gioia, 1998) as a source of sustainable competitive advantage in terms of (a) configuration of identity characteristics – homogeneity, complexity, intensity, abstractness and fluidity, (b) simultaneous loose and tight coupling of these organizational characteristics, (c) organizational identity statements as configuration of critical dimensions of organizational purpose and its context, (d) organizational image is perceived to be valuable and worthy of a premium (e) organizational image promotes positive identification and is perceived to be of comparably higher value by prospective employees and existing employees.

Key Words : Organizational Identity, Resource Based View, Configuration Approach, Sustainable, Competitive Advantage

Introduction

Sustainable competitive advantage is the Holy Grail in strategic management research and practice, the bone of contention in many a theoretical debate and the seed of inquiry for both researchers and practitioners. Sustainable competitive advantage eludes definition but can be broadly defined as the quality of an organization that enables it to outperform its competitors and sustain above normal returns (Peteraf, 1993). Porter states "competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm's cost of creating it." (1985). Porter's analysis was at industry level and he assumed homogeneity within an industry and also imitability across organizations. From industry analysis and competitive strategy, strategy research evolved to the resource based view of the firm in the 90s (Barney 1991). Barney postulates high performance as a function of both competitive positions in industries and

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endowments of valuable resources. These resources are heterogeneously distributed among firms and unique to each. Resources that are complex, casually uncertain and ambiguous tend to be unimitable and lead to sustainable competitive advantage (Barney 1991 & 2002). Much of strategic management research in recent years focused on identifying unique, valuable, complex and unimitable resources such as organizational processes and socially complex resources.

Configuration approach evolved as an extension of the organizational contingency between strategy, structure, environment and performance and is holistic and non linear (Meyer & Tsui 1993; Miller 1986, 1987 & 1996). The complex relationships between the strategy, organizational characteristics and performance are better captured in configuration approaches (Miller 1986). Traditionally configuration approaches develop conceptual typologies or empirical taxonomies, but Miller (1996) suggests the study of configuration as a quality for competitive advantage. Configurations as a quality of organizations are socially complex phenomena and hence there is merit in considering configuration as a complex source for sustainable competitive advantage.

Organizational identity helps management to focus on strategic issues, manage resource allocation process and motivates members to enhance organizational effectiveness and performance and hence can be a source of sustainable competitive advantage (Stimpert, Gustafson & Sarason 1998). Fiol (1991 & 2001) considers organizational identity to be a core competency of the organization. Organization identity can be a negative, neutral or positive resource for competitive advantage (Whetten & Godfrey, 1998).

Organizational Identity and Sustainable Competitive Advantage

Organizational identity is a socially complex resource that can be the source of sustainable competitive advantage by allowing an organization to do things that its competitors cannot do, do some things better than its competitors and preventing it from succumbing to fads (Reger 1998). Organizational identity is the members' shared answer to the question 'who are we as an organization?' (Gioia 1998). Albert and Whetten (1985) in their landmark paper defined organizational identity as the characteristics of the organization that are collectively claimed to be central, distinctive and enduring. Later empirical studies found that organizational identity is flexible, less central and even less distinctive than originally defined (refer Corley 2004 for a review). However there is an inherent need among organizations to maintain continuity in their identity over past, present and future and be distinctive (Whetten & Mackey 2002). The need for continuity ensures that even if the shared labels remain the same, the meanings associated with the labels evolve and adapt to the changing requirements of the environment, (Gioia et al. 2000). This paper assumes that organizational identity is distinctive and continuing.

Stimpert et al (1998) argue that organizational identity can be a source of sustainable competitive advantage by the following – a. identity is defined and described by the image held by the stakeholders and an identity that creates a distinctive and particularly attractive image in the minds of customers have a significant positive reputational impacts that can be a source of sustainable competitive advantage, b. identity helps management to focus on most significant or important strategic issues, c. Identity is a major influence on the resource allocation process and is tightly coupled with organizational processes and assets, and d. identity can be motivational.

Researcher argues that organizational identity is a socially complex resource that can be source of sustainable competitive advantage, due to the configuration of its characteristics. Organizational identity is characterized by homogeneity (shared beliefs about the organization's identity), intensity (strength of conviction/belief & degree of positive affect towards identity), complexity (number of beliefs & the number of identities), abstractness (extent of use of abstract language in identity), content (what the identity is), and context (the internal and external context). There are inherent contradictions in assuming coherence among these characteristics. Organizations that have a simple vision and values that are shared by its members survive longer (Collins & Porras 1994). Hence an organizational identity that is homogeneous and evokes intense positive affect will endure over time. It is not rigid and permanent but malleable and continuing (Gioia et. al. 2000).

The change and continuity in organizational identity are not distinct but exist simultaneously as a duality in organizational identity narratives (Chreim 2005). For this duality to exist an organization's identity has to be complex enough to hold many beliefs of identity or many identities together, and the narratives are to be abstract enough to provide for changes in meanings associated with organizational identity labels (Gioia et al. 2000). An organization that has survived for long and outperformed its competitors then would have had a homogeneous and intense organizational identity, which at the same time had been complex and abstract enough to survive over time. Then organizational identity necessarily would have to be simultaneously loose and tight coupled for it to survive long and be a source of sustainable competitive advantage (Orton & Weick 1990).

Proposition 1a : Organizational identity is a source of sustainable competitive advantage if it is

> ***homogeneous*** *enough to prevent identity dissonance;*
>
> ***intense*** *enough to promote strong identification and positive affect towards it;*
>
> ***complex*** *enough to hold a number of beliefs of identity or number of identities together;*
>
> ***abstract*** *enough to permit meaning making in a variety of diverse contexts; and*
>
> ***fluid*** *enough in content to match changing contexts.*

Proposition 1b : Loose and tight coupling of organizational identity characteristics are sources of sustainable competitive advantage if homogeneity and intensity are tightly coupled; and complexity, abstractness and fluidity are loosely coupled and these couplings exist simultaneously.

Organizational Identity as Configuration of Purpose and Context

Member claims on what is central, distinctive and enduring about the organization can include some dimensions of the organizational characteristics (Albert & Whetten, 1985; Dutton & Dukerich 1991; Elsbach & Kramer, 1996; Gioia 1998; Golden-Biddle & Rao 1997). These could be dimensions of organizational vision, culture, structure, systems, processes, products, stakeholders, or the environment. Along with the "who are we?' organizational members reflect on the purpose of the organization's existence and the nature of the organizational context. These are in the nature of the questions 'what is the purpose of our existence?' and "what is the nature of the world we exist in?' Answers to the former question give direction for purposive managerial action, resource accumulation, resource-environment configuration over time and prevent cognitive dissonance under environmental stress; and the latter embeds the organization in its historical antecedents, founder aspirations and style, founding conditions, environmental uncertainty, leadership style and stakeholder expectations. When the answers to the two questions are integrated, they embed the organization's existential quest in a network of interdependent relationships with the external world. If this embedding is considered as central and enduring, they provide a means where an organization is in dynamic interaction with its internal and external context with a clear direction for movement. The dynamic interaction would ensure that an organization is competitive through continuous adaptation and the clarity of purpose would sustain the competitive advantage over time under changing environmental conditions. The three self reflective questions are inter related and inter dependant and in a special case, (where organization identity includes critical dimensions of purpose and context) differentiate the organization, maintain continuity over time, give direction for the continuity and embed the distinctive continuity in its context.

