SCMS JOURNAL OF INDIAN MANAGEMENT

Contents

Volume 5 **January - March 2008** **Number 1**

The Chairman speaks ...

Technological advancement brings about changes in the social firmament also. Industrial revolution, in the last century, caused large scale migration of people from villages to seek jobs elsewhere in cities. Many people left farming and opted for factory work, which was more remunerative.

Along with economic prosperity, migration, which continues even today, has brought in its train better amenities and more comfortable lifestyles. Modern lifestyles are so alluring that it may not be without its own problems and challenges. Race for achieving more comforts and conveniences is unending. The stresses and strains brought about along with it are tiresome. But few bother about it. The displacement has caused fragmentation and alienation in family units. The family units are now more vulnerable to adversities such as soaring divorce rates, high rates of suicide, entanglement in debt traps etc.

Apart from all the above, the benefits of technological advancement are not equitably shared within the society. People who become rich get more opportunities to acquire still better technologies and utilize them to become richer. Therefore, on the one side technology creates more wealth and on the other side it leads to greater social divisions.

I hope you might find it interesting to read the lead article in this issue, a paper by Dr. K. Babu Joseph titled "Technological Impact on Society: A Model." Dr.Babu Joseph, formerly Vice Chancellor of the Cochin University of Science And Technology, is our Director of MCA Programmes. In the second lead article, Prof.Prabhakar Kaushik and Dr.Dinesh Khanduja of NIT, Kurukshetra make a critical investigation on the application of Six Sigma methodology in process industries and show how operational excellence can be achieved with certain different ground rules.

As usual, you will find papers on other interesting areas like portfolio management, tourism, human relations, livestock farming etc. I am sure you will enjoy the assortment. Let me assure you that we will continue to do everything possible to meet the expectations of our avid readers.

Dr.G.P.C.NAYAR
Chairman, SCMS Group of Educational Institutions

SCMS Journal of Indian Management

A Quarterly Publication of

SCMS-COCHIN

Editorial

The Ear and Business

The sensory organ of the auditory system is the ear. Sound waves cause the tympanic membrane (ear-drum) to vibrate and humans can hear sounds: waves with frequencies between 20 and 20,000 Hz. This faculty of the ear is greatly related to business today.

Consumer spending on music is noted in three sectors: recorded music, live music, and music instruments. Recorded music dominates, but this large market is on the cusp of a technological revolution that will eventually transform the way the majority of people buy music. By 2010 legal down loading will account for more than a third of consumer spending on recorded music. In mainstream music, recording and marketing are now dominated by just four majors worldwide: UK's EMI Group PLC, Universal Group and Warner Music Group (US), and SONY BMG (Japan/Germany). The world of music provides an excellent metaphor for today's business climate: by examining the orchestra and the conductor, the jazz band and improvisation, the composer and innovation, music and management, it introduces a dynamic vocabulary for discussing leadership, teamwork, creativity and personal development, inviting participants to explore new ways of thinking about business practice.

Every business is becoming a "music business" or, more accurately, an entertainment business. Tom Peters claims that it's barely an exaggeration to say that everyone is getting into the entertainment business. Music Business to Musician Business taking a cue from the cyber-bard John Perry Barlow, we could see a paradigm shift from the domination of the music business to that of the musician business. What do the cultural industries do? The cultural industries, the recording industry, the arts, television, and radio commodify, package, and market experiences as opposed to physical products or services. Their 'stock in trade' is selling on short term access to simulated worlds and altered states of consciousness. The fact is that they are an ideal organizational model for a global economy that is metamorphosing from commodifying goods and services to commodifying cultural experience itself. The same forces that are undoing the larger business companies are empowering individual musicians. As a result, the idea of a music career is sprouting new wings as artists and industry careerists begin discarding intoxicating myths and tapping into some new-found powers. The triune Music Industries develop side by side: the mainstream pop/rock business, will continue to market established stars like Celine Dion and Whitney Houston, the chaotic illegal record business will involve pirates and bootleggers, and the indie, genre music scenes (local players connected through websites and digital radio, but commercial in their niche) will make enough money to go on making music.

Music may be defined romantically as **the food of love** (Shakespeare). Music, in prosaic business terms, is **sound with particular characteristics**. However, it is undeniably a **vibrant art form** and one which touches more people, in more ways than any other art form.

In business, music certainly generates a higher market value than the other arts, although a comprehensive market size for music in all its manifestations is impossible to calculate.

Dr.D.Radhakrishnan Nair

Technological Impact on Society: A Model

K.Babu Joseph

Kurzweil's model of technological growth (Kurzweil, 2005a) has been criticized for its failure to address the social impact. An alternative model is proposed with focus on the number of technological gadgets in use per person, rather than the total number of innovations which includes inventions as well as technologies. The fundamental differential equation in the present formulation contains two parameters λ and μ, called the technological adoption rate and retentivity respectively. Its solution yields the technological utilization factor (TUF), T. The ratio of T(t) to T(0) for arbitrarily large times, called the technological impact factor (TIF), is shown to be equal to $1 + \frac{1}{\mu}$. For finite μ, however small, there is no singularity in the model, despite the possibility that the impact can be considerable on a society which is favourably disposed towards technological change.

The growth of science and technology over the past three or four centuries has trapped mankind in a state of euphoria concerning achievements in the economic, political and social spheres. Economists in the past have extensively studied the phenomenon of economic growth (Sen, 1970; Barron and Sala-i-Martin, 2004). Gradually the concept of development has emerged as all-round progress. Development no longer refers to creation of wealth alone but also diverse things such as eradication of poverty and malnutrition, increase in life expectancy and quality of life, and medicare. Linked to it are factors like reduced infant mortality and access to education and knowledge (Ray, 1998). All this has become possible thanks to giant leaps made in science and technology.

Dr.K.Babu Joseph, Director-MCA Programme, SCMS School of Technology and Management (SSTM), Prathap Nagar, Muttom, Aluva-683 106, Cochin. He is formerly Vice Chancellor of Cochin University of Science And Technology, Cochin, Email: babu_65@hotmail.com

Recently Kurzweil (2005a) has put forward the stunning hypothesis that human knowledge is expanding beyond bounds and will soon hit a singularity (infinity). He speaks as if this is an immediate certainty. Several earlier authors have also made speculations along similar lines (Kurzweil, 2005b). We shall however accord his statement only the status of a hypothesis, because, centred as it is, on the possibility of reducing all knowledge to computable knowledge, it says nothing about the response of society towards innovations. Even

if the world of knowledge were to blow up, there is no guarantee that the singularity would be readily welcomed by the society. This gives the motivation to formulate an alternative approach which emphasizes the social impact of technological progress. In this paper a theoretical formulation of such a model that incorporates only measurable quantities is presented.

Kurzweil's Singularity Hypothesis

Kurzweil (2005a) defines the singularity as a future period, during which the technological change will be so rapid that human life will be irreversibly transformed. He has enunciated what he calls the law of accelerating returns which predicts that the pace of change of human created technology is accelerating at an exponential rate. The gist of his argument is that, within a few decades, information-based technologies will engulf the entire gamut of knowledge as well as diverse forms of intelligence. There is every chance of the emotional and ethical behaviour of humans is also stimulated by artificial intelligence software.

Besides physical time t, he introduces the two quantities V and W, where V denotes the velocity or power of computations expressed in terms of computations per unit cost, and W is the world knowledge in respect of computer manufacturing. He also makes the following assumptions:

(i) V is proportional to W.
(ii) The rate of change of world knowledge is proportional to V.
(iii) The resources used for computation are growing exponentially.

Kurzweil then shows that the world knowledge accumulates at a double exponential rate:

$$W = W_o \exp(k \exp ct) \qquad [1]$$

where k and c are constants, defined in terms of other constants, and W_o is the initial value of W.

The assumption listed as (iii) above implies exponential growth of the economy. This is a debatable point, because it is known from extensive data that the annual per capita growth rate is less than 10 per cent in almost all countries (Barro and Sale-i-Martin, 2004). Even if this assumption were rejected, the Kurzweil model would still predict exponential growth in W with time. The model is not realistic to the extent that it does not say anything about how the development in knowledge will be received by the society. Just as there survive vast sections of people below the poverty line, there are also large islands of ignorance in society. This is the current situation in several countries. The truth is that the waves of knowledge explosion are too slow to reach the common people living there.

Technology Impact Model

The inadequacy of the Kurzweil model in expressing the social impact of technological growth motivates the formulation of a new approach to the problem. To keep matters as concrete as possible, we exclude purely theoretical developments in society from this study on the plea that, sooner or later, technology absorbs the philosophical turbulence that rocks the scientific boat from time to time, and that quantification would be easier with the abstract content excluded from the model.

We assume that the technological impact on a society is measurable in terms of the number of gadgets employed by it, where the term gadget refers to any contraption or device used to augment the comforts of life. Since research is also a social activity, the tools used in scientific investigations are also subsumed by this quantity. It comprises the number of radio sets, TV sets, air conditioners, washing machines, computers, computer-based devices, vehicles, machine tools and so forth. The specification of items like these is essential for defining the parameters of the model whose values depend on the items included in this list.

We define the technology level N of a country or community as the total number of (specified) gadgets used by the people, in the sense outlined above.

The technology utilization factor TUF is the ratio of N to the population P under consideration:

$$TUF = N/P \qquad [2]$$

It is clear that TUF is analogous to GDP. We denote TUF by *T*. It is a function of GNP which in turn, depends on time. So it is reasonable to attribute temporal dependence to *T*. Thus

$$T = T(t) \quad [3]$$

At a point of time, T may be regarded as depending on the stock of technical gadgets available per person, as well as on the person's affinity towards the gadgets already in possession. Those who own some of them are likely to aspire to buy more such objects. People who already have a bike or small car go in for a small car or a big car, as the case may be, while retaining the old one. There is a group who steadfastly cling to the objects they own and do not want to buy new things. To buy or not to buy new things—that is the question!

The rate of change of T is determined by its current value as well as the tendency not to change it or to retain existing stock. Accordingly we postulate the following rate equation:

$$\frac{dT}{dt} = \lambda T - \mu T^2 \quad [4]$$

where the parameters λ and μ are called the technology adoption rate and retentivity respectively. Both λ and μ are defined to be positive. Their actual values depend on the list of articles used in defining T. The first term on the right in (4) represents an increase in $\frac{dT}{dt}$ with T while the second term represents a decrease with T^2. The net rate of change in T is a 'compromise' between the two rival tendencies, namely adoption and rejection. It is worth noting that the first term in our model mimics the only such term in the Kurzweil formulation which features W the world knowledge, rather than T.

The novel feature, herein introduced is the 'retentivity' term - μT^2. The differential equation (4) can be solved exactly to yield T as a function of time:

$$T(t) = \left(\frac{\beta\lambda}{1 + \mu e^{\lambda t}} \right) e^{\lambda t} \quad [5]$$

where β is an integration constant. Alternatively, the solution of (4) is expressed in the form

$$T(t) = \left(\frac{(1+\mu)T(0)}{1 + \mu e^{\lambda t}} \right) e^{\lambda t} \quad [6]$$

The technology impact factor (TIF) is defined by the ratio

$$\mathrm{TIF} = \lim_{t \to \infty} \frac{T(t)}{T(0)} \quad [7]$$

TIF is evaluated by invoking L'Hospital's rule of calculus. Accordingly we find:

$$\mathrm{TIF} = 1 + \frac{1}{\mu} \quad [8]$$

This result is interesting, because it explains the two extreme cases: (i) $\mu = 0$, (ii) $\mu = \infty$. The first of these represents the ideal Kurzweil situation in which technology undergoes infinite growth while the second highlights the attitude of a tradition-bound society that refuses to accept anything new. In a realistic case, $0 < \mu < \infty$, and the current model is expected to account for all cases of technological impact. Because of poverty or conservatism, μ will be different from zero in practice. Hence there is no singular behaviour in TIF even at infinitely large times.

The time required for TIF to double is given by the expression:

$$T_2 = \frac{1}{\lambda} \log_e \left(\frac{2}{1-\mu} \right) \quad [9]$$

The time required for trebling is

$$T_3 = \frac{1}{\lambda} \log_e \left(\frac{3}{1-2\mu} \right) \quad [10]$$

From an annual enumeration of T values for a social group over a period of 10 to 20 years, a fairly accurate determination of λ and μ would be possible. It may even turn out that education and global economic influences modify their values once in a while, leading one to suspect a temporal dependence for them. But over a shorter span, say five to ten years, λ and μ are likely to remain constant in most countries.

Concluding Remarks

We have presented a new model of influence of technology on society as a viable alternative to that of Kurzweil in which the psychological factor inhibiting technology adoption, namely retentivity, is overlooked. The current model is based on how a real society responds to technological progress. The formulation showcases the parameters λ and μ, which can be evaluated for a given social group, using relevant data over a period which is not too long. Over sufficiently long periods, λ and μ are also liable for change, falsifying the long-term prediction made in (8). But the usefulness of the model as a better approximation than Kurzweil's over comparatively short epochs, is clear.

Acknowledgements

The author thanks his colleagues for valuable discussions

which took place during a *Satchat* [meeting place for academics] session, at SCMS. The author is also grateful to Dr.G.P.C.Nayar, Chairman, SCMS Group of Educational Institutions, for encouragement and support.

References

Barrow, Robert J., and Sala-i-Martin, Xavier. *Economic Growth* (Second Edition). Prentice-Hall of India, New Delhi: (2004): 12-21.

Kurzweil, Ray. *The Singularity is near.* New York: (2005): (a) 7-17, 491-493, (b) 24, Viking.

Ray, Debraj. *Development Economics*. New Delhi: OUP, 1998. 9-10.

Sen, Amartya (Editor), *Growth Economics: Selected Readings.* Penguin, Hammondsworth, 1970. 9-40.

DMAIC Methodology:
The Enigma of Six Sigma

Prabhakar Kaushik and Dinesh Khanduja

Increasing competitive pressure in all business sectors is reflected in the continuing quest for business improvement philosophies and methodologies. Recent developments have included more organizational and academic interest in the Six Sigma approach for business improvement. Six Sigma is a powerful breakthrough improvement business strategy that enables companies to use simple but powerful statistical methods to define measure, analyze, improve and control (DMAIC) processes for achieving and sustaining operational excellence. In the past few years, successful cases of Six Sigma implementation have been reported in numerous manufacturing industries. This technique has also been implemented in some service industries, but the same cannot be said about its implementation in the process industries. Applying Six Sigma to process industries is still limited. This paper reviews the application of Six Sigma DMAIC methodology in process industries with certain different ground rules and shows how the goals for Six Sigma in process industries can be achieved and surpassed through the complimentary usage of Six Sigma methodology.

In today's fast paced global economy market constraints are demanding that companies produce their product more quickly and with a better quality. The fast changing economic conditions such as global competition, customer's demand for high quality products had a major impact on organizations. Highest quality products and services were required to be offered at the lowest possible costs for maximizing customer satisfaction. Developers needed to create innovative complex products in lesser time. Six Sigma approach if applied prudently can meet these expectations of customers and organizations. Six Sigma as a measurement standard in product variation can be traced back to the 1920 when Walter Shewhart showed that three sigma from the mean is the point where a process requires correction (Pande et al., 2000). Motorola is the oft-cited creator of the formal Six Sigma methodology. Smith (1993) implies that Motorola first embarked on its Six Sigma quality initiative in the mid-1960s and the concept of implementing Six Sigma processes was pioneered at Motorola in the 1980s. Their approach was based on rigorous Japanese theories of TQM for use in the manufacturing process, where

Prof.Prabhakar Kaushik, Assistant Professor, Mechanical Engineering Department, N.C. College of Engineering, Israna (Panipat) Haryana, E-mail: parbhakarkaushik@yahoo.com

Dr.Dinesh Khanduja, Assistant Professor, Mechanical Engineering Department, National Institute of Technology, Kurukshetra (Haryana), India, E-mail: dineshkhanduja@yahoo.com

defects are relatively easy to spot and count and thus well suited to the high-volume, high precision electronics industry that has highly complex processes (De Feo, 2002). Motorola's specific involvement with Six Sigma began in 1982, when it implemented a quality-improvement program focused on manufacturing. Motorola's CEO asked his corporate managers to cut quality costs in half that year. He repeated the charge in 1983. By 1984, the cost reduction efforts were beginning to point to the need for improved analytical methods and product design for continued process improvement. The company's emphasis focused on design quality and a number of advanced quality tools were employed (Hendericks and Kelbaugh, 1998). It is no surprise that the first proponents of Six Sigma after Motorola were Texas Instruments, Allied Signal, Eastman Kodak, Borg-Warner Automotive, GenCorp, Navistar International and Siebe plc (Kumar, 2002). These forerunners of Six Sigma documented their discoveries and successes and, in the ensuing years, other companies followed their lead. While the original goal of Six Sigma was to focus on the manufacturing process, it became clear that the distribution, marketing and customer order processing functions also needed to focus on reaching Six Sigma quality standards (Smith, 1993) and eliminating defects throughout the organization's processes. Motorola eventually developed its Six Sigma tools curriculum and created Six Sigma practitioner qualifications. These early efforts led the company to winning the Malcolm Baldrige Award in 1988 (Hendericks and Kelbaugh, 1998).

What is Six Sigma?

Sigma (σ) is a letter in the Greek alphabet that has become the statistical symbol, which is used in mathematics and statistics to define standard deviation. The sigma scale of measurement is perfectly correlated to such characteristics as defects-per-unit, parts-per-million defective, and the probability of a failure. Six is the number of sigma measured in a process, when the variation around the target is such that only 3.4 outputs out of one million are defects. Coronado and Antony (2002) pointed out that Six Sigma methodologies have recently gained wide popularity because it has proved to be successful not only at improving quality but also at producing large cost savings along with those improvements. So, an organization needs to give smarter Six Sigma solutions that are linked to bottom line benefits. Kumar (2002) has stated that Six Sigma is a statistical measurement, which provides the opportunity and discipline to eliminate mistakes, improve morale, and save money. Doing things rightly and keeping them consistent are the basic ideas behind Six Sigma. A fundamental objective of Six Sigma is to achieve customer satisfaction with continuous improvement in processes.

According to Harry CEO of Six Sigma Academy Phoenix, USA:

⇒ Six Sigma is a well structured, disciplined, data driven methodology for eliminating defects, waste, or quality con trol problems of all kinds in manufacturing, service delivery, management and other business activities.

⇒ It is a business strategy that allows companies to drastically improve their performance by designing and monitoring everyday business activities in ways that minimize waste and resources while increasing customer satisfaction.

According to O'Neill and Duvall (2004), Six Sigma (6σ) is a disciplined quality improvement methodology that focuses on moving every process that touches the customers - every product and service - towards near perfect quality. It is measure of the company's quality. Maleyeff and Krayenvenger (2004) noted that Six Sigma implies three things: statistical measurement, management strategy and quality culture. It is a measure of how well a process is performing through statistical measuring of quality level. It is a new management strategy under leadership of the top management creates quality innovation and total customer satisfaction. It is also a quality culture. It provides the way to do things right the first time and to work smarter by using data information. It also provides an atmosphere to solve many CTQ (critical-to-quality) problems through team efforts.

Six Sigma Goals

Six Sigma is a disciplined, data driven approach and methodology for eliminating defects (driving towards six standard deviation between the mean and the nearest specification limit) in any process from manufacturing to process industry and from product to service. The statistical representation of Six Sigma describes quantitatively how a process is performing. Six Sigma's goal is the near elimination of defects from any process, product or service-far beyond where virtually all companies are currently operating.

Six Sigma focuses all function on "processes." Every process/ procedure has an expected outcome/measurement called a "mean." Every outcome/measurement has some variation. The

measure of that variation is called sigma. Thus, the focus of Six Sigma methodology in manufacturing/process is to reduce variation as shown in figure 1. The numerical goal of Six Sigma is reducing defects less than 3.4 parts per million (PPM), also know as Defects Per Million Opportunities (DPMO), reducing cycle time and reducing costs dramatically which impact the bottom line. Reducing variation and mean is the essence of Six Sigma and a Six Sigma defect is defined as anything outside the customer specification. The parts per million defective with respect to various sigmas are given in Table 1.

Figure 1- Reducing Variation - Reducing Defects

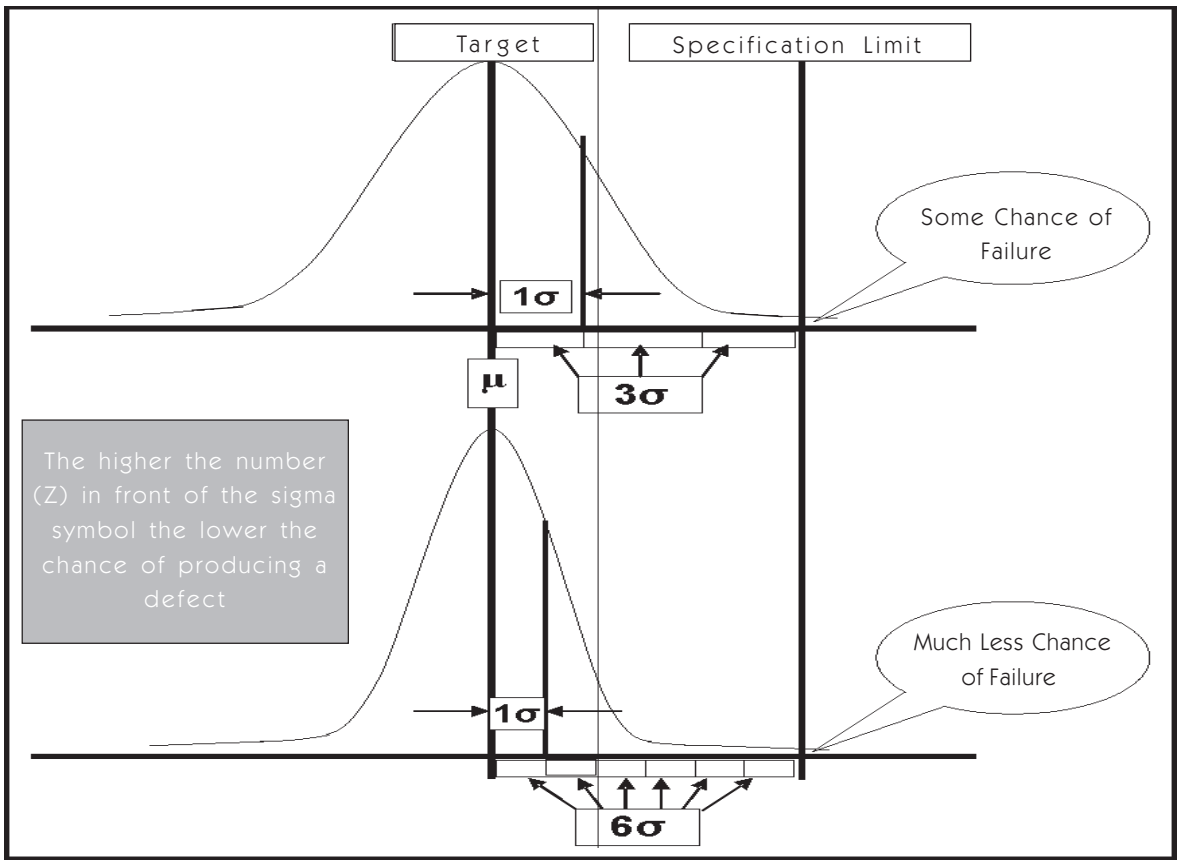


Table 1: Sigma and Corresponding PPM

Sigma	Per cent Yield	PPM
6	99.9997%	3.4
5	99.98%	233
4	99.4%	6,210
3	93.3%	66,807
2	69.1%	308,537
1	30.9%	691,462

Nature of Statistical Problems

Six Sigma is a statistically based quality tool as it deals with the statistical problems. The nature of statistical problem is shown in figure 2 and figure 3.

Figure 2 shows the problem with spread or variation. Most of the quality and management problems are due to the existence of product variation. All defects and non-conformities would have vanished if variation could have been vanished. This type of problem is mainly associated with product industries.

Figure 3 shows the problem with centering or the mean value. This type of problem is mainly associated with the process industry where consumption rate is very high and to reduce the consumption rate, statisticians have to develop methodology and tools for estimating, comparing, controlling and reducing mean value.

Figure 2 – Problem with Spread or Variation

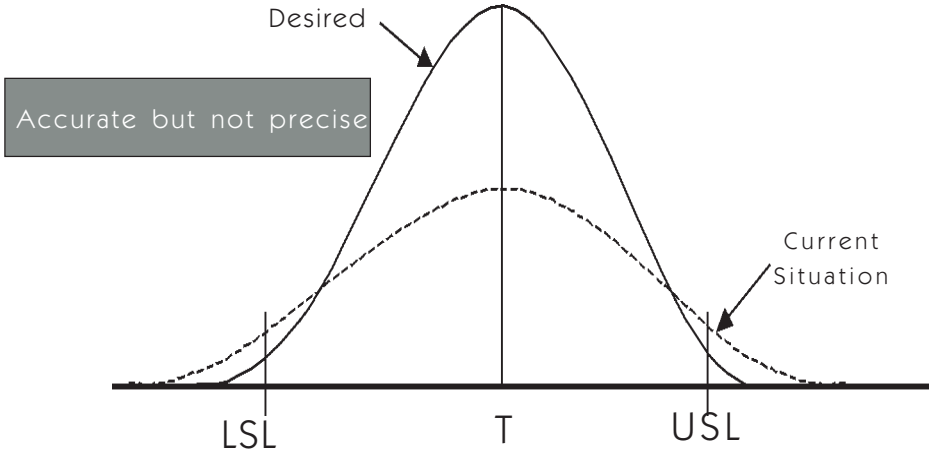
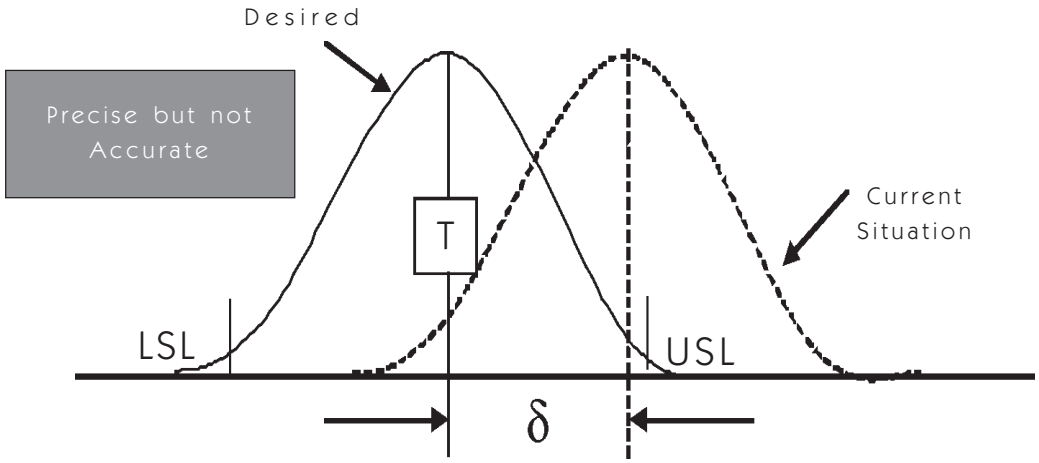


Figure 3: Problem with Centering or the Mean Value



Application of Six Sigma DMAIC Methodology in Process Industries

Six Sigma, as a quality tool has found place primarily in manufacturing industries where there is a specific product with specified dimensions, which are measurable at every intermediate stages of manufacturing for making necessary measurements and analysis. On the other hand, in the process industries, no such convenience is available. The working fluid in these industries may not be visible and its quality is measured by the various instrumentations mounted on the process hardware in the form of pressure, temperature and flow measurement. Application of Six Sigma to such processes is possible with same kinds of tools, but certain different ground rules are required to be laid down before starting such an exercise. The ground rules that are to be followed: -

⇒ Normally in manufacturing industries, the production is already operating at 1-2 sigma level and by applying Six Sigma methodology it can be raised up to 5-6 sigma levels, whereas in process industries, there are many sub- processes that operate even at negative sigma level because of being secondary in nature and here improvement potential is up to 2-3 sigma level with logical tools application only and the cost benefits accrued thereof are quite significant.

⇒ In a product manufacturing, the defined dimension of the product is required to be maintained and dimension is measurable. Both upper and lower limits are normally specified for the measured value. On the other hand, for the measured value in the process industries, normally there is limit only on one side i.e. upper or lower limit e.g. Impurity in a chemical compound or consumption of water in a process. The impurity level in a chemical compound should not increase beyond a certain upper limit, while no lower limit is required to be defined as it is of no importance.

⇒ Normally the process industries are huge investment industries viz. Thermal Power Plant, a Fertilizer Unit, a Chemical Plant. It may not always be possible to improve sigma level of the process by applying breakthrough improvements/changes. So in process industries, a quantum jump in the sigma value by application of Six Sigma tools should not be expected. The approach that needs to be followed is that of the logical reasoning and patience. The expectation from Six Sigma should be of gradual and continual improvement in the process.

⇒ For doing measurement Gauge R&R study, it is not always possible to check the instrument healthiness at any point of time or even taking it on to a laboratory may not always be possible. So measure phase of process industry presents a different scenario as compared to manufacturing industry. The process industry being a continuous process, does not have discrete outputs within the process which can be measured separately i.e. the item measure is not a specific event. For such situations, another measuring device of tested accuracy and characteristics needs to be put in series to the original instrument before Gauge R&R study (It may require shutdown of the process for some time). It will assist in cross checking the existing measurement device also.

⇒ Substantial short-term benefits can be easily calculated of any quality improvement technique in a manufacturing industry. On the other hand, in a process industry, the short term benefits may not always be appreciable. The fact that needs to be kept in mind here is the life span of that industry (usually it is 15 to 25 years). The benefits potential of the Six Sigma application also needs to be calculated over the entire life span, then only the final decision regarding applicability of Six Sigma tools can be reached.

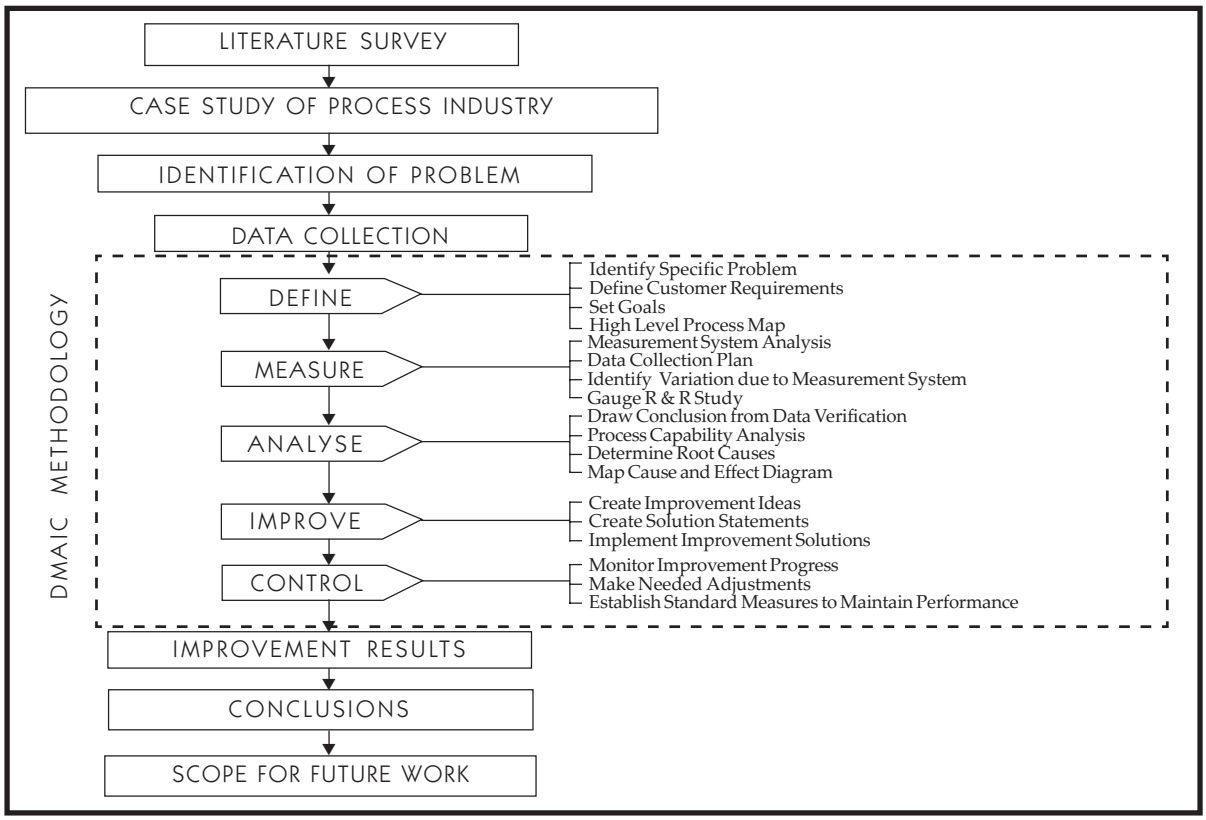
Methodology Adopted

For any problem solving, the methodology adopted must cover all possible causes of problem. If the methodology of problem solving is not comprehensive enough, the solution arrived at won't be complete and the problem shall resurface sooner or later.

A process flow chart is prepared to proceed in a sequential manner and to present a one shot picture of the entire methodology, as shown in the figure 4.

Literature survey is chosen as the first step to know the present status of research and application of Six Sigma in the process

Figure 4 – Flow Diagram of Methodology Adopted



industry. From the literature survey, it is found that most of the Six Sigma work has been carried out so far in manufacturing industries only and there is a definite scope of improvement in process industries through Six Sigma application. For this reason, an initiative has been taken to apply Six Sigma to a process industry.

Six Sigma tools and techniques are applied to the collected data using DMAIC methodology. Minitab software for Six Sigma, which is easily available, is used for data analysis.

The study covers the following phases of DMAIC-methodology. The details of each step taken for our study is as follows: -

Define

Define the problem and what the customer requires (Henderson and Evans, 2000). The define phase sets the expectation of the improvement of project and maintenance of focus of Six Sigma strategy on customers' requirement. The quality problem that requires break through solutions has to be defined in measurable terms. The defining of the problem is the first and the most important step of any Six Sigma project because better understanding of the problem makes the job much easier later on during analysis. The defining of the problem forms the backbone of any Six Sigma project. The objectives to define a problem are as listed: -

- To identify the process or product for improvement
- To identify the voice of customer
- To identify the customer's requirements and translate the customer needs into CTQ's

There are many tools used in Six Sigma methodology for defining the problem but the "High Level process map - a SIPOC diagram" as shown in figure 5, is one of the best tools being used in defining a problem as it fulfills all the basic objectives to define a problem.

Figure 5 - SIPOC-Diagram

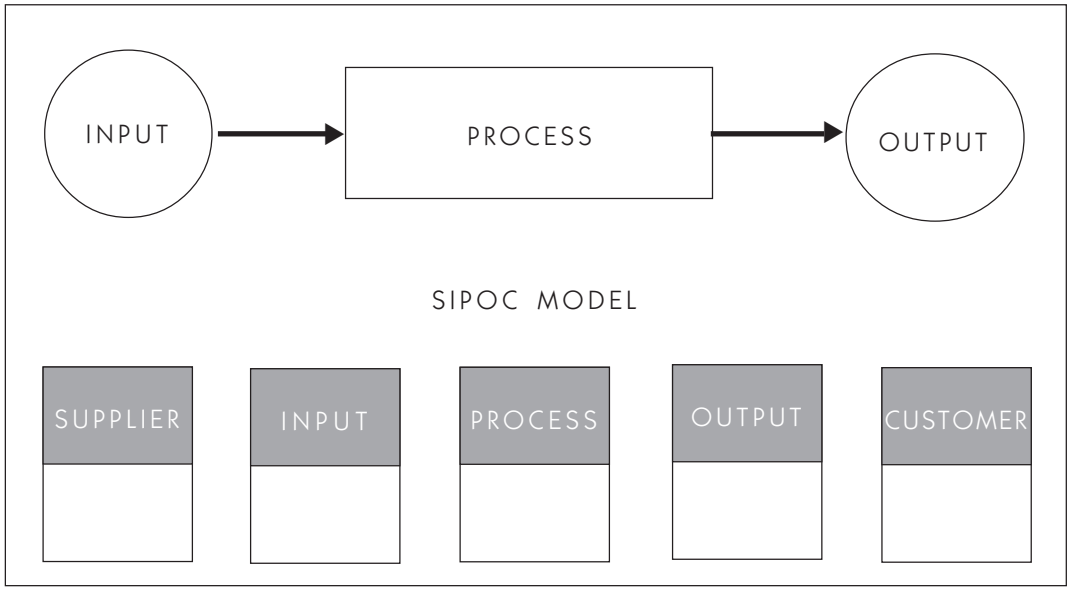
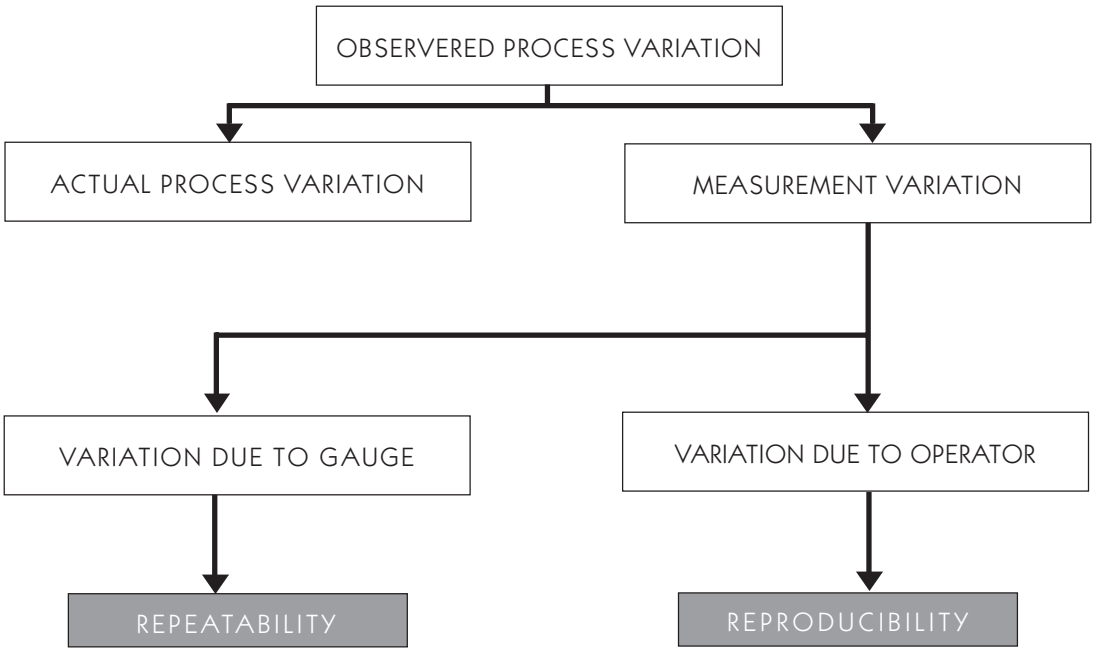


Figure 6 - Possible Source of Variation



Within SIPOC-diagram, the letters stand for-

Supplier	The people or organization that provides information, material and other resources to be worked on in the process.
Input	The information/material provided by suppliers that are consumed or transformed by the process.
Process	The series of steps that transforms the inputs.
Output	The product or Service used by the customer.
Customer	The people, company or another process, that receives the output from the process.