Proposition 2 : Organizational identity is a source of sustainable competitive advantage, if organizational identity claims include critical dimensions of its reason for existence and interdependencies with its context.

Organizational Identity as Configurational Roots

Organizations are effective when their internal organizational characteristics match the environment (Mintzberg, 1981). Burns and Stalker (1961) found that under stable environmental conditions organizations with mechanistic characteristics were most effective and under dynamic environmental conditions organizations with organic characteristics. If the level of environmental uncertainty and organizational differentiation and integration are at same levels then the organization tends to be most effective (Lawrence & Lorsch, 1967). The organizational characteristics such as its structural elements, culture, management systems and management styles along with many others form a gestalt. This gestalt or configuration is not limited to the internal characteristics but also includes the environmental variables and effectiveness (Miller, 1987 & 1996). The configuration of internal organizational characteristics, external environment and effectiveness is unique, depends on the organization's history, cannot be causally attributed to any specific variable, conditions or managerial action and complex because of the intricate and complex interactions amongst the variables (Miller & Whitney, 1999). The configurations are observed as patterns at a particular level of abstraction so that there are only a limited number of configurations that are observed in the organizational population. The configuration is level dependent and is not exhaustive across levels, i.e. organizations exhibiting same configuration at one level are likely to have unique patterns among lower level variables. This unique nature of configurations depends on the history of the organizations. The founder – his aspirations, style of management, choices, founding environmental conditions, the past critical managerial decisions, accumulation, choice and combination of resources, and changes in leadership, stakeholder expectations and environmental conditions determine the nature of the configuration (Ketchen & Thomas, 1993; Ketchen & Combs, 1997; Meyer & Tsui, 1993; Miller, 1982, 1986, 1987, 1990 &1996; Miller & Friesen, 1984;). The configuration is a complex network of interdependencies over time of various aspects of the organization and very difficult to attribute causality for a specific configuration at a specific level (Miller 1996). Some configurations are rare and valuable in that the organizations remain competitive over time under changing environmental conditions. Thus a configuration can have competitive advantage by its unique combination of organizational characteristics matching the environmental needs.

One of the possible influences on the evolution of an organization is the collective cognitive map carried by the managers, which enables sense making and strategic decisions. A collective sense of 'who we are?' envelops and contains managerial decision-making and choices in resource accumulation and combination. Even though the evolution of configuration is complex and causally indeterminate, organizational identity acts as a seed for this evolution by providing the necessary cognitive resources over time and limiting the possible paths. When organizational identity holds critical dimensions of its purpose and context within it, it provides clarity for manifestation of identity in terms of organizational characteristics. This clarity in manifestation enables an organization to sustain its competitive advantage over time, under changing environmental conditions. In a special case where organizational identity statements are purposive and contextual the competitive advantage is sustainable over time under changing environment.

Managerial decisions are guided by their sense making of the context (internal and external) and the clarity of purpose. The decision choices and development of the complex configuration is guided by the organizational members' sense of 'who we are?' which enables continuity and to some extent stability of the sense of the organizational self over time. Thus organizational identity acts as a seed for the organizational configuration.

Proposition 3 : Organizational identity is a source of sustainable competitive advantage, if organizational identity claims manifest in the configuration of organizational characteristics – its structure, culture and processes.

Organizational Identity, Image and Sustainable Competitive Advantage

Organizational identity is expressed to the stakeholders and the external environment as organizational image and defined as what the members want the stakeholders to consider as the organization's identity (Whetten & Mackey 2002). Stakeholders provide feedback on these identity claims in terms of the reputation the organization has in the environment. If the customers and the context find the organization's reputation valuable then the organization charges a premium for its association and can be a source of sustainable competitive advantage.

Proposition 4 : Organizational image (hence organizational identity) is a source of sustainable competitive advantage if it is perceived to be valuable and worthy of a premium.

Organizational Identity, Identification and Sustainable Competitive Advantage

People are a source of sustainable competitive advantage to an organization (Pfeffer 1994). Attracting and retaining talented employees is one of biggest challenges in modern times. Prospective employees are attracted to an organization if they positively identify themselves with the organizational identity's proxy - its image. If the positive identification is more valuable than their identifications with other organizations, then these prospective employees are likely to join this organization. A larger pool of prospective employees enables an organization to select the best talent and leads to sustainable competitive advantage. An employee remains in an organization only as long as he positively identifies with the organizational identity or its essence in terms of vision or values, and this identification is more valuable than identification with other prospective employers' identities or their proxy - images.

Proposition 5a : *Organizational image (hence organizational identity) is a source of sustainable competitive advantage, if it promotes positive identification and that identification is perceived to be of comparably higher value by prospective employees.*

Proposition 5b : *Organizational identity is a source of sustainable competitive advantage, if it promotes positive identification and that identification is perceived to be of comparably higher value by employees.*

Conclusion

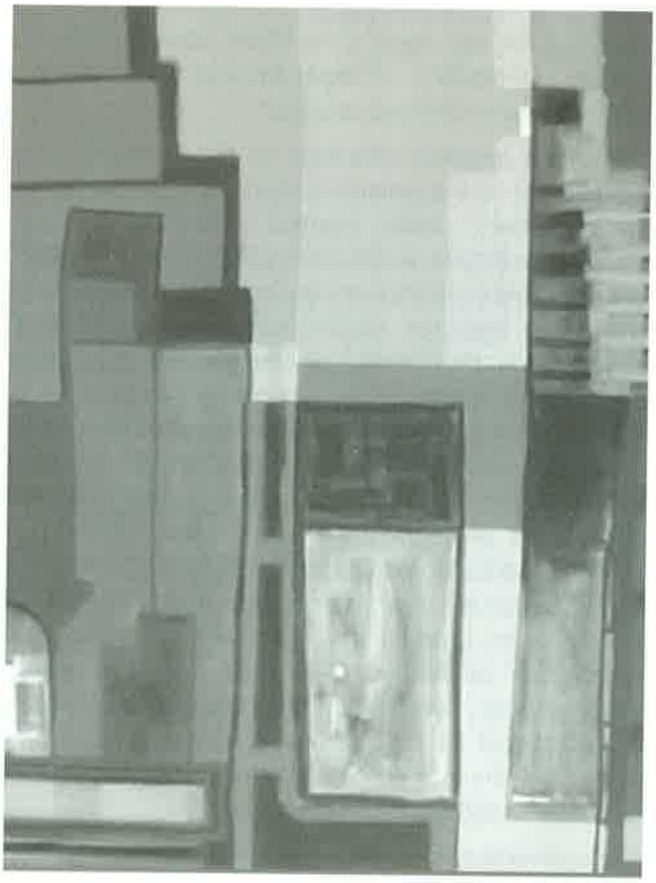
Resource based view has extended strategic management research from industry analysis to resources, capabilities and competencies (Barney, 2002). Configuration approach, a holistic and non-linear approach to organizational analysis provides immense opportunities for conceptual development as a quality of organizations and hence a source of sustainable competitive advantage (Miller, 1987 & 1996; Miller & Whitney 1999). Organizational identity, the essence of an organization helps focus management to focus on strategic issues, resource allocation process and motivates members in enhancing organizational effectiveness and performance and hence can be a source of sustainable competitive advantage (Stimpert, Gustafson & Sarason 1998).