Measure

Six Sigma is based on measured data. The measure phase identifies the defects in the product, gathers valid base line information about the process. There will be unfavourable consequences from analysis using Six Sigma tools if there is problem with measuring system. The observed possible source of variations in a process, as shown in figure 6, is the actual process variation and measurement variation.

To address actual process variability, firstly it is necessary to identify the variation due to measurement system and to separate it out from the process. The goal of the measure phase is to ensure that the measurement system is statistically confident otherwise if there is problem with measuring system, the process gets worse and the experiment will end up failure.

Therefore it is very important to secure a correct measuring system before the project. In the Measure Phase, a measurement system analysis (MSA) is conducted which includes the Gauge R&R studies (Raisinghani, 2005). The purpose of the Gauge R&R study is to ensure that the measurement system is statistically sound. Gauge repeatability and reproducibility studies determine how much of the observe process variation is due to the measurement system variation.

Analyze

According to Kapur & Feng (2005), the analyze phase examine the data collected in order to generate a prioritized list of source of variation. Many statistical tools are used to carry out the analysis which are explained as follows:-

a) Run Chart

A run chart or trend chart is a very simple technique for analyzing the process in the development stage. The important point is to draw a picture of the process and let it "talk" to you. A picture is worth a thousand words, provided someone is listening.

Plotting a run chart is the first step in data analyzes as without a run chart, other data analysis tools - such as the process capability and histogram analysis can lead to erroneous conclusions.

Run chart is constructed from a measurement that has been gathered over time (Usually at regular intervals such as hourly, daily, weekly) and than plot with time order. Purpose of this chart is to measure and track a key input, process or output measure over time and helps a team look at whether there are patterns over time in the problem. It mainly identifies the special cause of variation. Common cause variation is a natural part of process. Another type of variation, called special causes, comes from outside the system and causes recognizable pattern, shift, or trends in the data. The run chart shows if special causes are influencing the process.

Minitab software is used to plot the value of each data points and plotting the run chart. It is used to provide the information on the non-random variation due to trends, oscillation, mixtures, and clustering.

b) Histogram

The first "Statistical" SPC technique is the histogram, which helps to display the large data that is difficult to interpret. It is used to examine the shape and spread of sample data and it provides the better view of the center, distribution and shape of data. The data is displayed on a chart on which the horizontal axis is marked off in increasing values (from right to left) and vertical axis shows the frequency. Histogram divides sample values into many intervals called bins. Bars represent the number of observation falling within each bin (its frequency). Minitab is used to plot each data points and plotting the histogram.

c) Process Capability Analysis

Process capability analysis is done to find out the actual state of the

process. The existing DPMO or PPM level which is the way to calculate the sigma level or yield of a process is determine using process capability analysis. Minitab software is used for analysis the data and it generates a process capability report, which includes a capability histogram overlaid with normal curve and the complete tables of capability statistics.

d) Fishbone Diagram

After knowing the DPMO and sigma level of the process using process capability analysis, a fishbone or cause and effect diagram is to prepare. It is a structured brainstorming tool. A cause-and-effect (C&E) diagram is a picture composed of lines and symbols designed to represent a meaningful relationship between an effect and its causes. It is used to summarize the problem statement in the "head" of fish, with potential causes arranging in sets of bones link to the head. This graphical tool is used to identify the relationship between a problem and possible cause of problem and being created by using the expert's experiences and critical analysis of process.

e) Bar Chart

Bar chart is a pictorial representation of a data over a period or under different heads for a given period. Instantly, it gives the areas, which need immediate attention, and presents the relative comparison of the data between different heads. It is a simple and effective tool of data presentation, which helps to focus on the components of the problem that have the biggest impact.

Improve

Improve the process to remove cause of defects. The optimal solution for reducing mean is determined and confirmed in improve phase. The gains from the improve phase are immediate and are corrective in nature. Specific problem identified during analysis are attended in improve phase. This stage involves:

- Use of brain storming and action workouts.
- Process optimization and confirmation experiment.
- Extracting the vital few factors through screenings.
- Understanding the co-relation of the vital few factors.

Control

Control the process to make sure that defects don't recur i.e. removes the root cause of the problem. The control phase is preventive in nature. All the possible related problem of the specific identified problem from the analysis phase are tackled in control phase.

- It mainly defines control plans specifying process monitoring and corrective action.
- Provides systematic re-allocation of resources to ensure the process continues in a new path of optimization.
- Ensures that the new process conditions are documented and monitored.

Conclusion

The purpose of this paper is to provide a sound discussion on Six Sigma DMAIC methodology and see how it fits in with quality and operational excellence initiatives from manufacturing to process industries. This paper reviews the implications of applying Six Sigma methodology over the process industries. The strategic implementation of Six Sigma in steps (DMAIC) leads to an optimisation of some selected process parameters, thus resulting in substantial saving in overall operational costs of a process industry. The study could be a paradigm initiative towards energy conservation for every energy intensive process industry. Through critical investigation of Six Sigma and its statistical tools, the study illustrates certain ground rules, which are required to be laid down before starting such an exercise with same kind of tools. Use of these ground rules will make Six Sigma more effective, more productive with less effort and less consumption. It shall provide useful information to practitioners and researchers planning to practise Six Sigma methodology in process industries to understand its pros and cons. Process industries that wish to accelerate development of their own quality program can utilize the evolutionary approach explained in this paper to understand their current level of evolution and to implement focused action that can quickly strengthen them to sustain market competition.

Key words: Six Sigma, DMAIC, DPMO, PPM, Gauge R&R, Process industries.

References

Coronado, R. and Antony J. "Critical Success Factors for the Implementation of Six Sigma Projects in Organization." *The TQM Mag.*, 14 (2002): 92-99.

De Feo, Joseph A. and Bar-Eilzion, "Creating Strategic Change More Efficiently with a New Design for Six Sigma Process." *Journal of Change Management.* 3 (2002): 60-80.

Harry, M.J. "Talk about Six Sigma." *Green Belt Training Report. General Electric Company*, India 2001.

Hendericks, C. and Kelbaugh, R. "Implementing Six Sigma at GE." *The Journal for Quality and Participation.* July/August 1998.

Henderson, K.M. and Evans, J.R. "Successful Implementation of Six Sigma: Benchmarking: General Electric Company." *Benchmarking: Int J.,* 7 (2000): 260-282.

Kapur, K.C. and Feng, Q. "Integrated Optimisation Models and Strategies for the Improvement of the Six Sigma Process." *Int. J. Six Sigma comp adv,* 1 (2005): 210-228.

Kumar, P. "Six Sigma in manufacturing." *Prod J,* 43 (2002): 196-202.

Mahanti, R. and Antony, J. "Confluence of Six Sigma Simulation and Software Development." *Manag Audi J.*, 20 (2005): 739-762.

Maleyeff, J. and Krayenvenger, D.E. "Goal Setting with Six Sigma Mean Shift Determination." *Air Engg Aero Tech.* 76 (2004): 577-583.

O'Neill, M. and Duvall, C.A. "Six Sigma Quality Approach to Work-place Evaluation." *J Facil Manag.* 3 (2004): 240-253.

Pandey, P.S., Neuman, R. and Cavanagh, R. *The Six Sigma Way: How GE, Motorola and Other Top Companies are Honing their Performance.* McGraw Hill, New York, NY: 2000.

Park, S.H. "Six Sigma for Productivity Improvement: Korean Business Corporations." *Prod J.*, 43 (2002): 173-183.

Raisinghani, M.S., Ette H., Pierce R., Cannon G., and Daripaly P. "Six Sigma: Concepts, Tools, and Applications." *Ind Manag Data Sys.* 105 (2005): 491-505.

Smith, G. "Benchmarking success at Motorola." *Copyright Society of Management Accountants of Canada.* March 1993.

Portfolio Management:
Country Funds

Malik N.S.

This study is an attempt to investigate the performance of country funds by using the data of developed and emerging markets of the world. The world of investment management follows the two approaches referred as active and passive management. The present study incorporates both these approaches to analyze the relative performance of country funds vis-à-vis their respective bench mark indices across the emerging and developed markets of the world. The results indicate that the country funds that follow the active portfolio management strategies have proved to be dramatically different in reporting the significantly higher returns (in US Dollar terms) compared to the passive portfolio (buy-and-hold) management strategies, and support the claim that these strategies are highly dynamic and remunerative for all the stake holders over a longer period (80.33 per cent of the country funds out-performed their respective bench mark indices over a period of five years). In term of the magnitude of out-performance over a period of five years, 40.82 per cent of out performers beat the bench marks by more than 50 per cent, where as, 14.29 per cent over performed the bench marks by at least 100 per cent.

There have been paramount evidences regarding the great degree of proliferation in management of funds around the world. The international diversifications which have come a long way to become a reality to reduce market risks have resulted in the further attractiveness to many investors around the globe. Hence, the study of different management styles that a fund manager can follow has emerged an important area of research in finance due to its academic and practical importance.

Rational investors wish to maximize the returns on their funds for a given level of risk. All investments possess varying degrees of risk. It is widely understood that diversified fund intends to reduce market risks to a greater extent. Due to this complexity of reaching at a proper equilibrium between return and associated risk, it has been realized that there is a pressing need for a credible and robust measure for assessing and ranking the performance of various investment funds. Therefore, the researchers have been prompted to carry out the present study. Although the past performance alone can not be indicative of future performance, but, frankly speaking, it is the only quantitative way to judge how good a fund is at present.

Dr. Malik N.S., Associate Professor, Haryana School of Business, Guru Jambheshwar University of Science and Technology, Hisar -125001, Haryana, India, Email: nsmalik2002@yahoo.com

Our work is based on the intuition that fund managers' returns can be characterized more generally by three key determinants: the returns from assets in the managers' portfolios, their trading strategies, and their use of leverage. Sharpe (1992) proposed an asset class factor model for performance attribution and style analysis of mutual fund managers. The elegance of Sharpe's (1992) intuition was demonstrated empirically by showing that only a limited number of major asset classes were required to successfully replicate the performance of an extensive universe of U.S. mutual funds.

In Sharpe's model; the focus was on the first key determinant, the "location" component of return, which tells us the asset categories the manager invests in. Our efforts are to extend Sharpe's approach by incorporating factors that reflect "how a manager trades" — the strategy component of return and the use of "leverage" — the quantity component of return. Adding new factors to Sharpe's model allows us to accommodate managers that employ dynamic, leveraged trading strategies. It is these additional factors that provide insight on the strategic difference between "relative return" versus "absolute return" investment styles. Just as Sharpe's model provides insight to the asset mix decision when only relative return styles are considered, the extended model provides a framework for analyzing the asset mix decision with an absolute return target. These targets may also be used to be bench-marked against the representative Indices of the different countries as in case of American Dow Jones Industrial Average and S&P 500 Index, the British FTSE 100, the French CAC 40, the German DAX and the Japanese Nikkei 225.

The investment management world of today can be divided into two broad categories of management style, each reflecting a fundamentally different belief system regarding how modern capital markets behave. These two schools of thought are generally referred to as active and passive management. This article will address these two approaches as they apply to stock market investments, but the observations apply with equal validity to the world of fixed income investments (bonds) as well.

Active and Passive Management

Active management is the traditional way of building a stock portfolio, and includes a wide variety of strategies for identifying companies believed to offer above-average prospects. One method might focus on companies with impressive past growth in sales and profits, another on companies with promising new products, a third on "turnaround" potential of distressed firms, and so on. Another active management method known as technical analysis attempts to find "patterns" in price movements to predict the future prices. Regardless of their individual approach, all active managers share a common thread: they buy and sell securities selectively, based on some forecast of future events.

Passive or index managers - the terms are often used interchangeably - make no forecasts of the stock market or the economy, and no effort to distinguish "attractive" from "unattractive" securities. Passive managers often construct their portfolios to closely approximate the performance of well-recognized market benchmarks such as the Standard and Poor's 500 index (large U.S. companies), Russell 2000 index (small U.S. companies) or Morgan Stanley EAFE index (large international companies).

Passive Management in Perspective:

The passive approach is a relative newcomer to the practice of investment management. Academic theories supporting the concept were developed in the 1950s and '60s. The America's first stock index fund was developed in 1973 by Rex Sinquefield, a trust officer at American National Bank in Chicago. Sinquefield (recently retired) was the co-chairman of Dimensional Fund Advisors Inc., one of the worlds' leading innovators in passively managed investing. Active management, on the other hand, is as old as money management itself. Indeed, forecasting the future - Which stocks will do best? Which way is the market headed? - has long been considered the very definition of investment advice.

One of these assumptions was the superiority of active management. At traditional investment firms, an army of economists, research analysts, portfolio managers and traders scrutinize an enormous daily flow of information on companies, industry groups, business conditions, and political developments. They produce stacks of detailed reports recommending stocks to buy or sell, and industry sectors to overweight or underweight. Does all this effort pay off? Are the nation's mutual funds, bank trust departments, corporate pension plans, college endowments, public retirement funds and insurance companies able to earn higher returns for their

shareholders and beneficiaries following these recommendations versus a "naive" strategy of simply holding a market portfolio of stocks?

There has been an accelerating trend in recent decades to create passively managed mutual funds that are based on market indices, known as index funds. Advocates claim that index funds routinely beat a large majority of actively managed mutual funds; one study claimed that over time, the average actively managed fund has returned 1.8 per cent less than the S&P 500 index (Source: www.wikipedia.org).

The Evidences: Mutual Fund Performance

Mutual fund returns are an excellent source of data on money manager performance since their results are audited by professional accountants and publicly available for all to see. Beginning with a landmark study by Michael Jensen in 1968, academic researchers have scrutinized the results of mutual funds covering a period of nearly fifty years. Not one major published study successfully claims that managers beat markets by more than one would expect by chance.

According to Morningstar, for the 15 years ending April 2006, only 40 per cent (918 of 2,309) of diversified actively managed U.S. equity mutual funds managed to outperform the S&P 500 index.

In India, over the last five years ending May 2006, all the 74 actively managed equity diversified growth funds not only out-performed the benchmark, but 20.27 per cent (15 of 74) beat the bench mark indices by at least 100 per cent. (A study conducted by the author in October 2006).

Portfolio Management

A portfolio manager (or fund manager) is an individual or company which runs an investment portfolio (or investment fund) on behalf of a client or the trustees of a client. The functions of a portfolio manager are as follows:

- ⇒ Portfolio structuring and analysis - to structure an optimal portfolio, and then analyzing the portfolio's expected return and risk;
- ⇒ Portfolio adjustment - selecting the set of asset purchases and sales as circumstances change;
- ⇒ Portfolio performance measurement and attribution measuring actual performance of the portfolio, identifying the sources of performance and comparing the performance against that of a predetermined benchmark portfolio.

Thus in brief, a portfolio construction process broadly involves setting of objectives of the fund; defining of suitable investment policy; applying of (either active or passive or mix of the two) portfolio strategies; selecting the assets in which to invest; and finally to assess the success of the fund manager, the performance of the fund is periodically measured against a pre-agreed benchmark- preferably a suitable stock exchange index. It is this back ground that has prompted the researcher to evaluate the performance of various country funds against the benchmark indices of their respective countries where these funds have been targeted to invest in emerging as well as the developed markets across of the world.

Objectives of the Study

The Study is aimed to:

- ⇒ examine if it pays to follow active or passive portfolio management strategy;
- ⇒ examine the performance of country funds vis-à-vis the bench marks indices of their respective countries;
- ⇒ examine the comparative performance of the country funds from emerging markets vis-à-vis developed markets of the world.

In the present study the performance of various country funds have been evaluated in terms of US Dollar (USD) to make them comparable across the globe. The performance of these country funds has also been compared with the bench mark indices of their respective country to which they are designated for. The depreciation in the currency against USD has been marked by +ve (positive sign in front), where as conversely the appreciation of any currency against the USD has been marked by –ve (negative sign in front).

Research Methodology

To evaluate the performance of various country funds designated to various emerging and developed markets, we have used the various descriptive statistical tools including rate of return, average, range, and standard deviation. It is difficult to make an exact list of emerging (or developed) markets; the best guides tend to be investment information sources (like The Economist) or market index makers (such as Morgan Stanley Capital International). These sources

are neutral and well-informed, hence has been used as the main source to categories emerging and developed markets.

Sample Size

In this study country funds belonging to seven emerging markets of China, India, Russia, South Korea, Indonesia, Malaysia and Mexico and nine developed markets of Singapore, Australia, Japan, U.K., Switzerland, Germany, Spain, Canada and USA have been included. The sample includes all the country funds (except two country funds of Thailand, whose bench mark index was not available for comparison) which have at least one full year of its operation as on 31 December 2006. The information has been sourced from Bloomberg.com.

Total of 71 country funds have been sampled of which 53 belong to Asia/ Pacific countries, four belong to European countries and the remaining 14 are from American countries. The sampled country funds represents 16 countries whose market capitalization is more than three fourths of the total World's Market Capitalization of 50098.59 Billion USD (refer Table No.2). Of the total sample, 18 funds belong to emerging markets and the rest 53 represent developed markets (refer Table No.1).

Table: 1 Sample Description of Country Funds

Region	Emerging Markets	Developed Markets	Number of Country Funds
Asia/Pacific	16	37	53
Europe	-	04	04
American	2	12	14
Total	**18**	**53**	**71**

(Source: Bloomberg.com)

Measures of Country Fund Performance:

A) Performance measures based on absolute rate of return: The compounded annual growth rate (CAGR) for one, three and five years calculated. The performance of funds has been assessed against the bench mark indices. The performance so assessed has been grouped into eight, namely:

i) Top Most Out Performers (TMOP): 100 per cent or more return over and above the bench mark return;

ii) Distantly Out Performers (DOP): (50 per cent or more but less than 100 per cent return over and above the bench mark return);

iii) Good Out Performers (GOP): 25 per cent or more but less than 50 per cent return over and above the bench mark return;

iv) Out Performers (OP): less than 25 per cent return over and above the bench mark return;

v) Under Performers (UP): less than 25 per cent under return than the bench mark return;

vi) Poorly Under Performers (PUP): 25 per cent or more but less than 50 per cent under return than the bench mark return;

vii) Distant Under Performers (DUP): 50 per cent or more but less than 100 per cent under return than the bench mark return;

viii) Very Poorly Under Performers (VPUP): 100 per cent or more under return than the bench mark return.

Standard deviation of the bench mark indices have been calculated on the basis of monthly rate of return of the respective indices for one, three and five years. This has been used to look into the relative consistency/volatility of the returns.

Results

The results of the study have been presented below and grouped in five segments namely, Asia/Pacific Countries; European Countries; American Countries; Emerging Markets and Developed Markets.

Table 2: Market Capitalization of Sampled Countries
(In % of World Market Capitalization of 50098.59 Billion USD)

		Emerging Markets	Developed Market	Total
Asia/Pacific	India	1.63	-	1.63
	China	1.90	-	1.90
	South Korea	1.63	-	1.63
	Indonesia	N/A	-	N/A
	Malaysia	N/A	-	N/A
	Russia	N/A	-	N/A
	Singapore	-	N/A	N/A
	Australia	-	1.87	1.87
	Japan	-	9.76	9.76
	Sub Total	**5.16**	**11.63**	**16.79**
Europe	U.K.	-	7.61	7.61
	Switzerland	-	2.40	2.40
	Germany	-	3.51	3.51
	Spain	-	N/A	N/A
	Sub Total	**Nil**	**13.52**	**13.52**
America	Canada	-	3.01	3.01
	Mexico	0.74	-	0.74
	USA	-	34.87	34.87
	Sub Total	**0.74**	**37.88**	**38.62**
Grand Total		**5.90**	**63.03**	**68.93**

(Source: The Business Standard, India, dated: 3rd January 2007)

Asia/Pacific Countries

India: The performance of both the country funds has been very impressive over a long period of five years as both the funds have beaten the index by 47.39 per cent and 34.53. In case of one year one out of the two funds has beaten the index, where as over a period of three years both the funds have underperformed to index by a very narrow margin of 6.66 per cent and 2.43 per cent (Refer Table No. 3).

China: All the four funds outperformed the index by a huge margin ranging 274.67 per cent to 129.35 per cent over a period of five years. In case of one year only one fund out of the total six funds have been able to beat the bench mark by 33.81 per cent, where as the under performance has been far severe in the range of 69.89 per cent to 45.78 per cent. Over a period of three years only one out of five funds under performed the index by 69.33 per cent (Refer Table No.4).

South Korea: All the three funds belonging to South Korea have been able to outperform the KOSPI Composite index by a very remarkable margin ranging from 164.77 per cent to 37.49 per cent. The interesting fact with South Korea in contrary to India and China is that it has relatively performed better over the short period of one year (Refer Table No.5).

Indonesia: There is only one fund belonging to Indonesia, which has beaten the JKSE index over one year as well as five years by 72.42 per cent and 53.61, where as the fund has been beaten by the index over three years by 17.76 per cent (Refer Table No.6).

Malaysia: The performance of Malaysia designated country fund has been on the same line as that of the Indonesia designated fund except the magnitude. The out-performance of the fund has been 74.30 per cent over one year and 72.07 per cent over five years, where the under performance has been to the tune of 28.86 per cent over three years (Refer Table No.7).

Table: 3 India (No. of Country Funds: 2)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country	IIF	50.38	-2.38	52.76	30.88	-1.09	31.97	50.10	-1.81	51.91
Funds	IFN	27.61	-2.38	29.99	32.33	-1.09	33.42	45.57	-1.81	47.38
Index	BSE Sensex	46.07	-2.38	49.08	33.16	-1.09	34.25	33.41	-1.81	35.22

(Computed and compiled by the author)

Table: 4 China (No. of Country Funds: 6)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Funds	GCH	163.17	-3.17	166.34	32.00	-1.92	33.92	38.03	-1.16	39.19
	CHN	63.61	-3.17	66.78	4.71	-1.92	6.63	32.53	-1.16	33.69
	MCHFX	64.3	-3.17	67.47	22.65	-1.92	24.57	22.83	-1.16	23.99
	TDF	49.97	-3.17	53.14	20.97	-1.92	22.89	34.34	-1.16	35.50
	TCWAX	40.19	-3.17	43.36	24.41	-1.92	26.33	-	-	-
	HPCCX	34.26	-3.17	37.43	-	-	-	-	-	-
Index	SSE Composite	121.14	-3.17	124.31	19.70	-1.92	21.62	9.30	-1.16	10.46

Table: 5 South Korea (No. of Country Funds: 3)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return Effect	Currency Return	Total
Country Funds	KEF	23.68	-7.96	31.64	33.63	-7.7	41.33	28.66	-6.63	35.29
	KF	17.34	-7.96	25.30	35.34	-7.7	43.04	29.74	-6.63	36.37
	MAKOX	12.28	-7.96	20.24	31.69	-7.7	39.39	26.25	-6.63	32.88
Index	KOSPI Comp	3.99	-7.96	11.95	20.95	-7.7	28.65	15.64	-6.63	22.27

(Computed and compiled by the author)

Table: 6 Indonesia (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Funds	IF	101.58	-8.63	110.21	31.07	2.04	29.03	56.51	-3.06	59.57
Index	JKSE Comp	55.29	-8.63	63.92	37.34	2.04	35.30	35.72	-3.06	38.78

(Bloomberg; Computed and compiled by the author)

Russia: Of the three funds designated to Russia only one fund (TRF) has been able to out-perform the Russia benchmark RTS-1 over all the years under study by 21.23 per cent over one year; 25.97 per cent in case of three years and by 8.1 per cent over five years respectively. The magnitude of under performance by one of the funds named LETRX has been moderate across all the periods where as the magnitude of the third fund called "TMRFX" has been quite brutal and ranges 41.84 per cent; 26.19 per cent and 16.62 per cent over one, three and five years respectively (Refer Table No. 8).

Singapore: Like South Korea, the Singapore designated country fund has been able to beat the bench mark (Straits Times) over all the varying periods considered for the purpose of this study. The range of out-performance has been 117.59 per cent, 54.85 and 85.40 per cent over one year, three years and five years respectively (Refer Table No.9).

Australia: The only Australia designated country fund has only been able to out perform the corresponding All Ordinaries index in case of five years by 11.39 per cent, where as its performance over a period of one and three years has been very-very pitiable where by it under performed the benchmark by 65.09 per cent and 95.14 per cent respectively (Refer Table No. 10).

Japan: The Table No. 11 exhibits that only two of the thirty five funds have outperformed the Nikkei-225, the bench mark for Japanese country funds over a period of one year ending December 2006 by 79.39 per cent and 60.82 per cent where as the extent of under performance by the remaining 94.29 per cent Japan designated funds has been to the extent of 91.31 per cent to 489.61 per cent.

In case of three years the position has not improved much where only four out of 35 funds have been able to outperform the bench mark where as over a longer period of five years the position happens to be quite conformable where 81.82 per cent of the funds have out-performed the bench mark (highest out-performance being 90.27 per cent by country fund called "JOF" and highest under performance being 57.65 per cent by country fund named "CNJFX"). The magnitude of out-performance in case of three years happen to be 128.00 per cent (UJPIX) and the under performance being 92.91 per cent (CNJFX). In case of country fund called "CNJFX," it has proved to be grossly underperformer (ranked last in case of three years as well as five years) over all three varying time periods used in the present study.

Table: 7 Malaysia (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Funds	MF	37.73	0.43	37.30	8.1	0.09	8.01	15.29	1.49	13.80
Index	KLSE Comp	21.83	0.43	21.40	11.35	0.09	11.26	9.51	1.49	8.02

(Computed and compiled by the author)

Table 8: Russia (No. of Country Funds: 3)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Funds	TRF	87.55	-8.39	95.94	64.12	-3.45	67.57	53.41	-2.91	56.32
	LETRX	67.55	-8.39	76.04	45.11	-3.45	48.56	46.29	-2.91	49.20
	TMRFX	37.64	-8.39	46.03	36.14	-3.45	39.59	40.53	-2.91	43.44
Index	RTS-1	70.75	-8.39	79.14	50.19	-3.45	53.64	49.19	-2.91	52.10

(Computed and compiled by the author)

Table: 9 Singapore (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Funds	SGF	68.45	-7.88	76.33	31.55	-3.43	34.98	27.17	-3.68	30.85
Index	Straits Times	27.2	-7.88	35.08	19.16	-3.43	22.59	12.96	-3.68	16.64

(Computed and compiled by the author)

Table: 10 Australia (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Funds	IAF	2.1	-7.43	9.53	-0.66	-1.69	1.03	13.12	-8.3	21.42
Index	All Ordinaries	19.87	-7.43	27.30	19.52	-1.69	21.21	10.93	-8.3	19.23

(Computed and compiled by the author)

European Countries

United Kingdom (U.K.), Switzerland, Germany and Spain:

On the thorough examination of table nos. 12, 13, 14 and 15, it has been found that all the four country funds (one for each) representing U.K, Switzerland, Germany and Spain have out-performed their respective bench marks (FTSE-100, SMI, DAX and IBEX-30) over all the varying period considered in the present study. In terms of the magnitude of out-performance, the U.K. designated fund has proved to be top most out performer (147.16 per cent, 111.72 per cent and 445.70 per cent) over a period of one, three and five years. In case of country funds representing European countries, it has emerged that there is positive correlation between increased return and time made available to active portfolio manager. Although the fund belonging to Spain too, has been able to out perform over the entire period under study but it happened to be the least performer amongst all the four country funds representing European countries. Switzerland and Germany designated funds too remained top most out performer by 118.56 per cent and 133.02 per cent respectively but only over a period of five years.

American Countries

Canada: The results of country designated funds in respect of Canada, Mexico and USA, are presented through table nos. 16, 17 and 18 respectively. On the examination of these results it has been found that in the case of Canada designated fund (one in number) has out-performed the bench mark over all the varying period of the present study. The magnitude of out-performance has intensified with the increased period of time funds have been managed actively.

Mexico: In case of both the Mexico designated country funds, it is found that they have out-performed the bench mark (representing passively managed fund) over one and three years but in case of five years both the actively managed country funds slightly under performed the bench mark. The magnitude of performance happens to be in reverse to the one observed in case of its counter part (Canada) in the same region.

USA: In the case of USA that individually holds 34.87 per cent share of the total World Market Capitalization of USD 50098.89 Billion as at the end of 2006 (Refer Table No.2), the results of all the country funds have been exhibited in Table No.18.

Table: 11 Japan (No. of Country Funds: 35)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
	UJPIX	11.58	1.05	10.53	34.80	3.61	31.19	15.80	-1.91	17.71
Country	UJPSX	10.49	1.05	9.44	33.47	3.61	29.86	14.68	-1.91	16.59
Funds	FJEAX	1.56	1.05	0.51	15.27	3.61	11.66	13.70	-1.91	15.61
	FJECX	0.82	1.05	-0.23	14.44	3.61	10.83	12.91	-1.91	14.82
	FJEBX	0.82	1.05	-0.23	14.41	3.61	10.80	12.91	-1.91	14.82
	GSJIX	1.33	1.05	0.28	13.92	3.61	10.31	10.18	-1.91	12.09
	JPNDX	0.41	1.05	-0.64	13.50	3.61	9.89	11.26	-1.91	13.17
	JPNAX	0.21	1.05	-0.84	13.23	3.61	9.62	11.14	-1.91	13.05
	GSJAX	0.64	1.05	-0.41	13.32	3.61	9.71	9.58	-1.91	11.49
	GSJSX	0.69	1.05	-0.36	13.43	3.61	9.82	9.77	-1.91	11.68
	JPNCX	-0.45	1.05	-1.50	12.45	3.61	8.84	10.19	-1.91	12.10
	JPNBX	-0.55	1.05	-1.60	12.39	3.61	8.78	10.20	-1.91	12.11
	GSJBX	-0.55	1.05	-1.60	12.37	3.61	8.76	8.75	-1.91	10.66
	GSJCX	-0.47	1.05	-1.52	12.37	3.61	8.76	8.78	-1.91	10.69
	SJPNX	-4.43	1.05	-5.48	10.83	3.61	7.22	14.24	-1.91	16.15
	CNJFX	-4.66	1.05	-5.71	4.58	3.61	0.97	3.27	-1.91	5.18
	CVJAX	-4.34	1.05	-5.39	15.73	3.61	12.12	14.21	-1.91	16.12
	CVJBX	-4.93	1.05	-5.98	15.00	3.61	11.39	13.42	-1.91	15.33
	JOF	-5.82	1.05	-6.87	11.51	3.61	7.90	21.36	-1.91	23.27
	FJPNX	-5.64	1.05	-6.69	14.97	3.61	11.36	13.70	-1.91	15.61
	WPJAX	-5.98	1.05	-7.03	9.11	3.61	5.50	5.20	-1.91	7.11
	CUJAX	-6.16	1.05	-7.21	8.95	3.61	5.34	5.11	-1.91	7.02
	WPJGX	-6.14	1.05	-7.19	8.83	3.61	5.22	5.21	-1.91	7.12
	JEQ	-6.24	1.05	-7.29	10.20	3.61	6.59	14.15	-1.91	16.06
	MJFOX	-6.84	1.05	-7.89	9.83	3.61	6.22	12.63	-1.91	14.54
	FAJIX	-9.46	1.05	-10.51	12.50	3.61	8.89	12.01	-1.91	13.92
	FJPAX	-9.76	1.05	-10.81	12.11	3.61	8.50	11.66	-1.91	13.57
	FAJTX	-10.00	1.05	-11.05	11.82	3.61	8.21	11.32	-1.91	13.23
	FAJCX	-10.46	1.05	-11.51	11.29	3.61	7.68	10.80	-1.91	12.71
	FAJBX	-10.47	1.05	-11.52	11.25	3.61	7.64	10.78	-1.91	12.69
	DFJSX	-12.68	1.05	-13.73	16.84	3.61	13.23	19.97	-1.91	21.88
	SPARX	-13.31	1.05	-14.36	19.74	3.61	16.13	NA	-1.91	NA
	SPXJX	-13.54	1.05	-14.59	19.55	3.61	15.94	NA	-1.91	NA
	JSCFX	-15.60	1.05	-16.65	10.34	3.61	6.73	13.62	-1.91	15.53
	FJSCX	-21.82	1.05	-22.87	10.97	3.61	7.36	16.98	-1.91	18.89
Index	Nikkei-225	6.92	1.05	5.87	17.29	3.61	13.68	10.32	-1.91	12.23

(Computed and compiled by the author)

Table: 12 U.K. (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Fund	DFUKX	44.35	-12.15	56.50	28.08	-3.17	31.25	23.7	7.55	20.12
Index	All Ordinaries	10.71	-12.15	22.86	11.59	-3.17	14.76	3.58	11.18	-5.82

(Computed and compiled by the author)

Table: 13 Switzerland (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Fund	SWZ	37.80	-7.31	45.11	25.53	-0.61	26.14	20.99	-5.79	26.78
Index	SMI	15.85	-7.31	23.16	16.98	-0.61	17.59	6.48	-5.79	12.27

(Computed and compiled by the author)

Table: 14 Germany (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Fund	GF	42.53	-10.23	52.76	30.57	-1.65	32.22	22.12	-7.66	29.78
Index	DAX	21.98	-10.23	32.21	18.49	-1.65	20.14	5.04	-7.66	12.70

(Computed and compiled by the author)

Table: 15 Spain (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Fund	SNF	35.00	-10.23	45.23	24.45	-1.65	26.1	23.07	-7.66	30.73
Index	IBEX-30	31.79	-10.23	42.02	22.28	-1.65	23.93	10.99	-7.66	18.65

(Computed and compiled by the author)

Table: 16 Canada (No. of Country Funds: 1)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country Fund	FICDX	14.96	0.03	14.93	22.37	-3.42	25.79	21.48	-6.02	27.5
Index	S&P TSX	14.52	0.03	14.49	16.23	-3.42	19.65	10.92	-6.02	16.94

(Computed and compiled by the author)

Table: 17 Mexico (No. of Country Funds: 2)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country	MXE	74.72	0.41	74.31	54.76	-1.25	56.01	31.94	3.33	28.61
Fund	MXF	54.07	0.41	53.66	47.49	-1.25	48.74	29.68	3.33	26.35
Index	IPC	48.56	0.41	48.15	44.34	-1.25	45.59	32.93	3.33	29.60

(Computed and compiled by the author)

Table: 18 USA (No. of Country Funds: 11)

		1-Year			3-Year			5-Year		
	Symbol	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return	Return	Currency Effect	Total Return
Country	SAGSX	15.94	-	15.94	13.08	-	13.08	7.96	-	7.96
Funds	GQETX	12.01	-	12.01	NA	-	NA	NA	-	NA
	GQEFX	11.96	-	11.96	NA	-	NA	NA	-	NA
	BUFGX	11.62	-	11.62	8.07	-	8.07	4.77	-	4.77
	CMNWX	11.11	-	11.11	10.9	-	10.9	8.09	-	8.09
	CMNCX	10.2	-	10.2	9.95	-	9.95	NA	-	NA
	CMNBX	10.09	-	10.09	9.87	-	9.87	7.07	-	7.07
	USLIX	1.07	-	1.07	4.61	-	4.61	NA	-	NA
	USGLX	0.59	-	0.59	4.15	-	4.15	2.52	-	2.52
	USLCX	-0.14	-	-0.14	3.37	-	3.37	NA	-	NA
	USLBX	-0.14	-	-0.14	3.37	-	3.37	NA	-	NA
Index	S&P 500	13.62	-	13.62	8.45	-	8.45	4.32	-	4.32

(Computed and compiled by the author)

The table corroborates that over a period of one year only one country fund out of the total 11 could out-perform the S&P 500, the representative bench mark for passively managed funds, where as the remaining ten funds representing 90.91 per cent under performed. The magnitude of the performance happens to be in favour of the under-performers, as the worst under performance was to the extent of 101.03 per cent by two country funds (USLCX & USLBX).

Over a period of three years, once again larger number (55.56 per cent) of country funds proved to be under-performers.

Whereever, the actively managed funds managers are given longer period of time to perform, there appears that they have been able to prove their presence by resorting to provide very decent end results in terms of higher rate of returns. The analysis of table no. 18 indicates that over a period of five years, the out performing funds (80.00 per cent) dominates over the number of under performing USA designated country funds.

In terms of the magnitude of performance, 60 per cent of the out performing country funds beat the bench mark by a greater distance of at least 50 per cent.

In case of USA designated country funds it may be inferred that the actively managed fund managers intends to out perform their respective bench mark over a longer period of time. These inferences are in conformity with the results of the actively managed funds across the globe.

Emerging Markets

Table Nos. 19, 20 and 21, exhibit the summarized results on the performance of country funds vis-à-vis their respective bench mark indices across various emerging markets of the world for one, three and five years respectively.

All the country funds designated to different emerging markets like India, China, South Korea, Indonesia, Malaysia, and Russia from Asia/Pacific Region & Mexico from American Region have been able to out-perform the bench mark indices on account of annualized absolute rate of return in US Dollar terms over a period of five years.

However, in case of three years all the country funds of South Korea and Mexico out-performed, where this proportion of out performing funds to the total number of funds is 80 per cent for China and 33.33 per cent for Russia. No country fund from India, Indonesia and Malaysia could out-perform the bench mark indices.

In the case of one year time horizon, all the country funds belonging to South Korea, Indonesia, Malaysia and Mexico out-performed the bench mark, where as the proportion of out performing country funds designated to China, Russia and India happen to be 16.67 per cent, 33.33 per cent and 50.00 per cent respectively. In aggregate it has been found that all the country funds belonging to South Korea and Mexico have out-performed the bench mark indices over all the varying periods of time taken for this study.

Developed Markets

Table nos. 22, 23 and 24, exhibit the summarized results on the performance of country funds vis-à-vis their respective bench mark indices in the developed markets of the world for one, three and five years respectively.

On the thorough examination of the summarized results it is found that all the country funds designated for Singapore, U.K., Switzerland, Germany, Spain, and Canada have out-performed their respective bench marks across the board over all the different periods of time used in the present study. In case of country funds belonging to other developed markets the proportion of out-performing funds has been 5.71 per cent, 11.43 per cent and 66.67 per cent in case of Japan over one, three and five years respectively, this proportion is 9.09 per cent, 44.44 per cent and 80.0 per cent for USA over the same period. It is of paramount significance to note that the country funds designated to USA, Japan and U.K. that together account for more than half of the World Market Capitalization (52.24 per cent, refer Table No. 2).

In case of the performance of only one country fund designated to Australia, there are divergent results, as it has only been able to out perform over five years by a very thin margin of 11.39 per cent, where as it has proved to be under performer over one year as well as three years by substantial margin of 65.09 per cent and 95.14 per cent over one and three years denoted as "Distant Under Performer" in the present study (Refer Table No.10).

Table 19: Summarized Results of Country Funds in Emerging Markets for one year ending December 2006

		Asia / Pacific							America		Grand Total
Category of Performance	Range of Return (%)	India	China	South Korea	Indonesia	Malaysia	Russia	Total	Mexico	Total	
TMOP	100 or >	-	-	2	-	-	-	2	-	-	2
DOP	50 <100	-	-	1	1	1	-	3	1	1	4
GOP	25<50	-	1	-	-	-	-	1	-	-	1
OP	<25	1	-	-	-	-	1	2	1	1	3
UP	<25	-	-	-	-	-	1	1	-	-	1
PUP	25 <50	1	2	-	-	-	1	4	-	-	4
DUP	50<100	-	3	-	-	-	-	3	-	-	3
VPUP	100 or >	-	-	-	-	-	-	-	-	-	-
	Total	2	6	3	1	1	3	16	2	2	18
% of Out performers		50.00	16.67	100.00	100.00	100.00	33.33	50.00	100.00	100.00	55.56
% of Under Performers		50.00	63.33	Nil	Nil	Nil	66.67	50.00	Nil	Nil	44.44
St. Dev. of Index		5.58	6.93	3.36	5.39	2.86	8.23		3.08		

(Computed and compiled by the author)

Table 20: Summarized Results of Country Funds in Emerging Markets for three years ending December 2006

		Asia / Pacific							America		Grand Total
Category of Performance	Range of Return (%)	India	China	South Korea	Indonesia	Malaysia	Russia	Total	Mexico	Total	
TMOP	100 or >	-	-	-	-	-	-	-	-	-	-
DOP	50 <100	-	-	1	-	-	-	1	-	-	1
GOP	25<50	-	1	2	-	-	1	4	-	-	4
OP	<25	-	3	-	-	-	-	3	2	2	5
UP	<25	2	-	-	1	-	1	4	-	-	4
PUP	25 <50	-	-	-	-	1	1	2	-	-	2
DUP	50<100	-	1	-	-	-	-	1	-	-	1
VPUP	100 or >	-	-	-	-	-	-	-	-	-	-
	Total	2	5	3	1	1	3	15	2	2	17
% of Out performers		Nil	80.00	100.00	Nil	Nil	33.33	53.33	100.00	100.00	58.82
% of Under Performers		100.00	20.00	Nil	100.00	100.00	66.67	46.67	Nil	Nil	41.18
St. Dev. of Index		6.18	7.23	5.26	5.30	3.20	8.20		4.70		

(Computed and compiled by the author)

Table 21: Summarized Results of Country Funds in Emerging Markets for five years ending December 2006

		Asia / Pacific							America		Grand Total
Category of Performance	Range of Return (%)	India	China	South Korea	Indonesia	Malaysia	Russia	Total	Mexico	Total	
TMOP	100 or >	-	4	-	-	-	-	4	-	-	4
DOP	50 <100	-	-	2	1	1	-	4	-	-	4
GOP	25<50	2	-	1	-	-	-	3	-	-	3
OP	<25	-	-	-	-	-	1	1	-	-	1
UP	<25	-	-	-	-	-	2	2	2	2	4
PUP	25 <50	-	-	-	-	-	-	-	-	-	-
DUP	50<100	-	-	-	-	-	-	-	-	-	-
VPUP	100 or >	-	-	-	-	-	-	-	-	-	-
	Total	2	4	3	1	1	3	14	2	2	16
% of Out performers		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of Under Performers		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
St. Dev. of Index		6.40	7.01	6.32	6.26	3.87	8.34		4.91		

(Computed and compiled by the author)

Table 22: Summarized Results of Country Funds in Developed Markets for one year ending December 2006

		Asia / Pacific				Europe					America			Grand Total
Category of Performance	Range of Return (%)	Singapore	Australia	Japan	Total	U.K.	Switzerland	Germany	Spain	Total	Canada	USA	Total	
TMOP	100 or >	1	-	-	1	1	-	-	-	1	-	-	-	2
DOP	50 <100	-	-	2	2	-	1	1	-	2	-	-	-	4
GOP	25<50	-	-	-	-	-	-	-	-	-	-	-	-	-
OP	<25	-	-	-	-	-	-	-	1	1	1	1	2	3
UP	<25	-	-	-	-	-	-	-	-	2	-	4	4	4
PUP	25 <50	-	-	-	-	-	-	-	-	-	-	2	2	2
DUP	50<100	-	1	1	2	-	-	-	-	-	-	2	2	3
VPUP	100 or >	-	-	32	32	-	-	-	-	-	-	2	2	34
	Total	1	1	35	37	1	1	1	1	4	1	11	12	53
% of Out performers		100.00	Nil	5.71	8.11	100.00	100.00	100.00	100.00	100.00	100.00	9.09	16.67	18.87
% of Under Performers		Nil	100.00	94.29	91.89	Nil	Nil	Nil	Nil	Nil	Nil	90.91	83.33	81.13
St. Dev. of Index		3.71	2.63	3.95		2.28	2.58	2.82	3.07		3.08	1.64		

(Computed and compiled by the author)

Table 23: Summarized Results of Country Funds in Developed Markets for Three Years ending December 2006

		Asia / Pacific				Europe					America			Grand Total
Category of Performance	Range of Return (%)	Singapore	Australia	Japan	Total	U.K.	Switzerland	Germany	Spain	Total	Canada	USA	Total	
TMOP	100 or >	-	-	2	2	1	-	-	-	1	-	-	-	3
DOP	50 <100	1	-	-	1	-	-	1	-	1	-	1	1	3
GOP	25<50	-	-	-	-	-	1	-	-	1	1	-	1	2
OP	<25	-	-	2	2	-	-	-	1	1	-	3	3	6
UP	<25	-	-	8	8	-	-	-	-	-	-	1	1	9
PUP	25 <50	-	-	16	16	-	-	-	-	-	-	1	1	17
DUP	50<100	-	1	7	8	-	-	-	-	-	-	3	3	11
VPUP	100 or >	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	1	1	35	37	1	1	1	1	4	1	9	10	51
% of Out performers		100.00	Nil	11.43	13.51	100.00	100.00	100.00	100.00	100.00	100.00	44.44	50.00	27.45
% of Under Performers		Nil	100.00	88.57	86.49	Nil	Nil	Nil	Nil	Nil	Nil	55.56	50.00	72.55
St. Dev. of Index		2.92	2.34	4.09		2.11	2.64	3.11	2.95		2.98	1.98		

(Computed and compiled by the author)

Table 24: Summarized Results of Country Funds in Developed Markets for five years ending December 2006

		Asia / Pacific				Europe					America			Grand Total
Category of Performance	Range of Return (%)	Singapore	Australia	Japan	Total	U.K.	Switzerland	Germany	Spain	Total	Canada	USA	Total	
TMOP	100 or >	-	-	-	-	1	1	1	-	3	-	-	-	3
DOP	50 <100	1	-	3	4	-	-	-	1	1	1	3	4	9
GOP	25<50	-	-	9	9	-	-	-	-	-	-	-	-	9
OP	<25	-	1	10	11	-	-	-	-	-	-	1	1	12
UP	<25	-	-	7	7	-	-	-	-	-	-	-	-	7
PUP	25 <50	-	-	3	3	-	-	-	-	-	-	1	1	4
DUP	50<100	-	-	1	1	-	-	-	-	-	-	-	-	1
VPUP	100 or >	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	1	1	33	35	1	1	1	1	4	1	5	6	45
% of Out performers		100.00	100.00	66.67	68.57	100.00	100.00	100.00	100.00	100.00	100.00	80.00	83.33	73.33
% of Under Performers		Nil	Nil	33.33	31.43	Nil	Nil	Nil	Nil	Nil	Nil	20.00	16.67	26.67
St. Dev. of Index		3.99	2.66	4.75		3.76	4.18	6.88	5.07		3.27	3.57		

(Computed and compiled by the author)

Conclusions

It's worth to conclude on the basis of thorough investigation of the performance of 71 country designated funds belonging to emerging as well as developed markets from Asia/ Pacific, European and American countries, that the actively managed funds tend to deliver better returns vis-à-vis passively managed funds (represented by Bench Mark Indices) over longer period of time.

In the emerging markets, in aggregate 55.56 per cent, 58.82 per cent and 100.00 per cent country funds out-performed their respective bench mark indices over a period of one, three and five years respectively, where as this proportion happens to be significantly lower in case of developed markets, i.e. 18.87 per cent, 27.45 per cent and 73.33 per cent over the same period (Refer table no. 19, 20, 21, 22, 23 & 24).

Top five ranking country funds on the basis CAGR (in US Dollars) over a period of one year are GCH (China with 166.34 per cent), IF (Indonesia with 110.21 per cent), TRF (Russia with 95.94 per cent), SGF (Singapore with 76.33 per cent) and MXE (Mexico with 74.31 per cent) respectively.

Over a period of three years TRF (Russia with 67.57 per cent), MXE (Mexico with 56.01 per cent), IIF (India with 50.10 per cent), MXF (Mexico with 48.74 per cent) and LETRX (Russia with 48.56 per cent) ranked at first five positions respectively.

In case of a longer period of five years the first five ranks on the basis of CAGR have been retained by country funds namely, IF (Indonesia with 59.57 per cent), TRF (Russia with 56.32 per cent), IIF (India with 51.91 per cent), LETRX (Russia with 49.20 per cent) and IFN (India with 47.38 per cent) respectively.

Only one country fund (SGF, Singapore designated country fund) from the developed markets has been able to find a place (4th over a period of one year) amongst the first five top ranks in terms of remunerating its unit holders in the form of absolute rate of return.

Key Words: Country Designated Funds; CAGR (Compounded Annual Growth Rate); Bench Mark Indices; St. Dev. (Standard Deviation); Active Portfolio & Passive Portfolio.

References

Admiti, A. and Ross, S. "Measuring Investment Performance in a Rational Expectations Equilibrium Model." *Journal of Business*. 58 (1985): 1-26.

Carhart, Mark M. "On Persistence in Mutual Fund Performance." *Journal of Finance.* 52 (1997): 57-82.

Davis, James L. "Mutual Fund Performance and Manager Style." *Financial Analysts Journal.* 57 (2001): 19-27.

David, A. Hsieh. "Empirical Characteristics of Dynamic Trading Strategies: The Case of Hedge Funds." *The Review of Financial Studies Summer.* Vol.10, No.2, (1997): 275–302.

Elton, E., Gruber, M. and Blake, C. "The Persistence of Risk-Adjusted Mutual Fund Performance." *Journal of Business*. 69 (1996): 133-157.

Elton, E.J. and Gruber, M.J. *Modern Portfolio Theory and Investment Analysis*. John Wiley, New York: 1995.

Fama, E. "Components of Investment Performance." *Journal of Finance.* 27 (1972): 551-567.

Francis, J.C. Investments, McGraw-Hill, Singapore: 1995.

Gupta, Manak C. "The Mutual Fund Industry and its comparative Performance." *Journal of Financial and Quantitative Analysis.* 6 (1974): 894.

Gupta, O.P. and Sehgal, Sanjay. *Investment Performance of Mutual Funds: The Indian Experience.* Presented at UTI-ICM Second Capital Markets Conference, Vasi, Navi Mumbai: December 1998. 23-24.

Jenson, Michael C. "The Performance of Mutual Funds in the period 1945-1964." *Journal of Finance.* 23 (1968): 389-415.

Lehman, B. and Modest, D. "Mutual Fund Performance Evaluation: A Comparison of Bench Marks and Benchmark Comparisons." *Journal of Finance.* 42 (1987): 233-256.

Malkiel, Burton G. "Returns from investing in Equity Mutual Funds, 1971-1991." *Journal of Finance*. 2 (1995): 550-572.

Matallin, J.C. and Nieto, L. "Mutual Funds as an Alternative to

Direct Stock Investment: A Co-Integration Approach." *Applied Financial Economics*. 12 (2002): 743-750.

McDonald, John G. "Objectives and Performance of Mutual Funds, 1960-69." *Journal of Financial and Quantitative Analysis*. 9 (1974): 311-333.

Obaidullah, M. and Ganeshan, Sridhar. "Do Mutual Funds in India Provide Abnormal Returns." Chartered Financial Analysts. 5 (1991): 11-15.

Sarkar, A.K. "Performance Evaluation of Mutual Funds." *Management Accountant.* 12 (1991): 924-928.

Sharpe, W.F. "Mutual Fund Performance." *Journal of Business.* 39 (1966): 119-138.

Sharpe, W.F., Alexander, G. and baily, J. *Investments.* Prentice-Hall, Englewood Cliff, NJ: 1995.

Treynor, Jack L. "How to Rate Management of Investment Funds." *Harvard Business Review.* 43 (1965): 63-75.

Treynor, Jack L. and Mazuy, Kay K. "Can Mutual Funds Outguess the Markets" *Harvard Business Review.* 44 (1966):131-136.

Quigley, Garrett, and Rex A. Sinquefield. "Performance of UK Equity Unit Trusts." *Journal of Asset Management.* 1 (2000): 72-92.

Websites:

<www. Bloomberg.com>.

<www. Finance.Yahoo.com>.

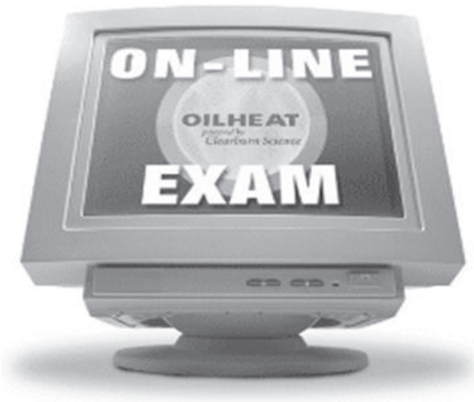
<www. Investopedia.com>.

<www. en.wikipedia.com>.

<www. oanda.com>.

<www. Centre4investmentstrategies.com>.

New "Test"ing Horizons: Web-Enabled On-Line



Minimol M.C. and Nalini B.

Future of education will be internet based to a great extent. The best information can be shared with the masses in a very effective manner. The Internet breaks boundaries and distances. It can also preserve information unlike conventional classroom where lecture is delivered not preserved. The preserved information can be accessed and retrieved. With high compression technology, through e-learning it is possible to deliver such hi-tech classes at affordable fee. Internet and multimedia technologies are the basic enablers of e-learning, with content, technologies and services being identified as the three key sectors of the e-learning industry. CAT and IIT-JEE are the exams taken by people all over India. At present the preparation for these exams is mainly through classroom or postal coaching. With the upswing of the internet, it is possible to provide online coaching, which provides wider access to the candidates. Considering the need of the hour, coaching institutes are all over India now introducing online coaching for CAT and IIT-JEE. The acceptance level, appropriate fees and essential features, for web enabled online entrance exam preparation among the CAT and IIT- JEE students, are assessed in this article.

Future of education will be internet based to a great extent. This is due to the fact that via this medium best information can be shared with the masses in a very effective manner (including cost effectiveness).Internet breaks the boundary and distances. It can also preserve information unlike conventional classroom where lecture once delivered is not preserved. This preserved information can be accessed again for better understanding. With high compression tech-nology it is possible to deliver such hi-tech classes at affordable fee. E-learning is the general term used to refer computer-enhanced learning. Developments in Internet and multimedia technologies are the basic enablers of e-learning, with content, technologies and services being identified as the three key sectors of the e-learning industry.

Dr.Minimol M.C., Lecturer, Rajagiri School of Management, Rajagiri Valley P.O., Kakkanad, Cochin-39, Email: dr_minimol@yahoo.com

Ms.Nalini B., Student-MBA, Rajagiri School of Management, Rajagiri Valley P.O., Kakkanad, Cochin-39, Email: b2757@rajagiri.edu

The Common Admission Test (CAT)

CAT is the most popular B-school entrance test. It is conducted each year on the third Sunday of November by the Indian Institutes of Management (IIMs). While the exam is conducted by the IIMs and all the six IIMs - at Ahmedabad, Bengaluru, Indore,

Lucknow, Kolkata, and Kozhikode - use it as part of their selection process, they are not the only ones who do so! Apart from the IIMs, there are close to a hundred B-Schools that use the CAT as the 'entrance exam' like that is to say that they use it to shortlist those candidates who will be invited to participate in the subsequent rounds of the selection process.

About 200,000 students are expected to give the CAT 2007 a shot. The IIMs together have approximately 1500 seats. If you take the top 50 B-schools, then cumulatively there are some 4000 seats on offer. Like you, almost everyone will apply to multiple institutes - thus taking the seat to applicant ratio higher and higher. Finally, for every seat, B-Schools invite anywhere from 3-7 candidates for subsequent rounds.

Therefore, the CAT is a terribly competitive exam. So it is essential for the student to ensure that he or she pays enough attention to the preparation for the CAT.

The IIT-JEE

Admission of Indian nationals to undergraduate programmes like B.Tech/B.Pharm/Integrated M.Sc., and M.Tech courses in any one of the IITs at Chennai, Guwahati, New Delhi, Mumbai, Kanpur, Kharagpur and Roorkee, is made through the Joint Entrance Examination (JEE) conducted by an IIT every year. Some other well-known institutes also admit students to their undergraduate programmes from the JEE merit list.

To produce exceptionally qualified human resources it is important to take in students with material that can be moulded. This has been the endeavour of the IITs in admitting students. This aim is achieved by the Joint Entrance Examination, better known as the IIT-JEE. Candidates who have passed 10+2 or equivalent qualifying examination and secured at least 60 per cent (55 per cent for ST/SC and PD) marks in the respective Board Exams can appear for the IIT-JEE. Understandably, the Joint Entrance Examination — IIT-JEE — is extremely tough and calls for a high level of preparedness. Various coaching institutes have been assisting students to face the daunting IIT-JEE with high level of confidence.

Statement of the Problem

CAT and IIT-JEE are the exams taken by people all over India. At present the preparation for these exams is mainly through Classroom or postal coaching. With the upswing of the internet it is possible to provide online coaching, which provides wider access to the candidates. Considering the need of the hour, coaching institutes all over India now have introduced on-line coaching for CAT and IIT-JEE. So an attempt was made in this study to know the acceptance level, appropriate fees and essential features, for web enabled online entrance exam preparation among the CAT and IIT- JEE students.

Significance of the Study

Online entrance coaching can be taken by the students from their home, just by having a computer with broadband internet connection, so that they can save time, money and can have a higher exposure with students from different states throughout India. But the problem is whether it will be acceptable by the students at this nascent stage. Hence, the present study.

Objectives

The objectives of the study are:

- ⇒ To forecast the acceptance level for the Web enabled online entrance exam preparation in the market,
- ⇒ To suggest the appropriate fee for online entrance coaching based on the opinion of the students enrolled for CAT and IIT-JEE coaching, and
- ⇒ To design the essential features for the on-line coaching portal.

Hypothesis

Online coaching for CAT and IIT-JEE Examinations is comparatively superior to the conventional system

Scope of the Study

- ⇒ The study attempts to forecast the acceptance level for the Web enabled on-line entrance exam preparation in the market.
- ⇒ It also throws light on appropriate fees and essential features for web enabled on-line entrance exam preparation among the CAT and IIT- JEE students.
- ⇒ The study has been conducted for two months i.e. from 1st April to 31st May 2007. The study consists of all type of students enrolled in different coaching institutes for CAT and IIT- JEE.

Limitations of the Study

⇒ The study is based on the perception of students so there may be some bias in their opinion.
⇒ There are, of course, certain time constraints.
⇒ Postal coaching students are the minor participants in the survey.

Methodology

Method of data collection: Primary data were obtained by interviewing students in the different coaching institutes for CAT and IIT-JEE, and some through on-line surveys. Data were also collected by face to face interview with the regional heads of various coaching institutes. Secondary data were obtained by surfing the internet and from the face to face interaction with the employees of various coaching institutes.

Sampling Technique

The population being vast and wide and due to time and cost constraints the sampling technique adopted for the survey was convenience sampling of the students of the different coaching institutes for CAT and IIT-JEE.

Population for the Study

About 1,20,000 students take CAT every year and about 2,52,000 students take IIT every year. The population for the study is all these students from different cross sections.

Sample Size

The population for the study as mentioned above is too large to carry out the survey; therefore a sample of the entire population is taken to conduct the analysis which will represent the entire population all over India. The total number of respondents covered under the survey was 200 for CAT and 200 for IIT-JEE, thus made a total of 400.

Pre-Test

Questionnaires prepared for the study were pre-tested among 30 students each from CAT and IIT-JEE, and based on the outcome the questionnaires were finalized.

Tools for Analysis

Analysis was done by using SPSS. Various statistical and mathematical techniques such as percentage analysis, paired sample T test etc. were used for analyzing the data collected.

Data Analysis

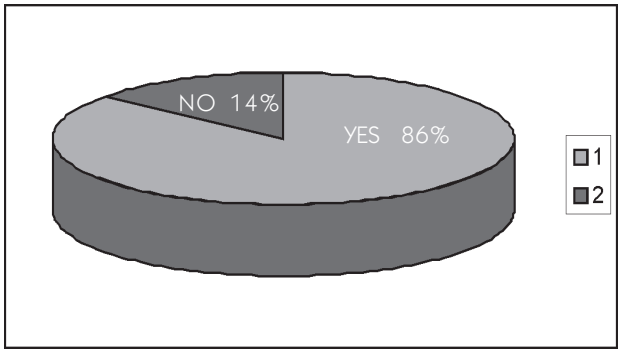
The analysis is arranged in two parts such as analysis of the responses on conventional coaching system and analysis of the responses on on-line coaching system. Conventional coaching system comprises both class-room and postal coaching for entrance examinations.

Analysis of the Responses of Students

Variables used for obtaining the perception of students include Fees to be paid, Location Constraint, Difficulty in timings, Chance for doubt clarification, Chance for extra reading, Convenience, Possibility of team work etc.

Substantial portion of the CAT and IIT-JEE students were in the opinion that it is very difficult to attend the conventional coaching [Exhibit I].

Exhibit I: Difficult to attend Conventional Coaching



Source: Primary Data

Table I: Perception of the Students on Conventional Coaching System

Perception	Very Low	Low	Moderate	High	Very High	Total
Fees to be paid (N=200)	15	13	23	34	15	100
Location Constraint (N=200)	36	5	9	19	31	100
Time Constraint (N=200)	20	12	6	37	25	100
Chance for Doubt Clarification (N=200)	19	16	27	10	28	100
Chance for Extra Reading (N=200)	14	31	23	15	17	100
Convenience (N=200)	30	45	7	9	9	100
Synergy of Team Work (N=200)	4	4	25	40	27	100

Source: Primary Data

Table II: Perception of the Students on On-Line Coaching

Perception	Very Low	Low	Moderate	High	Very High	Total
Fees to be paid (N=200)	28	31	14	18	9	100
Location Constraint (N=200)	35	27	9	16	13	100
Time Constraint (N=200)	15	15	7	42	21	100
Chance for Doubt Clarification (N=200)	5	1	14	41	39	100
Chance for Extra Reading (N=200)	1	11	35	35	18	100
Convenience (N=200)	4	6	23	38	29	100
Synergy of Team Work (N=200)	4 1	10	13	17	19	100

Source: Primary Data

Perception of the CAT and IIT-JEE Students regarding the special features of class-room and postal coaching is given in Table I.

Nearly half of the students (49 per cent) agree that the fees to be paid for conventional coaching is high as compared to on-line coaching and another 23 per cent agreed that it is moderate enough to accommodate students from middle class families. Half of the students (50 per cent) pointed out that the problem of location constraint is high in conventional system. Forty one per cent students opined that it is low as they select the coaching centre according to there convenience. Majority (62 per cent) of the students consider time constraint is very high in conventional system. More than one-third of the students (38 per cent) pointed out that conventional system of coaching offers better doubt clarification facilities and 45 per cent students complained that chance for extra reading is low in the case of class-room and postal coaching. A good number of students (75 per cent) opined that on-line coaching is convenient than class-room or postal

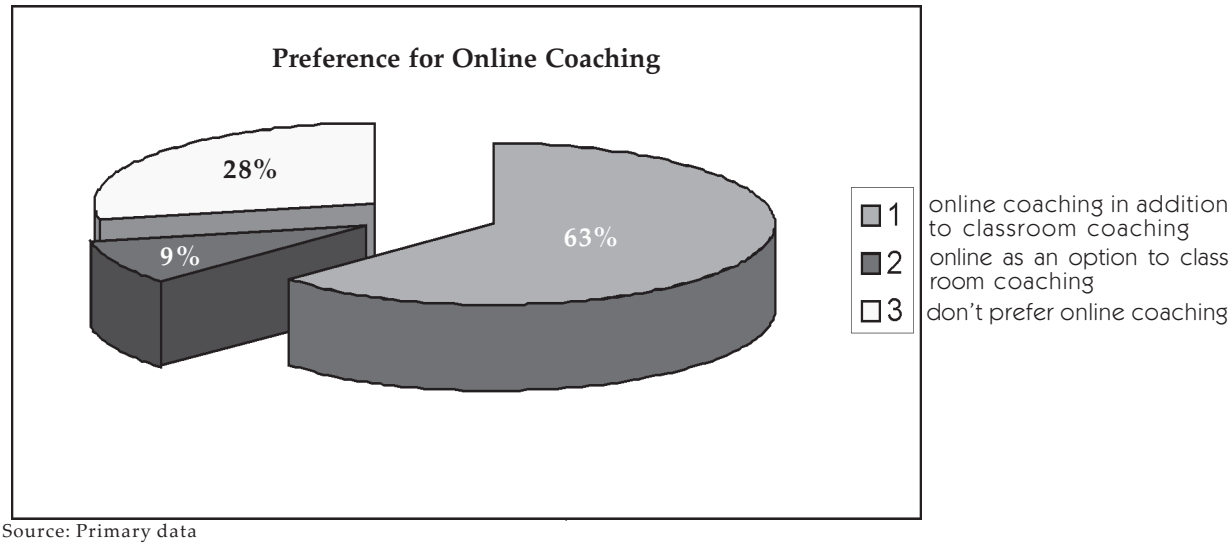
coaching and 67 per cent agreed that synergy of team work is high in conventional coaching system.

Perception of the students enrolled for CAT and IIT-JEE on the proposed on-line coaching is also collected through online and personal survey. The results of the survey are arranged in Table II.

More than half of the students (59 per cent) agreed that the fee to be paid for on-line coaching will be low as compared to the conventional system of coaching. Sixty two per cent of the students pointed out that location constraint will not cause many problems in on-line coaching because students can access the coaching facilities at their home. Majority of the students revealed that they are satisfied with on-line coaching as it will offer flexibility of time. Substantial number of students (80 per cent) pointed out that on-line will offer better doubt clarification facilities and 53 per cent students agreed that chance for extra reading will be high in the case of on-line coaching. A good number of students (67 per cent) opined that convenience is there in opting for on-line coaching and 51 per cent agreed that synergy of team work will be less in on-line coaching system.

Regarding the preference for on-line coaching, out of the 400 students, 63 per cent prefer online coaching in addition to conventional coaching and 9 per cent prefer on-line coaching as an option to conventional coaching. 28 per cent students agreed that they don't prefer on-line coaching at all [Exhibit II].

Exhibit II



Source: Primary data

Table III: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Sum of perceptions on On-Line Coaching	3.1000	200	.75688	.05352
	Sum of perceptions on Conventional Coaching	2.9700	200	.79515	.05623

Source: Computed from Primary data

The hypothesis is tested using paired sample T test as the samples are related in nature. The result of paired sample T test is summarized in Tables III, IV and V.

The Paired-Samples T Test comparing the means of Sum of perceptions on class-room and postal coaching and sum of perceptions on on-line coaching provides a 'p' value [0.059] which is greater than 0.05. Hence the hypothesis stands accepted at 5 per cent level of significance. It means that there is significant difference between sum of perceptions on conventional coaching and sum of perceptions on on-line coaching given by the students. So it can be concluded that on-line coaching system is comparatively superior to the conventional system of CAT and IIT-JEE Coaching.

Regarding the appropriate fee for on-line coaching, majority of students opined that they are willing to spend Rs.3500-Rs.5000. 22 per cent is willing to pay Rs.5000-Rs.6500 for on-line coaching and nine per cent each is willing to pay Rs.6500-Rs.8000 and above Rs.8000 respectively [Exhibit III].

Table IV: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Sum of Perceptions on Conventional Coaching and On-Line Coaching	200	.222	.002

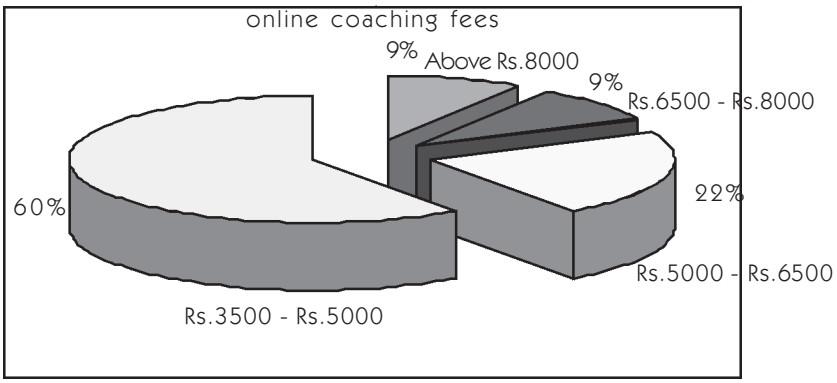
Source: Computed from Primary data

Table V: Paired Samples Test

			Paired Differences				t	DF	Sig. (2-tailed)
		Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Sum of Perceptions on Conventional and On-Line Coaching	.1300	.96840	.06848	-.0050	.2650	1.898	199	.059

Source: Computed from primary data

Exhibit III: Preference for On-Line Coaching Fees



Essential features for On-line Coaching Portal

Face to face interaction with the students and experts in the field reveals that the following features should be treated as the essential pre-requisite of an on-line entrance coaching portal.

- Instant doubt clarification facilities,
- Direct interaction with faculty,
- One to one interaction,
- Competitive environment ,
- Interaction with other students,
- Live question answer session with the faculty,
- Audio, video facility,
- Group learning,
- Group Discussions, and
- Shortcuts and ways to solve.

Summary of Findings

The major findings of the study are summarized below:

- Difficulty exists in attending conventional entrance coaching classes.
- Considerable number of students prefers on-line coaching in addition to the conventional system.
- A good number of students are willing to spend an amount ranging from Rs.3500-Rs.5000 towards on-line entrance coaching.
- Students have suspicion about the doubt clarification system and extra reading facilities of on-line coaching.

Suggestions

Based on the analysis and findings, the following recommendations are made for the effective implementation of the new system.

- There is higher level of acceptance for online coaching, so it is the right time to start the portal.
- On-line coaching can be provided in addition to classroom coaching.
- Doubt clarification session as video conferencing and on-line chatting.
- E-books may be provided along with the coaching.
- Majority students prefer on-line coaching in addition to classroom coaching and they are willing to spend an amount in between Rs.3500 and Rs.5000 towards this. Hence it is advisable to charge fees between Rs.3500 – Rs.5000.

Conclusion

From the study it can be concluded that web enabled on-line entrance exam preparation will have ample scope in the market. Existing difficulties in the conventional system ensures more feasibility to on-line coaching system. However the success of the portal will depends on the specific features of the portal. The students are looking for all the characteristics of the conventional system along with added advantages like convenience, low fees, absence of location and time constraint. Hence it is essential to device the portal with all these characteristic features to take advantage of the market potential.

Reference

Books

Zikmund, William G. *Business Research Methods [7th Edition].* Thomson Publishers, 2007.

C.R.Kothari, *Research Methodology Methods and Techniques [2nd Edition],* New Age International Publishers, New Delhi: 2004.

Cooper, Donald R. and Schindler, Pamela S. *Business Research Methods [8th Edition].* Tata McGraw-Hill Publishing Company Ltd., New Delhi: 2003.

Websites

<www.time4education.com>, <www.cflogic.com>, <www.careerlauncher.com>, <www.indianetgroup.com>, <www.aspirelearning.com>, <www.esurveyspro.com>.

Tourism Destination:

Image Building

Sampad Kumar Swain

The measurement of destination image tends to provide a comprehensive overview on the varied attributes of destinations by examining the feelings and experiences of visitors. Destination promotional agencies strive hard to put an outstanding show of attributes of destination in a fabulous way to cater to the urge and demand of visitors. This paradigm has widely been recognized all across the industries owing to have much relevance in the context of destination marketing. The present paper offers an overview on the concept of the destination image as to how the destination image is determined by the quality of infrastructure and quality of services. On the basis of the data collected from the domestic tourists, the study has revealed the significant role of the two destinations attributes for playing decisive roles in the promotion of destination image. The paper has also given much scope for comprehensive discussion about the issues and suggested constructive solutions to manage the two major growing issues that generally obstruct the formation of a better destination image for Puducherry in the different generating tourist markets in India.

Tourism is one of the leading growth-driven sectors recognized as a major engine for socio-economic and cultural development by all countries in the world. It is an unvarnished fact that International tourism has witnessed a phenomenal growth in the era of globalization and liberalization. The movement of people across international boundaries has risen spectacularly over the last one-and-a half decades. The recovery of international tourism may be attributed to the upbeat growth in the Information and Communication Technology sector, a multitude of travel choices with cost-effective and custom-made travel services, low cost air services, simplified and hassle free travel formalities etc. Today, more countries than ever before have given maximum preference to revenue generation by focusing on the promotion of international tourism. Path-breaking measures introduced in the aviation sector like long-haul non-stop flights have minimized the travel distance between continents and the booking procedures have become simplified with the availability of web-based information on the finger tips. Competition among tourist products and destinations is the order of the day and every promoter is vying with one another for share of the market.

Dr.Sampad Kumar Swain, Lecturer in Tourism Studies, Department of Tourism, School of Management, Pondicherry University, R.V Nagar, Kalapet, Pondicherry-605014, Email: sampadswain@yahoo.co.in

The degree of motivations and expectations followed by habits and life style of tourists has undergone substantial changes. These changes are the glaring indicators and acts as catalysts for the destinations to inculcate the spirit of competition, taking into account the tourist's profile, activities and interaction with the environment. These destinations should be thought of as evolving a competitive destination image in the form of a definite brand image that has to be managed effectively and positioned strategically. More particularly, a tourist destination such as Puducherry that remains untapped and unexplored in many ways needs to plunge into an aggressive brand campaign to place the country's fabulous tourist attractions in the international tourist market.

Thus, the destination image has turned out to be a strategic tool aiding to realize a competitive advantage and leverage to the Indian tourism industry. It has a greater role to play in the description, promotion, distribution, amalgamation, organization and delivery of the destinations' products in a dynamic way. It is widely accepted that the destinations possessing a positive image get a facelift on par with the competitors and also validate tourists' decision making process. As a considerable number of factors affects tourists' decision making process, e.g. climate, scenery, accommodation, cultural attributes, political factors, exchange rates, the availability and form of transportation etc, tourists possess images of potential destinations which reflect their perception of the ideal and appropriate characteristics of a destination. In addition to this destination images permit tourists to generate a set of expectations about a destination before that destination is actually experienced. The latter seems to be important as the tourism product has become a bundled product whose services are often characterized by credence and experience qualities.

Therefore, this paper is presented in the following sequences: Firstly, it reviews and evaluates some literature pertaining to the construct of destination image and its association with infrastructure and services. Finally, a primary survey of foreign tourists is analyzed and presented highlighting on the evaluation of destination attributes of India broadly classified into two. The paper draws inferences while emphasizing on the overall implications of the management of India Tourism and its concern for the destination image and calls for meeting future research requirements.

Review of Literature

The destination is a location that travelers desire to visit during the ideal time and where they spend time, in tandem with their motivations, needs, and expectations. A destination can be as small as a single building or structure to as large as an entire continent. Howsoever the size of the destination may be adequate facilities and services must be developed to satisfy the needs of visitors. Crompton (1979) suggests a destination image as 'the sum of beliefs, ideas and impressions that a person has of a destination.' Um and Crompton (1990) have put forth the process of the formation of overall image from evaluation of an object and described that the image of a place as a pleasure destination is a gestalt. It is a holistic construct which, to a greater extent, is derived from attitudes towards the destination's perceived tourism attributes.' MacKay and Fesenmaier (1997) have argued that a destination's image is a composite of various products (attractions) and attributes woven into a total impression. Predominantly, since present destinations are competitive in nature with other destination markets for acquiring massive share of business, it is, therefore, essential to have a thorough understanding of destination formation to undertake fundamental steps and procedures to enhance destination attractiveness as well as market competitiveness. The image correlates the tourist's attitudes towards a number of attributes. The image concept has by and large been considered as an attitudinal construct consisting of an individual's mental representation of knowledge (beliefs), feelings and global impression about an object or destination (Baloglu and McCleary, 1999). Fakeye and Crompton (1991) expanded these dimensions into three dimensions: (1) organic, (2) induced, and (3) complex. Dann (1996) and Gartner (1993) in their socio-linguistic model of destination image formation also delineated three components of images: (1) affective (internal sources or stimuli), (2) cognitive (external sources or stimuli), and (3) conative (of stimuli and motives). Recently, Baloglu (1999) has proposed and tested two different distinct components but these are interrelated to each other such as affective (feelings) and cognitive (beliefs) image. Affective image deals with the emotional response of individuals to a place or product. Cognitive image, on the other hand, represents knowledge of the place, environment or product features. However, each destination offers different images to tourists so that the separated measurement of image for each destination is necessary (Gartner, 1993). In this regard, destination image can also be seen as an umbrella construct

for different products and services. The destination image is influenced by two important attributes of tourist behaviour, one is atmospheric attributes and another is environmental attributes. Atmospheric attributes are related to the climate, weather, temperature, humidity etc; and the environmental attributes encompass the socio-cultural, economic and political aspects of a destination.