Organization identity concepts to configuration and resource-based approaches of sustainable competitive advantage are employed and developed propositions for organization identity as a source of sustainable competitive advantage in terms of:

- Configuration of identity characteristics – homogeneity, complexity, intensity, abstractness and fluidity,.
- Simultaneous loose and tight coupling of these organizational characteristics
- Organizational identity statements as configuration of critical dimensions of organizational purpose and its context,
- Organizational image is perceived to be valuable and worthy of a premium,
- Organizational image promotes positive identification and is perceived to be of comparably higher value by prospective employees and existing employees.

These propositions are not exhaustive and there are opportunities for conceptual development in extending quality of configuration as a source of sustainable competitive advantage. The following configurations can be studied as sources of competitive advantage – configuration of organization identity, image and reputation (Gioia, Schultz & Corley, 2000; Whetten & Mackey, 2002); configuration of multiple facets of the organizational identity - professed, projected, experienced, manifested and attributed identities (Moingeon & Soenen, 2002); configuration of organizational identity, strategy, structure and culture (Hatch & Schultz 1997 & 2002); configuration of multiple identities, environment and effectiveness (Albert & Whetten, 1985; Pratt & Foreman, 2002; Corley, 2004); configuration of dimensions of organizational identity and identification (Ashforth & Mael, 1989 & 1996; Ravasi & van Rekom, 2003; Edwards, 2005); and configuration of organizational, brand and corporate identities.

This paper is just an exploration in combining two of the major perspectives on competitive advantage with organizational identity conceptualization. Hopefully, empirical findings and further elaborations would add to the existing literature on organizational identity.



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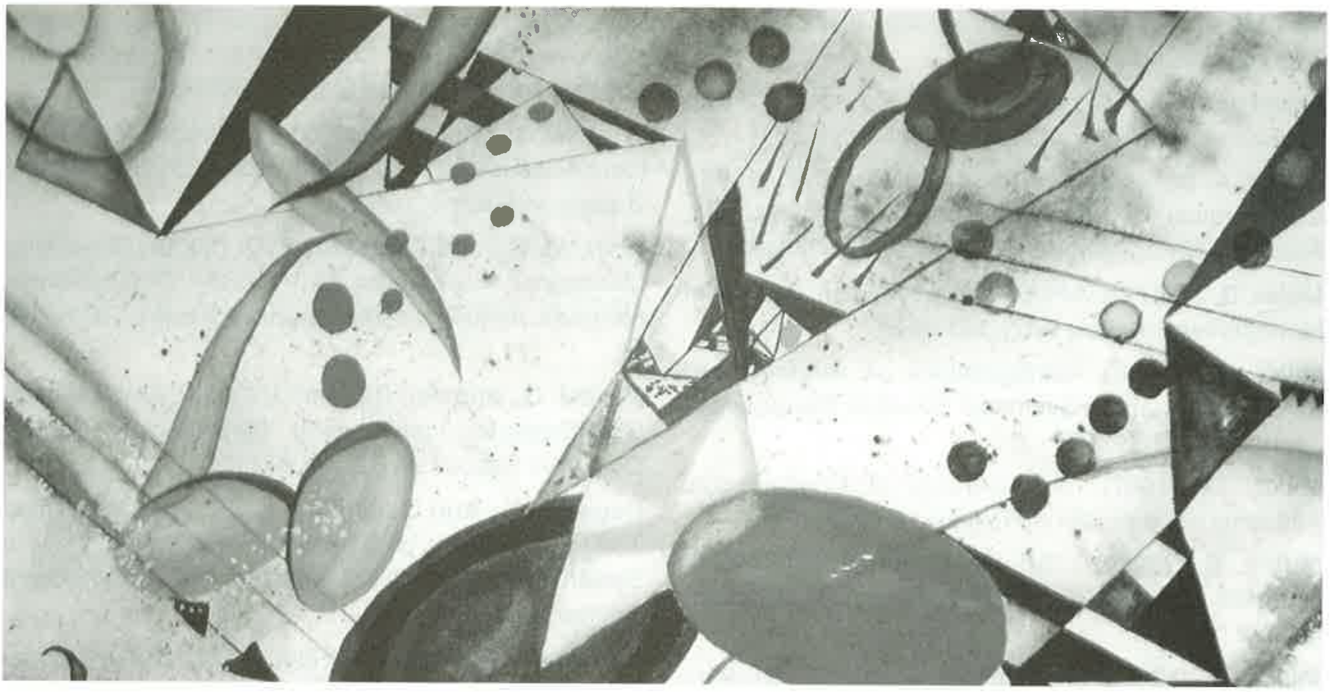

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CASE STUDY

MIS Implementation at Construction Project: An Experience

V.V.Sople*

Dipankar Gupta**

Abstract

Information systems serve as a critical medium in many industries, providing management with information necessary to make and support decisions. This MIS implementation study is conducted at Hydro Electric Turnkey Project by a leading project construction company in India i.e. 'LAJ' (Name not disclosed as requested). The project includes complete study and understanding of MIS implementation and various modules of the software that were implemented and used in the company. LI from Germany are the project consultants and the engineer in charge for the project. To implement the project LAJ had over 6000 employees working at the site. To co-ordinate all the functions the LAJ has implemented Management Information System (MIS) resulting into ease of working on the project. This paper gives a detailed understanding of all the modules of the MIS and how each module works and produces results for the company. The dependence of modules for particular information is also explained. This implementation is first of its kind in project construction in India. Data collection for the project was done through interviews with the project executives at construction site of power project. The secondary data was collected from website of the construction company.

Key Words : Business Process, Optimised Resource Planning, Trip Card

Company

LAJ is an acknowledged leader in the construction of multi-purpose river valley and hydro power projects and has been involved in construction of major engineering projects for the last four decades, including complex hydro power / river valley projects, expressways and real estate development, etc involving design and engineering of works, controlled earth / rock fill, concrete manufacture and placement (including

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chilling), fabrication and erection of penstock liners and steel structures, hydro-mechanical equipment design, procurement and erection, expressway construction and real estate development. Over the years LAJ has completed several projects in India and abroad as an engineering procurement and construction (EPC) contractor and possesses necessary experience and expertise to carry out such works in a time bound schedule. LAJ's current revenue is Rs 0.5 bn pa.

Hydro Electric Project

Hydro electric project in Northern India is executed with the help of three companies i.e. LI Germany as the consultant of the design, supervision, quality control and the Engineer-in-charge for the complete project; LAJ as civil and hydro mechanical works contractor and Voith Siemens as electrical and electro-mechanical works contractor for the project. The total cost of the project is estimated at Rs 4000 crores, while LAJ has awarded with civil contract of Rs. 2500 crores. LAJ has over 6000 employees working on this project alone and a complete base camp has been setup in the hills, which includes all facilities like staying, mess, hospitals and other amenities. Staff assigned to the project has been grouped under the headings such as project and site management, design review group, planning and control group, construction supervision team, and environmental monitoring group and administration staff

MIS Overview

A management information system may be defined as "a system that collects and processes data (information) and provides it to managers at all levels that use it for decision making, planning, program implementation, and control." An information system is comprised of all the components that collect, manipulate, and disseminate data or information. It usually includes hardware, software, people, communications systems such as telephone lines, and the data itself. The activities involved include inputting data, processing of data into information, storage of data and information, and the production of outputs such as management reports.

As an area of study, it is commonly referred to as information technology management. The study of information systems is usually a commerce and business administration discipline, and frequently involves software engineering, but also distinguishes itself by concentrating on the integration of computer systems with the aims of the organization. MIS has the following role to play:

- ***Functional Support Role***

The business processes and operations support function are the most basic. It involves collecting, recording, storing, and basic processing of data. Information systems support business processes and operations in the areas of HRM, Production, Marketing, Finance, R & D etc

- ***Communication Decision Support System Role***

Information systems can support a company's competitive positioning at various levels of analysis. It supports in piloting the chain of internal value. They are the most recent and the most pragmatic systems within the reach of the manager. They are the solutions to reductions of costs and management of performance. They are typically named 'Business Workflow Analysis' (BWA) or 'Business Management' Systems.

All successful companies have one (or two) business functions that they do better than the competition. These are called core competencies. However, in today's changing and competitive world, no advantage can be sustained in the long run. The only truly sustainable competitive advantage is to build an organization that is so alert and so agile that it will always be able to find an advantage, no matter what changes occur. Hence, communication is the key element in building competitiveness.

Information systems often support and occasionally constitute these competitive advantages. The rapid changes forced business firms to acquire timely and current information, which is critical for gaining competitiveness. In many cases the information system itself is the competitive advantage. Examples are Wal-Mart, Dell Computer, eBay and Amazon.com etc

Problem Faced in LAJ

In LAJ's previous projects all works carried out were manual or on paper hence most of the calculations were made on judgments. The main problem was that the data was not complete and not up to date. Hence this posed a problem for the top management to see if all the wings of the company were working properly or not and it was very difficult to analyze which activity or which part of the project was making profit and which part was going into losses. Benchmarking was also very difficult as there was no standardization set for any of the projects.

The total cost of the project was also difficult to calculate and tender filling was also became a problem. Hence, LAJ was one of the earlier construction companies in India to implement the MIS system to run on the complete network. LAJ also increased its capacity as well as allocated resources including manpower, money, machines (systems) and material so that the costing and working can be computerized and all benefits of MIS explained earlier can be extracted.

Hardware

The complete networking of the LAJ at all its locations throughout India are done Via the INSAT 3A satellite and on radio frequency only. Base camp setup includes 85 terminals and connections at the base camp, project site and Stores.

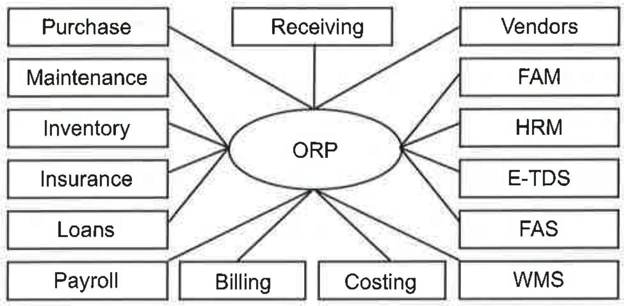

Figure I : ORP System

Hub: - 10 Mbps **Terminals**: - 85 at base camp **Modems** • Traffic • Supervisor • Data Card • Voice Card	**Servers** • UNIX and FOXPRO • Win 2000 Server and ORACLE 8i as back end and VB 6 as front end.	**Cables:-** • Over 100m – fiber cables • Less than 100m – CAT 6 cables.	**Video Conferencing** with • Polycom cameras • Data link @ 64 Kbps • Voice link @ 8 Kbps • Video Link @ 384 Kbps

The complete networking is done over 22 locations in India out of which 9 locations have video connectivity and others have only voice and data connectivity.

The main challenges faced by the IT dept of the company were

- Centralization
- Common coding for all softwares and activities
- Expertise to operate MIS
- Speed of the connectivity.
- Bandwidth related issues.

For internal connectivity the company already has a CITRIX server at the main head office in Delhi and all employees are given access through the LOTUS NOTES VER R5 and 6.0.

Optimised Resource Planning

The company has installed ORP system for information collection, processing and dissemination. The ORP (Optimized Resource Planning) is implemented on the basis of a software developed by MAARS Software Ltd. and is called MAARSMAN1 Ver 6.0. LAJ has already brought the software and further developments and changes required in the software for complete operations is done by the development team at the main centre HO in UP. The software completely covers all the individual operation that is a part of the ORP.

The diagram above shows all the modules of the ORP and Maarsman1, which the company has been using for optimum utilization of the resources. Benchmarking is not possible in ORP as it is the first time a construction company in India has implemented MIS in its processes and hence set the benchmark for new entrants.

Working guideline of the ORP system-

Following categories of bills are being received and processed by the functional users-

- Indigenous goods
- Imported goods
- Expenses.
- Capital goods.
- Material supplied by the Department (at Sites)

Except for the bills pertaining to supplies made by the department and the bill for expenses, processing under ORP is based upon Goods Receipt Note (GRN), being created by Stores at the time of receipt of material. The work flow for procurement of material and for processing of Party's bills is interrelated and has been defined as under :

Purchase Requisition
→ Store Indent
→ Purchase Order
→ Goods Received Note (GRN)
→ Bills Processing (A/Cs)
→ Party's Payment

Figure II : Interrelation of Work Flow for Procurement and Processing of Bills

As is evident from above, due care and diligence is required while raising a Purchase Order under ORP since any mistake in the P0 does percolate down to bill processing and to the Party's Ale in the Books. Functional users' are therefore once again reminded to adhere to following practices while working with ORP.

- Ensure that the Purchase Order is thoroughly checked before approval.
- Amend the P.O (before receipt of material by Site stores) for any subsequent Change
- In terms and conditions (including rate etc.) negotiated with the Supplier
- Ensure all dispatches from H.0 bear ORP - P. 0. references so as to facilitate preparation of GRN at Site.

Sites also need to ensure

- that only one GRN is raised against one Invoice Challan of the Party. The current system does not permit linkage of multiple bills to single GRN. As such its absolute essential that GRN is prepared by the site stores individually for each Invoice! Challan. However, vice versa does not hold well i.e. there can be multiple GRNs against single Invoice / Challan. It has been noticed in the past that in order to clear the backlog of data entry, many of the Sites had resorted to creation of single GRN against multiple invoices, for which Accounts Dept. had to face lot of problems while processing the bills.
- that copy of discrepancy voucher / rejection voucher is sent to the Party. In case material has been received directly from the Party & to the H.O despatch section if the material has been received thru' H.O. No separate debit/credit note is required to be raised at this stage since GRN is recorded for the net quantity actually received by the Stores. H.O - dispatch section will in turn inform the Party about the discrepancy/rejection as advised by the Site stores.
- that the correctness of data entered in the GRN before saving the GRN (system provides adequate warning at each stage to this effect) since receipt is immediately recorded in the Stock Ledger and books of A/C, once the GRN is saved by the functional user.
- that All GRN's are checked and initialed by the concerned officials after comparison with Party's Invoice/Challan. In exceptional cases where the error still persist, Site store will have to create a Purchase Return Voucher with the option "Reinstate P.O" whereby a store return entry would be effected in the Stock ledger and P. O will get reinstated enabling the user to make a fresh GRN.
- that no change is incorporated manually in the GRN since bill passing is system based and system and does not take cognizance of any manual correction in the data entry.
- that copy of Journal Vouchers so generated duly initialed by the store in charge are sent to accounts Department at the end of the day. The GRN shall be the supporting documents for the journal Vouchers.