Destination image can be perceived, organized and instituted as a second order factor model that includes affective and cognitive image. Noticeably, it can be suggested that affective image has more impacts on developing destination image. Thus, destination attributes that are associated with internal sources or feeling of travel such as exotic atmosphere, relaxation, scenic beauty, and good climate, are useful components of developing destination image. Also, cognitive image components such as personal safety, availability of good restaurants, suitable and standardized accommodations, friendly people and unique architecture could be good destination attributes to develop destination image. As a result, this information could be of interest for destination marketers and developers to understand destination image so that the appropriate services and products can be introduced and developed in order to enhance the status of the destination image. The marketing of destinations thrives on the presentation of a clear and precise image that has the capacity to invite the attention of potential tourists. This process may lead to superficiality and oversimplification in the promotional material produced. Images in tourism marketing may be viewed as semiotic tools, used to reflect complicated cultural systems of travel destinations. These images often reflect how it is perceived that people want to see a destination and they may reveal visions and aspirations that have existed in a society for a long time (Jensen and Korneliussen 2002). Attractions provide the pull factors, which energizes and entices individual's need to travel. It is the job of attractions to pull people towards them and satisfy their needs. Attractions awaken a sleeping or dormant need and induce the individual to act by traveling to the attraction. The important role of attractions is to create an image that distinguishes one place to another.

Assessment of Tourist Behaviour

This study integrates theories from tourism destination image and tourist behaviour to examine how the feedbacks of tourists are used to determine and assess the tourist behaviour on the destination, image construction and interpretation. Image has been shown to be an important influence in the selection of destinations. A destination image is formed by both stimulus factors and tourist's characteristics (Baloglu and McCleary 1999). Tour operators today play a very important role in creating the images of destinations. In this global capacity, they can significantly influence international tourism flows towards a country hit by safety and security risks. Even decisions of individual tourists on where to spend a holiday very often depend on the attitude and practice of tour operators towards a particular destination (Cavlek 2002). Appraisal is an important technique of understanding the pre and post behaviour of tourists about the destination. The image of a destination dwells on the appraisal results collected and analyzed by the intermediaries with the purpose of examining the outlook on various services rendered at the halting place of the tour. A good number of studies have been undertaken to bring forth the underlying importance of appraisal method in measuring the behaviour of tourists (Pritcharda and Havitza 2006). Psychographic segmentation in tourism marketing research can be an important tool in ascertaining why tourists choose destinations and what are their expectations and perceptions of a holiday experience (Waryszak and Hyeonju 1995).

Methodology

The objective of the study is to evaluate various destination images and analyze the opinions of the foreign tourists as target respondents regarding the Puducherry's destination image and its unique selling points. The study emphasizes the significance of tangible and intangible destination attributes by taking the empirical results to be derived from the data analysis. Many similar studies have been undertaken in the context of destination image. A wide variety of quantitative tools have been employed to collect evaluative information. However, in recent years attitude rating scales, along with increasingly sophisticated analyses, have come to dominate as the method of choice for examining tourist experience (Reid and Andereck 1989). Evaluations of festivals, ski resorts, and destinations have all used bipolar, semantic differential or Likert-style attitude scales to understand appraisals (Baker and Crompton 2000). For example, Pritchard and Havitz (2006) have made a case study on the appraisal of destination image in the Western Australia by using a structured questionnaire and the quantitative method.

A survey was carried out by interviewing respondents comprising of domestic tourists for gaining further insights into the evaluation of destination images during January 2007. Thus, 110 domestic tourists from various states more particularly from West Bengal, Andhra Pradesh, Kerala, Orissa and Karnataka were requested to put tick mark basing on their judgment in the five point Likert scale questionnaires concerning various destination attributes. Finally 100 properly filled-in questionnaires were included in the coding and data analysis. After the collection of the questionnaires, respondents were grouped into three categories at the time of coding the data. The objective of classifying the respondents into three groups was to ascertain the differences of opinions on the premise of the destination image. It is timely to mention that division of the total respondents into three groups on the basis of their spending capacity has a strong relationship with the selection of the quality of infrastructure and services. In majority cases, tourists do not tend to compromise with quality of facilities and services during their leisure or business trips. The primary questionnaire survey was conducted on site which is Puducherry. The respondents were interviewed by the students of Department of Tourism, Pondicherry University and students were trained to select the respondents on the basis of convenience - cum - judgment sampling technique.

The previous studies on the measurement of destination images have been reviewed to get a final list of destination attributes. These destination attributes are broadly classified into two major variables which are quality of infrastructure and quality of services. The quality of infrastructure encompasses Night life, entertainment, Shopping facilities, Quality of Cities, Local cuisine, food quality, Local traffic, transport infrastructure, Quality of accommodation, Sports and recreation facilities, banks, telecommunication, post office, etc and the quality of services comprises Hygiene, cleanliness, Safety, security, Honesty, authenticity, Accessibility, Luxury, Experience, adventure, Variety, fun, Freedom, Open mindedness, etc. Respondents were requested to evaluate these two attributes on a five point Likert-scale including tangible as well as intangible factors. The data collected was analyzed using the SPSS data analysis package. Statistical tools such as mean and standard deviation were applied to find the results about the perceptions of foreign tourists regarding the attributes of destination images in Puducherry. Mean, standard deviation and one way ANOVA were also computed. The use of one-way ANOVA was taken to test the hypothesis. The results of the analysis are presented in the following tables.

Hypothesis

H1: There are no significant variances among the three categories of domestic tourists about the quality of infrastructure and quality of services as significant attributes of destination image on the basis of the spending capacity.

Data Analysis

In a bid to mark the mean and standard deviation differences of perceptions on the destination image, the descriptive statistics of the three groups of respondents are illustrated in table 1.1. In the first attempt, the analysis is made on the variable of quality of infrastructure by using the mean and standard deviation method in order to determine the difference of means and square of means of three categories of respondents. The group having maximum spending ability has attributed to the quality of infrastructure as a major image building factor relatively compared to other two groups of respondents such as minimum and least spending groups. There is a highest mean value of 3.92 in case of group having high spending capacity whereas mean values of 3.12 and 1.53 in case of medium and low spending groups respectively. The results of the standard deviation are also equally important in establishing the degree of dispersion among the three respondent groups on the quality of infrastructure as a key determining factor of destination image. However, there is no much dispersion between the opinions of the high and low groups on the quality of infrastructure. Whereas, considering the quality of service as another vital attribute of destination image, it is ascertained from the results of mean that the high spending group has secured highest mean value of 4.7 followed by the medium spending group. The low spending group has relatively secured very less mean score. There is no much difference of standard deviation among the three groups. The result of the standard deviation denotes greater consistency in their opinions about the quality of infrastructure.

It is essentially important to determine the change of perceptions of respondents on these two major destination attributes. Thus, there exist differences between each spending groups of the quality of infrastructure and the quality of services. But there is a visible difference of opinions between high spending group of the quality of infrastructure and the quality of services. The high spending group has relatively considered the role of service quality that effectively changes the image of the destinations more than the quality of infrastructure can do. In a similar case, it

Table.1.1: Descriptive Statistics

Destination Image Attributes	Tourist Spending Groups	Mean	Std. Deviation
Quality of Infrastructure	High Spending	3.92	.615
	Medium Spending	3.12	1.29
	Low Spending	1.53	.516
	Total	3.1	1.29
Quality of Services	High Spending	4.7	.465
	Medium Spending	4.05	.574
	Low Spending	1.66	.975
	Total	3.87	1.15

is also observed that there is no much dispersion among the respondents in each group about the quality of service as a major influencing factor in building destination image.

The results of the ANOVA are presented in table-1.2. It is explained about the variance of means between and within the groups of respondents. While taking the instance of the basic tourism infrastructure as a major image building attribute for destination, the F- statistics is 24.422 that is followed by the F distribution with df= (2, 97) and an associated P- value=.000. Therefore, the null hypothesis is rejected at the five per cent significance level. Another factor that has much larger impact on the formation of destination image is the quality of services. The F-statistics is 119.945 and F distribution is df= (2, 97). The associated P- value =.000 that signifies the significance of the hypothesis. Both the associated values have rejected the null hypothesis that states that there is no significant variance among the three categories of domestic tourists about the quality of infrastructure and quality of services as significant attributes of destination image on the basis of the per capita spending at the destination. It may otherwise be stated that the effect is said to be significant. The data provides sufficient evidence to conclude that a difference exists in the perception of domestic tourists about basic tourism infrastructure and services as two broad determining factors of the destination image.

When the effects of the one way ANOVA are significant, it tends to imply that the means differ more than that would be expected by chance alone. In terms of the above experiment, it would indicate that the destination images were not equally effective in building a magnificent destination image for Puducherry in the domestic tourism market in all across countries. When the effects are significant, the means must then be examined in order to determine the nature of the effects. The measure which examines the difference of means among the three categories of tourists is "post-hoc test." The analysis is fairly evident simply by looking at the size of the various means. When the null hypothesis is rejected in a one way ANOVA, the conclusion is that the means are not all equal. An attempt has been made to analyze further i.e., which means are different, which is the highest, or, more generally, the relation among means can be ascertained. Thus it is essential to adopt the Tukey multiple comparison method to distinguish between the individual confidence level and group confidence level. The Tukey multiple comparison method is based on the studentised range distribution for obtaining confidence intervals for the differences between means which is similar to the pooled t- interval formals.

Having established the significant differences of means between groups and within groups in respect of quality of infrastructure and quality of services, an effort is undertaken to use the Tukey's post hoc test to examine whether there are

Table 1.2: ANOVA

Variables	Tourist Spending Groups	Sum of Squares	df	Mean Square	F	Sig.
Quality of Infrastructure	Between Groups	55.260	2	27.630	24.422	.000
	Within Groups	109.740	97	1.131		
	Total	165.000	99			
Quality of Services	Between Groups	93.502	2	46.751	119.945	.000
	Within Groups	37.808	97	.390		
	Total	131.310	99			

any differences of means among the groups such as high, medium and low spending groups or not. To further validate the significance of hypothesis, post hoc test has been conducted to look into the actual differences between the groups about the quality of infrastructure and quality of services. While analyzing the out-put of post hoc results given in table 1.3, it is concluded that there is a difference between high spending group tourists with the medium and low spending group of tourists. It is further tested that each group is very much significant ($p<0.04$) about the quality of infrastructure that has been perceived differently by three categories of tourists. Therefore, the outputs of Tukey's post hoc test have validated the significance of hypothesis test carried out by using the ANOVA test in table-1.2. The quality of services is considered to be another significant factor to decide the building of image of destinations. The quality of services is also regarded as important determinants of destination image building. It is also observed that there are differences of perceptions between high spending and medium spending groups and vice versa. Similarly, there are differences of perceptions about the quality of services between medium spending and low spending group and vice versa. However, much difference of views on both the two key destination images building factors is reported in case of high spending group with other two categories.

Discussion and Conclusion

The study of the measurement of destination image has been regarded as a thrust area to pursue empirical tourism research work for the last three decades. People's perceptions on various attributes in a destination will tend to form a composite or overall image of it. Thus, it is important to delineate the relationship between the overall image and its components. The process of selection of potential destination is solely driven by the image of a particular place or region that is a determining factor in the destination choice process. Since the manner in which tourists perceive travel destinations has a basic influence on their travel decisions. A destination's image is a significant aspect in the tourist's decision making process, even if it does not accurately portray of what in reality the place has to offer. There is a clear relationship between positive perceptions of destinations and positive purchase decisions; as a result, destination image becomes an important determinant of tourist buying behaviour. One of the most important tasks in the development of a destination's image is the creation and the transmission of a favourable image to a potential tourist by sharing good experiences about the quality of infrastructure and quality of services. This clearly leads to strengthening the destination's competitiveness. Destination planners and promoters have to customize their products by adopting innovative marketing efforts to suit the image of a particular target audience, and so it is implied that they must take into account the image of it upheld by visitors.

An open discussion is essential to go deep into the discussion about the destination image attributes and their consequent impacts on the promotion of destination image in the tourist generating markets. Destinations are expected to be endowed with premium attributes that augment the competitiveness in the ever growing tourism market. A well-maintained destination will outsmart other rival destinations by

Table.1.3 Tukey HSD: Multiple Comparisons

Dependent Variable	Category of Tourists on duration -wise	(J) Category of Tourists on duration -wise	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Quality of Infrastructure	1.00	2.00	.80524(*)	.24781	.004	.2154	1.3951
		3.00	2.39259(*)	.34253	.000	1.5773	3.2079
	2.00	1.00	-.80524(*)	.24781	.004	-1.3951	-.2154
		3.00	1.58736(*)	.30811	.000	.8540	2.3207
	3.00	1.00	-2.39259(*)	.34253	.000	-3.2079	-1.5773
		2.00	-1.58736(*)	.30811	.000	-2.3207	-.8540
Quality of Services	1.00	2.00	.65198(*)	.14545	.000	.3058	.9982
		3.00	3.03704(*)	.20105	.000	2.5585	3.5156
	2.00	1.00	-.65198(*)	.14545	.000	-.9982	-.3058
		3.00	2.38506(*)	.18085	.000	1.9546	2.8155
	3.00	1.00	-3.03704(*)	.20105	.000	-3.5156	-2.5585
		2.00	-2.38506(*)	.18085	.000	-2.8155	-1.9546

* The mean difference is significant at the .05 level.

superimposing the facilities and amenities along with the massive improvement of quality of services. In the competitive world, destination intermediaries, promoters, planners and developers are taking supplementary safety measures to meet to the demand of the tourists because destinations are competing at the national and international spectrum. On the other side of the discussion, tourists are flooded with comparative choices and preferences. The new age tourists are more motivated for value added attractions that the tourists of the pre-globalization period. In the era of information highway, it is reasonably possible to have a comprehensive idea about the quality of products and services available at each stopover in the holiday trips.

In the present paper, it is the intention to uncover the possible grounds for which the differences have occurred among the groups in realizing the image of destinations. It is inferred from the analysis that domestic tourists have shared their varied perceptions on the quality of infrastructure and quality of services. The paper has drawn a relevant hypothesis to test the results of primary data directly collected from the tourists. That hypothesis is rejected based on the output shown in the ANOVA table 1.2. The rejection of first hypothesis has tentatively proved that the quality of services and the quality of infrastructure are the significant predictors for the destination image building. It is clearly perceived from the results of the rejection of hypothesis that tourists lay a high degree of importance on the service quality as it gives them a kind of comfort and respite during their visit to tourist destinations. It can be compared with the common parlance of human beings where the basic understanding is a need for better and improved service quality at the place of stay. Therefore, tourists have clear-cut expectations and the demand for safe and comfortable places of stay is very intense. The units of accommodations which they prefer as a sojourn should cater quality services as per the needs and expectations of the guests. It is obvious that there are significant differences among the three groups of domestic tourists as respondents having low spending ability in the present study have given less importance as compared to the tourists

having high spending ability. Similarly, domestic tourists having medium spending ability have also become less serious for the quality of services than the high spending ability. It is inferred from the results of the hypothesis that the difference will exist among the three groups because quality of services are the major pulling factors of destinations. Those who have the ability to spend or already spent must sincerely have scanned all dimensions of services because their stays will be longer and their dependence and reliability on the services will be much more as compared to the other two categories of tourists groups in the study. The overall perception of three respondent groups in the quality of services is as good as the results of the quality of infrastructure. There are significant differences of perceptions of three categories of tourists on the quality of infrastructure front. The results have demonstrated that low spending respondents have given modest attention to the quality part of the infrastructure because much of the facilities are unaffordable as they are treated as budget category tourists in our conventional parlance. It is the high and medium group of domestic tourists who are treated as a major determining attributes of selecting these destinations. The results of hypothesis in the ANOVA test have also been examined further by using the post hoc turkey test. The outputs of the analysis have demonstrated the differences among the three groups in the case of quality of infrastructure variables and so also in case of quality of services.

The paper has made an intensive discussion on these two destination image building attributes which have solicited pertaining views from the three categories of tourists in tourist destinations in and around Puducherry by using a judgement sampling method. The paper has some limitations for drawing general conclusion as the sample is not large and so also the area of the study. However, the results of the study will unveil wide-ranging discussions in the future. The Ministry of Tourism both at the centre and at the union territory of Puducherry, should take leverage of the findings of the study as critical factors to mould the tourist destinations to the demand and expectation of the tourists. The study has reproduced the facts that Puducherry Tourism along with India Regional Tourism Office in Chennai should evolve promotional strategies to allure long haul tourists with high spending ability than the short haul or transit tourists with having little scope for spending. The former will generate much revenue for the people delivering services at various stages in the tourist destinations. On the other hand, room occupancy rates will be higher and ground transports will also be used on a much larger scale. Infrastructural development that are in the pipeline will not be sufficient at all to cater to the demand of the destinations which will be growing at a fast pace in terms of multiplier effect on the local economy. After all, optimum utilisation of infrastructure facilities at the destination may certainly be possible.

The present research implies qualitative improvement of infrastructure and services at the destinations as having a significant impact on the overall destination image. Destination planners, promoters and developers should plan for much investment on research and development on varied areas of destination image building measures. Unlike other neighbouring states like Kerala, Tamil Nadu, Andhra Pradesh and Karnataka, Puducherry is also bestowed with diversified tourist destinations which are known for their intrinsic charm and uniqueness. Thus these unrivaled and implausible destinations have created a better image for Puducherry whereas the two major destination image building determinants like the quality of infrastructure and the quality of services should equally match with the original value of the destinations. The conclusion may be drawn by delving on one more important point in the study about the new age tourists who are much concerned for the destination image for the fact that motivational factors of the destination alone cannot pull the tourists but it is the quality of infrastructure and quality of services which play a vital role in helping the tourists to take the final decision to visit the destinations.

The underlying study has firmly argued for greater destination image building exercise in Puducherry in the coming decade because Puducherry is recognized as most preferred weekend destination by the domestic tourists of adjoining states. Thus, the paper has sincerely presented the ground for the future research work in the area as the prospective research work will highlight other relevant issues and challenges affecting Puducherry's destination image in the domestic tourist market. Finally the undertaking of future work will certainly throw open more latent discussions on the critical aspects of destination image.

Keywords: Destination Image, Quality of Infrastructure, Quality of Service and Evaluation.

References

Baker, D. and J. Crompton. "Quality, Satisfaction and Behavioural Intentions." *Annals of Tourism Research.* Vol. 27 (2000): 785–804.

Baloglu, S. and McCleary, K.W. "A Model of Destination Image Formation." *Annals of Tourism Research.* Vol. 26 (4) (1999): 868-897.

Baloglu, S. "A Path Analytic Model of Visitation Involving Information Sources, Socio Psychological Motivations, and Destination Image." *Journal of Travel and Tourism Marketing.* Vol. 8 (3) (1999): 81–90.

Cavlek, N. "Tour Operators and Destination Safety." *Annals of Tourism Research* Vol. 29 (2) (2002): 478-496.

Crompton, J.L. "An Assessment of the Image of Mexico as a Vacation Destination and the Influence of Geographical Location upon That Image." *Journal of Travel Research*. Vol. 17(4) (1979): 18–23.

Dann, G.M.S. "Tourist Images of a Destination – An Alternative Analysis." *Journal of Travel and Tourism Marketing*. Vol. 5 (1/2), 41–55, 1996.

Fakeye, P.C. and Crompton, J.L. "Image Differences between Prospective, First-time and Repeat Visitors to the Lower Rio Grande Valle." *Journal of Travel Research.* Vol. 32 (2) (1991): 10-16.

Gartner, W.C. "Temporal Influence on Image Change." *Annals of Tourism Research.* Vol. 13 (1986). 635–644.

Jenssen, O. and Korneliussen, T. "Discriminating Perceptions of a Peripheral." *Journal of Travel Research.* 41 (2002): 185-196.

MacKay, K.J. and Fesenmaier, D.K. "Pictorial Element of Destination in Image Formation." *Annals of Tourism Research.* Vol. 24 (3) (1997): 537–565.

Pritcharda, M.P. and Havitza, M.E. "Destination Appraisal: An Analysis of Critical Incidents." *Annals of Tourism Research.* Vol. 33 (1) (2006): 25-26.

Reid, L. and K. Andereck "Statistical Analyses Use in Tourism Research." *Journal of Travel Research.* 28 (2) (1989): 21–24.

Um, S. and Crompton, J. "Attitude Determinants in Tourism Destination Choice." *Annals of Tourism Research.* Vol. 17 (3) (1990): 432–448.

Waryszak, Z. and K., Hyeonju. "Psychographic Segmentation of Tourists as a Predictor of Their Travel Behaviour: An Exploratory Study of Korean Tourists to Australia." *Journal of Hospitality and Leisure Marketing.* Vol.2 (4) (1995): 5-19.

Perceptual Mapping:
The "Country" Consumer and Toilet Soap Branding

Ramakrishnan Venkatesakumar, Thillai Rajan P. , and Ramkumar D.

Indian rural markets are highly heterogeneous with different life styles patterns, literacy levels, spending pattern, socio-cultural differences and high degree of fragmentation in terms of size and languages spoken, and these factors make any marketer to rethink about the efforts they need to place in serving these markers. The current study aims to find out how the performance of toilet soap brands is assessed by the consumers and relative positioning of various brands on the selected marketing mix elements. The findings include lack of clear positioning based on quality aspects by the rural consumers and need for improving positioning based on quality.

India is one of the largest emerging markets, with a population of over one billion. It is one of the largest economies in the world in terms of purchasing power and has a strong middle class base of 300 million. Around 70 per cent of the total households in India (188 million) reside in the rural areas and the average household size is estimated at 5.6 persons per household. The rural markets in India show a steady growth and it is estimated to be larger than the urban markets; nearly 53 per cent of FMCG sales and 59 per cent durable sales accounted by these markets. Many companies consider the rural markets to be vital for growth. Marketers as well as academic researchers are concerned about some of the key issues of interest including understanding rural consumers or reaching out with products and services to remote locations and developing suitable communication strategies to these markets where the rural audiences are vastly heterogeneous. With growing incomes at both the rural and the urban level, the market potential is expected to expand further. One of the key geographical areas that need specific research is rural areas of Indian sub-continent. The current study aims to focus on the perceptions on various

Mr.Ramakrishnan Venkatesakumar, Faculty-JSN School of Management Services, Kanchipuram -631 501, Tamil Nadu, Email: venkat@jsnindia.org

Mr.Thillai Rajan P., Faculty-Department of Management Studies, Thiagarajar College, Madurai, Email: thillairajan@linuxmail.org

Mr.Ramkumar D., Faculty-Department of Management Studies, The American College, Madurai, Email: ramkumar_madurai@yahoo.com

factors like price, quality and performance factors of the toilet soap brands by the rural consumers. The study is expected to give insights into the marketers to reposition their brands, if needed, based on various factors and develop suitable marketing mix strategies, specific to the rural consumers.

Introduction about the Indian FMCG Industry

The Fast Moving Consumer Goods (FMCG) sector is the fourth largest sector in the Indian economy with a total market size in excess of $13.1 billion. The FMCG market is set to tripple from $11.6 billion in 2003 to $33.4 billion in 2015. The FMCG sector creates employment for three million people in downstream activities. A distinct feature of the FMCG industry is the presence of global players through their subsidiaries (HLL, P&G, Nestle), which ensures new product launches in the Indian market from the parent's portfolio. Demand for FMCG products is set to boom by almost 60 per cent by 2007 and more than 100 per cent by 2015. Most of the Indian FMCG companies focus on urban markets for value and rural markets for volumes. Between 1998 and 2000, overall value growth for FMCG products fell from a robust 25.4 per cent to 7.2 per cent. The slowdown was most acutely felt in Northern and Western India, where growth rate fell from 29 to 3.9 per cent and from 29 to 4.9 per cent respectively. In the year 2003, the FMCG industry showed a growth of 2.7 per cent with categories like toothpastes, detergents, and packaged tea continuing to be in the negative growth rate region. Toilet soap category, which contributed nearly ten per cent of the industry sales, showed a recovery and registered 2.7 per cent growth over 2002. For February 2005, the industry recorded an 8 per cent growth rate, while the moving annual total (MAT, that is for the 12-month period ended February 2005) growth was placed at 6.3 per cent. The survey released by FICCI estimated that the industry was poised to achieve an overall growth between 8 per cent-8.5 per cent in 2005-06, up 2-2.5 percentage points over the growth rate clocked in the previous year.

Toilet Soap Category – A View

The size of the personal wash products is estimated at $989 Million. The toilet soap industry is divided into segments like Premium, Popular, Discount and Economy based on unit price. While the overall personal wash market is growing at one per cent, the premium and middle-end soaps are growing at 10 per cent. Toilet soaps, however, are dominated by the large-scale units with leading players like HLL, Nirma, Godrej Soaps and Reckitt and Colman; the leading brands include Hamam, Lifebuoy, Pears, Nirma, Cinthol, Mysore Sandal, Liril, Dove and Lux. The toilet soap industry witnessed single digit growth rate from 1996 onwards with 1998 showing the lowest among the recent times (1.8 per cent). From 1999-2003, the categories have struggled with growth rate and toilet soaps category managed to be positive growth rate regime (1.1 per cent) against the FMCG growth of 4.4 per cent. Toilet soaps contributed nearly 10 per cent of Rs.47, 800 crores during 2002-03. The Rs.4,350-crore toilet soap market grew by around 4.5 per cent in April 2003 after de-growing for almost two years at a stretch. In 2004-05, the toilet soap segment grew at six per cent and in 2005-06 it was expected to reach 14 per cent as per the FICCI survey.

Rationale of the Study

Indian rural markets are highly heterogeneous and could be considered as an unexplored hinterland in terms of market potential and consumer characteristics. A farmer in rural Punjab is considered as more progressive than fellow farmers in Bihar, and Karnataka's farmers are better educated than the ones in Rajasthan. In urban consumer's decision processes, mostly all of the family members are involved, including the children, whereas, due to lack of mobility and exposure among women, men in rural places make most of the purchases. This is particularly at very high levels in states like Bihar, Uttar Pradesh, Madhya Pradesh and Orissa (The Marketing Whitebook 2003-04). When Kurt Salmon Associates' (KSA) Indian arm, KSA Technopak conducted its first rural consumer outlook in the year 1999, it was found that unlike the urban counterparts, rural consumers do not distinguish between occupational and personal spending. Personal care products occupied fifth rank of the priority for the rural consumers in Tamil Nadu, and in states like Maharashtra and Punjab it is occupied higher priority levels.

The success of a brand in the Indian rural market is as unpredictable as rain. In particular, it has always been difficult to gauge the rural markets. Many brands, which should have been successful, have failed miserably (Anugrah Madison). FICCI Survey (2003) offered insights into the dynamics of growth in the competitive market environment and foresaw that future growth for the Corporate India would come from newer segments such as the youth and through increased rural and small town

penetration of the products and services. Rural retailers are disadvantaged due to geographic isolation, unfavourable cost structures and restricted population catchments and support services from the firms, which consequently make their trading conditions inefficient and highly pressured by keeping limited product line and stock keeping units (SKUs) (Paddison and Calderwood 2007). This is resulted in limited product/brand reach in rural places. Choe et al (2004) worked on new food products consumption by Indian consumers and concluded that subjective norms had greater influence on Indian consumers' attitudes, intention to buy, and actual purchase behaviour and confirmed that Indians' collective social views strongly influenced their attitudes towards and purchase behaviour of new food products.

Positioning can also differentiate brands on the basis of attributes or image, associate them by highlighting similarities between market competitors, or focus consumers on a promotional price of an advertised brand. A particular positioning strategy could alter the beliefs about the sponsor's attributes or the price consumers are willing to pay for the brand (Kalra and Goodstein 1998). Rural consumers showed willingness to pay additional secondary costs to travel distances far to shop for getting quality products (Choe et al 1997). Thus quality of the product purchased can no longer be ignored by the marketers and the rural consumers are seeking value for money proposition when they make purchases. Sullivan and Savitt (1997) work on identifying the store patronage and psychographic factors associated with rural grocery shoppers indicated that price was considered to be an important factor in deciding shopping pattern. Rural consumers are more likely to do comparison-shopping to negotiate over the price; due to differences in living standards; between rural and urban, rural consumers are concerned about product prices than urban ones (Sun and Wu 2004). Broadbridge and Calderwood (2002) studied the shopping habits of residents of rural communities in Scottish context and suggested that they were not always buying cheaper brands and liked to get things on offer.

It is reported that prior to trial stage, brand name increases the consumers' perception of experience and credence attribute performance evaluations (Srinivasan and Till 2002). It is expected that the benefits of positive initial evaluations may be carried over to repurchase situations (Mattila, 1997). In store, promotions and advertising have not found good reach in rural places and lack of functional alternatives for retail outlets decreases the chances of rural consumers to be exposed to various marketing promotions (Sun and Wu 2004).

One of the key elements among them in influencing the current purchase is the effect of previous purchases. The effects of previous purchase therefore should be positive (Deighton et al 1994). It is confirmed that both overall satisfaction and repurchase intentions are affected asymmetrically by attribute-level performance and disconfirmation (Mittal 1998). Ganesan and Venkatesakumar (2003) study on Brand Switching among the Rural Consumers suggested that brand switching improved the overall satisfaction, price and quality perceptions but failed to improve the perceptions related to promotional measures and advertisement supports.

Moreover, mixed feelings toward a product exist because a consumer may be satisfied with one attribute but dissatisfied with another (Mittal et al 1998). Ultimately, any successful brand forges a special relationship with the consumers through its unique combination of perceived attributes (Dyson et al 1996). It was found that rural consumers were generally situated at lower levels of hierarchy of needs than their urban counterparts do (Sun and Wu 2004) and less likely to do attribute evaluations due to constrained availability and choices.

Thus the current study aims to develop perceptual maps for overall satisfaction levels, price and quality factors for the various brands of toilet soaps, particularly for the rural markets, which are constrained by physical distribution as well as communication and where very limited efforts were taken in the past particularly for rural consumers.

Methodology

The data were collected from the rural consumers of Kanchipuram district, Tamil Nadu. Nearly 600 respondents were contacted through field survey with a structured questionnaire. To record the post-purchase analysis/reactions of the consumers, the scale used by Ganesan and Venkatesakumar (2003) for brand switching among the rural consumers was adopted (Cronbach's alpha of 0.780). The 21-items scale showed Cronbach's alpha coefficient of 0.712. The study is an attempt in exploring the rural consumers' purchase process, and normally for a preliminary research, recommended alpha

level of 0.7 (Nunnally 1978), the same has been used as criterion in this study.

Findings and Discussion

From the 600 respondents, after a careful screening process, 502 usable responses were considered for the analysis. Out of the 502 respondents, 55 per cent are male respondents and 45 per cent female respondents. Monthly family income is a positively skewed distribution with mean income of INR 9118.5 per month (σ= INR 7375.68). Correspondence Analysis is predominantly used to identify the positioning of the brands.

Correspondence analysis is an interdependence technique (Yavas 2001; Hair et al 2005). The objective of the correspondence analysis is to portray data geometrically in low-dimensional space. The technique relies upon a singular value decomposition of a matrix of chi-square distance. The decomposition generates eigenvalues and eigenvectors that are applied to row and column distance matrices. This in turn produces the interpoint distances for mapping. The correspondence table is a cross-tabulation of the row variable by the column variable. The active margins show the category totals for the row and column variables used in the analysis. In the current analysis, top ten brands based on the usage frequency were considered, which amply represented brands from Economy, Popular and Premium segments.

Table –1 Correspondence Table for Price

Current Brand	Price (current brand)[a]					
	Very Low	Low	Normal	High	Very High	Active Margin
Hamam	6	11	63	49	28	157
Lux	2	7	29	29	11	78
Pears	0	1	17	28	6	52
Lifebuoy	1	7	23	11	1	43
Mysore Sandal	1	1	11	20	6	39
Cinthol	1	1	13	17	6	38
Dove	0	1	5	21	4	31
Power	3	3	9	12	1	28
Medimix	0	1	11	6	4	22
Liril	0	0	2	10	2	14
Active Margin	14	33	183	203	69	502

a 36 degrees of freedom
Chi-square statistic = 63.017
Sig. = 0.004

Table –2: Summary of Correspondence Analysis for Price

Dimension	Singular Value	Inertia	Proportion of Inertia		Confidence Singular Value	
			Accounted for	Cumulative	Standard Deviation	Correlation
1	0.282	0.079	0.633	0.633	0.040	0.076
2	0.162	0.026	0.209	0.842	0.042	
3	0.129	0.017	0.133	0.974		
4	0.057	0.003	0.026	1.000		
Total		0.126	1.000	1.000		

(a) Perceptual Mapping – Current brand usage vs. Price

The correspondence table for price *(Table -1)* shows the price perceptions of consumers for various brands used by them. For example, nearly 50 per cent of users of Hamam brand and Lux perceived the price is high or very high and brands like Pears, Mysore sandal and Cinthol, nearly 60 per cent of the brand users perceive price as high/very high.

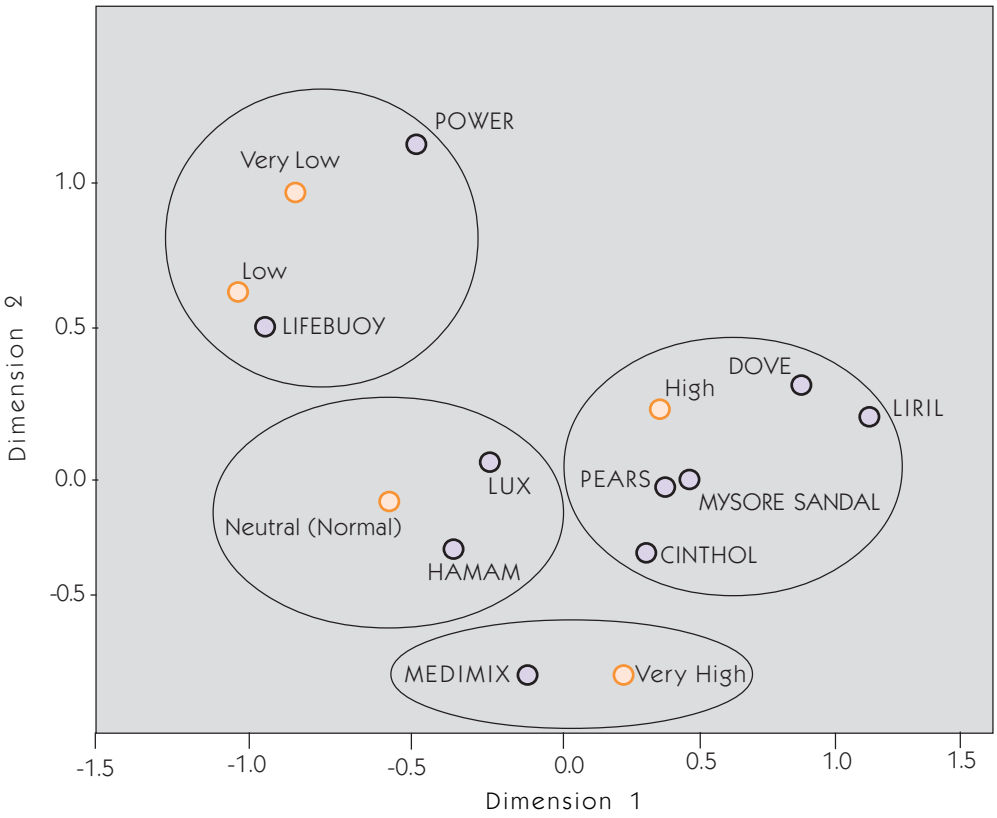
The summary table *(Table-2)* shows whether there is any relationship between the row and column variables, and how many dimensions are needed to display this relationship. The singular values are measures of association by dimension between the row and column variables, with larger values indicating stronger relationships and in the current study, the larger values *(0.282 and 0.162)* indicate strong relationship between Price perceptions and brands used by the consumers. The squares of the singular values equal the inertias, which are sum able over dimensions. The first two dimensions accounted to nearly 84.2 per cent of the proportions, and for make the interpretation easier, a 2-Dimentional solution is used in the study. Thus the correspondence procedure, which aims to simplify the data structure, accounted or reflecting nearly 84 per cent of the original characteristics of the data considered for analysis, which is fairly a high level of fitting for the data. The chi-square statistic is a supportive tool used to test the null hypothesis that "there is no relationship between the row and column variables" (It is equal to the total inertia times the total number of objects). Since the significance is small (i.e., less than 0.05), it can be safely claimed that there is a relationship between the row and column variables. That is, the significant chi-square value *(Chi-square statistic = 63.017 Sig. = 0.004)* indicated that there is a relationship between the brand usage and opinion on price factor for the rural consumers (Table -1 & Table – 2).

From the perceptual map *(Picture-1),* we could identify that against the price ratings of 'Low' and 'Very Low,' the newly introduced brand 'Power' occurred with 'Lifebuoy' nearby. These two brands are priced in the range of rupees eight to rupees ten for 100g packs. Particularly, Lifebuoy price perceptions are nearer to the ratings of 'Low' and 'Power' is nearer to 'Very Low.' The consumers perceived these two brands' prices are relatively lower. This will be a positive signal for the firms that still there are opportunities for them to increase the price marginally and can develop their promotional actions price based. However there are chances that the price game of one brand might affect the performance of the other brand or its variants.

Hamam and Lux are perceived to be 'normally' priced. The popular segment brands, Hamam and Lux are priced about Rs.14/100g and the consumers rated the price as normal. This is also a positive sign for the firms that a brand priced

Picture – 1: Perceptual Map for Price Perceptions

Row and Column Points: Symmetrical Normalization



about Rs.14 not considered very high. It could also be viewed as these two brands are Value for Money brands, and consumers perceived the price as not high/very high. Brands like Pears, Dove, Mysore Sandal, Liril and Cinthol are near by the 'High' price perceptions. But the brand Liril, which is considered as popular segment brand perceived on par with the price perceptions of brands like Dove and Pears and it is an indication that the brand is perceived as over-priced rather than normal. Any price increase might affect its market share and price off may deliver the results in the short run that the consumers might try to take advantages of the price promotions. The brand 'Medimix' is considered very high on price factor. The brand is currently in the price bracket of Rs.13 to Rs.18. It suggests that the firm has to take appropriate actions to change the price perceptions. In particular, since the brand has positioned itself in medicinal value platform, it needs to reinforce its Unique Selling Proposition to change the price related perceptions.

The findings reflect the perceptions generated or evaluated by brand usage on price and not based on any other sources of information. Product category like toilet soaps, where consumers have opportunity to purchase frequently, and use it for a longer period and longer association with the product category as such, this price perception could be viewed as a resultant of evaluations over a period of time rather than one time affair. The marketers need to place major efforts on ensuring performances on attributes like quality and safety related issues and should create an impression that the brand stands for the value for the money spent by the consumers.

(b) Perceptual Mapping – Current Brand Usage vs. Quality

As far as Quality Perceptions are concerned, more than 70 per cent of the consumers of the respective brands perceived their brand's quality as high/very high *(Table-3).* Thus irrespective of the price range, the brands are rated high on the quality aspects. This is a positive sign for the respective firms that their brand (s) is perceived with higher quality, and this will develop longer associations with the respective brands. But, to bring consumers from the competitors, the firms need to work hard.

The 2-dimensional mapping accounted nearly 84 per cent of the variance in the data. But the chi-square statistic *(33.335, p>0.01)* is not statistically significant. Since the significance is larger than 10 per cent, it is claimed that there is no relationship between the row and column variables. Hence, the non significant chi-square value indicated that there is no relationship between the brand usage and opinion on quality factor.