Party's Bill Processing

On receipt of the Party's invoice, a preliminary checking is carried out at Stores and Invoice should then sent to Accounts Department for processing, with GRN No, thereupon, they should also verify the levies (if any) not specifically mentioned in the P.O. like freight expenses, insurance charges etc. while forwarding the bills to accounts department should use "Bill Passing Screen" for processing all invoice except for imported material, department supplies, expense related bills and bills pertaining to previous financial year which shall be passed through the Journal Voucher.

• Procedure for Processing of Purchases Made by the Imprest A/C's

Following procedure is followed for accounting of the Imprest related purchases made by H.O on behalf of Sites:

- ***H. O. -Accounts***

  - Debit Staff Imprest a/c (Individual a/c) on payment of Imprest.
  - On submission of Purchase Cash Memos, Debit respective site account with

  corresponding credit to the concerned staff (Imprest a/c).

- ***Site(s) Purchase / Stores***

  - Raise a cash P.O. (if not already raised) for the material procured.
  - Choose the Vendor's name as "Misc. Cash Purchase" while raising the P.O. (For all

  - Imprest related purchases; Cash P.O has to be raised by the Site only. Incase

  Site has already sent an indent and H.O -Purchase decides to procure the material

  in Cash, it would be treated as normal purchase with 'Cash' as mode of payment.

  - Prepare the GRN at Stores for the material received.

- ***Site(s) -Accounts***

  - On receipt of advice from H. O, choose 'Inter Site processing' screen and debit "SL

- A/c: Misc. Cash Purchase" with Corresponding credit (automated) to H.O. a/c.
- simultaneously, process the PJV whereby O/s Liability is automatically debited with
- corresponding credit to "SL O/c: Misc.Cash Purchase".

Vendor Management Module

The complete purchase of materials and equipments is done through various vendors across the country. LAJ has a total of 638 suppliers of various products and equipments and for every vendor a separate code is generated. The vendor codes range from AG00003 to ZG00010. Any new vendor who is to be added or any old vendor who is to be deleted from the list can be done at individual site as well as the main head quarters.

Terms of payments to the vendors varies vary depending on the relations with the vendors. 90% of the vendors transact on credit basis and payments are made within a period of 45 days. Some of the vendors supplying high quality or huge amounts are paid at spot or even before receiving the goods, for ex: - SAIL for steel and IOC for petrol, diesel are paid earlier even before the material reaches the premises at the base camp. The most of the material that is brought in to project site is procured from the main 9 sites located all over India and those are; Local sites, head quarters (Delhi), other sites, imports (from foreign countries), Mumbai, Calcutta, Siligudi, Dulhasti (another LAJ project and main store), surplus Inventory at other sites of LAJ projects

- ***Purchasing***

The complete purchasing of equipment is done from all the above said vendors and the system is fully computerized now. Hence all entries of the minutest details have to be entered into the system so that final costing can be made. The complete procedure starting from the purchase requisition to the final purchase order approval can be done with the help of MAARSMAN1. which is user friendly. The transactions such as; Purchase Requisition, Purchase Requisition approval, Store Indent, Store Indent approval, Purchase Order and Purchase Order approval etc.can be easily made and data of these forms can be entered into the system without any problems or issues.

- ***Reports***

Reports such as; Purchase Requisition approval sheet, Store Indent, Indent Status reports (to check if material received), Enquiry and Negotiations can be generated daily, monthly or quarterly with the help of MAARSMAN1 and can be used for analysis of the material procured and consumed for production, Rate Variation analysis, Amendments, Cancellations, Manifests, Vendor Analysis and Receipt Statements GRN wise. Hence all these reports are read by the senior officials of the company and detailed analysis made are forwarded to the top management for further decision-making.

- ***Receiving***

Once the material purchase request is put up, the vendors send the material at the main store at the base camp. When the truckload of material reaches the main store and quality inspection is done and through then the data is to be entered for the material received. It includes the complete entries of the gate pass, goods received note etc. The various transactions that can be recorded using the MAARSMAN1 are: GRN Entry, Imported GRN entry, Material Replacement, Order Schedule and Gate entry which is very important for security purposes.

The main quality check i.e. "is the goods send are up to the set standards of the company at which they were demanded from the vendors?" is also done at the receiving level.

Also in Goods Receiving certain reports are generated for analysis and can be done for any time period required by the company. The various others reports generated are; GRN Report, Import GRN report, Gate Pass register, Discrepancy Vouchers, Rejected Vouchers, Intimation Slip, Receipt Statements (Supplier wise & Group head wise). System could sent Goods Received Note (4 copies) each to Supplier, Stores, Accounts division and Receiving Section

Inventory Management Module

The main central store is located at the base camp and LAJ has over 14 sub stores located in the area of operation. All the operations in the store including procurement, inventory management and receiving are fully computerized and MIS is implemented here and fully functional. The main inventory at the central store is actually divided into 17 major heads for e.g.: -

- 001 – all steel items
- 002 – general items
- 003 – Electrical items
- 004 – lubricants
- ----
- 017 – Assets (heavy machinery including tippers, bull dozers etc.)

All the items in the store are characterized by a 10 digit universal code that is used everywhere throughout all LAJ sites. The code is as follows: -

1409E01502 - WATER FILTER (Aquafina , 20 ltr. black colour)

The first four digits of the code are meant for the minor heads and then the details of the product follow further on. In inventory management the basic two transactions done are Store Issues and Material return note.

Other REPORTS that can be generated in inventory management are: Debit Note Voucher, Issue voucher, Daily Issue statements, Inventory on loan, Site monthly requirements reports, Stock ledger, Stock transfer, Stock more than maximum level reports, Stock less that minimum level reports and Inventory statements

In totality inventory management module helps the company to reduce the wastage and improve the availability of the raw material to the production sites. It also helps to co-ordinate the purchase, receiving and inventory departments of the company so that it is easy to understand the need and requirements of various employees and increase the productivity.

Human Resource Management (HRM) Module

HRM control is exercised from the main head office in New Delhi and Technology Centre of LAJ. For the project site, the total manpower of 900 employees has been posted for the complete execution of the project. Also the company further has contracts with various contractors in areas of different projects so that the supply of labour and workers is easy. The other types of workers are DWC Daily Wages Cadre (around 1000 in number including employees) and SWC-Staff Wages Cadre (around 5000 in number including workers and labour). The HRM module in the ORP could do the transactions such as Manpower planning, Recruitment selection Joining order, Joining order formalities, List of various, Salary and wages breakups, Reimbursements, Performance appraisals and Details of the current employees.

The module also takes care of the leaves throughout of the year in which around 45 are defined for a year and other leaves are entered as per requirements. This application is done by a LEAVE MASTER in the Maarsman1 software and is a very user-friendly application. Other different information like salary structures that are made site wise can also be done depending on which site the employee is currently located at. Also some of the deductions are preset that will take place by themselves at the start of the month and variable deductions are done as and when the facilities are used by the employees. For ex: - any employee who uses the mess facilities in the base camp can get his charges deducted by entering the number of meals he has had in the ORP and deductions of charges can be made directly. The ERP that is installed for Human Resource Management in JPA helps the HR employees to ease their operations and reduce paper work. It also reduces the time of operations and transactions in the company resulting into better productivity.