The quality perception gives a complex picture for the decision makers. As far as quality dimension is concerned, the brands are not clearly positioned by the rural consumers. This could also be considered as dangerous to the branding that all the brands, irrespective of their price or positioning, were viewed to be very similar in their quality. The firms, which want to develop clear positioning strategies, need to work on this issue, or it is giving an opportunity for the marketers to create a niche positioning which is so far untapped. On the other hand, as far as toilet soap segment is concerned, since quality is perceived to be high for all the brands, many of the price based promotional measures may work effectively, provided if the brand matches the consumers' expectations on other factors/attributes. This would lead to price war in the category and profits will shrink subsequently. Bigger firms might withstand the price wars, but regional niche players will be affected very severely.

Table – 3: Correspondence Table for Quality

Current Brand	Quality (current brand)[a]					
	Very Low	Low	Neutral (Normal)	High	Very High	Active Margin
Hamam	3	9	12	75	56	155
Lux	0	6	17	37	18	78
Pears	0	0	6	28	18	52
Lifebuoy	0	1	7	20	15	43
Mysore Sandal	0	2	4	19	16	41
Cinthol	0	2	3	22	11	38
Dove	0	2	6	12	11	31
Power	0	3	5	16	4	28
Medimix	0	1	3	11	7	22
Liril	0	0	2	7	5	14
Active Margin	3	26	65	247	161	502

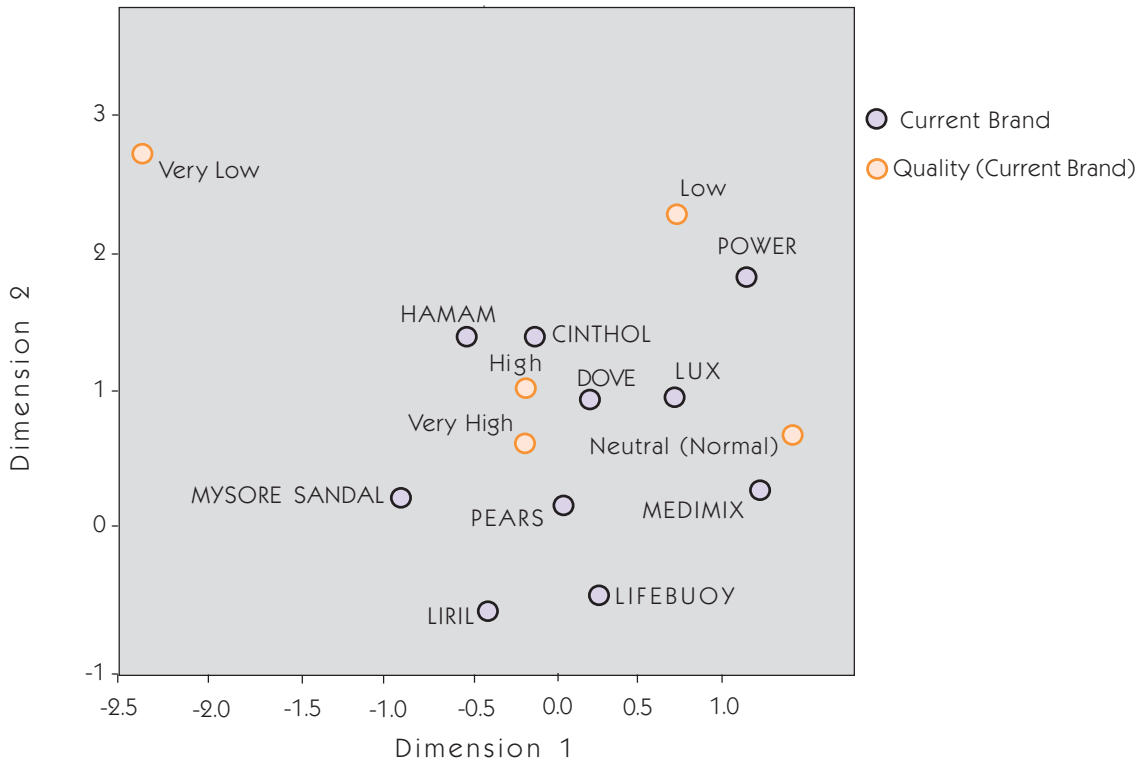
a 36 degrees of freedom
Chi-square statistic- 33.335
Sig. = 0.596

Table – 4: Summary of Correspondence Analysis for Quality Perceptions

Dimension	Singular Value	Inertia	Proportion of Inertia		Confidence Singular Value	
			Accounted for	Cumulative	Standard Deviation	Correlation
1	.195	.038	.576	.576	.042	-.008
2	.131	.017	.261	.837	.033	
3	.090	.008	.124	.960		
4	.051	.003	.040	1.000		
Total		.066	1.000	1.000		

Picture – 2: Perceptual Map for Quality Perceptions

Row and Column Points: Symmetrical Normalization



(c) Perceptual Mapping – Current Brand Usage and Overall Satisfaction

The correspondence table for overall satisfaction *(Table -5)* revealed that many of the brands delivered satisfaction than the expected levels. But nearly one third of the consumers are not happy with overall satisfaction levels of their respective brands.

The summary table-6 shows whether there is any relationship between the row and column variables, and how many dimensions are needed to display this relationship. The first two dimensions accounted nearly 72 per cent of the variance in the data and make the interpretations easier; a 2-Dimentional solution was derived. The chi-square statistic *(Chi-Square statistic = 58.603, $p<0.05$)* which was significant, reflects that there is a relationship between the overall satisfaction levels and brand usage. Thus, as far as overall satisfaction of the brand's performance is concerned, there are certain brands not performing against the consumers' expectations which might result in brand switching.

From the perceptual map, one can infer that brands like Lux and Power are not rated highly by the respondents on the overall satisfaction measure. Particularly 'Power' received very poor ratings along with Lux. However, the brand Lux, which was rated as normally priced, better on quality perceptions, but was not delivering to the expectations of the consumers. Medimix and Lifebuoy are in the marginal satisfactory levels. Medimix is perceived very high on price along with the premium brands like Dove and Pears. By reinforcing the USP or

Table – 5 Correspondence Table for Overall Satisfaction

Current Brand	Overall I am satisfied with the brand's performance [a]					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Active Margin
Hamam	13	7	22	50	60	*152*
Lux	10	11	13	31	17	*82*
Pears	0	4	8	20	20	*52*
Lifebuoy	5	1	12	13	12	*43*
Mysore Sandal	2	2	6	17	14	*41*
Cinthol	1	3	6	10	17	*37*
Dove	1	0	0	21	9	*31*
Power	3	4	3	8	10	*28*
Medimix	3	1	4	5	9	*22*
Liril	1	1	1	3	8	*14*
Active Margin	*39*	*34*	*75*	*178*	*176*	*502*

a 36 degrees of freedom

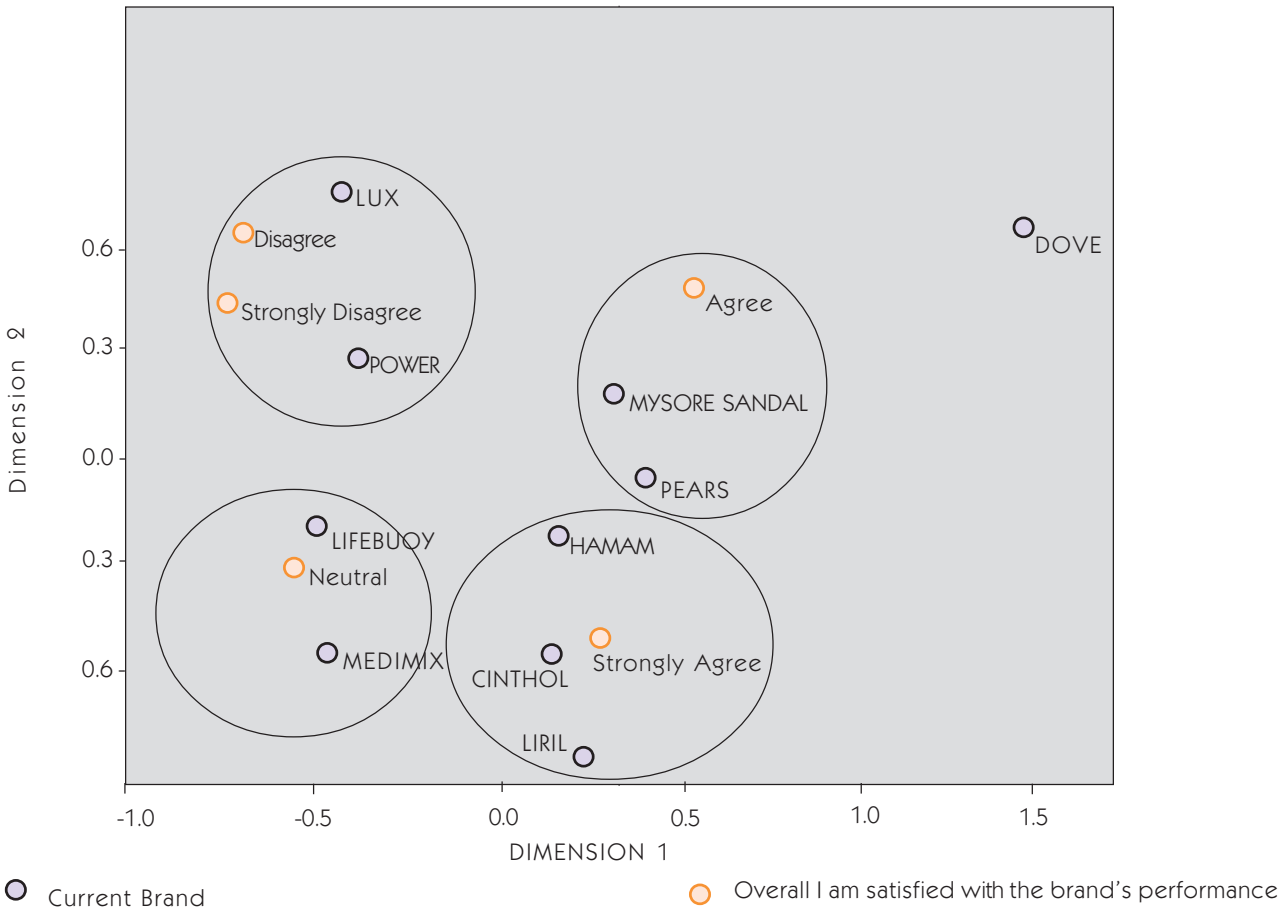
Chi-square statistic = 58.603
Sig. = 0.010

Table – 6: Summary of Correspondence Analysis for Overall Satisfaction

Dimension	Singular Value	Inertia	Proportion of Inertia		Confidence Singular Value	
			Accounted for	Cumulative	Standard Deviation	Correlation
1	0.218	0.048	0.412	0.412	0.036	0.133
2	0.188	0.035	0.306	0.718	0.043	
3	0.145	0.021	0.183	0.901		
4	0.107	0.011	0.099	1.000		
Total		0.115	1.000	1.000		

Picture -3: Perceptual Map for Overall Satisfaction

Row and Column points Symmetrical Normalization



repositioning or by appropriate communication strategies, 'Medimix' could create better expectations among the consumers. Hamam, Pears, and Mysore Sandal are rated higher on satisfaction levels. Cinthol is rated very high in terms of satisfaction levels. Except Hamam, rest of the brands are perceived high on price front.

Hence, we suggest that the findings should be viewed along with the issues rural consumers typically face with, making their choices with complete and easily comparable information on some attributes but only partial (or difficult to compare) information on other attributes (Kivetz and Simonson 2000). Overall satisfaction might be a combination of easily and partially comparable attributes performance. Moreover, by adoption of a longitudinal perspective on how quality perceptions evolve, it is also possible to establish that attributes asymmetrically influence satisfaction with product quality and factors used to form the perceptions early in the ownership experience become less important (or vice versa) over time (Slotegraaf and Inman, 2004). The findings suggest that the marketers should have a continuous monitoring for their brands based on how the attributes' importance shifts over a period.

The perceptual maps developed gives a starting point for the marketers to understand the rural consumers in terms of price, quality and overall satisfaction levels. In the price front, there is a clear clustering of brands evident from the perceptual map. It is proved that some consumers may search shelf prices for a small number of regularly purchased brands but are mainly passive information receivers for the remaining brands (Bronnenberg and Vanhonacker, 1996). Moreover, it is proposed that for every consumer, brands in one price range may be more salient than brands in others and support that price as a tool in differentiation. To compete successfully in a value-conscious environment, sellers must stress the value of their offerings. Sellers can increase acquisition value perceptions by enhancing buyers' perceptions of the product's quality or benefits relative to the selling price. Price is less likely to have a significant effect on buyers' perceptions of quality in the presence of other attributes and when buyers are familiar with the product or product category (Grewal et al 1998). The study on the relationships among product familiarity, objective quality, price and perceived quality in a product class shows that there is a strong market correlation between price and objective quality (Moorthy 1993). A brand's positioning on quality reflects the extent to which a manufacturer attempts to convey to consumers that the brand has superior ability to perform its functions. Manufacturers of brands positioned near the low end of the quality continuum are expected to rely on numerous retailers in each trade area to promote convenience and competitive pricing for their customers (Frazier and Lassar, 1996).

The marketers need to carefully develop quality positioning for their brands since customer satisfaction is more quality-driven than value or price-driven. One of the determinants of overall customer satisfaction is perceived value, or the perceived level of product quality relative to the price paid (Fornell et al 1996). From the perceptual maps *(Picture -1 and Picture–3)* of price and overall satisfaction, it is clearly indicated that brands that deliver higher satisfaction, the consumers feel the prices to be higher as well. The marketers fail to translate the price positioning in terms of quality or value for money positioning.

Managerial Implication

One of the key findings of the research work is lack of perceived positioning of various toilet soap brands by the rural consumers, particularly in quality factor and nearly one-third of the consumers are not satisfied with quality aspects. The price positioning might lead to a price war by the firms which are taking place in the recent times, where firms started concentrating more on promotional and price front in selling the brands; it is common nowadays that 2+1 bundle offer for many brands are offered including the premium category brands like Dove and Pears. This would force the consumers to switch the brands more often and for the firm, it would lead to increase in the promotional budget, cost measures and ultimately lower the profitability. Particularly rural markets, which are very tiny and fragmented and cost of physical distribution as well as media are likely to be on the higher side. There is a definite need to create quality positioning for the brands as a long-term strategy.

Conclusion

The perceptual maps give a clear insight about how various brands are positioned in the Indian subcontinent. One of the major aspects to be considered with attention is that in the price-quality-satisfaction relationships, the marketers are yet to clearly create any measures in quality dimensions. The consumers perceive higher satisfaction to come with higher

price. It also gives a suggestion for the marketers in creating suitable communication mix in crafting quality aspect as a predominant positioning strategy in the long term, rural market.

References

Broadbridge, A. and Calderwood, E. "Rural Grocery Shoppers: Do Their Attitudes Reflect Their Actions?" *International Journal of Retail and Distribution Management*. 30 (8) (2002): 394 – 406.

Bronnenberg, B.J., and Vanhonacker, W.R. "Limited Choice Sets, Local Price Response and Implied Measures of Price Competition." *Journal of Marketing Research*. 33 (2): (1996): 163-174.

Choe, S.T., Pitman, G.A., and Collins, F.A. "Proactive retail strategies based on consumer attitudes towards the community." *International Journal of Retail and Distribution Management*. 25 (11) (1997): 365-371.

Choo, H., Chung, J., and Pysarchik, D.T. "Antecedents to New Food Product Purchasing Behaviour among Innovator Groups in India." *European Journal of Marketing*. 38 (5/6) (2004): 608-625.

Deighton, J., Henderson, C.M., and Neslin, S.A. "The effects of advertising on brand switching and repeat purchasing." *Journal of Marketing Research*. 31 (1): (1994): 28-44.

Dyson, P., Farr, A., and Hollis, N.S. "Understanding, Measuring, and using Brand Equity." *Journal of Advertising Research*. 36 (6): (1996): 9-22.

Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J., and Bryant, B.E. "The American Customer Satisfaction Index: Nature, Purpose and Findings." *Journal of Marketing*. 60(4) (1996): 7-19.

Frazier, G.L. and Lassar, W.M. "Determinants of distribution intensity." *Journal of Marketing."* 60 (4) (1996): 39-52.

Ganesan, P. and Venkatesakumar, R. "Brand Switching: A Study of Rural Consumers." *Udyog Pragati – The Journal for Practising Managers*, 27 (2): (2003): 36-40.

Gopalaswamy, T.P. *Rural Marketing: Environment, Problems and Strategies*. New Delhi: Wheeler Publishing, 1997.

Grewal, D., Monroe, K.B., and Krishnan, R. "The Effects of Price- Comparison Advertising on Buyers' Perceptions of Acquisition Value, Transaction Value, and Behavioural Intentions." *Journal of Marketing*. 62 (2): (1998): 46-60.

Hair, J.F., Anderson, R.E., Tatham, R. L and Black, W.C. *Multivariate Data Analysis*. Delhi: Pearson Education, 2003. <http://www.ibef.org>.

Kalra, A., and Goodstein, R.C. "The Impact of Advertising Positioning Strategies on Consumer Price Sensitivity." *Journal of Marketing Research*, 35 (2) (1998): 210-225.

Kivetz, R., and Simonson, I. "The Effects of Incomplete Information on Consumer Choice." *Journal of Marketing Research*. 37 (4) (2000): 427-449.

Mattila, A.S. "The Role of Accessibility of Prior Judgements in Biasing Consumers' Post-purchase Evaluations and Behaviour." *Asian Journal of Marketing*. (December): (1997): 23-39.

Mittal, B. "Must Consumer Involvement Always Imply More Information Search?" *Advances in Consumer Research*. 16 (1989): 167 – 172.

Mittal, V., Ross, W.T., and Baldasare, P.M. "The Asymmetric Impact of Negative and Positive Attribute – Level Performance on Overall Satisfaction and Repurchase Intentions." *Journal of Marketing*. 62 (1) (1998): 33-48.

Moorthy, K.S., "Theoretical Modeling in Marketing." *Journal of Marketing*.57 (2) (1993): 92-107.

Nunnally, J.C. *Psychometric Theory.* New York: McGraw Hill Book Co., 1978.

Paddison, A., and Calderwood, E.C. "Rural retailing: a sector in decline?" *International Journal of Retail and Distribution Management.* 35 (2) (2007): 136-155.

"PricewaterhouseCoopers." *Fast Moving Consumer Goods.* New Delhi: IBEF, 2005.

Slotegraaf, R.J., and Inman, J.J. "Longitudinal Shifts in the Drivers of Satisfaction with Product Quality: The Role of Attribute Resolvability." *Journal of Marketing Research.* 41 (3): (2004): 269- 281.

Srinivasan, S.S., and Till, B.D. "Evaluation of Search, Experience and Credence Attributes: Role of Brand Name and Product Trial." *Journal of Product and Brand Management.* 11 (7) (2002): 417 – 31.

Sullivan, Pauline and Savitt, R. "Store Patronage and Lifestyle Factors: Implications for Rural Grocery Retailers." *International Journal of Retail and Distribution Management*, 25 (11) (1997): 351-364.

Sun, T. and Wu, G. "Consumption Patterns of Chinese Urban and Rural Consumers." *Journal of Consumer Marketing,* 21 (4): (2004): 245-253.

The Federation of Indian Chambers of Commerce and Industry (FICCI). *A Report on FMCG Industry.* New Delhi.

The Marketing Whitebook: 2003-04. New Delhi: Businessworld, 2004.

The Marketing Whitebook: 2005. New Delhi: Businessworld, 2005.<www.ksa-technopak.com>.

Yavas, Ugur. "Patronage Motives and Product Purchase Patterns: A Correspondence Analysis." *Marketing Intelligence and Planning,* 19 (2): (2001): 97-102.

Interactivity and Advertising:

A Conceptual Framework

Vinod Kumar Singh, Amit Pandey and Vinay Pratap

Mass communication has seen many revolutions since the beginning of advertising. All these modes of communication were one to many, impersonal forms of communication. This left nothing for the receiver of the message to do. The receiver was a mute spectator, and could not communicate his thoughts to the sender of the message. This left a wide gap between the exposure to the communication and the behavioural implication it was aimed at. This gap between communication and action increased the communication cost for organization and also left the receivers at the mercy of other organizations' fighting for the same behavioural action in their favour. With the advent of internet and its spread across sections of societies throughout the world it has now become possible for organizations to interact with the audience. The interactivity of internet makes it a viable tool for seeking immediate action from the receiver of the message. This paper tries to develop on the concept of interactivity and its implications in the modern societies. In this paper the authors have tried to explain the concept of interactivity, and its present day use in communicating with empowered audiences. This paper explains the concept of interactivity and the variables that define its success. These variables such as number of inputs, number of characteristics, speed of interactions, etc., are very important for the success of any interactive communication with audience. In the end certain questions have been raised for further study and research.

Many new channels of mass communication were developed during the latter part of the 20th century, exposing the public to an ever increasing number of mediated messages (Clocking Clutter, 2000; Fitzgerald, 1999; Lombard et al., 1997; Shales, 1994). Every day, citizens are faced with hundreds of advertising appeals delivered via television, magazines, newspapers, billboards, direct mail solicitation, e-mail spam, World Wide Web banners and pop-up boxes, and more. As a result of exposure to these messages, some argue that consumers have developed a more sophisticated understanding of the mass media and of advertising (Campbell, 2000). All of this creates a greater challenge for advertisers, and all media producers, to attract attention, especially thoughtful attention, to their messages.

Dr.Vinod Kumar Singh, Reader, Head and Dean, Faculty of Management Studies (FMS), Gurukul Kangri University, Haridwar, Email: drvksingh1969@gmail.com

Mr.Amit Pandey, Regional Training Manager, TATA AIG Life Insurance Co. Ltd., Shalimar Court, 1st Floor, 5, Rani Laxmi Bai Marg, Near Kaiserbagh Telephone Exchange, Lucknow, email: amitpandeysnp@gmail.com

Mr.Vinay Pratap, Faculty, Icfai Business School, C-1/101, Indira Nagar, Dehradun, Email: vinaybps@gmail.com

In responding to this challenge much advertising has become more colourful, more vibrant, bigger, faster-paced, louder, and more obnoxious (in fact it is the "quiet" ad which stands out from the others because it is so rare). Although this trend has

been associated with television advertising, the same thing seems to be happening on the World Wide Web (Geller, 2001). While the "aggressive, more is better" approach may succeed in the short run, it is likely to fail in the long term as consumers habituate to the new style and learn to ignore even the most aggressive messages (Elliot and Speck, 1998; Ha, 1996). A more promising approach takes advantage of new technological possibilities to provide a new kind of advertising experience, a customized and personalized one (Fitzgerald, 1999; Johnson, 2000). This goes beyond designing the content of messages to target specific demographic and psychographic groups. The notions of personalization and control, mentioned in the definitions of advertising above, are central to this new trend.

The Changing Nature of Advertising

Traditionally advertising has been defined as "a form of controlled communication that attempts to persuade consumers, through use of a variety of strategies and appeals, to buy or use a particular product or service" (Defleur and Dennis, 1996, p. 564) and relatedly, "paid nonpersonal communication from an identified sponsor using mass media to persuade or influence an audience" (Wells, Burnett, and Moriarity, 1998, p. 13). But it is becoming abundantly clear that although the central goal of advertising is still the same to persuade consumers to purchase a product or service - the media environment into which advertising is placed is changing, and as a result of this trend, the nature of advertising is changing as well.

The Internet and other interactive technologies make it possible to create ads that are not only more targeted, but more personal, in which advertising is an experience in which the consumer participates and is engaged. Thus, the model of advertising as communication that is non-personal and controlled exclusively by the sponsor seems to be evolving into one in which advertising is personal and interactive.

Interactive advertising gives consumers more control by giving them a range of choices in their experience with product information. And it produces a sense that the communication is more personal than traditional media ads because it creates or simulates a one-on-one interaction. Johnson (2000) characterizes the future of consumer marketing this way: "Consumers, in receiving marketing messages or doing e-business, will expect to be treated as individuals, with their preferences catered to. Why would consumers or advertisers put up with the 'spam' of a network TV commercial or magazine ad when they can interact one-on-one?"

Internet: The New Interactive Media

Cutler (1990) defines the new interactive media as media that provide the opportunity to instantaneously advertise, execute a sale, and collect payment. With the advent of the Internet and other technologies, the interaction between and among consumers and marketers is becoming increasingly more pronounced. Consumers can collect and provide information by searching and navigating through commercial Web sites, they can post and customize their preferences, and they can communicate with other consumers as well as product and service providers. Similarly, marketers can use information obtained from consumers to customize their advertisement messages, to segment their audiences, to facilitate consumer search for selected types of information and products, and to collect information about consumers' preferences to improve future products and services. Moreover, marketers can potentially provide consumers with a more enjoyable experience by offering such services as information, entertainment, customer service and technical support through e-mail, Web sites, live operators, and soon via video-conferencing.

Use of interactive advertising through new media such as the Internet, also draws attention to the contrast between traditional assumptions about advertising and its effects and the realities of communication in the market place. Traditional approaches to advertising practice and research implicitly assume that advertising is something the firm does to the consumer. Interactive advertising makes it clear that this is a very limited view of advertising and highlights the need to understand what consumers do to advertising. The reasons consumers seek for information, self-select information for attention, process and use of information, and response to information are critical for understanding the effects of advertising and for designing measures of advertising effectiveness in an interactive context. Self-selection of both the sources from which information may be obtained, and the way this information is processed, is an increasingly important determinant consumer behaviour. Market information systems that fail to consider the impact of customer control of information will, at best, be incomplete, and potentially misleading.

Understanding Interactivity

Interactivity is an "overused and under-defined concept," Heeter (2000). Unlike comprehension, no consensual definition of interactivity exists. Rafaeli's (1988) interpersonal view of interactivity was one of the first definitions to be applied to "new media." Since then, several scholars have elaborated and explicated the definition. Derived from previous studies and based primarily on Hoffman and Novak (1996) and Ha and James (1998), the definition used in this study is: interactivity is the state or process of communicating, exchanging, obtaining and/or modifying content (e.g., ideas, entertainment, product information) and/or its form with or through a medium (e.g., computer, modem, etc.) which responds to both the communicator's and the audience's communication needs by including hypertext links, reciprocal communication, etc. In other words, a person can "interact" on the Web in two general ways: get or give information from/to the Web (e.g., surfing, researching, etc.) or communicate to another person through the medium (i.e., e-mailing, chat rooms, etc.).

Heeter (1989) offered seven observations about interactivity in emerging media systems:

1. Information is always sought or selected, not merely sent.
2. Media systems require different levels of user activity. (Users are always active to some extent).
3. Activity is a user trait as well as a medium trait. Some media are more interactive than others; some receivers are more active than others.
4. Person-machine interactions are a special form of communication.
5. Continuous feedback is a special form of feedback in which behaviour of all users is measured on an ongoing basis by a source (e.g. videotex system) or gate-keeper (e.g. cable operator).
6. The distinction between source and receiver is not present in all media systems.
7. Media systems may facilitate mass communication, interpersonal communication, or both.

Morris and Ogan (1996) defined interactivity as an assumed attribute of interpersonal communication. According to their definition, interactivity can be mainly understood as a kind of two-way communication system from senders to receivers. However, such a definition of interactivity, which focused on human-to-human communication, was elaborated by the study of Cho and Leckenby (1999), in which they included another type of interaction between human and message in addition to the interaction between senders and receivers. Therefore, they defined the term, "interactive," from an advertising perspective as "the degree to which a person actively engages in advertising processing by interacting with advertising messages and advertisers" (p. 163).

Roehm and Haugtvedt (1999) also suggested the two dimensions of interactivity in terms of message and control dimensions. Therefore, they argued that interactivity can be divided into a total of four dimensions: "customer-controlled and content-oriented interactivity," "customer-controlled and form-oriented interactivity," "marketer-controlled and content-oriented interactivity," and "marketer-controlled and form-oriented interactivity." McMillan (2000) also identified four types of interactivity based on the variation in the direction of communication and control of the communication experience. According to her, the direction, time, and place of communication should be considered as important dimensions when an individual perceives interactivity in a particular medium. As a result, she presented the following four types of interactivity: packaged content (one-way communication with low receiver's control), rich content (one-way communication with high receiver's control), virtual transaction (two-way communication with low receiver's control), and virtual community (two-way communication with high receiver's control). For instance, receivers have a relatively limited control over the message that is provided by the sender in commercial websites (e.g. packaged content or virtual transaction). On the other hand, the level of receivers' control on content is increased in case of search engines or newsgroups (e.g. rich content or virtual community).

Interactivity is a complex and multidimensional concept and there is little agreement on a specific set of conceptual and operational definitions related to it (much of the discussion and debate is recent, prompted by the development of advanced interactive technologies such as virtual reality). However, we need to establish an understanding for the context of this discussion; therefore, following Heeter (2000), Steuer (1995), and Lombard and Ditton (1997), we define interactivity as a characteristic of a medium in which the user

can influence the form and/or content of the mediated presentation or experience. It is not dichotomous (a medium is not just interactive or not) but can vary in degree (from not interactive to highly interactive) as well as type (different aspects of the form and/or content that can be influenced by the user).

The degree to which a medium, or a mediated experience, can be said to be, and will likely be perceived as, interactive depends on (at least) five subsidiary variables.

The first variable is the number of inputs from the user that the medium accepts and to which it responds. Biocca and Delaney (1995) discuss a variety of user inputs, including voice/audio input (e.g., speech recognition systems that allow a computer to accept and respond to voice commands), haptic input (e.g., television knobs and buttons and computer mice, joysticks, wands, etc. that record user commands via object manipulation), body movement and orientation (kinetic) input (e.g., data gloves, body suits, and exoskeletons that translate body movements into electronic signals a computer can use to "fit" the user in a virtual environment), facial expressions and eye movements, and even psycho physiological input (e.g., heart rate, blood pressure, muscle tension, skin resistance, and brain waves could be input to a computer for mood management or enhanced mediated interpersonal communication); see Biocca and Delaney (1995) for a complete discussion. The extent to which each of these media input channels contributes to interactivity has not been demonstrated.

The number and type of characteristics of the mediated presentation or experience that can be modified by the user also help determine the degree to which a medium can be called interactive. Steuer (1995) identifies the dimensions of temporal ordering (order of events within a presentation), spatial organization (placement of objects), intensity (of volume, brightness, colour, etc.), and frequency characteristics (timbre, colour). Others might include size, duration, and pace. Heeter (1992) suggests that a highly responsive virtual environment is one in which many user actions provoke even unnatural responses (e.g., entering a room produces verbal or musical greetings or rain). While it remains unclear which modifiable characteristics are most important, a greater number of the characteristics should generate perceptions of greater interactivity.

A third variable is the range or amount of change possible in each characteristic of the mediated presentation or experience. Interactivity is enhanced by expanding the degree to which users can control each attribute of the mediated experience. For example, in a highly interactive virtual environment the user can look out in any direction; move over large distances in each one; proceed at any pace and in any sequence desired; pick up, feel, and move many different objects each with different textures; and change the type and volume level of ambient sounds. In a different context, the larger the vocabulary of a computer speech recognition system (i.e., the more words it recognizes and to which it responds appropriately) the more interactive is the computer use experience.

A fourth variable is the speed with which the medium responds to user inputs. The ideal interactive medium responds in "real time" to user input; the response or lag time is not noticeable. Although it accepts and responds to only audio input and uses only a limited frequency range, the telephone is highly interactive in terms of this criterion because interactions via telephone seem to occur in real time (except with calls over exceptionally long distances). With bandwidth limitations and explosive growth in the number of users, the issue of response time is an important consideration on the World Wide Web (often derisively called the World Wide Wait). The computational difficulty of processing inputs related to the user's position can cause even an advanced virtual reality system to present images and sounds that lag quite noticeably behind user movements and the problem is recognized as an important one: Heeter (1992) notes that "based on their own experiences and observations of others," when forced to choose between "responsiveness to motion and resolution of images, [virtual reality] developers are choosing responsiveness as the more important factor" [p. 263]). See Steuer (1995) and Zeltzer (1992) for further discussion of the role of response time.

A final variable that may be important for interactivity (and certainly is for presence - see below) is the degree of correspondence between the type of user input and the type of medium response. Steuer (1995) suggests that the "mapping" between these two can vary from being arbitrary (e.g., pressing a sequence of keys on a keyboard to adjust a visual display) to natural (e.g., turning one's head in a virtual reality system to see the corresponding part of the environment). Using "our

familiar sensorimotor skills to manipulate virtual objects directly by means of whole-hand input devices" may lead to perceptions of greater interactivity, and "naturalness," than "writing programs, twisting knobs, or pushing a mouse to accomplish the same task" (Zeltzer, 1992, p. 129; see also Bricken, 1996; Held and Durlach, 1992; Sheridan, 1992).

Defining Interactive Advertising

Defining Interactive Advertising during the decade of the nineties appears to reflect a broad-based depiction. Cutler (1990), taking an exchange perspective, defined Interactive Advertising as a "media that provides the opportunity to instantaneously advertise, execute a sale, and collect payment." Steuer (1992) recognized the expanded role of the consumer and defined interactivity as "the extent to which users can participate in modifying the form and content of a mediated environment in real time." Skuba (1996) suggests that to be truly interactive, the consumer needs to be deeply involved in a two-way communication process with the advertiser. Roehm and Haugtvedt (1999) likened interactivity to a real-time dialogue... [that] "might resemble conversations between salespersons and customers." Finally, Leckenby and Li (2000) provided us with even more broad definition: Interactive Advertising is "the paid and unpaid presentation and promotion of products, services and ideas by an identified sponsor through mediated means involving mutual action between consumers and producers."

These definitions do not limit interactive to just the Internet, but allows us to include any form of Interactive Advertising that seeks "mutual action." Catalogs, direct response mail, phone solicitations etc. are included in this wider view and allow use to use the extant literature, theory, and methodology to make comparisons across Interactive Advertising formats. Arguably one can say that Interactive Advertising has been around a long time. The changes we see today are in the scale, speed and scope of interactivity as facilitated by the latest communication technologies.

The Journal of Interactive Advertising manuscript guidelines suggest that Interactive Advertising includes and distinguishes between "human-machine-human, human-machine, human-message, or machine-machine interactivity." These mechanisms of communication infer a human-human or human-entity (e.g. company) relationship. Ultimately it is the consumer's choice to interact, thus interactivity is a characteristic of the consumer, and not a characteristic of the medium. The medium simply serves to facilitate the interaction.

Objectives of Interactive Advertising

In general, the goals of interactive advertising tend to be similar to the traditional objectives of advertising. This means that many of the traditional measures of advertising effectiveness remain relevant, even in a world of interactive media. However, interactive advertising also has some properties that expand the range of potential objectives and that facilitate the acquisition of traditional measures of advertising effectiveness. Interactive advertising also has the potential to lessen the 'process loss' associated with uncoordinated advertising, to reduce the difficulties commonly encountered in clearly communicating an advertising message and to help overcome resistance to new products.

At the same time, interactive advertising also has the potential to increase the efficiency and quality of consumers' decisions, increase customers' involvement and satisfaction, and promote trust through reciprocity in information exchange, technical assistance, and reduction of information asymmetry. Finally, marketers can use feedback from consumers to improve their advertising message and intended target, and strategically adjust their customer support, product line, and services provided. Interactive advertising may also produce greater efficiency, trustworthiness, and quality in advertising. Thus, interactive advertising has the potential to fundamentally change the nature of advertising in much the same way that electronic communication infrastructure has changed the nature of group interaction (Fulk and Boyd, 1991).

Interactive media of various types not only opens new opportunities for communication with and among consumers; it also creates opportunities for creating new measures of consumer response to such communications, as well as to product offerings and other marketing initiatives. Interactive media shift control of the information flow from the marketer to the consumer. This provides many more options for responding to information than previous forms of marketing communication, and it is the response of consumers to these options that provides the basis for new measures of consumer response. For example, providing consumers with the opportunity to search for more information about a product, as is done at many Internet sites, provides an opportunity to monitor the types of information and products that consumers seek at both an individual and aggregate level.

To illustrate the power of interactivity, consider the following scenario: a manufacturer of a product offers a description of a

product concept. Information about this concept can be obtained by consumers in an interactive environment through an interactive search of various branching trees of information offering more and more detailed information about the product concept. Note that the intensity of search for information (measured by click through rate) can become a surrogate for interest in the product. Indeed, because such search involves deliberate and active decisions by the consumer, it is likely that measures of the breadth and depth of information search will be far better predictors of product interest and eventual purchase behaviour than measures currently in use.

It is very likely that measures of intensity of information search bears a strong relationship to product interest and, in turn, to product purchase. Further, interactive media provide the opportunity for direct customer feedback regarding product modifications, likes and dislikes, and improvements. Evaluation of product concepts is but one potential opportunity for using the power of interactive media. By tracking the types of information users of interactive media seek it should be possible to determine the information that consumers find most useful when evaluating a product. Indeed, examination of the information search patterns of users of interactive media may inform positioning decisions. Information provided by the consumer to the marketer can provide a means for customized offers and customized advertising. Indeed, fully interactive advertising would provide the consumer with the opportunity to request information, not simply respond to what is provided by the advertiser.

While the potential of interactive media is clear, much remains to be done to realize that potential. For example, numerous measures of intensity of search for information (click-through rates) might be constructed which vary in their capacity to capture the depth and breadth of search. There is also the important issue of establishing a link between such measures and more traditional measures of purchase interest and intent. In addition, new issues arise in the context of interactive advertising that do not arise, at least to the same extent, in the context of traditional advertising.

For example, there is the question of whether and when consumers wish to be engaged by an interactive medium. There is also the question of how much information consumers are prepared to provide advertisers or even how much information consumers are prepared to allow marketers to capture about the interaction. Finally, there are issues of satiation of response that arise in the context of measures based on interactive media that do not arise with more traditional measures. Consumers have only limited time and resources, and therefore, are unlikely to be able to sustain large numbers of on-going interactive relationships.

The Final Question

While there has certainly been significant positive press regarding the role of "interactivity," there are some experts that question the singling out of interactive advertising. Consider these quotes:

- "Let's stop being overly impressed with 'interactive marketing.' It's a tool. It will be ubiquitous. By 2005, marketing types will be talking about marketing, not about things interactive. By 2005, interactive marketing will be marketing."

Bradley Johnson, Advertising Age Interactive Media & Marketing Editor [*Advertising Age*, April 17, 2000]

- "The Web is not the center of our universe. It's just another place where consumers go. [We know] consumers are multitasking-reading, watching TV, going online-and we want to advertise everywhere they are."

Nick Bishop, Coca-Cola's Vice President of Consumer Connections [*Wall Street Journal*, December 28, 2000]

- "The Internet has changed a lot of things, but the idea that the dot-com was going to erase the old media was ludicrous. We have been in this type of transformation more than once in history."

[Miles Grove, Chief Economist at the Barry Group [*Chicago Tribune*, December 27, 2000]

- "The Internet no longer is being treated as the stepchild of media. Advertisers are beginning to see the Internet as a medium they can integrate and plan for in the same fashion they plan for TV."

Allie Shaw, Vice President of Online Advertising firm Unicast Communications [*Wall Street Journal*, December 28, 2000]

- "The direct marketing industry...has a unique kind of interactive system utilizing voice recognition software that is infinitely superior to anything that the most talented software engineers or computer manufactures can

produce. It's called the human order entry operator."

Joe Segel, founder of QVC Home Shopping Network

[Hodgson, *Interactive Marketing: The Future Present*, 1995]

These quotes point to a contradiction in how experts view the importance of IA and the role of media forms that facilitate interactivity. Consider the following questions:

- Will interactive advertising be the panacea that everyone predicts?
- Will it change the way we define advertising?
- Will interactive advertising be mainstream marketing by 2005 or will it continue to stand out among the crowd of other promotional tools?
- What technology will likely facilitate interactivity in the next five years?
- What issues will interactive advertisers face?
- What opportunities will there be for research into aspects of interactive advertising?

References

Ananova, Ltd. 2001. Retrieved on the World Wide Web February 28, 2001: <http://www.ananova.com>.

Ask Jeeves 2001. Retrieved on the World Wide Web February 28, 2001: <http://www.ask.com>.

Clocking Clutter. *Brandweek.* April 13 2000. 20.

DeFleur, M.L. and Dennis, E.E. *Understanding Mass Communication.* Boston: Houghton Mifflin Company. 1996.

Elliot, M.T. and Speck, P. S. "Consumer Perceptions of Advertising Clutter and Its Impact across Various Media." *Journal of Advertising Research,* 1998. 38(1), 29-41.

Fitzgerald, K. Picking through the clutter, MediaCom bids for flawless, 1999.

Ha, L. "Advertising Clutter in Consumer Magazines: Dimensions and Effects." *Journal of Advertising Research.* 36 (4), 1996. 76-84.

Heeter, C. "Being There: The Subjective Experience of Presence." *Presence: Teleoperators and Virtual Environments. 1* (2) 1992. 262-271.

Heeter, C. (2000). "Interactivity in the context of designed experience." *Journal of Interactive Advertising.* 1, (1). Retrieved November 10, 2000 from the World Wide Web: <http://www.jiad.org/vol1/no1/heeter/>.

Held, R. M., and Durlach, N. I. "Telepresence. Presence: Teleoperators and Virtual Environments" 1(1), 1992. 109-112.

Johnson, B. 2000. It's just the future. *Advertising Age, 71* (16), 8+. Retrieved January 16, 2001 from EBSCOhost (Academic Search Elite) on the World Wide Web: <http://search.epnet.com>.

Kaye, B. K. and Medoff, N. J. *Just a Click Away: Advertising on the Internet.* Boston: Allyn and Bacon, 2001.

Steuer, J. Defining virtual reality: Dimensions determining telepresence. In Frank Biocca and Mark R. Levy (eds.), Communication in the age of virtual reality. 33-56. Hillsdale, NJ: Lawrence Erlbaum Associates. 1995. 33-56.

Wells, W., Burnett, J., and Moriarity, S. *Advertising Principles and Practices* (4th Ed.). Upper Saddle River, NJ: Prentice Hall, 1998.

Aura and Ambience
in Human Relations: Private Banks Scene

Anukool Manish Hyde, Sulakshana Deshpande and Mishra D.P.

In recent years there has been an increasing recognition of the importance of human resource and as a result a new concept of dealing with the human resource known as the Human Resource Development (HRD) is fast growing everywhere. This concept emphasizes the need for every organization to continuously develop its employee's competencies in a planned way and it brings into sharp focus the importance of roles, which employees occupy in organizations. Human Resources take active role in the modern economic scenario of any country. The abundant physical resources alone cannot benefit the growth of the country without human resource component, which transforms physical resources into productive resources. Present study fulfills this objective by measuring HRD climate in financial institution i.e. private banks only. This study is an attempt to find out HRD climate in private banks with special reference to Indore (M.P.). The factors contributing towards HRD climate, have been identified and areas to improve so that HRD climate can be more congenial.

The present study is an exhaustive investigation to understand the level of HRD climate in banks and insurance companies in Indore.The HRD climate survey is described in detail to build a conceptual framework for systematically processing in completing the research endeavour.

Just as it is possible to determine the climate of a place through parameters developed by modern sciences, it is possible to determine the climate of an organization through parameters developed by behavioural scientists. All organizational theoreticians and the researchers unanimously agree that a congenial HRD climate is extremely important for the ultimate achievement of the business goals. Climate is a commonly experienced phenomenon and often referred to by many expressions as "atmosphere," "environment," etc. Each has its own traditions, methods of action and culture, which in their totality comprise the climate for the people.

Dr.Anukool M.Hyde, Asst. Professor - HR, Shri Vaishnav Institute of Management, Scheme No.71, Gumasta Nagar, Indore—452 009 (M.P.), E-mail: anukool_h@rediffmail.com

Ms.Sulakshana Deshpande, Faculty - Statistics, Operations Research and Research Methodology, E-mail: sulakshanakelkar@rediffmail.com

Dr.Mishra D.P., C.E.O. (Vaishnav Vidyapeeth) and Ex-Director of Shri Vaishnav Institute of Management, Indore.

HRD climate is an integral part of "Organization climate." Organizational climate is a very important factor to be considered while studying and analyzing organizations because it has a profound influence on the outlook,

well being and attitudes of organizational members and thus on their overall performance.

P.N.Singh in his "Developing and Managing Human Resources" on special human resources" in India, says that seven behaviours based indicators are constituted to form a new Human Resource Information System to indicate the health of the organization.

(a) Sycophancy Index –
Dissent in present day organization is not only discouraged but also "curbed." Those who matter do not seem to realize that 'Yes-men' contribute little in making an organization great. Therefore, a high level of sycophancy should serve as a warning to the management.

(b) Self – Development Index –
All development is self – development. The strength of an organization will partly depend on how serious its employees are about their own development. Factors like how many employees are attending courses, how many books they are reading etc., will be the index.

(c) Boredom Index –
Any employee either newly recruited or posted to a new assignment goes through the following stages: Anxiety Period, Competence Building Period, Confidence Building Period, and Boredom Period.

(d) Leadership Index –
Productivity etc., depend to a great extent on the quality of leadership at different hierarchy levels of the organization. Therefore, better the leadership and better the climate.

(e) Creativity Index –
In a modern and changing environment one has to be creative to cope with competition from outside.

(f) Executive Stress Index –
Since executives play a crucial role in achievement of goals, stress for a short period may be functional. The executive stress index could be gauged from the number of key executives suffering from high blood pressure etc. Therefore, less the stress, better the achievement.

(g) Parochialism Index –
Lastly, it is stated that organizations will do very well if this index is lower and vice-versa. This depends on the performance of cosmopolitan team.

Last two are not directly affected by technology, and are known as "Technology Independent."

Definition of HRD Climate

Baumgartel (1971) viewed organizational climate as a product of leadership practices, communication practices and enduring and systematic characteristics of the working relationships among persons and division of any particular organization.

Payne and Monsfield (1973) viewed HRD climate as a conceptual linkage between organizations and individual that intervenes between specific situation attributes or events and individual perceptions, attitudes and behaviour.

Pritchard and Marasick (1973) define HRD climate as a relatively enduring quality of an organizations internal environment, distinguishing it from other organizations, which: (a) results from the behaviour and practice of members of the organization especially in top management, (b) is perceived by members of the organization, (c) serves as a basis for interpreting the situation, and (d) acts as a source of pressure for directing activity.

Review of Literature

Koffka (1935) had suggested that individual behaviour could be more understood if it was related to the behavioural environment as perceived and reacted to by the subject. At about the same time, Lewin (1935) discussed the impact of environment factors or behaviour.

Litwin and Stringer (1968), through their experimental studies found that a given leadership style produced a characteristic climate. This shows how we can create and alter climate in a group, and how climate can then arouse a motive appropriate for its demands.

Becker (1992) suggested that climate survey resulted due to

need for a systematic method of collecting information on human motivation, as this is essential for effective management.

National Institute of Bank Management, Pune conducted HRD climate survey for bank and revealed that HRD climate is satisfactorily perceived, and cooperation, team spirit, trust and top management's belief in human resources have been favorably perceived. The survey suggested, re-orienting mind-set of entire Bank family members towards facing the challenges posed by the turbulent environment. The top and senior management executives including chairman and Managing Director and Executive Director were exposed to a weeklong workshop at IIM, Ahmedabad in three batches, covering about 110 senior executives, which prepared them to meet the challenges of the future.

Bayti (1970) has identified eight dimensions of climate and found difference in climate of rural and urban school, the open system of education and more responsive and stimulating environment lead to greater creativity in students.

Nakra (1971) is of the view that the public sector in India is a victim of the absence of well-defined policies and the presence of an atmosphere of suspicion, mistrust, lobbying, and patronage.

Sharma (1971), Rao and Mehta (1973) have worked on organizational climate in Indian Schools. They conclude that school systems have complex climates within a variety of organizational setup, which pose serious problems of measurement.

Sinha (1973), on the basis of his study of over 800 executives of two public and two matching private sector organizations found public sector to be inferior in terms of the following dimensions: Chances of promotion, efficiency, responsibility, social relationships, initiative and reward and working conditions. There were lesser conditions, poor leadership, ineffective in the face of external interferences, diffused reinforcement pattern etc. leading to inefficiency, lack of involvement and dissatisfaction among the executives.

Rao and Chattopadhyay (1974) studied a number of workers and supervisors and managers of eight small-scale industries and found no consistent differences in their perceptions of their organizations.

Ray (1974) compared the climates of organizations in public and private sectors as seen through the eyes of the urban cities of Delhi. The public sector, as compared to the private sector, was perceived to be less efficient because of nepotism, arbitrariness in Union-Management relations inexperienced managers lacking adequate management system and influence by government and political forces.

Neelu Rohmetra (1995) studied HRD climate and satisfaction in State Bank of India (SBI) and The Jammu and Kashmir Bank Ltd. (JKB) and found that HRD climate was much higher in SBI than in JKB. Comparative analysis of the attitudes of employees towards the prevailing development climate revealed that employees in SBI held a much favorable attitude towards the development practices than that in JKB. Consequently, the satisfaction level of employees in SBI is higher than that in JKB.

Neelu Rohmetra (1996) conducted a research on the impact of prevailing entrepreneurial culture in four Indian Commercial Banks viz. State Bank of India (SBI), Punjab National Bank (PNB), Oriental Bank of Commerce (OBC) and Dena Bank (DB). Entrepreneurial culture is the function of (i) general climate (ii) the development mechanisms (iii) the value base. The overall entrepreneurial climate for SBI has been worked out at 3.49 indicating a good degree of scope for improvement along this dimension. The entrepreneurial climate for PNB (3.41) is also estimated at a moderate level implying lot of scope for improvement and in DB, entrepreneurial climate at below average level. The study establishes intimate relationship between entrepreneurial climates and level of satisfaction.

Research Methodology

The Study:

The study is exploratory in nature since study was on Private Banks of Indore (M.P.) city. The selection was made on random basis. The survey approach was used to collect primary data.

The Sample:

Data had to be collected from the clerks, officers, managers of the Private Banks of Indore. The simple random sampling

method was used as sampling procedure to select respondents. The total number of respondents was 50.

The Tools:

For data collection - "HRD Climate Survey" scale developed by Prof. T.V. Rao and Mr. E. Abraham was used for data collection. A 38-item HRD climate questionnaire was used to survey the extent to which development climate exists in Private Banks.

The scale includes the general climate, OCTAPACE culture and HRD mechanisms in the organization. General Climate consists of not only top management and line management's commitment but good personnel policies and positive attitudes towards development. HRD mechanisms include: Performance appraisal, Potential appraisal, Career planning, Performance rewards, Feedback and Counseling, Training, Employee welfare for quality work life, job-rotation etc. OCTAPACE culture is essential for facilitating HRD climate. OCTAPACE stands for Openness, Confrontation, Trust, Autonomy, Proactivity, Authenticity, Collaboration and Experimentation.

The filled questionnaires were screened for completeness and the ones in which responses to all the statements were complete, were selected for analysis. The questionnaires incomplete in any respect were rejected at this stage. After that all the responses were scored and tabulated.

For analysis - The Z-test was applied to test the significant difference in General Climate, HRD Mechanism and OCTAPACE Culture in Private Banks.

The study tested following Hypotheses:

(a) H_o: Total HRD Climate in Private Banks is average against the Hypothesis (H_1) that it is high.
(b) H_o: General Climate in Private Banks is average against the Hypothesis (H_1) that it is high.
(c) H_o: HRD Mechanism in Private Banks is average against the Hypothesis (H_1) that it is high.
(d) H_o: OCTAPACE Culture in Private Banks is average against the Hypothesis (H_1) that it is high.

The Karl Pearson's Correlation Coefficient was used to find the Correlations between Total HRD Climate, General Climate, HRD Mechanism and OCTAPACE Culture in banks.

Analysis and Results

The table 1 shows that the mean score range is from 115.46 to 150.38 of Total HRD Climate while for General Climate it ranges from 42.25 to 56.83. The mean score range of HRD Mechanism is from 45.5 to 58.9 and for OCTAPACE Culture mean score range is from 25.61 to 36.75.

Again from table 1, it can be inferred that the calculated value of Z is 7.658 for total HRD Climate and the critical value of Z

Table 1: Arithmetic Means, Standard Deviations and Z-values of HRD Climate Factors in Private Banks.

	Total HRD Climate	General Climate	HRD Mechanisms	OCTAPACE Culture
Mean	132.92	49.54	52.2	31.18
Standard Deviation	17.468152	7.2933	6.7005939	5.571245
Z-Value	7.6587726	7.31025	7.598085932	5.305289

at five per cent level of significance for one tail test is 1.645, which is lower than the calculated value. Hence the null hypothesis is rejected and it is concluded that the total HRD Climate is very high. The calculated Z-score for General Climate is 7.293 which is much higher than the critical value of Z. Therefore the null hypothesis is rejected and the statement that there is high General Climate in the Private Bank is accepted. Similarly the calculated Z-value of HRD Mechanisms (6.7) which is higher than the critical value and hence the statement is rejected i.e. HRD Climate is also very high in Private Banks. Again because of the calculated Z score of OCTAPACE Culture we may conclude that the OCTAPACE Culture in private bank is very high.

Correlation Analysis

To ensure the validity of the measure and dependability on the outcome of the study, simple correlation (r) was determined between the variables of the scale and the total score of the scale. All such correlation was found to be significant, hence confirming the validity of the instrument and results obtained in the study.

Results show that all the 38 variables are showing significant relationship with HRD climate, which means that all the variables are contributing towards HRD climate. All these variables are reflecting either OCTAPACE culture or general climate otherwise these variables are reflecting HRD mechanisms. Following variables have strong relationship in HRD climate scale:

- Variable 33 i.e. Team spirit is of high order in this value of r is .5597.
- Variable 36 i.e. "The organizations future plans are made known to the managerial staff to help them develop their juniors and prepare them for future" has relationship in HRD climate but here the value of r is 5369 which is less than the previous one.
- Variable 12 i.e. "Seniors guide their juniors and prepare them for future responsibilities / roles they are likely to take up" also contributing towards HRD climate scale which has value .5312.
- Variable 32 i.e. "When seniors delegate authorities to juniors, the juniors use it as an opportunity for development is having relationship with HRD climate scale. This variable has a score of .5307.
- Variable 13 i.e. "The top management of this organization makes efforts to identify and utilize the potential of the employees" plays vital role in HRD climate scale, which has a score of .5305.
- Variable 14 i.e. "Promotion decisions are based on the suitability of the promotee rather than on favoritism" has a relationship in HRD climate scale. This variable has a score of .5212.
- Variable 31 i.e. "Delegation of authority to encourage juniors to develop handling higher responsibilities is quite common in this organization" also has a relationship in HRD climate scale which has a score of .5166.
- Variable 17 i.e. "Performance appraisal reports in our organization are based on objective assessment and adequate information and not on favoritism" contributes toward HRD climate scale which shows the value .5103.
- Variable 34 i.e. "When problems arise people discuss these problems openly and try to solve them rather than keep accusing each other behind the back" also contributes toward HRD climate scale. This variables value is .5071.

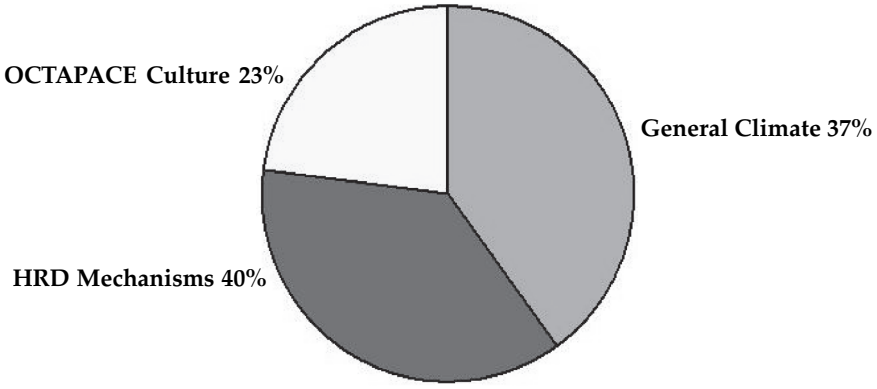
The pie chart shows percentage of factors of HRD Climate in private banks. From the graph we may conclude that in private banks the HRD Mechanism is better than General Climate and OCTAPACE Culture. That is performance appraisal, potential appraisal, career planning, performance rewards, feedback and counseling, training, employee welfare for quality work life, job rotation etc. are better in private banks as compared to General Climate and OCTAPACE culture.

There is slight difference in the percentage of HRD mechanisms and General Climate in private banks but HRD mechanisms (40 per cent) is better than General climate (37 per cent). OCTAPACE culture (23 per cent) is poor as compared to HRD mechanism and General climate.

Table 2: Correlation Coefficient Values between Variable and Total Score.

Variable	r	Result
01	.3769	Significant
02	.4655	Significant
03	.4869	Significant
04	.3903	Significant
05	.4573	Significant
06	.4818	Significant
07	.4501	Significant
08	.4429	Significant
09	.4736	Significant
10	.3999	Significant
11	.4319	Significant
12	.5312	Significant
13	.5305	Significant
14	.5212	Significant
15	.4655	Significant
16	.4818	Significant
17	.5103	Significant
18	.394	Significant
19	.4594	Significant
20	.4558	Significant
21	.428	Significant
22	.4799	Significant
23	.4085	Significant
24	.4055	Significant
25	.4801	Significant
26	.459	Significant
27	.4593	Significant
28	.3443	Significant
29	.3141	Significant
30	.4655	Significant
31	.5166	Significant
32	.5307	Significant
33	.5597	Significant
34	.5071	Significant
35	.4466	Significant
36	.5369	Significant
37	.4772	Significant
38	.4794	Significant

Figure: Percentage of Factors of HRD Climate in Private Banks.



Conclusion

The study found that the Total HRD Climate, General Climate, HRD Mechanism and OCTAPACE Culture in Private Banks surveyed appears to be at high level. High level of HRD Climate gives an indication that employee's perception towards HRD activities in the banks is positive. Therefore, null hypothesis is rejected (Z cal > Z tab).

High level of General Climate indicates not only top management and line management's commitment but good personnel policies and positive attitudes towards development in private banks. Successful implementation of HRD involves, taking an integrated look at HRD and making efforts to use as many HRD mechanism as possible Performance appraisal, Potential appraisal, Career planning, Performance rewards, Feedback and Counseling, Training, Employee welfare for quality work life, job-rotation etc.

HRD mechanism is high in private banks i.e. they have adopted latest techniques of performance appraisal. Superiors are guiding their subordinates for their career growth and advancement. Top management people have made the policies, which encourage employees towards achieving the goals of the organization. They have transparent system in the organization to motivate the employees for better performance.

OCTAPACE culture is essential for facilitating HRD climate as without OCTAPACE culture one can not think of HRD climate.

Suggestions

Though HRD climate is high in private banks but private banks should periodically take feedback of their HRD mechanism.

- Superiors should guide their subordinates for their career growth and advancement. Top management should make such policies, which can encourage employees towards achieving the goals of the organization.
- Seniors should feel the pulse of their employees and should treat their subordinates as their younger brothers in developing their skills, knowledge etc.
- The policy of the organization and the activities should not be in "lock and key."
- Superiors should act as a counselor, teacher, guide, and facilitator in the realization of the vision of the employees.

References

Baytim, J. "A Comparative Study of the Organizational Climate in Rajasthan School." *Indian Educational Review*. Vol.5, 2 (1970):107-117.

Becker, T.A. and Charles, E. "Deciding When It's Time for a Change in Organizational Climate." Personnel, 52 3 (1975): 25-31.

Davis, J. "Rules, Hierarchy and Organizational Climate." Personnel Administration, 31 (1968): 50-55.

Devi, L. "Encyclopedia of Management and Behavioural Science Series – Human Resource Management." Institute for Sustainable Development, Lucknow and Anmol Publications Pvt. Ltd., New Delhi: 1998.

Ginsburg, Lee. "Strategic Planning for Work Climate Modification." Personnel, Vol. 55, 6 (1978): 10-20.

Goswami, M. "Organizational Commitment, Job Satisfaction and HRD Climate: A Study on Shift and Non-Shift Employees." Unpublished Doctoral Dissertation. Utkal University, Bhubaneswar, 1995.

Gupta, R.K. "HRD – Concerns, Concepts and Frameworks, in Khandelwal, A.K. (ed.)." *Human Resource Development in banks.* New Delhi: Oxford and IBH, 1988.

Hillriegal, D. and Slocum, W. "Organizational Climate: Measures, Research and Contingencies." *Academy of Management Journal.* Vol. 17, 2 (1974):225-280.

James, L.R. and A.P.Jones. "Organizational Climate: A Review of Theory and Research." *"Psychological Bulletin.* 81: (1974): 1096-1112.

Joyce, W.F. and J.W. Slocum. "Climate in Organizations, In: S.Kerr (ed.)." *Organizational Behaviour.* Columbus: O.H. Glid, 1979.

Kaczka, F. and Kirt, R. "Manage Climate, Work Groups and Organizational Preference." *Administrative Science Quarterly.* Vol.12 (1968): 252-271.

Nadler, Leonard. "Implications of the HRD Concept; Training and Development Journal." May-June, (1974): 3-13.

Nakra, D.S. "Managerial Motivation in Public Sector, Lok Udyog, Vol.5, 9 (1971): 877-883.

Pareek, Udai and Rao, T.V. *Designing and Managing HR Systems.* New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd., 1981.

Pattanayak, Biswajeet. *Corporate HRD.* New Delhi: *Excel Book,* 1998.

Payne, R.L. and Pugh, S.S. "Organizational Structure and Organizational Psychology." Chicago Rand McNally, (1976): 1125-1173.

Powell, G.N. and D.A.Butterfield. "The Case of Sub-System Climate in Organizations. *Academy of Management Review.* 3 (1978):151-157.

Rao, T.V. and Abraham, E. "HRD Climate in Organizations, Readings in Human Resources Development." New Delhi: Oxford and IBH publishing, 1991.

Rao, T.V. and Chattopadhyay, S.N. "A Study of the Perceptions of Organizational Climate by the Employees of Small Industries." *Indian Journal of Industrial Relation.* Vol.10, 1 (1974): 55-67.

Rao, T.V. and Pereira, D.F. "Recent Experiences in Human Resource Development." New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd., 1989.

Schreidel, B. "Organizational Climate: An Easy Personnel Psychology." Vol.28, (1975): 447-479.

Sharma, M.L. "School Organizational Climate: An Overview." Indian Educational Review, Vol.6, No.2 (1971): 281-292.

Silvera, D.M., "Human Resource Development – The Canara Bank experience in Khandelwal, A.K. (ed.)" *Human Resource Development in Banks.* New Delhi: Oxford and IBH, 1988.

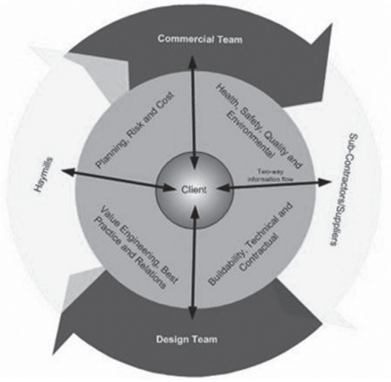
Singh, P.N. "Developing and Managing Human Resources." Bombay: Suchandra Publications, 1990.

Tagiri, B. "The concept of organizational climate in B. Tagiri and G.H. Litwin (eds), Organizational Climate: Explantation of Concept, Boston: Harvard University Press, (1968):11-32.

Wilkins, A. and Ouchi, W.G. "Research in Organization Behaviour – An Annual Series of Analytical Essays and Critical Reviews." Volume 18, Jai Press Inc., 1996.

Woodmen, R.W. and King, D.C. "Organizational Climate: Science folklore." *The Academy of Management Review.* Vol. 3, 4 (1978): 818-826.

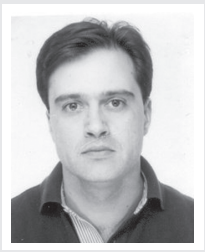
Livestock Farming and Local Agri-Food System:
Scene from Brazil



Guilherme Cunha Malafaia, Julio Otavio Jardim Barcellos, Luis Kluwe Aguiar, and Eugenio Avila Pedrozo

This study addresses how Indication of Origin within a Local Agri-food System has served to create competitive advantages for a livestock farming system In Brazil. The concept of LAS relates to strategic resources encompassing typical products, differentiated techniques, territory, natural resources, collective actions and organisation of the productive activities. The authors used the concept of Resource-Based View (RBV) to provide a theoretical foundation for the analysis of LAS. As a result, such a livestock farming system was granted 'Meat of the Gaúcho Pampas' Indication of Origin status. The conferring of Indication of Origin within this LAS is perceived as being of creating opportunities for those involved in the supply chain as it allows for market penetration strategies at both domestic and international level. In order to achieve such an Indication of Origin status, problems of coordination amongst the actors have been addressed. Farmers are now better equipped to compete in an ever globalised agribusiness environment. The results of this study show that LAS is a viable alternative for the insertion of the southern Brazil's livestock farming system in a competitive environment.

This article discusses the feasibility of a specific livestock farming system in the state of Rio Grande do Sul in southern Brazil. Such a system is locally known as the *gaúcho* livestock system, and it is ranked fourth in beef production in Brazil (Fürstenau, 2004). Such a livestock system is typical of a relative low land value, low fixed capital, low labour utilisation and low or even negative efficiency indicator (SEBRAE/FARSUL/SENAR, 2005).




Mr.Guilherme Cunha Malafaia, PhD Candidate in Agribusiness at the Federal University of Rio Grande do Sul, Senior Lecturer at University of Caxias do Sul (UCS), Venancio Aires Avenue, 444, Apt.603, Porto Alegre - Brazil - 90.040-192, Email: gcmalafa@ucs.br

Mr.Julio Otavio Jardim Barcellos, Senior Lecturer of Post Graduate Program Centre for Research and Studies in Agribusiness (PPGA/CEPAN), Federal University of Rio Grande do Sul, Washington Luis Street, 855, Porto Alegre - Brazil - 90.010 - 640, Email: julio.barcellos@ufrgs.br

Mr.Luis Kluwe Aguiar, Senior Lecturer - School of Business - Royal Agricultural College, Glos GL7 6JS.Cirencester, UK, Email: luis.aguiar@rac.ac.uk

Mr.Eugenio Avila Pedrozo, Senior Lecturer of Post Graduate Program for Research and Studies in Agribusiness (PPGA/CEPAN), Federal University of Rio Grande do Sul (UFRGS), Washington Luis Street, 855, Port Alegre - Brazil - 90.010-640, Email: eapedrozo@ea.ufrgs.br

In the last decades, the process of globalisation has greatly impacted on the *gaúcho* livestock farming. Such a sector is enduring constant difficulties, resulting from the loss of market share to other agrifood chains (Malafaia et al., 2005). This could be mainly attributed to increased competition with other member countries that form the South American Common Market (MERCOSUR) of which Brazil is a member. Nonetheless, the *gaúcho* livestock system has lost competitiveness in comparison with other regions in Brazil where cattle raising is more intensive. Despite this, the *gaúcho* system possesses great competitive potential advantage that derives from its natural strategic resources. Such a feature, if explored in a more coordinated way, would allow for sustainable competitive advantages to be achieved. The implications of this state of affairs serve as a basis for the discussion in this article.

When the process of globalisation is analysed closely, it is perceived that it imposes increasing challenges for companies because of the requirement for new processes, new technologies and management practices. Globalisation has shifted the world's competitive settings further, complicating the conditions of survival of companies (Forsman and Paananem, 2002). According to Sterns and Peterson (2001), the globalisation process demands that companies establish inter-organisational relationships in which they have to establish cooperative links aiming at obtaining the necessary access to the factors of production for their maintenance and survival. As a result, new forms of competition emerge to the detriment of others, and the isolated perception of single competitive productive units gives way to a more comprehensive view of groups of competitive companies (Hansen, 2004; Pedrozo and Hansen, 2001; Fleury and Fleury, 2000; Casaroto Filho and Pires, 1998; Lambert, 1998; Coutinho and Ferraz, 1995; Porter, 1990). Hence, companies establish inter-relationships in the most diverse forms. These can have a formal or informal character, but the common aim is to attempt to face shared problems and/or jointly explore the possibilities available, which, consequently, generate collective efficiency (Lins, 2004). This means companies are continuously seeking to create partnerships in the search of competitive advantages that at an individual level would hardly be achievable (Altenburg and Meyer-Stamer, 1999). As a result of globalised competition since the mid-1980s (Reardon et al., 2001) there has also been a need for cooperation amongst different actors in the agricultural food sector (Cozzarin and Barry, 1998) to face the new challenges imposed by intensified competition. However, whilst large agrifood organizations have addressed these challenges early enough, it is known that this has not been the case for many smaller individual farming units.

Moreover, another feature of the globalisation phenomenon is the concentration of the productive resources (Linck and Schiavo, 2003) and Requier-Desjardins (1999). Nevertheless, concentration in the agribusiness domain has also allowed for an extensive diffusion of standards of relationships and practices. A production-oriented model based on dependence on international markets has been efficiently diffused by the means of a more cooperative behaviour. Larger companies and multinational enterprises have adopted such a model that requires high use of technology, lands of high agricultural potential and standards of consumption that, when diffused, require strong demand in terms of concentration and accessibility of resources. Such a model also embodies increasing economies of scale and standardisation of products supported by intensive capital requirement to foment production of a predominantly intensive cultivation system. The overall effect is characteristic of hegemonic competitiveness in the agribusiness sector, but, according to Requier-Desjardins (1999), in the case of some very large agribusiness companies, by imposing a model of internationalisation, have also created new forms of dependence. Conversely, the globalisation process has also resulted in harmful transformations. Many producers have left the farming activity because of their inability to fulfil such a large scale demand of very standardized products and process. As a consequence, the increased social costs and the destruction of the natural resources are also part of this setting (Lins, 2004; Linck and Schiavo, 2003; Borray, 2000; Dominguez, 2003; Breda and Santos, 2000).

Yet, Forsman and Paananem (2002) point to the continuously increasing interest by consumers in quality, safety and sustainability issues. Issues of sustainability have gained prominence in recent years as a counterbalancing force against globalisation. It is, thus, possible for a family-type of agriculture to use attributes such as more transparency in the production process, product certification and ultimately denomination of origin that create opportunities for the insertion in competitive market environments. This is made possible through initiatives such as product differentiation resulting from local collective actions of which fair-trading is

a good example. Moreover, the creation of geographical marques acts as a means of exploring sets of imageries (Goodman and Goodman, 2001), local values and customs that could provide sustainability for family-type agriculture. This becomes of importance as a viable form of promotion of rural development as an instrument of accessing globalised markets that would enable the modernisation of the agricultural process (Lyns, 2004; Giordano, 2003).

Despite the fact that many of the consequences of the issues addressed so far could be perceived as mainly negative, this study endeavours to determine the actual needs of the livestock sector so that actions could be proposed to revert the present situation. In order to analyse it, the authors use the Local Agrifood Systems (LAS) framework. According to Lyns, (2004) and Borray, (2002), the conceptualisation and analysis proposed by LAS provide a response to many of the resulting problems of globalisation. Moreover, in this study it was felt that applying the theory of the Resource-Based View (RBV) would provide a stronger theoretical foundation to support the analysis of LAS. The authors will explore these two concepts further in the light of Barney's (1991) and Peteraf's (1993) understanding of businesses as collections of resources, whose efficiency depends on the strategic vision of its agents. If these resources are heterogeneous and can add effective value to the products or services, they can be utilised, as these are sources of superior competitive advantage for the economic agents in question.

Local Agrifood Systems (LAS)

In recent years, especially in the European countryside, to counterbalance the undesirable results of globalisation and modernisation of agriculture, a change in the logic of the production-oriented type of agriculture towards a multi-functional one has taken place. Such a change is based on the existence of: (1) a diversified demand; (2) opportunities connected to the transformations of the functions of the rural areas (agriculture of service i.e. leisure and countryside stewardship); (3) the relationship with the environment (sustainable agriculture) and (4) national and regional objectives of development (Borray, 2002). Hence the importance of the concept of territory is highlighted where aspects such as the environment, culture, history, politics, the economy as well as the actors involved are important elements for the development of competitive advantages. In such a territory, actors are inclined to partake in collective actions through the sharing of problems, visions, knowledge and opportunities (Lins, 2004 and Córdova, 2003). In view of this, a systemic approach for the process of productive transformations in the farming sector is important where the territory assumes a singular relevance as instrument of analysis (Dominguez, 2003).

The role of a geographical approach linked to an organizational and social context has been highlighted since the end of the 1970s by economists aiming at understanding the dynamic powers behind economic development (Requier-Desjardins, 1999). Following this perspective, and according to Velarde et al. (2002), a territory can be approached under three complementary dimensions: firstly, as a physical space, secondly as a place of articulation of actors, and thirdly for its cultural and historical context. Considering the territory as a physical dimension, it encompasses spatial distribution where boundaries delimit the actions and development policies can be established. Yet, when considering the territory as a setting where diverse actors can interact in an articulated manner, it is about emphasising the dynamics of a relational reality. Since such a reality is built up over a period of time, the agents involved end up interacting and agreeing to some form of production. Finally, the collective construction of a space defines habits, practices, routines and accumulated experience that are expressed through differentiated goods.

Moreover, as seen before, partner-production companies operating within supply chains under collective configurations represent better power positions for providing competitive advantage. This frequently happens within geographical clusters of companies that according to Linck and Schiavo (2003) and Schimitz and Nadvi (1999) are typical of linkages to a productive chain aimed at achieving collective efficiency. However, to support the establishment of efficient units inside a collective arrangement some level of coordination is necessary in respect of labour training and qualification, division of work, product quality control as well as standardization of production. Hence, the standardisation of relationships on the supply side acts as a facilitator in solving common problems within a collective action arrangement. In view of this, institutional support by federal or local government allows for the development of relationships of trust amongst the members of such an arrangement.

Lins (2004) sees the concept of territory as a set of specific assets, whose characteristics can be seldom met in other places. These assets are often depicted through the tacit knowledge diffused in a local arrangement that takes into account the partner-cultural identity of the actual institutions. In the case of the agrifood sector, the tacit idea that natural resources are used, aiming at a sustainable production system means that some specific assets relating to the production of food provide a particular relationship that enables a closer interface with consumers. Hence, such a relationship in the agrifood sector becomes more important than in other sectors as the consumers' role involves evaluation of product quality. Consumers being able to to capture the characteristics of the products purchased connect the original characteristics of a natural environment to that of the cultural identity. Within a food chain, the sum of the relationships established amongst producers, processors, distributors and consumers that enable a social construction of quality can be also considered a specific territorial asset. This is because in the view of Requier-Desjardins (2002) the 'conventions of quality' are originally connected to the territory of production.

Following the above exposition, it is now possible to characterise Local Agri-food Systems (LAS) using a systemic view. LAS is a concept that has developed by linking agricultural activities of particular territories to the environment, the social organisation of rural communities, food quality etc. The LAS concept encompasses the investigation of the relationships between the development of local agrifood chains and its territorial dynamics, such as the system of local food production, where not only the territory but social and historical roles are as important (Requier-Desjardins, 1999; Boucher et al., 2000). According to Requier-Desjardins (2002), LAS are local concentrations of small companies of agrifood transformation that present the following characteristics:

a) Oriented for the output of products whose quality is linked originally to the territory;
b) Based on a specific activity using common resources at the disposal of the actors of these systems;
c) Carry out a collective production of public and private goods;
d) Can be replicated at the same time, in diverse countries.

LAS can be, thus, defined as an organisation of producers of goods and services (units of agricultural production, agrifood companies such as traders, service, gastronomic etc) linked by shared characteristics and operating in a specific territory (CIRAD, 2005). According to Lyns (2004), the space of LAS does not possess a merely geographical content, but, it is a space built by collective actions, marked by regular and cultural exchanges. In LAS there ought to be an interaction between territory and the productive chain (production-distribution-consumption) of a determined sustainable activity. Specific assets become notorious in respect of a differentiation image that a territory represents. The image of a territory is the fundamental point for the support of LAS, therefore, an object of interest amongst its agents. Cooperation between a determined group of companies, closely geographically located and of high specificity regarding the use of assets within a territory, are important elements for creating opportunities. Cooperation also opens new spaces for the action of small organizations facing increasing competitive environments caused by globalisation. Such an argumentation leads on to the next stage which is the discussion of the theory of Resource-Based View aiming at building competitive strategies with the assets available of a business.

The Resource Based View (RBV) of a Business

The first definitions of RBV were depicted in the 1950s by Edith Penrose. For the author a company is seen as 'a unique bundle of productive resources' (Penrose, 1959). These collections of resources can generate a competitive differential for businesses if managed efficiently. According to Barney (1999), companies can differentiate themselves through the use of their resources provided the resources available are specific (rare, scarce, and specialised). If the resources are capable of aggregating value to final products, they can generate a competitive differential. These resources when available and controlled by businesses include assets such as capacities, organizational process, attributes of the firms, information, knowledge etc. These assets also allow businesses to set out and implement strategies that optimize the efficiency and the effectiveness of operations (Barney, 1991), thus enabling the creation of value. Resources can be classified as:

(1) Physical capital - industrial plants, equipment, geographical position, access to material.