- ***Payroll***

The payroll of the company actually consists of the complete functioning of the HRM (employees) as well as the complete functioning of payroll (salary structure). The deductions are predefined in the HRM but there are other deductions that take place every month and they are handled in PAYROLL of the ORP. There are various transactions taking place in the PAYROLL module and they are; Shift Grouping, Shift Process , Leave Entry, Leave Cancellation, Loan and Advances, Attendance Confirmation, Attendance process, Attendance approvals, Mess Entry and Number of meals taken and Over Time

Earlier the company was using FOXPRO to enter the data of the employees and handling became very complex. There was very less security measures in the FOXPRO and no probable centralization took place. With the shift to ORP the benefits achieved are of high value as there is centralization and better security of data. The module is also capable of generating various reports that are used by the top management and the HR dept. to analyze the working and productivity of there employees. The reports that can be generated are; Shift Reports, Attendance Reports, Leave Reports, Joining Reports, Over Time Reports, Salary Reports, PF Reports, ESI Reports and TDS Reports

- ***Billing***

The genesis of the ORP at LAJ dates back to year 2003. Significant progress has been made since then in terms of Users Requirement Study (URS), Customization and roll out of all major business applications viz Purchase, Receiving, Inventory , Financial Accounting System (FAS) , Fixed Asset Management (FAM) & Payroll Processing. Today all transaction for these business processes are being carried thru ORP System at all site of the company. The development of billing (Client / PRW) module is an addition to the existing modules of the ORP System. The module primarily aims to raise work bill on client, based upon certified quantities of the measurement (MBS). Besides, system would also maintain track of payment received and recoveries made by the Client / Project Authority.

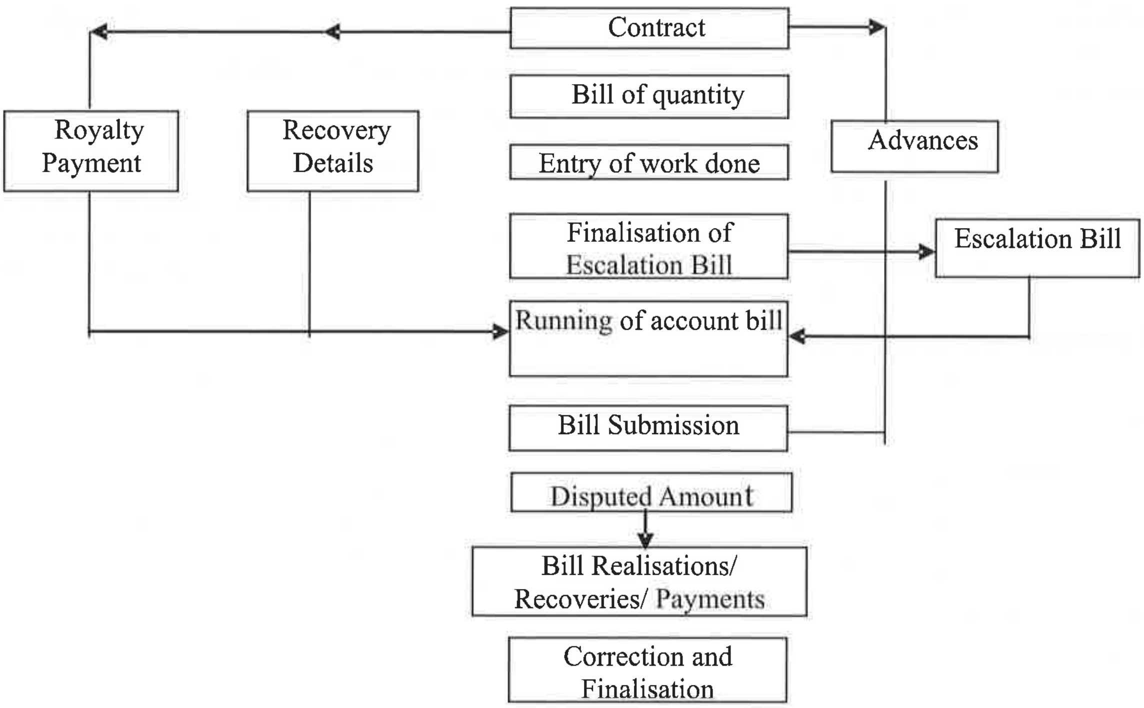

Figure III : Client Billing Module: - Work Flow

Codification Structure

- ***Contract Code***

Contract code is system generated single digit numeric code signifying the number of contracts for work. Contract code is used to separate transactions where more than one contract exists.

- ***BOQ Item Codification***

An alphanumeric five-digit codification structure has been designed for BOQ items for systematic and purposeful billing transactions. Besides, two sub levels also can be defined in 2 digit numerical numbers if needed. The structure would facilitate easy compilation of data.

- ***Group Code***

Group Code is a two digit manual serial code to tag the BOQ items with the main group.

Example: - Open Excavation, Under Ground Excavation and Structural Steel Support

- ***Sub Group Code***

The Sub Group Code is a two digit manual serial code to tag the BOQ items with the main group and the sub group. Example: -

Billing Group	Sub-group
01 – Open excavation	01 - Common excavation

- ***Escalation Component Code***

Escalation Component Code is the 10-digit user defined manual code. It is required to capture the required details of the escalation component. Example: -

Code	Description
CPI_GEN	Labor
WPI_MAT	Material
WPI_POL	P.O.L
WPI_STL	Steel

- ***Advances, Recovery and Reimbursement Code***

These are numerical two-digit system generated serial codes.Example:-

Type	Code	Description
Advance	01	Mobilization Advance
Advance	02	Machinery Advance
Recovery	01	Recovery of Mobilization Advance
Recovery	02	Sales Tax
Recovery	03	Retention Money
Recovery	04	Income Tax

- ***Royalty Component Code***

This is numerical two-digit system generated serial code. Example:-

Code	Description
01	SAND
02	Aggregate
03	Boulder

- ***DPR Group and sub group code***

This is also a two-digit system generated serial code.Example:

Group		Sub-group	
Code	Description	Code	Description
01	Underground Excavation	01	U/G excavation in flushing tunnel
02	Concreting		
03	Structural Steel Supports		

- ***R.A. Bill number***

This is a numerically four-digit system generated serial number.

Example:- 0157 ---- (RA Bill 157)

- ***Escalation bill number***

This is also a numerical four-digit system generated serial number.

Example:- 0046 ---- (Escalation Bill 46)

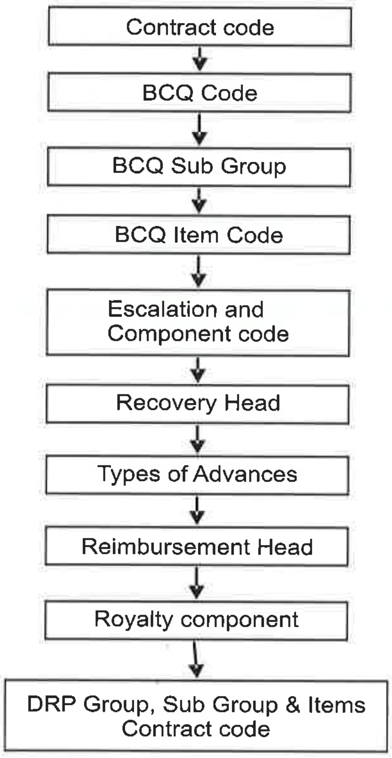

Figure IV : Billing System Coding Sequence Flow

Masters, Transaction Screens and Reports Generation

MASTERS

Work Contract

- Contract Profile Master - used for capturing all the details related to a contract like Contract Number, Name of work, Date of start, date of completion, project owner, billing currencies etc.
- BOQ Type Master- used for capturing the type of work in a contract like Civil work, Design engineering, Supply of hydro mechanical equipments etc.
- Bill Part Master - used for entering the parts of BOQ, which are being reflected in RA Bill like PART - A DAM WORK, PART -B Power House Complex etc.
- Bill Group Master- used to enter the main group of the BOQ item
- Bill Sub Group Master - used for entering the sub group of the BOQ items.
- BOQ Entry Master - used for the entry of the BOQ items of the contract. All details related to the BOQ items are being captured like the Item Description, part of the item (bill part), unit of the item, rate of item, finished quantity (closing balance), whether royalty applicable etc. authorized user can add new BOQ items or can change the existing items.
- Work location tagging with the BOQ items- Master is used for tagging the BOQ items with billing locations. Location is used for RA Bill preparation. Location wise Quantity for each item is entered for the billing cycle.