(2) Human capital - training, experience sharing, intelligence and individual perception of top management.

(3) Organizational capital - structure of information, formal or informal planning, control and systems of coordination and the information related to the group and the environment.

Moreover, Grant (1991) proposes a classification of tangible and intangible resources. Tangibles can be clearly observed and evaluated such as financial scope, human resources and equipment. Intangible resources cannot be directly observed such as knowledge, organisational culture, reputation of the company, technological or managerial abilities and relationships with suppliers and clients, among others. Hence, for a company to build competitive advantages it is necessary that it implements a strategy that creates value that could not be easily copied by potential competitors. As a result, what determines the period of the sustainability of a competitive advantage is the inability of competitors to copy such an advantage? The sources of competitive advantages are, thus, maintained by the immobility and heterogeneities of the resources, when they are distributed between the businesses (Barney, 1991). In short, to sustain competitive advantages, resources should be heterogeneous and immobile. Peteraf (1993) complements the above notion by suggesting that business' resources should encompass four empirical attributes: (1) it should be valuable, in the sense of exploring the opportunities and neutralize the threats of the environment; (2) it should be uncommon amongst a competitor's business and a potential competitor; (3) it should be imperfectly matched, and (4) it could not be strategically equivalent and replaceable by other valuable resources, which are not uncommon or inimitable.

Valuable resources are those capable of keeping the competitive advantage position by being able to implement efficient and effective processes. Distinguishable or uncommon resources are related to the capacity to implement the value creation strategy in face of the competitors. Some strategies require a package of resources, a mix of organizational, human, and physical capital to implement it, as well as talented managers. If many companies are able to use these resources, they can be of value, but they could not be distinguishable enough. In respect of the ability or not to match the resources, they would be perfectly inimitable if: (1) the ability of the companies to obtain a resource is dependent of historical conditions; (2) the connection between the resources possessed by the company and its sustainability as a competitive advantage is the cause of ambiguity; or (3) if the generation of the advantages of the resources are socially complex. According to Peteraf (1993), the main limits to the competition ex-post involve the presence of conditions called *imperfect copy* and *imperfect substitution* of a resource. The capacity of protection of a resource against imitation or substitution depends on the *causal ambiguity*, the *no-coding of the knowledge*, or the existence of *dependences*, among others.

Methodology

The study has a qualitative nature due to its descriptive approach. The study also has an exploratory function and has a descriptive character as it attempts to understand a phenomenon that is not sufficiently known. This study is characterized as exploratory research because it focuses on the construction of competitive advantages in the livestock sector by the means of existing strategic resources within LAS. According to Tripodi et al. (1975), the exploratory study aims to 'supply a chart of reference that can facilitate the process of deduction of pertinent questions in the inquiry of a phenomenon.' According to the authors it is possible for the researcher to formulate concepts and hypotheses that will be developed further in subsequent studies (Tripodi et al., 1975). In respect of the procedures, a review of the literature was carried out to underpin the theoretical background of the study. This research used a case study approach, which is justifiable as a procedure for the exploratory character of the research. In-depth interviews were carried out with specialists for a better understanding of the issues as well as for those matters related to the operational process regarding indication of origin.

The Building of Competitive Advantages

An Analysis of the Lacking of Competitiveness

Livestock farming in Brazil can be analyzed under two specific characteristics: diversity and lack of coordination. Diversity because of the great variety of breeds, systems of production, health and safety conditions at slaughter and because of a variety of marketing arrangements. The lack of coordination is reflected in the diminishing stability in the relationships between the actors along the beef supply chain such as those involved in termination, slaughter, processing, wholesaling and retailing. The unreliability of

such a relationship is brought to fruition at the market place and is aggravated by the actors treating beef as commodity. The resulting effect is the low level of the specificity of the traded products.

In works of Malafaia, et al. (2005), Euclides Filho (2004), Zilbersztajn and Machado Filho (2003), Ferreira (2003), Rocha et al., (2001) and Pigato et al. (1996) there is a consensus that the beef chain in Brazil generally presents low levels of coordination. The system as a whole is inefficient, with a great deal of opportunistic behaviour amongst the actors, it lacks of price stability and is characteristically asymmetrical regarding information sharing. As a result, the marketing practices are obsolete which, when coupled with animal health problems and disloyal competition amongst slaughter houses, contribute to the overall inefficiency of the sector.

Such a poor performance could be attributed to the process of globalisation that has had a huge impact on the livestock farming activity mainly as a result of economic and trade integration with other members of MERCOSUR, such as Argentina and Uruguay. As a result of this, many producers were forced to cease farming due to not being efficient or specialised enough. Despite this, not only the harmful effects of globalisation can be blamed for the debacle in the sector, but also the absence of agricultural policies has aggravated the state of play for livestock farmers. Short-sightedness of politicians and rural leadership has also jeopardised the future sustainability, efficiency and performance of the livestock sector.

To understand how competitive advantages can be built into the *gaúcho* livestock system it is necessary to revert the loss of market share that *gaúcho* beef has had over a long period of time to similar agrifood chains (Malafaia, et al., 2005). According to FÜrstenau (2004), in 1990 the participation of gaucho beef in meat exports was 22 per cent, dropping to less than six per cent in 2002. Market share has been lost to livestock systems in the centre-west region based on Indian cattle breeds such as Gir, Nelore and Guzerah. The difference relies on cattle ranchers in those states being oriented towards a beef export market that demands standards and qualification in the productive process. Despite not necessarily aiming at supplying the domestic market, these are good examples of how more sustainable competitive advantages can be obtained in the beef chain. However, at six per cent market share it reflects the relative loss of importance in the external market.

The *gaúcho* beef chain has struggled to increase productivity and reduce costs in a systemic way, hence unable to be competitive. The authors have identified many other problems. As a consequence of poor performance of the sector farmers are highly dependent on earnings deriving from non-agricultural activities, especially from financial operations and the drawing of pension funds. Equally, the livestock system being studied is typical of a relatively low value of the land, low level of immobilized capital, low utilization of labour and low or negative indicator of economic efficiency (SEBRAE/FARSUL/SENAR 2005). On the processors' side, many meat packers went bankrupt as identified by Favarett Filho and Lima de Paula (1997) as a result of competition from neighbouring countries. The segments' profitability today is precarious and no longer guarantee a sustainable livelihood.

FÜrstenau (2004) identified the *gaúcho* system as being the least dynamic in the country. This is generally due to the Brazilian marketing of beef at domestic and export level being *in natura.* This is an indication of the overall degree of evolution of the sector where adding value through the processing of meats is insignificant. However, the gaucho system, operating in much narrower amplitude, does not provide sufficient incentives for further market development. Product differentiation is limited and solely in the hands of the retailer. This results in the consumers being unable to identify the likely relationships between the product acquired and its origin. Rocha et al. (2001) mention that the market place is used just as an arena for exchanges and not the cultivating of relationships – which is probably the likely reason for the many frustrated attempts to establish productive arrangements in this sector. Because historically the relationship between the agents of the beef chain has always been of conflict, beef producers aiming at higher quality market segment fail to capture the real potential of the product deriving from better attributes. Better quality attributes are not transmitted to the consumers either.

However, the analysis revealed the existence of a great competitive potential. It would derive from available strategic resources in the territory (genetics pool; animals which are grass fed; large extensions of pastures; good climate and soil

conditions; the presence of meat processing plants certified for supplying the export market, the political power of producers' associations, a network of scientific-research stations; universities and cultural tradition). Nevertheless, all these elements need to be worked in a coordinated form in order to obtain sustainable competitive advantages. Such a lack of coordination in the beef chain hinders the promotion of stricter health and safety inspection criteria, quality attributes that determine reliability on the product consumed so that actors would have an incentive to produce beef with more specificity.

In order to reverse this situation, the setting up of a Local Agrifood System (LAS) attempted to exploit the existing strategic resources present in the territory. As a result, Indication of Origin of the 'Meat of the Gaúcho Pampas' was conferred by the Brazilian Institute of Intellectual Property (INPI). The LAS in question is situated in the Pampa Region (see map in the appendices). The next section will deal with the analysis of indication of origin in beef.

Indication of Origin as a source of Competitive Advantage for Beef

The project 'Meat of the Gaucho Pampas' started in 2004 through a partnership between private and governmental organisations under the leadership of farmers from the region. It consists of a program for quality meat certification that would enable product differentiation through aggregation of value to the cattle. The programme aims at enabling the beef produced to reach a larger consumer market either domestically or internally. As a result of the interventions, it is expected that a better final product quality would result so that it would enable the producers to obtain a better remuneration, thus allowing them to continue investing in a program of improved quality.

From the literature review, the configuration of LAS in the Pampa region means that all those in the beef chain operating within a specific territory, seek to achieve a sustainable competitive advantage through the use of common strategic resources. The region has many strategic resources: a privileged ecosystem, extensive native grasslands, production based on year-round outdoor grass feed cattle, European cattle genetic base, animal welfare at slaughter, farmer's tacit know-how, a network of agricultural research stations, rich culture and tradition of the people. However, for the strategic resources present in the LAS to become competitively sustainable, it is necessary to employ technological, organizational and institutional innovation. The expected outcome would be transparency, value added, lower transaction costs, less opportunism, and a unique fiscal and health standards so that the specificity of the assets can be explored.

As addressed before, an important aspect for the improvement of a supply chain is the management and coordination of such a system. If this is possible the collective action becomes fundamental for the creation of new opportunities and new spaces of action for the agents involved. For this Pampas beef LAS to become competitive, the authors' analysis shows that it is a necessary change in the attitude of the agents. Opportunistic behaviour of agents is a problem identified by Rocha et al (2001), amongst others, that has determined the collapse of many productive arrangements. Malafaia et al. (2005) identified in another case that in region delimited by the *gaúcho* LAS in the locality of Bagé, short-term vision by some of the agents has broken the cooperation behaviour and eroded the competitive advantage state in livestock farming. Therefore, the authors suggest a change of behaviour moving from a short-term vision to medium and long-term to enable the building of trust amongst farmers. This is crucial in order to reverse the unfavourable present situation of the livestock farming in that region.

Therefore, the benefits of operating within LAS are evident. Without the arrangement of LAS many projects and initiatives of productive arrangements in the beef chain would have been abandoned. To be successful, LAS must share a cooperative action and a coordination of strategies by its agents. According to Meyer-Stamer (2001), it is frequently the failure of experiences that stimulate co-operation between companies of the same sector in a determined locality. Following this, the collective construction of coordination becomes fundamental for the sustainability of that system, therefore it provides a reconciliation of the heterogeneity of the individuals and their unified principles, generating rules and a basis of coordination. Farmers in collective arrangements such as this of the *gaúcho* beef have been able to introduce productivity improvements in the livestock farming activity of the Pampa's LAS. The resulting quality improvements are reality and the marketing of the beef

exploiting the Indication of Origin (IO) status marks an important evolution for such a traditional sector.

Obtaining Indication of Origin means that a product, which has originated within a specific territory, in a region or a country following a set of quality, reputation or other characteristics, can essentially be attributed to this specific geographical location. What distinguish the 'Pampas' biome are the natural characteristics that enable additional value to be added to the beef product. The geographical distribution of such an Indication of the Origin that qualifies the beef encompasses the municipalities in the Pampas region as identified in the map in the appendices. Likewise, the requirements to qualify for the IO 'Meat of the *Gaúcho* Pampas' can also be seen in the appendices. The indication of origin stamp of the 'Meat of the *Gaúcho* Pampas' identifies the type of cattle, sex, progenitors, locality, age, type of feed consumed etc. However, it mainly depicts the fulfilment of an assembly of requirements that guarantees the quality of the product and that should be continued in all of the links of the productive chain.

Final Considerations

This study attempted to contribute to the argument of the insertion of the *gaúcho* livestock farming in the agribusiness competitive environment context. Its contribution relies on a better understanding of the interventions regarding the strengthening of one agrifood cluster following the notion of development of strategic resources as proposed by Requier-Desjardins (2002). Following the arguments presented here, it is perceived that there is an enormous opportunity for such a livestock system to penetrate specific niche markets. However, willingness to cooperate and the organization required between these economic agents is vital for capturing and supplying both potential and existing demands. In view of this, the concept of LAS gathers importance because it is possible through the realisation of an association of techniques, typical products, production styles, territory, natural resources, collective actions and organization of the activities of production. The efficiency of LAS is a link between territory and innovation, provided by the process of collective action, as well as by the reduced costs of transaction due to the proximity between the

Appendices: Map of the Geographical Indication area (27ºS to 33ºS 49ºW to 57ºW)

Meat of the Gaúcho Pampas identified in the municipalities of Bagé, Hulha Negra, Dom Pedrito, Lavras do Sul, Candiota, Pedras Altas, Aceguá, e Pinheiro Machado.

Logo of the Programme

CARNE DO **PAMPA GAÚCHO** **da Campanha Meridional**

Requirements for achieving Indication of Origin Status

- Animals of European breed either Hereford and Angus and their hybrids which are fed exclusively on native pastures or improved native (cultivated winter lots) pastures.
- The herd should remain a minimum of one year within the IO region.
- Set of animal husbandry practices: age of the animals for slaughter (42 months) following weight, fat and carcass conformation.
- The monitoring system of animals since its birth.
- Certification of animals, not properties.
- Slaughter houses following strict industrial process (checking of animals, slaughter, approval of the carcasses, identification of the carcasses with the geographical identification, release of bones and maturation of the meat) and tag of cuts.
- Producers belonging to APROPAMPA – Association of the Producers of the Meat of the Pampas. Under this program some 200 cattle ranchers have signed up to the scheme. The association closely monitors all the process of certification, also functioning as a regulation council. The project foresees the adhesion of 300 cattle dealers until June 2007, and a total of a thousand until June 2010. The link with processing are two slaughter houses which are part of the scheme. One of the goals of the program is to increase the exports of meat *in natura* to 97 thousand tones until 2007 (Diário Popular, 2005).

agents. The impact of the environment of trust and the feeling of shared identity amongst the actors also allow for reductions in the costs of transaction inside the LAS.

The RBV theory provides a consistent foundation for better understanding the possibilities of insertion of the livestock farming in the competitive environment. The factors that were considered before as competitive bottlenecks (decrease scale production; low use of the technology and inputs; cultural and territorial characteristics etc.) actually become important factors of competitive differential. It is highlighted that these competitive advantages are specific to each locality, being difficult to be copied. However, the present strategic resources in the territory will only provide sustainable advantages if the resources are utilised by the agents in a coordinated basis.

Finally, the evidence presented in this study confirms that the Local Agrifood Systems are viable alternatives for the insertion of livestock farming in the competitive environment. In future studies the authors suggest further investigating the social construction regarding the concept of coordination in territories where the economy of the conventions would fit, and its relationship with the sustainable competitive strategies in the light of the RBV theory.

References

Altenburg, T. and Meyer-Stamer, J. "How to promote Clusters: policy experiences from Latin America." *World Development*. Vol. 27, No. 9, 1999. 1693-1713.

Barney, J. "Firm Resource and Sustained Competitive Advantage." *Journal of Management*. Vol.17. No. 01, 1991.

Borray, G. R. "La Multifuncionalidad de Los Sistemas Agroalimentarios Locales: Un análisis desde la perspectiva de tres casos en Colômbia." *Colloque Syal Systèmes Agroalimentaires Localisè: Produts, Enterprises Et Dinamiques Locales*. 16-18 octobre. Montpellier, France: 2002.

Boucher, F., Sautier, D., Bridier, B., Muchnik, J. and Requier-Desjardins, D. *Globalización y evolución de la agroindustria rural en América Latina: Sistemas Agroalimentarios Localizados*. Serie documentos de trabajo PRODAR No. 10. Lima, Perú. 2000. 40.

Breda, N.L. and Santos, A.C. "Coordenação de cadeias agroalimentares locais: uma estratégia para as pequenas atividades familiares." XVIII *Congresso Brasileiro de Economia e Sociologia Rural – SOBER*, Rio de Janeiro, 2000.

Brown, W. J. "Agribusiness Cases." *Supply Chain Management*: 13th International Farm Management Congress, Netherlands, Wageningen -July 7th -12th, 2002.

Casaroto Filho, N. and Pires, L.H. *Redes de Pequenas e Médias Empresas e Desenvolvimento Local*. São Paulo: Atlas, SP, 1998.

Centre de Coopération Internationale en Recherche Agronomique pour le Dévelopment – CIRAD. [on-line] Available from www.cirad.org.br. Accessed on 20/06/2005.

Cordova, P. "Cuando los arboles dejan ver el bosque: impactos territoriales de la florestacion en el Uruguay." Linck, T., Schiavo, C. (ed.). *Globalizacion Y Território. Nueva Ruralidad, Patrimônios Colectivos Y Sustentabilidad En La Cuenca Del Plata*. Editorial Nordan– Comunidad. Montevideo, Uruguay, 2003.

Coutinho, L. and Ferraz, J. *Estudo da Competitividade da Industria Brasileira*. Editora da Unicamp – 3.ed. Campina, SP, 1995.

COZZARIN, B. P. and BARRY, P.J. "Organizational Structure in Agricultural Production Alliances." *International Food and Agribusiness Management Review*. 1 (2): 1998.149-165 .

Diario Popular. *Forte impulso à pecuária regional.* Pelotas 21/08/2005. [on-line] Available from <www.diariopopular.com.br>.

Dominguez, A. "El desarrollo local en el marco del processo de globalizacion." Linck, T., Schiavo, C. (ed.). *Globalizacion Y Território. Nueva Ruralidad, Patrimônios Colectivos Y Sustentabilidad en La Cuenca Del Plata*. Editorial Nordan – Comunidad. Montevideo, Uruguay: 2003.

Euclides Filho, K. "Supply Chain Approach to sustainable Beef Production from a Brazilian Perspective." *Livestock Production Science* . 90: 2004. 53–61.

Farina, E. "Challenges for Brazil's Food Industry in the Context of Globalisation and Mercosur Consolidation." *International Food and Agribusiness Management Review*, 2(3/4): 2001. 315–330.

Ferreira, G. "Alianças Empresariais em Cadeias de Produção: Estrutura, Motivação e Estratégias na Produção de Carne Bovina." *Anais do I Encontro de Estudos em Estratégias,* Curitiba: 2003.

Fleury, A. and Fleury, M.T. *Estratégias Empresariais e Formação de Competências: um quebra-cabeça caleidoscópio da Industria Brasileir*a. São Paulo: Atlas: 2000.

Forsman, S. and Paananem, J. " Local Food Systems: Explorative Findings Finland." *Colloque Syal " Systèmes Agroalimentaires Localisè" : Produts, Enterprises Et Dinamiques Locales.* 16-18 octobre. Montpellier, France: 2002.

Fürstenau, V. "Pecuária de corte: baixos índices zootécnicos e eficiência no setor exportador." *INDICADORES ECONÔMICOS FEE / Fundação de Economia e Estatística Siegfried Emanuel Heuser*. Porto Alegre. Vol.32., No.01, 2004.

Giordano, S. R. "Mapeamento Internacional de Redes Orgânicas Certificadas." *IV Congresso Internacional de Economia e Gestão de Redes Agroalimentares*. FEA / USP -Ribeirão Preto, Brasil: 2003.

Goodman, D. and Goodman, M. "Place, Space and Networks: geographies of sustainable consumption." *Social Science.* Vol.1:97-119. May. Elsevier Science, 2001.

Grant, R. M. "The Resource-based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*, Vol. 33, No.3, 1991. 114-135.

Hansen, P. *Um Modelo Meso-Analítico de Medição de Desempenho Competitivo de Cadeia Produtivas*. Tese de Doutorado. PPGEP/UFRGS, Porto Alegre, RS 2004.

Hart, L. S. "A Natural Resource base view of the firm." *The Academy of Management Review*. Vol.20 (4) October: 1995. 986-1014.

Jank, M.S. *Competitividade do Agribusiness Brasileiro Discussão Teórica e Evidencias no Sistema Carnes*. São Paulo. FEA/USP.. tese de Doutorado, 1996.

Karantininis, K., Zylbersztajn, D. "The Global Farmer: Typology, Institutions and Organization." *15th Annual Iama World Forum* -Chicago, Illinois, USA: 2005.

Lambert, D. "Supply Chain Management: What does it envolve?" *Supply Chain and Logistic Journal,* Vol.4, Issue 4, Canadian Association of Supply Chain and Logistics Management, Canada: 2001.

Lazzirini Neto, S. *Pecuária de Corte: a nova realidade e perspectivas no agribusiness*. Lazzarini *and* Associados. São Paulo SDF Editores: 1996.

Linck, T. and Schiavo, C. (ed.). *Globalizacion y Território. Nueva ruralidad, patrimônios colectivos y sustentabilidad en la Cuenca del Plata*. Editorial Nordan – Comunidad. Montevideo, Uruguay: 2003.

Lyns, H. Território, Cultura e Inovação. A Ótica dos Sistemas Agroalimentares Localizados. In: *IX Encontro Nacional de Economia Política. Uberlândia* – MG, Brasil: 2004.

Malafaia, G.C., Talamini, E. and Blume, R. "A caracterização de um *cluster* pecuário no município de Bagé / RS." *XXV ENEGEP -XI International Conference on Industrial Engineering and Operations Management*. Porto Alegre, RS, Brasil: 2005.

Meyer-Stamer, J. "Estratégias de Desenvolvimento Local e Regional: Clusters, Política de Localização e Competitividade Sistêmica." *Policy Paper*. ILDES - Friedrich Ebert Stiftung. 2001. [onb-line] Available from <http://www.fes.org.br>.

Pedrozo, E. and Hansen, P. "Cluster, Filiere, Suply Chain, Redes Flexíveis: uma Analise Comparativa." *Colóquium As Relações Econômicas Franco-Brasileiras / Coloque "Lês Relations Industrielles Franco-Bresiliennes*. Grenoble, France, Ecole Superieure dês Affaires / Université Pierre Mendes – France – Grenoble 2. 2001. 29-30.

Penrose, E. T. *The theory of the growth of the firm*. New York: Wiley, 1959.

Peteraf, M. A. "The Cornerstones of Competitive Advantage: A Resource based view." *Strategic Management Journal*. Vol.14, 1993. 179-191.

Pigato, G., Silva, A.L. and Souza Filho, H.M. "Alianças Mercadológicas: A busca da Coordenação na Cadeia de Gado de Corte Brasileira." *II Workshop Gestão dos Sistemas Agroalinentares. PENSA/FEA/USP*. Ribeirão Preto, 1999.

Porter, M. *A Vantagem Competitiva das Nações*. Rio de Janeiro: Campus, RJ, 1990.

Reardon, T., Codron, J-M., Harris, L. B. and Craig, J. "Global Change in Agrifood Grades and Standards: Agribusiness Strategic Responses in Developing Countries." *International Food And Agribusiness Management Review*, 2(3/4): 2001. 421–435.

Requier-Desjardins, D. "Agro-Industria Rural y Sistemas Agroalimentarios Localizados: ¿Cuáles puestas?" *X Aniversario De Prodar*, Quito, Peru. Noviembre De 1999.

Requier-Desjardim, D. "Multifonctionnalité, territoire et secteur agro alimentaire: une approche par lês "systèmes agroalimentaires localisés." *CAHIERS DU C3ED*. Centre d'Economie et d'Ethique pour l'Environnement et le Développement. Université de Versailles Saint-Quentin-en-Yvelines. Cahier n°02-01. Juin, 2002.

Requier-Desjardins, D; Boucher, F. and Cerdan, C. Globalisation, Competitive Advantages and the Evolution of Production Systems: Rural Food Processing and Localized Agri-Food Systems in Latin-American Countries. *Entrepreneurship and Regional Development*. Routledge. Volume 15, Number 1. Pages. 2003. 49-67.

Rocha, J.C.M., Neves, M.F. and R.B. Lobo. "Experiências com Alianças Verticais na coordenação da Cadeia Produtiva da Carne Bovina no Brasil." *III Congresso Internacional de economia e gestão de negócios*, Ribeirão Preto. Anais. Ribeirão Preto:FEA-USP 2001.

SEBRAE/FARSUL/SENAR. *Diagnóstico de Sistemas de Produção da Bovinocultura de Corte do Estado do Rio Grande do Sul*. Relatório. Porto Alegre. 2005. 261 pg.

Schmitz, H; Nadvi, K. "Clustering and Industrialization: Introduction." *World Development.* Vol. 27, No. 9, 1999. 1503 – 1514.

Schiavo, C. "El Espacio Rural y sus Atores. Un Proyecto alternativo de gestion territorial participativa y sustentable en Microcuencas del sur de Uruguay." Linck, T. and Schiavo, C. (ed.). Globalizacion Y Território. Nueva Ruralidad, Patrimônios Colectivos Y Sustentabilidad En La Cuenca Del Plata. Editorial Nordan – Comunidad. Montevideo, Uruguay, 2003.

Sterns, J and Peterson, C. "The Globalisation of Smaller Agri-Food Firms: A Decision – Making Framework tested through Case Research." *International Food And Agribusiness Management Review,* 4, 2001.133 – 148.

Velarde, I., Garat, J.J., Marasas, M. and Seibane, C. "Sistemas de producción locales en el Río de La Plata, Argentina: concertación de actores, diferenciación y valorización de productos típicos." Linck, T. and Schiavo, C. (ed.). *Globalizacion Y Território. Nueva Ruralidad, Patrimônios Colectivos Y Sustentabilidad En La Cuenca Del Plata.* Editorial Nordan – Comunidad. Montevideo, Uruguay, 2002.

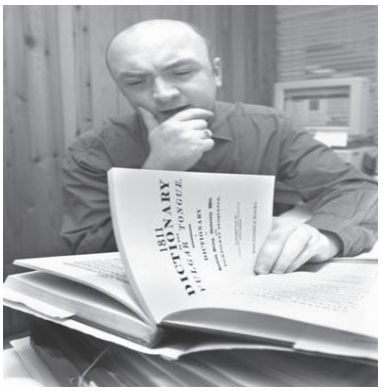
Zilbersztajn, D. and Machado Filho, C.P. "Competitiveness of meat Agri-food Chain in Brazil." *Supply Chain Management International Journal.* V.8, N.2, 2003.

Williamson, O. E. "Comments by Oliver Williamson." Jensen, M.C., Meck-Ling, 1992.

W. *Specific and general knowledge, and organizational struture*. In: WERIN, Lars, Wijkander, Hans (eds.). economics. Blackwell.

Case of Singruali
"Energy Smartness"

Ashok Kumar Tiwari and Atul Pandey



The effort required to manage energy effectively will vary between companies and depends on the company size, and energy intensity (energy costs expressed as a percentage of total company costs) and the current level of efficiency. Energy management requires a logical and comprehensive management approach and it needs managerial decision making based on energy data analysis. This paper presents comparative analysis of energy management in industries in Singrauli area of M.P. On the basis of this analysis, calculation of energy saving will be made. The research methodology used is collection of primary data through energy meters and secondary data from questionnaire and interviews from opinion leaders and general workers of selected industries. The energy efficient industries were measured on 1000 point scale based on the data analysis and calculations for energy savings were made.

Energy Management is the science involving planning, directing, controlling the supply and consumption of energy to maximize productivity and comforts and minimize the energy cost and pollution with conscious, judicious and efficient use of energy. The basic objective of energy management function is to see that energy needs of the company are satisfactorily met at minimum cost at present and in future to extend possible. Strong commitment from top management is essential for a successful energy management programme which includes managerial decision making.

However, managing energy does not necessarily require a formal system; any firm can improve their energy performance by following a few simple techniques. As with any business strategy, strategic energy management incorporates a few fundamentals:

Mr.Ashok Kumar Tiwari, Addl. Executive Engineer, MP Power Transmission Company Ltd., Singrauli (M.P.) 486889, E-mail ashokktiwari@gmail.com

Dr. Atul Pandey, Sr. Lecturer, Deptt. of Business Administration, A.P.S. University, Rewa (M.P.) 486001, E-mail atulpandey1@yahoo.com

1. Get senior management commitment
2. Assess current situation
3. Set goals and targets
4. Establish an action plan
5. Allocate resources
6. Implement plan
7. Review and evaluate

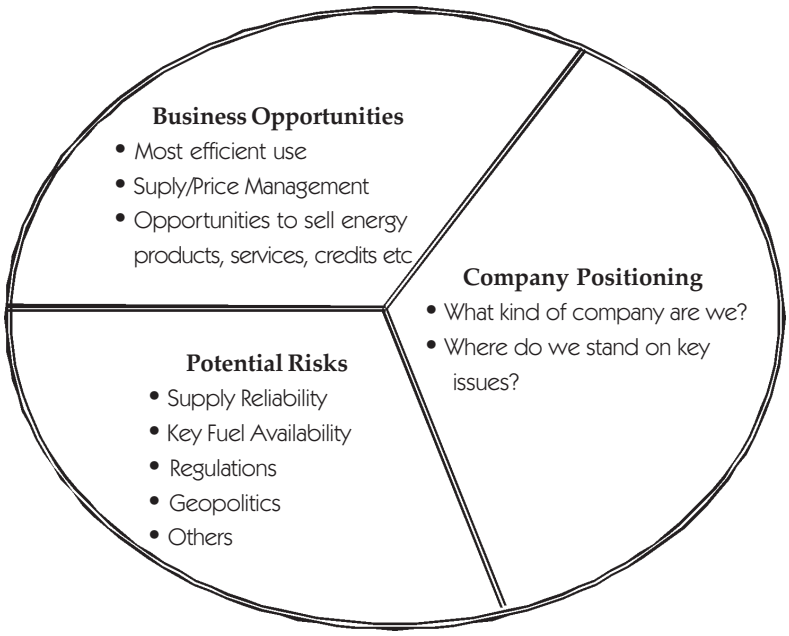
Companies that are already utilizing quality and/or environmental management systems such as ISO

9000 / 14001 will undoubtedly find the implementation of a formal energy system familiar, as the method and management of the system should follow the structured 'plan-do-check-act' approach. Ideally, to provide an integrated approach to business sustainability, it is strongly recommended that energy management be incorporated into existing systems.

Energy strategy spans a number of the key functions within a firm and therefore requires cooperation and commitment from all. *Senior management* provides the leadership and set direction; *finance* is involved to ensures the most appropriate purchasing decisions are made; *production*, as the key user, ensures that energy is used appropriately; *engineering* ensures that plant is operated and maintained efficiently and *HR* is involved to facilitate training and help generate a culture of energy awareness.

The most successful energy management strategies typically involve the setting up of an energy management team with participants from each of the functions mentioned above. This team would support a dedicated energy manager with responsibility for the coordination of energy management activities. Depending on the size of the business, this may or may not be a full-time, dedicated post. The team in association with senior management would establish an energy management policy, which should include general aims and specific energy cost reduction targets, timetables and budgetary limits, the methods to be employed and the organisation of management resources. The energy manager should set up a system to collect, analyse and report on energy consumption and costs. This can consist of reading meters on a regular basis and the analysis of utility bills i.e. gas, fuel oil and electricity.

Fig. 1: Drivers for Company Energy Management
How Energy Management can impact Corporate Planning



Strategic Energy Management Process

There are four steps in the overall process:

- Step 1: Initial Assessment
- Step 2: Design the Process
- Step 3: Evaluate Opportunities
- Step 4: Implementation

Step 1: Initial Assessment

This first step involves a thorough, organization-wide assessment of the importance of energy to the company in relation to its overall needs, risks, goals, image and reputation, and of potential business opportunities through energy-related products or services. Properly implemented, the assessment can provide clear direction as to the

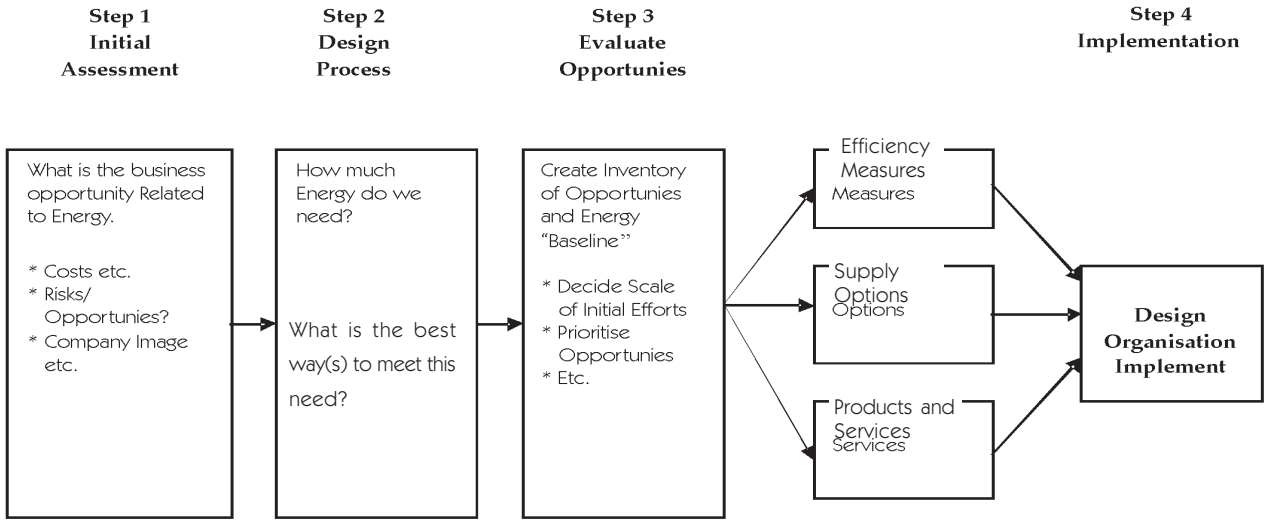
potential inherent in a strategic approach to energy planning and management. The key question posed by the assessment process is "what are the business opportunities related to energy?" This framework provides the context for evaluating energy as more than simply a cost of operation.

Companies that have embarked on such an evaluation have asked themselves very fundamental questions about how energy relates to:

- Potential business opportunities;
- Potential business risks; and
- The overall "positioning" of the company

The bottom line is that while cost is an increasingly important factor, companies evaluate the importance of energy from multiple perspectives. Other factors such as risk management, reputation, and even product-line issues may carry weight as well. As Howard Stanley of Corning, Inc. observes: *"Cost and consumption are key elements of managing energy. You have to gather your data and implement strategies to affect the factors you can control. Even if your energy dependence is low, if energy is important to your company, then a review is justified."* The outcome of this step is a decision: to go forward with a more strategic approach to energy management, or not.

Fig.2: Energy Planning and Management Strategy



Step 2: Design the Process

The design and planning process begins with an assessment of a company's actual energy needs versus "business as usual" practices and an investigation into the most promising solutions for meeting those needs. Taking this approach—asking the fundamental question of "how much energy do we need?"— encourages thinking beyond the familiar and the comfortable and exploring possibilities for innovation. It is important that process design and planning consider all factors that could inhibit success, from corporate culture to appropriate scale to resources, funding and organization.

Key Questions to consider:

- At what scale should we initially approach energy management: a single facility or division, or enterprise wide? This decision is driven by the potential for success in the early stages and consequent sustainability of the overall management process.
- What technical and financial resources are available (this is closely related to the scale question): are they internal, external, or both? What are the competing priorities for these resources?
- Are there programs or processes already in place (e.g. Six Sigma) with which energy management could be integrated?

These and other questions frame the overall approach that a company will choose and can greatly influence the chances for early success, which is critical to establishing a sustainable management process that will maximize potential benefits.

Step 3: Evaluate Opportunities

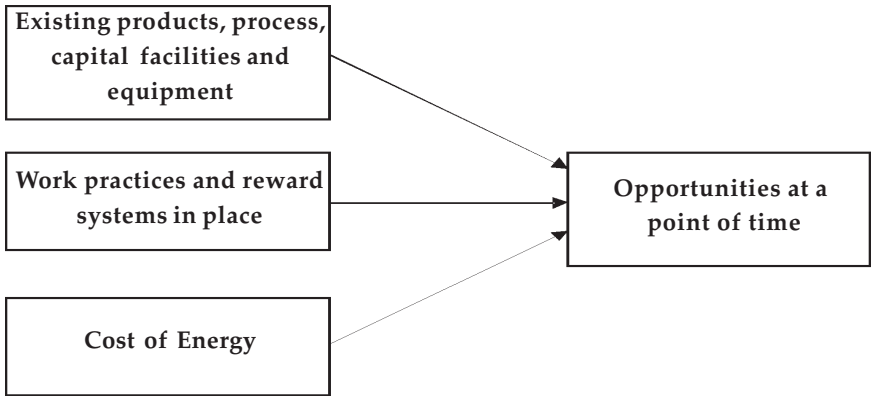
This step is the "nuts and bolts" of the energy strategy and management planning process because it is where real opportunities can be realized. It is where the "real work gets done," but because of its potential size and complexity, especially in larger, diversified and energy intensive businesses, if not well mapped out and systematically approached, significant opportunities may be missed, or momentum may be lost that will be difficult to regain. Essential to this third and crucial step in the process is a baseline that reflects the types, quantities, and costs of energy used in each significant component of the business. Ideally this will include facilities, operations, and transportation and distribution, and in some cases even the energy consumed by the product itself, especially if that issue is increasing in importance in a business sector. Also, for certain companies, this will include an assessment of new or expanded energy-related products and services that may benefit the company.

Opportunities fall into three categories, although not all will be relevant for all companies:

- Energy efficiency reduces the amount of energy used, reducing both cost and environmental impact.
- Energy supply management can help to control costs and assure reliability.
- Energy related products and services can help existing products to be more competitive in the marketplace or create new markets.

At any point in time, in addition to the cost of energy, a range of factors influence the opportunities that are available. Because these influencing factors, including energy cost, are dynamic, a strategic approach to energy planning and management must be dynamic and iterative rather than static. Only in this way will opportunities be continuously identified and realized.

Fig. 3: Factors influencing Energy Opportunities at a Given Point in Time



Step 4: Implementation

This fourth and final process step follows a classic management system model and involves determining and setting in place an organizational structure that will ensure that the program is integrated into the overall company management culture and that the new energy management goals are achieved. Regardless of the framework decided upon, certain management principles and tools must be in place to achieve significant results.

These include:

- Leadership at the very top of the company with a clear commitment to results;
- Clearly stated goals and measurable objectives at appropriate levels;
- Clear accountability for results, whether in a single or multiple executives;
- Sufficient resources to enable achievement of the objectives and goals;

- Periodic review and updating of goals, objectives and resource commitments; and
- Recognition of progress and reward for achievements.