Escalation

- Common Escalation Component -Master is used for defining the escalation component, which is being used in escalation bill, like Labour, P.O.L, and Material etc.
- Escalation Component Tagging -Master is used for Tagging of escalation component with project contract
- Escalation Indices Transaction Entry -Master is used for entry I updation of monthly indices of escalation components

Advances, recovery and reimbursements

- Advance types: - Master is used to define various types of advances like Mobilization advance, Machinery advance etc.
- Recovery Heads: - Master is used for defining

various recoveries related to a bill and their parameters.

- Reimbursements: - Master is used for defining reimbursement heads under a contract.

DPR

- DPR Group Heads - Master is used for defining the Major Groups of DPR
- DPR Sub Group Heads - Master is used for defining the Sub Groups of DPR under Main Group.
- DPR Items Entry - Master is used for defining the DPR items, which is being used to prepare DPR day wise entry and report.
- BOQ Items tagging with DPR -Master is used to tag DPR items with BOQ items.

Royalty

- Royalty Components - Master is used for defining the components of royalty and their rates for computation of royalty.
- Royalty Tagging with BOQ Items - This master is used to tag royalty component with BOQ items and their composition for the various royalty component.

Transactions

DPR (Daily progress Report Entry)

This screen is used for DPR entry at various billing locations. Same transaction is used to print the DPR for that day.

Entry of work done - Location wise

This screen used to enter the quantity of each item for billing period at particular location. These transactions are being further used for preparation of RA Bill. Options available are:

- Create -Through this screen user can add location and item wise qty for the period of work done.
- Change - This screen is used to changes the qty of exiting items for word done period. If any item left out, the same can also be added.
- View - User can view the entry of work done for the selected period through this screen

R.A. Bill

- Process - This screen is used to prepare R.A Bill. System generates R.A Bill according to the defined parameters for the selected period of billing.
- View - This screen is used to view RA bill details on screen. Item wise remarks can also be updated if needed.
- Approval - Status of RA Bill is updated through this screen. For example Initial Bill can be changed to Authorized. Or Authorized bill can be updated as submitted. Like wise bill status can be updated as 'Corrected or Finalized' (Completed).
- Withheld - This screen is used to capture the item-wise withheld payment transactions.

Escalation Bill

- Processing Provisional Bill- This screen is used to prepare provisional escalation bill. Escalation bill is generated based on the given parameters by user.
- Approval -This screen is used to approve or change the status of escalation bill.
- Final Bill Processing - This screen is used to prepare the final escalation bill. System will check for the available indices for the period given by user and create escalation bill accordingly.

Advance Bill

This screen is used to capture the amount of advance taken. Details related to advance bills are also further used for recoveries of advance from RA Bills.

Recovery Transactions

- Change Before bill submission

This screen is used to change the recovery details of R.A Bill if any changes are to be made in bill before submission.

- Change after bill submission

This screen is used to change the recovery details of R.A Bill if any changes are to be made after submission of bill i.e. in Corrected bill.

Reimbursement Bill

- Create- This screen is used to capture the details of Reimbursement bill.
- Change -This screen is used to change the details of existing Reimbursement bill.

Work Plan

- BOQ.-This screen is used to prepare work plan for BOQ Items
- DPR -This screen is used to prepare work plan for DPR Items

Reports Generation

Following reports are available in client billing module under the report menu.

- 01 Daily progress reports
- 02 Royalty reports - Royalty Details and Royalty Statements

- 03 RA Bill - RA Bill and Extract of RA Bill
- 04 Escalation Bill - Escalation Bill, Abstract of escalation bill and Computation sheet of escalation bill
- 05 BOQ list
- 06 Work location wise entry report
- 07 Deviation Statements

Costing

Earlier the company was following the nominal financial accounting system (FAS). The FAS was giving only the overview of the profits and was not capable of telling the different various activities and the costs generated by them individually. Hence, the company was not able to calculate the profit /loss from each of the activity and it was very difficult to calculate the difference between the client rate and the actual cost

that the company was incurring for the process. All these posed a deeper threat to the business of the company as even cost of the tenders set could not be calculated perfectly. Hence ,the company went for ORP and deciding to do the complete costing for each activity considering Product , Location and Activity therein.

LAJ has done activity based costing as cost of each of the activity is taken separately and then cumulated to total cost of the project. For a hydroelectric project, the costing constitutes of the following components: -

- Head works DAM
- Water Conductor System (the head race tunnel)
- Power House (where generation takes place)
- Infrastructure (includes roads, houses, hospitals, mess etc.etc.)

The company has divided the complete project and main heads (mentioned above) in to over 500 cost centre codes. The cost centers can be direct or indirect cost centres. Depending if the cost incurred has any hand in the production (direct cost centres) or the cost incurred is a support function to the production (indirect cost centres). The codes generated are 7 digit codes and are as following:

The diagram above shows the breakup of the coding done to define the cost centre codes. The first digit of the code is the main location. The various codes that can be for main location are as follows:-

Code 1 = Head works, Code 2 = Head Race Tunnel

Code 3 = Power House Code 6 = Infrastructure

The second and third digits of the code are for the sub locations i.e. if the main location is Power House then the sub locations can be :-

Code 11 = Transformer hall, Code 23 = Bus Duct

Code 45 = Machine Hall Code 65 = Draft Tube etc.

The next two digits form the sub-sub location of the place where cost is being generated and finally the last two digits form the activity where the work is being done and money in any form is being used. The various activities included are: Excavation, Underground tunneling, Soil works, Concrete works, Steel reinforcements and Rock bolting. Etc. The costing module gets its information from various other modules of the software as following:

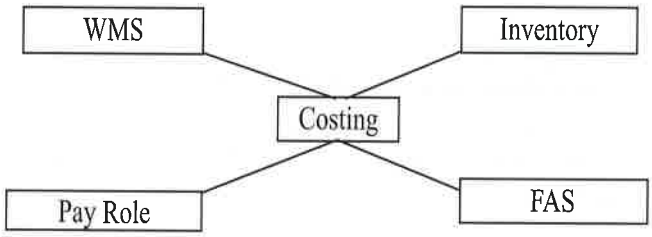

Figure VI : Cost Modules

The PAYROLL Dept. provides the information of the cost generated by the total employees and the INVENTORY department. tells the cost incurred in procurement of the materials. FAS (Financial Accounting System) provide other details of the costs generated and WMS (Workshop Management System) gives the information of the heavy machinery and its costs to the company. Hence all these other modules deliver the information of cost generated to the costing dept. and then the integrated cost is developed that tells the cost of the final project for a given time period.

Further on, Costing of the project is divided into two parts such as direct costs and indirect costs. The direct

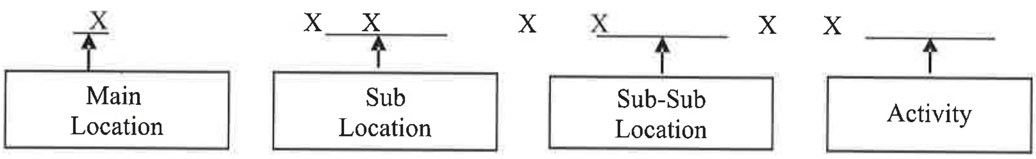

Figure V : Break-Up of the Coding

costs covers:-

- ***Power Cost***

The total power used in LAJ comprises of the power from the state electricity board (SEB) and the diesel generator Costs (DG SETS). The SEB cost is calculated on the basis of units consumed per month and the cost per unit is pre defined by the state govt. The DG sets cost varies with the variation in the rates of diesel and other equipments. The WMS (Workshop Management System) module helps the costing dept. to govern the per unit rate of the DG Sets and hence makes it easy to integrate the total cost spend on the power as well as electricity for all the direct and indirect cost center heads. Hence the power consumption all over the LAJ setup in hydroelectric project is feeded monthly and the total cost generated is known.

- ***Equipment Cost***

The WMS module is very effective and provides the basic required information to the costing dept. The WMS covers all equipment, material, labour, diesel, deployment of heavy machinery and the cost incurred in these activities and forwards the information to the costing dept.

For example, A 'TRIP CARD' is given to each operator using heavy machinery like cranes, bull dozers, tippers etc. the card has a front side as well as a back side. The front side is used to capture the attendance of the operator and the back side has space which is filled up with information like where the equipment is deployed, who is operating it, what are the working hours, breakdown hours and idle hours of the machinery. This information helps in to calculate the per hour productivity of the machinery as well as the operator. Also it is easy to calculate the per hour rate of the equipment that is being used. This TRIP CARD is then send to the WMS dept. and when information is completed and fed into the system, further on forwarded to the costing dept.

- ***Manpower Cost***

Two modules of the ORP i.e. HRM and PAYROLL provide detailed information to the costing department about the attendance of the employees. The information is based on the various cost centre codes and the employees working in these cost centres. Hence it becomes very easy to calculate the cost generated per cost centre of all the employees in that cost centre. Also various value works by the PRW (piece rate workers) is calculated by the billing department and then it is also supplied to the costing dept. The billing department has a separate PRW section which measures the output of the PRW and gives the monthly reports and payments information to the costing dept.

- ***Material Cost***

The material costs are provided by the three different modules and they are as

Purchase, Receive and Inventory management

These modules of Maarsman1 provide the complete details of the costs incurred in the procurement of material and then finally can be accessed by the costing department. The Indirect Cost covers ,Production Cost, Service Cost and Overhead Cost

The Indirect costs are collected from the Financial Accounting System (FAS). In the project on an average the cost of any cost centre code is calculated on percentage basis such as Direct cost – nearly 70% - 80% of total cost.and Indirect cost – around 20% - 30% of total cost.

Where direct cost is incurred the indirect cost (total) is proportionally divided among various direct cost centre costs on basis of direct cost. The billing dept. takes the Direct Cost Centre Costs output per month e.g. how much concrete is used in 1 month is the output in DAM. This is given as the progress report to costing centre on basis of Direct Cost Centre Codes and then fed into the costing module.

Summary

LAJ being the first construction company in India, which has implemented the MIS. ORP has definitely gained a competitive advantage over its competitors. Even the distribution channel management has improved and resulted into quicker delivery times, problem free delivery, and preferential treatments. The investment in this technology, and the experience gained in learning how to use it, can be a role model in project construction industry. The company has obtained economies of scale in purchasing, and production; economies of scope in distribution; reduced overhead allocation per unit; and shorter break-even times. And finally over all Brand Equity of the company has also risen resulting into better profitability and more projects for LAJ in the later stages. 'LAJ' MIS implementation has produced major differences in the construction industry. They have installed the package for almost 90% of its project and in process of extend to full commercialization across its all project centres which would in turn help them to analyze the complete profitability of the company.

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ORP Billing Functions, User Manual

Book Review

Title

India's contribution to Management

Author(s)

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Published by

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Reviewed by

Pramod Pathak*

For an MBA from Kellogg majoring in Marketing, International Business and Organisation Behaviour with an MS in Computer Science in the area of Artificial Intelligence from Florida, 'India's Contribution to Management is rather unlikely to be expected'. Yet, the author has chosen the subject, and more importantly, done justice to that. While it has been long realized that Management cannot be separated from the cultural moorings of the society where it is practiced, American concepts and theories find maximum place in Management literature. It goes to the credit of the author that he chose to be different. India is the oldest continuing civilization in the world and has made outstanding contributions to the various fields of knowledge over the millennia. Influenced by Sri Aurobindo and his philosophy, the author has in his book brought together articles on management that he has written over the past few years. These articles are refreshingly original and present an alternate view on Management Philosophy establishing supremacy of the Indian thought for effective Management practice.

Talking about the Asian resurgence the author in his opening article in the first part of the book very lucidly reasons out why Asia as a whole is set to dominate the Global scene. While his philosophical outlook gives a better look at the big picture, his management orientation helps in synthesizing ground realities with philosophy. He rightly says that we need to reform our gaze to become aware of both the Earth and the Sun. Much of all this is evident in the changing focus of Global leaders from development friendly environment to environment friendly development. He has outlined the role India is likely to play in Asian resurgence and has dwelt upon the issue of east-west synthesis.

The second part of the book deals with the need for a new management framework as, the author argues, the complexities of problems have grown manifold. Human abilities, too, have grown immensely. It is time then to think of a new paradigm that helps managers acquire spiritual bliss along with material gains.

In the second part the author also talks about the macro trends as well as the digital economy that needs to be taken care of. Digitization and virtualization have created a new world altogether. This world is an entity that defies logic of the conventional world. Thus, here, individuality is operating within a planned collectivity and boundaries of the conventional world do not exist. It is a free floating environment. The modern day organisation has to cope with the contradiction that exist between the digitized virtual work place and the conventional structured set up as the two seem to co-exist in many cases. This dynamics, then, is of an altogether different kind. Thus the author goes to suggest an effective approach to change management in the next chapter of this part which aims to help organizations acquire the ability to gain higher mastery over their environments. In the final chapter of this part of the book the author talks of a leadership model that he claims will help managers develop capacity to lead more effectively in the volatile global environment.

The third part of the book is about the future of business as well as the future of organization and bringing about compatibility between the two. The author uses the analogy of oxygen to explain that businesses don't exist purely for profit just as oxygen, though essential for human existence, is not the purpose of living. Organisations have a much larger role to play. This part is in fact the crux of the author's thought and offers enjoyable and enriching reading. A good read, the book is to be chewed and digested.

Dr. Pramod Pathak*, Head, Department of Management Studies , Indian School of Mines Dhanbad-826004

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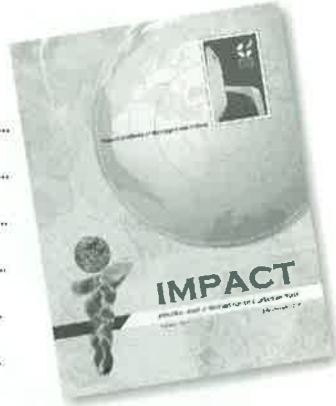

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