Strategic Management Model for Energy Cost Reduction in Industry

One simple and widely adopted management system model and guidelines has been developed. The various implementable guidelines recommended for energy conservation measures in industries are:

- Reducing energy consumption through operational improvements resulting in little or no investment with immediate pay back/within one year (Short-Term Measures)
- Making low-cost modifications and improvement to existing equipment having the pay-back period less than two years (Medium-Term Measures/Low Cost Alternative)
- Making equipment changes or implementing new techniques and new technologies involving large investments leading to capacity utilisation and major energy savings having paid back more than 2 years (Long-Term Measures, High Cost Alternative)

This study aims to analyze power cost economics based on above information and methods the critical evaluation of managerial decision making in energy management in industries of Singrauli area under Rewa commissionary of Madhya Pradesh in India was made. The study in some of the industries in Singrauli area carried out as:

1. Northern Coal- fields Ltd. (NCL – A subsidiary of Coal India Ltd.)
2. National Thermal Power Corporation (NTPC)
3. Renusagar Power Company (Aditya Birla Group)
4. IDL Industries Ltd. (Hinduja Group)
5. Rewa Gases Pvt. Ltd., Waidhan [RGPL]
6. Vindhyachal Air products Pvt. Ltd. [VAPL]

Fig. 4: Guidelines for Energy Management

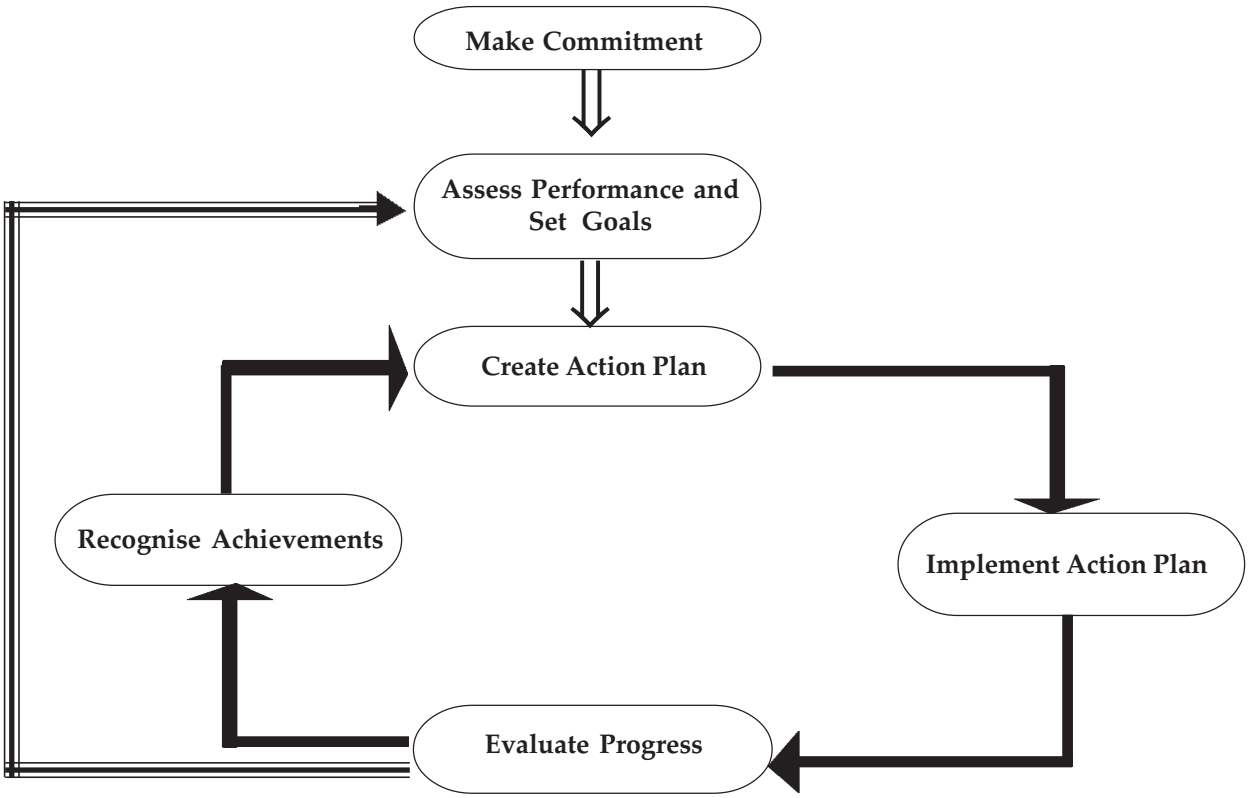
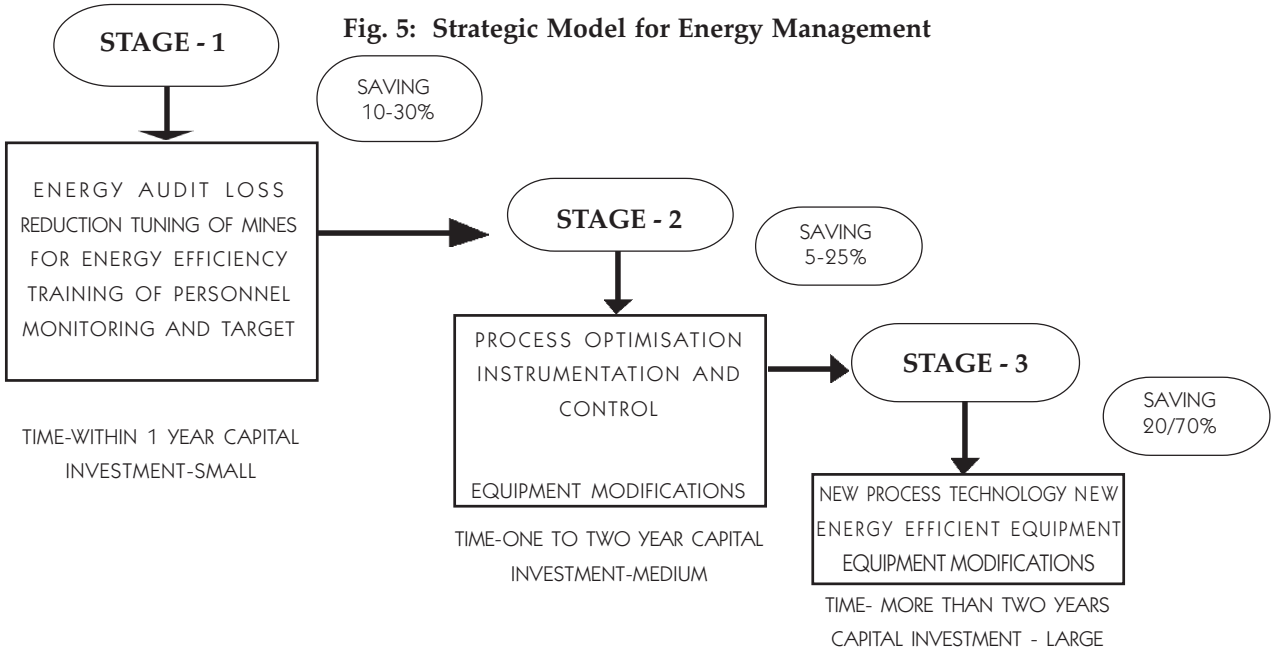


Fig. 5: Strategic Model for Energy Management



Research Methedology

The research technique used for study of energy management in industries in Singrauli Area is as follows:

A thorough search of the secondary sources of information related to energy conservation and management have been made from documents of Coal India, NTPC, various journals/ periodicals in the energy economics and management and records of Northern Coalfields Limited Singrauli, NTPC and other industries.

Experience survey was made as an attempt to tap the experience and expertise of knowledgeable persons such as operating managers, General Managers, chief engineers of industries in Singrauli through a series of structured interviews, questionnaire and discussions, (including workman), they are requested to give their views and opinions on various aspects of energy management.

Energy audit of mines of NCL and other industries in Singrauli was made and studied with the purpose of probe deeply and analyze carefully for energy conservation measures and its further implementation in new areas of recommendations. Energy audit involves an in-depth study of all major energy consuming equipments at all stages of production to achieve significant energy saving through a systematic and comprehensive study.

The following approaches applied to each important equipment, process and plant:

- Questioning the need
- Minimizing the end use and losses.
- Minimizing idle/ redundant running
- Running machines at full/ optimum capacity.

Analysis would include simple pay back calculations where investments are required to be made to implement recommendations to establish their economic viability. The audit used various portable instruments for measurements (Energy meter/ energy monitor, P.F. meter, Lux meter, Digital multimeter/ Power meter, Hour meter, Leak detector, Time study etc.) at a different mining/ non-mining project under NCL and other industries in Singrauli.

The following key tasks of energy management were conducted and final recommendations were suggested:

- Energy data collection and analysis
- Energy purchasing supervision
- Energy conservation project evaluation
- Energy project implementation
- Communication and public relations

On the basis of above data, calculation of energy saving was made. The present efforts for energy management taken by industries will be studied and accordingly new methods for energy management and monitoring system will be suggested in an orderly and effective manner with on-going and continuous exercise.

The power cost economics, cost benefit analysis and advantage of energy management in overall performance of industries in Singrauli was studied and recommended.

Methods of Data Collection

A. Primary Source

- Measurements of Energy inputs and outputs at various units of industry in KWH , KVARh and Maximum demand in KVA
- Measurements of illumination level at various units of industry in lumens

B. Secondary Source

- Energy bills of the company for past 5 years [electricity deptt.]
- Diesel and other fuel bills of company for past 5 years
- Questionnaire for workers
- Questionnaire for opinion leaders

a. The questionnaire for workers

It contains twelve question in Hindi /local language to assess workers awareness on energy saving and energy management.

b. The Questionnaire for Opinion Leaders

It contains about 100 questions in the form of Yes/No. These questions were asked about many aspects of energy management in company such as –

- Management commitment
- Strategic planning
- Monitoring, measurement and continual improvement
- Resource management
- Process management
- Reduction in specific energy consumption
- Resource optimization
- Waste minimization
- Reduction in pollution
- Greening supply chain
- Use of non-conventional source of energy

The first page of sample questionnaire for opinion leaders is given herewith-

On the basis of various parameters and attributes the ENERGY EFFICIENT SCALE for industry has been framed. It is a 1000 point scales and industries under study were given marks on that scale to determine their energy smartness.

QUESTIONNAIRE

NAME..... COMPANY..... DESIGN.....

1. **MANAGEMENT COMMITMENT- 100 Points**					
a)	Energy Management Policy (20)				
	- Has Organizations top management declared Energy Management Policy ?		Yes	◯	No
b)	Does Energy Management Policy include commitment to (30)				
	- Promote energy savings and conservation of resources reduction in specific energy consumption?	◯	Yes	◯	No
	- Minimization of waste generation and promote reuse recycling and disposal in eco-friendly manner in all segments of operation?	◯	Yes	◯	No
	- Comply with energy legislation/ regulation/ guidelines?	◯	Yes	◯	No
	- Continual improvement in cost reduction by adopting effective Energy Management System?	◯	Yes	◯	No
	- Use of renewable energy sources?	◯	Yes	◯	No
c)	**Management communicates to the Organizations.** Energy Management Policy and Energy Smart Criteria (30)				
	- Is Effective System of communicating Energy Policy and Energy Smart System criteria applied to different levels in the organization?	◯	Yes	◯	No
	- Is there appropriate knowledge and visible commitment at different management levels on complying with energy policy and Energy Smart System?	◯	Yes	◯	No
d)	Does Management determine Energy Smart requirements applicable to the organization ensures incorporation in objectives and targets ? (20)	◯	Yes	◯	No
2. **STRATEGIC PLANNING -50 Points**					
a)	Energy Smart Objectives and Targets				
	- Are Energy Smart Objectives and Targets determined and established at relevant functions and levels of the organization?	◯	Yes	◯	No
	- Are the objectives consistent with Energy Policy and Energy Smart criteria?	◯	Yes	◯	No

Full questionnaire can be given on demand

Responses: The Responses on Questionnaire are given in Table 1

Sl.No.	Name of Industry	Quest. for Opinion Leader		Quest. for Workers	
		Circulated	Responded	Circulated	Responded
1	Northern Coalfields Ltd.	35	28	150	87
2	National Thermal Power Corporation	44	31	50	21
3	Renusagar Power Company	18	16	20	16
4	IDL Industries Ltd.	6	5	19	19
5	Rewa Gases Pvt. Ltd.,	2	2	20	18
6	Vindhyachal Air Products Pvt. Ltd	3	3	20	19
	TOTAL	108	85	279	180

Results: The results and discussion derived from the research methodology prepared and the ongoing research works in this field. The above six industries measured on energy smart standard and calculations for saving potential has been done.

Table 2: Assessment of Industries and Awarding Points on Energy Smart Scale

QUEST NO.	CRITERIA	SUB-CRITERIA	TOTAL POINTS	NCL	NTPC	RENU SAGAR	IDL	RGPL	VAPL
1	Management Commitment	Energy Management Policy	20	0	20	20	0	20	0
		E M P includes commitment	30	0	30	30	0	12	0
		Management communicates to the organizations	30	0	30	30	0	0	0
		Management determines Energy Smart requirements	20	0	20	20	0	0	0
		TOTAL	**100**	**0**	**100**	**100**	**0**	**32**	**0**
2	Strategic Planning	Energy Smart Objectives and Targets	30	15	30	30	10	15	15
		Energy Smart System Planning	10	0	10	10	10	0	10
		Internal Communication	10	10	10	10	0	5	10
		TOTAL	**50**	**25**	**50**	**50**	**20**	**20**	**35**
3	Monitoring, Measurement and Continual Improvement		**100**	90	100	100	30	10	20
4	Resource Management	Organization setup for Energy Conservation	10	0	10	10	0	0	0
		Provision of Resources	40	40	40	40	20	25	25
		TOTAL	**50**	**40**	**50**	**50**	**20**	**25**	**45**

5	Process Management	HR Process	25	0	20	25	0	15	15
		Engineering Process	25	11	21	25	23	9	11
		Pruchasing Process	25	0	5	0	0	0	0
		Production Process	50	34	50	50	26	14	34
		Other Organization Processes	25	0	25	25	0	0	0
		TOTAL	**150**	**45**	**121**	**125**	**49**	**38**	**60**
R1	Reduction in Specific Energy Consumption		150	125	150	150	25	150	100
R2	Resource Optimization		100	64	68	84	48	36	68
R3	Waste Minimization		100	14	58	70	58	16	30
R4	Reduction in Pollution		50	24	20	26	26	0	0
R5	Greening Supply Chain		50	0	0	0	0	0	0
R6	Use of Non-Conventional Source of Energy		50	25	50	50	0	0	0
	GRAND TOTAL		**1000**	**452**	**767**	**805**	**246**	**342**	**338**

Table-3: Summary of Results

Energy Smart Grading of Industries in Singrauli Area			
Rank	Company	% Points Obtained	Grade
1	RENUSAGAR	80.5	A
2	NTPC	76.7	A
3	NCL	45.2	B
4	RGPL	34.2	C
5	VAPL	33.8	C
6	IDL	24.6	D

Some Findings

i. Except for NTPC and Renusagar other companies don't have energy management cell headed by qualified energy manager. Smaller companies like IDL, VAPL, RGPL don't conduct energy audits of their company which is mandatory under energy conservation act 2001.

ii. There is no energy management policy in highly energy intensive industries such as NCL, IDL and VAPL. Other companies as NTPC, Renusagar, RGPL have energy management policy.

iii. No industry is following greening supply chain criteria. Companies don't know whether the suppliers have energy

smart criteria or not. No company conducted or demanded energy smart assessment of suppliers.

iv. Only NTPC and Renusagar having all processes in organization (administrative/personal inclusive) consider capacity utilization, energy conservation, waste reduction and continuous improvement of efficiency.

v. There is no energy smart system planning found in NCL and RGPL while other companies having it.

vi. Maximum numbers of labourers and workers are unaware of any energy policy of company. They don't know about energy conservation in their work.

vii. In NCL and IDL there is no reward recognition, career advancement and motivation method employed to derive employees toward energy smartness.

viii. Except for NTPC and Renusagar other companies don't provide competency development/training of employees in energy management/conservation.

ix. In IDL much wastage of energy is observed at all levels. All motors are running at under loading and over heating conditions. No fine tuning and capacity utilization was found.

x. Free Electricity to all employees in NCL is the main reason of wastage and heavy consumption in NCL Townships. Some townships are having electricity consumption at par with mining projects. Also there is no metering /monitoring of electricity in individual residential units. This leads high percentage of energy cost in companies' overall expenditure.

xi. The energy cost as percentage of production cost, percentage saving potential and percentage increase in profitability if all suggested measures of energy management will be adopted is shown in table below:-

Name of Industry	Energy Cost as % of Production cost	Energy Saving Potential in %	% Increase in Profitability
RENUSAGAR	9.11	1.10	2.01
NTPC	10.01	3.21	2.79
NCL	23.63	14.42	5.81
RGPL	69.20	12.77	4.16
VAPL	71.08	14.36	5.37
IDL	45.66	22.08	9.33

Conclusion

This study identifies opportunity for introducing and testing of latest/ innovative alternate ideas / process/ equipment/ technology which can result in significant energy-saving and cost minimization, the emphasis being on those having wide application in industry.

This study transfers knowledge and experience in the field of energy management in industry to the operational managers and engineers. A careful and thorough presentation of energy management in industries as the consequence of management decisions will be underlying theme of this research. The orientation continues to be operational with an emphasis on identification and implementation of energy management plan and solution of problems of power crisis confronting industries in Singrauli area.

This study will be pin-pointing the reforms and challenges needed in present energy policy and promote for awareness of individual's participation of energy users with regards to energy management.

This study identifies opportunity for introducing and testing of latest/ innovative alternate ideas/process/ equipment/ technology which can result in significant energy-saving and cost minimization, the emphasis being on those having wide application in industry. All

measures assessed for energy saving and cost therein involved. A realistic cost benefit analysis carried out leading to prioritization of various measures and formulation of action plan i.e. short term, low cost alternative and long term, high cost alternative for its implementation. This study also suggests and recommends the future directions for further research. This research will suggest a new phase of overall cost reduction causing more profitable in its business in industry through effective energy management.

References

Anandalingam, G. *Policy Incentives for Industrial Energy Conservation.* Discussion Paper N o.02.83. TERI, New Delhi.

Energy Management Policy-Guidelines for the Energy Intensive Sector of India. [Report No.2000IE68. Sponsored by: Bureau of Energy Efficiency, Ministry of Power, Government of India].

Piper, James. *Operation and Maintenance Manual for Energy Management.* Standard Publisher and Distributor, New Delhi: 2006.

Rajan G.G. *Optimizing Energy Efficiencies in Industry.* Tata McGraw-Hill Publishing Company Ltd., New Delhi: 2005.

Tiwari A.K. "Linear Mathematical Model for Industrial Energy Management." *Proceedings of National Seminar on Mathematics and Computer Science.* SDPG College, Muzaffarnagar (U.P.) November, 2005.

Tiwari, A.K., Chandra, V. and Pandey, Atul. "Energy Data Analysis in Energy Management of Industries." *Proceedings.* 23rd National Convention of Electrical Engineers, Institution of Engineers (India) Cochin: November, 2006.

Tiwari, A.K., Chandra, V. and Pandey, Atul. "Managerial Decision Making in Energy Management of Industries- (A Case Study of Renusagar Power Company). Proceedings of All India Seminar on Energy Security, Institution of Engineers (India) Hyderabad: November, 2006.

Tiwari, A.K., Chandra, V. and Pandey, Atul. "Energy Management Information System in Power Distribution Companies." *Proceedings of All India Seminar on Best Practices in Power Distribution and Management.* Institution of Engineers (India) Shillong, October, 2006.

Tiwari, A.K., Chandra, V. and Pandey, Atul. "Technology Management Information System in Power Distribution Companies." *Proceedings of 10th ACSOM* at Indian Institute of Management, Ahmedabad: December, 06.

Tiwari, A.K. and Pandey Atul "Forecasting Electricity Price in International Electricity Market Using Neural Networks." Chapter 3. *Maketing in New Global Order. B*ook published by Excell books, New Delhi: 2007.

Tripathi, T.K. and Pandey, Atul. "Innovative Action Plan and Implementable Guidelines towards Mega Savings for Energy conservation in Coal Sector." *Proceedings of All India Seminar on Energy Security*. Institution of Engineers (India) Hyderabad: November, 2006.

Tiwari, A.K., Y.Singh and Pandey, Atul. "Strategic Planning and Process in Energy Management of Companies." *Proceedings of National Conference on Strategic Management*. Sihgad Institute of Management, Pune: January, 2007.

Tiwari, A.K. and Pandey, Atul. "Conservation and Energy Efficiency in Industries of Singrauli Area." *Proceedings.* Mechex, National Conference, Gyanganga Institute of Technology and Science, Jabalpur: February, 2007.

Referral Marketing in Management Education: An Overview

Malmarugan D.

Referral marketing is making use of existing customers to rope in prospective customers. This paper seeks to discuss the applications of referral marketing to Educational services. In an era of Global competition, Educational services require marketing efforts and innovative efforts like referral marketing, making use of people as the new media, is required. The application of Referral marketing in Educational services in general and Management Education in particular, is an under-researched area. This review attempts to draw the attention of policy makers and administrators of Higher Educational Institutions, the relevance and Importance of Referral Marketing. The article discusses the decision making process at length, which the students and parents undergo before enrolling to an Institution.

Absent from research into services has been an extensive examination of education as a specific marketing problem. Like many other "professional services" education has tended to eschew marketing. Despite this neglect, education remains a service capable of treatment as any other in terms of marketing theory. In doing this, an important starting-point is the classification of education as a marketable service. This paper discusses the applications of referral marketing to educational services.

Educational Services and Buyer Behaviour

In a recent review of marketing in service industries, Edgett and Parkinson (1993) point out that it is now generally accepted that the marketing of services is sufficiently different from the marketing of physical products to deserve separate treatment. The four unique characteristics that distinguish services are intangibility, inseparability, perishability and heterogeneity. By their nature, services cannot be touched, tasted or possessed; this leads to consumer difficulty in evaluating an intangible service offering. A service is inseparable from the source of the service; production and consumption take place simultaneously. Services are perishable since they cannot be stored; yesterday's course vacancy cannot be sold. Heterogeneity simply means that services are difficult to standardize; this makes it difficult to control quality. Services differ considerably in the

Prof.Malmarugan D., Associate Professor, Sardar Vallabhbhai Patel Institute of Textile Management, 1483, Avanashi Road, Peelamedu, (Near Krishnammal College), Coimbatore - 641 004, Email: mal_sal2000@yahoo.co.in

extent to which they are people-based or equipment-based. Educational courses including MBAs (other than those by distance learning) are usually heavily people-based; the staffs are part of the product.

Assael (1981) suggests that the buyer's decision-making processes vary with the type of decision, and that the more complex and expensive decisions are likely to involve more buyer deliberation. Consumers go through complex buying behaviour when they are highly involved in a purchase and they are aware of significant differences between brands. Marketing MBA programmes clearly involve the selling of an expensive product (in terms of both money and time), significant brand differences and infrequent buying. Murray (1991) suggests that, in the face of greater risk and uncertainty, services customers engage in extended decision processes. There is a distinctive information acquisition pattern for service customers; personal sources of information become particularly important.

Until recently there appeared to be little evidence regarding MBA students' information-gathering behaviour. Nicholls and Wong (1998) conducted a study of MBA students' motives at seven UK business schools based on 255 mailed questionnaires and a response rate of 41 per cent. Fifty-three per cent of the respondents listed personal contacts as being a main source of information and in total 89 per cent sought some personal advice. The survey was backed up by a semi-structured interview study with 27 students. About half of the latter felt that they were unhappy with the information they had received from the business schools, and a few thought that the information they had received had turned out to be quite misleading.

Educational establishments have far to go in terms of sophisticated marketing, and particularly identifying and tailoring their offerings to actual market needs. One of the challenges is to do this and then to communicate to potential customers and, indeed, to industry generally that they have succeeded. As far as management courses are concerned this is not made easier by the speed of change in management theories and in the marketplace in general. However, unless business schools succeed in improving their marketing, they will stand accused of not practising what they preach.

Selling philosophy is probably the least acknowledged yet the most applied in Higher Education (HE). It captures the broad understanding which key university managers and marketers across the world hold about HE marketing. Central to this philosophy is a desire to achieve a critical mass of publicity and public awareness about the universities' offerings. It is about projecting the right image, providing university information and maintaining a steady or increasing stream of applicants through a range of strategies that include advertising, public or external relations, direct promotion and personal selling. Research around the world has indicated that marketing in HE institutions is often very narrowly associated with these activities (Murphy and McGarrity, 1978; Gray, 1991; Foskett, 1995; Smith *et al.*, 1995; Naude and Ivy, 1999; Ivy, 2002; Maringe and Foskett, 2002; Maringe, 2004).

Influential Attributes of Higher Education Institutions

If universities are to satisfy students' requirements, they must be aware of their own offerings and how these are perceived in the market place. Knowing those influential factors and the associated impact on potential students is important for institutional policy makers. Secondary research suggests that the influential variables are location (Gorman, 1976; Leister and Menzel, 1976; Roberts and Allen, 1997; Welki and Navratil, 1987), reputation for academic quality (Anderson, 1976; Erdmann, 1983; Murphy, 1981), courses that are available with the benefits that they offer, (Erdmann, 1983; Roberts and Higgins, 1992; Saunders *et al.*, 1978; Sevier, 1987; Taylor, 1994; Walker *et al.*, 1979) and career opportunities with employment enhancement (Krone *et al.*, 1981; Saunders *et al.*, 1978).

Decision Making Stages in the Choice of Education

The purchase of higher education can be considered high involvement, due to its high cost, high personal relevance, variety of different alternatives available and time taken to make the decision (Gray, 1991). Many models of decision making in relation to high involvement consumer purchases such as higher education are put forward by many scholars. By the late 1960s the various strands of the discipline were combined into comprehensive models of consumer behaviour and their decision making. Three models proved to be the most influential: Those presented by Nicosia (1966), Howard and Sheth (1969) and Engel, Blackwell and Miniard (1995). These models merely provided a framework to draw together the various disparate strands of a new and

growing discipline, but were inherently flawed in their combination because they had little explanatory power and were generally untestable. It was in terms of the matter that the models became best known and most influential; as organising frameworks which allowed for the incorporation of individual, situational and social influences upon purchase outcome (Gabbott and Hogg, 1998). Whilst recognizing that there are a few differences among the three models, they describe the decision making stage of a cognitive consumer in the same major ways. That is, the models suggest that consumers make decisions after moving through various stages of the decision process and that the process, at least theoretically, applies to the full range of consumer decisions, including educational choices (Myers, 1996).

The following discussion is based on the portion of the EKB's model (1995) that pertains to the three stages of the pre-purchase decision process, namely: (1) problem recognition; (2) information search; (3) alternative evaluation, followed by post-purchase stages which are (4) choice and (5) post-purchase evaluation.

Problem Recognition

Problem recognition is the consumer's realization that he/she has a purchase goal stemming from a need that requires a decision. Engel et al (1995) indicate that problem recognition occurs when there is a significant difference between a desired state and an actual state in relation to a particular need. Thus, needs are the cornerstone upon which all consumer decision making is based.

In the case of a student, problem recognition occurs when the student reaches the realisation that he/she needs to study. Previous research studies (Hill, Romm and Patterson, 1991) suggest that this stage is quite complex since there are four aspects that the student considers, namely: (1) the country; (2) the state/city; and (3) the university. However, the choice of courses and subjects, which are also important, was not mentioned in the past literature. It cannot be assumed that students deal with only one problem at a time. They consider a sequence of related problems that are associated with higher education. Since each problem increases uncertainty, a high level of risk exists which has a direct impact on the remaining stages of the decision process. Thus, the problem recognition stage is multi-faceted and more complicated than the EKB's model (1995) seems to suggest.

Information Search

Information Search is the collecting of information about a problem from either internal or external sources. Engel et al (1995) state that internal search mainly concerns the person's memory of previous experiences with a similar type of purchase. External search includes information from both personal sources, e.g., family, friends, experts and impersonal sources. While information is deliberately retrieved from the individual's long-term memory during internal search, information from personal or impersonal sources is acquired either voluntarily or involuntarily during external search (Hill, Romm and Patterson, 1991) Patterson, Romm and Hill (1992) show that students' expectations about studying can be conceptualized in terms of four different dimensions, namely: (1) economic; (2) social; (3) personal; and (4) learning. Firstly, the economic dimension related to the students' ability to obtain and pay for the goods and services necessary. Secondly, the social dimension involves the quantity and quality of interactions with other individuals. Thirdly, the personal dimension pertains to the perception of self and also changes in perception that results from the sojourn. Finally, the learning dimension describes the elements directly pertaining to knowledge and professional skills. The students' main personal information sources consisted of parents, relatives, friends, and agents. Evidence also indicates that newspaper and television advertising are not as effective in initiating the purchase of services with enduring benefits, e.g. higher education, since these services are more expensive and require the consumer to be more involved (Zeithaml et al, 1985). A number of studies suggest that word-of-mouth communication is the most important information source for many services and can reduce risk for high involvement services since it gives the consumer the opportunity to receive clarification and feedback. Consequently, students may go to great length (go to university fairs in another city) to secure a first-hand personal source rather than rely on impersonal sources, e.g. mass media. The main function of impersonal sources of information for this type of service is, therefore, to direct students to personal sources of information. The information is then confirmed with close family members and friends (Hill, Romm and Patterson, 1991).

Alternative Evaluation

The alternative evaluation stage is the prelude to consumer

choice. It involves organizing the information that has been gained from the search process, selecting appropriate criteria, and comparing the various alternatives in relation to the consumer's recognised needs (Hill, Romm, and Patterson, 1991). Engel et al (1995) describe the four major components that affect the alternative evaluation stage as evaluative criteria; (2) beliefs; (3) attitudes; and (4) intentions. Evaluative criteria are the desired outcomes expressed as the preferred attributes. Beliefs are the perception of an alternative's performance on important evaluative criteria. Attitudes are the evaluation of an alternative's acceptability. Intentions are the subjective probability that a particular action will be undertaken.

The alternative evaluation stage differs according to type of decision making (e.g., high, low, or routinised involvement). Since higher education for students is an example of a high risk purchase, it is a high involvement decision in which more alternatives are considered in an extended problem solving process. Previous research studies also show that different rules can be used when evaluating alternatives. Under conditions of high involvement, consumers have been found to use a compensatory model in which an overall evaluation is made of all alternatives before the final decision is reached. Thus, an alternative is not necessarily rejected because it has a low rating on any particular attribute since a high rating of another attribute can compensate for it. Hill, Romm, and Patterson (1991) suggest that in evaluating the options, students are willing to ignore what they perceive as the relatively low prestige of a particular university when they consider other attributes at that same university that can compensate for it. In the case of education, it appears as if universities are the only professional services in which service providers ultimately make the final decision with regard to acceptance or rejection of every potential customer. It may seem as if the alternative evaluation stage is quite straight forward for students, e.g., they apply to a number of universities and take their chances. In other words, most of the students not only have a limited amount of alternatives available to them but also are finally accepted or rejected on the basis of the university's evaluation of them and not vice versa. However, a closer scrutiny of the alternative evaluation stage reveals that it is a lot more complex.

Post Purchase Evaluation

Once the pre-purchase stages are completed, the final stage, which is post-purchase assessment, occurs. This final phase of the decision process is only concerned with satisfaction and disposition of the product. The positive evaluation of the purchase, e.g., meeting or exceeding expectations, would lead to satisfaction or dissatisfaction.

In other words, this phase of decision-making is seen as an opportunity to build and create longer term relationships with the customers (Gray, 1991). The majority of studies in the area of education have been undertaken after a choice has been made. If the choice of higher education ranks as one of the most consequential decisions that an individual has to make, then student choice, whether it be to study abroad or the selection of a specific institution and/or course, involves extended decision-making. This being the case the selection process is likely to be a complex mix of interrelated and discrete elements which can vary in sequence, timing and content (Myers, 1996).

Conclusion

The Educational Services sector is assuming importance, in the face of domestic and international competition. The main goal of a higher education institution should be that of delivering (and continually enhancing) excellence in teaching and learning and of combining the values of a liberal education with the professional qualifications required in a globalized economy. Education being a service requires a different treatment, as Services marketing is different from traditional product marketing. Application of marketing concepts to Educational services is in the nascent stages.

Students while considering Higher Educational Institutions for enrollment, go through an elaborate procedure, as the perceived risk and uncertainty are high. A number of studies suggest that word-of-mouth communication is the most important information source for many services and can reduce risk for high involvement services since it gives the consumer the opportunity to receive clarification and feedback. The decision making models and stages were discussed. The Evaluation criteria may differ for different groups of students. The applicability of Referral marketing in each stage with specific reference to Higher Education was discussed. The attributes sought after by students from an Educational Institution, are to be seen as the building blocks of Brand Image for Higher Educational institutions. These are inputs for planning in the Management of Higher educational institutions.

The implication for Administrators of Higher Educational Institutions is how to make use of this under utilized resource, namely–Referral marketing, to improve the enrollment both in Qualitative and Quantitative terms.

With the proliferation of institutions offering higher education it is fundamental that business schools employ the right strategies and resources that will allow them to achieve their ambitious goals, while remaining competitive in the evolving global market for business education.

The scope for further research can be to study empirically among the stakeholders of Higher Educational Institutions, the influence of Referral Marketing applications in Management Education.

Keywords: Referrals, Decision, Enrolment, Education

Bibliography

Assael, H. *Consumer Behaviour and Marketing Action*. Boston, MA: Kent Publishing Company, 1981.

Australian Education Foundation, *Survey of Students Studying in Australia.* Department of Employment, Education, Training and Youth Affairs, Canberra: 1997.

Coccari, R. and Javalgi, R. "Analysis of Students' Needs in Selecting a College or University in a Changing Environment." *Journal of Marketing for Higher Education.* Vol.2, No.6 (1995): 27-38.

Duan, J. "The Influence of Various Factors on Students in Selecting Universities: A South Australian Study of Chinese Students from Hong Kong and Malaysia." Doctoral Thesis, School of Management, University of South Australia: 1997.

Edgett, S., Parkinson, S. "Marketing for Service Industries: A Review." *Service Industries Journal*. Vol. 13 No.3 (1993): 19-39.

Eric Cornuel. Challenges Facing Business Schools in the Future, *Journal of Management Development*. Volume 26 Number 1 (2007): 87-92.

Engel, J.F., Kollatt, D.T., and Blackwell, R.D. Consumer Behaviour, 6th Edition, Illinois: The Dryden Press, 1995.

Erdmann, D.G. "An Examination of Factors Influencing Student Choice in the College Selection Process." *Journal of College Admissions.* No.100, (1983): 3-6.

Foskett, N.H. "Marketing, Management and Schools: A Study of a Developing Culture in Secondary Schools." Unpublished Phd Thesis, University of Southampton, Southampton: 1995.

Gabbott, M. and Hogg G. "Consumer and Services." Chichester, Sussex, England: 1998.

Gray, L. *Marketing Education*. Open University Press, Buckingham: 1991.

Hill, C., Romm, T. and Patterson, P. "The Pre-Purchase Decision Making Process; a Qualitative, Retrospective Longitudinal Study of Students in Australia." *University of Wollongong Working Paper.* No. 3-92, 1991.

Howard, J. and Sheth, J. "The Theory of Buyer Behaviour." New York: John Wiley, 1969.

Kotler, P. and Fox K., Strategic Marketing for Educational Institutions, Prentice-Hall, Englewood Cliffs, N.J.: 1985.

Krone, F., Gilly, M., Zeithaml, V., Lamb, C.W. "Factors Influencing the Graduate Business School Decision." *American Marketing Services Proceedings.* (1981): 453-456.

Lawley, M. "Factor Influencing the Choice of Destination in Education: The Case of Hong Kong." *Masters Thesis*. Faculty of Business, University of Southern Queens land, 1994.

Leister, D.V, Menzel, R. "Assessing the Community College Transfer Market." *Journal of Higher Education*. Vol.47 (1976): 661-680.

Maringe, F., Foskett, N.H. "Marketing University Education: The Southern African Experience." *Higher Education Review.* Vol.34, No.3 (2002): 35-51.

Maringe, F. "Vice Chancellor's Perceptions of University Marketing: A View from Universities in a Developing Country." *Higher Education Review.* Vol.36 No.2, (2004): 53-68.

Murphy, P., McGarrity, R.A. (1978), "Marketing Universities: A Survey of Student Recruiting Activities." *College and University.* No.Spring, (1978): 249-261.

Murray, K.B. "A Test of Services Marketing Theory: Consumer Information Acquisition Activities." *Journal of Marketing*. Vol. 55 January, (1991): 10-25.

Myers, S.K. "Information Search in Higher Education Choice." *Master of Marketing Thesis.* Faculty of Business, Curtin University of Technology, WA: 1996.

Nicholls, J.R., Wong, T.H. "The Marketing of Educational Services." *Proceedings of the Conference of the Academy of Business*. London, No. April 1988.

Nicholls, J. et .al *Lecturer at the School of Management, University of Bath, Bath, UK* Journal *of Educational Management.* Volume 9 Number 2 (1995): 31-38.

Naude, P., Ivy, J. "The Marketing Strategies of Universities in the United Kingdom." *The Journal of Educational Management*, Vol. 13 No.3, (1996): 126-134.

Smith, D., Scott, P., Lynch, J. *The Role of Marketing in the University and College Sector*. Leeds: Heist Publications, 1995.

Roberts, D., Higgins, T. *Higher Education: The Student Experience*, Ch. 10, Leeds, (1992): 115.

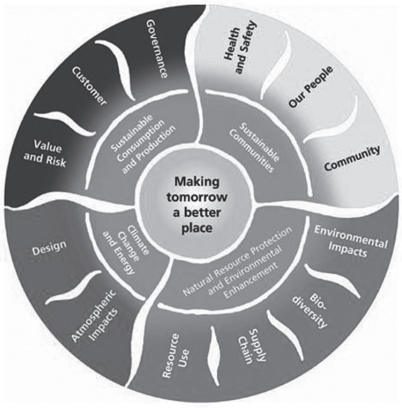
Saunders, J.A., Hamilton, S.D., Lancaster, G.A. "A Study of Variables Governing Choice of Course in Higher Education." *Assessment in Higher Education*. Vol.3 (1978): 203-36.

Sevier, R. "How Students choose a College." *Currents*, Vol.13 (1987): 146-52.

Welki, A.M., Navratil, F.J. "The Role of Applicants' Perceptions in the Choice of a College." *College and University*. Vol. 62 (1987): 147-59.

Supply Chain Disruption:
Risk and Management

Jose Paul



Most Companies are caught unaware when there is disruption in their supply chain and to combat this situation they often tend to blame it on the Events, People, Technology, Operations, Facilities, that were responsible for its very cause. In fact, these Happenings should be largely predicted before their occurrences and preventive standards should be put into place so that the damage they tend to cause would be lesser and the Company can easily recover without spending extra valuable dollars or Resources. The ability of the Organization is put into real test during such distractions. Some disruptions are under our control and we can be well equipped in advance to face them with systematic planning in Risk and Disaster Management.

When it comes to global supply chains, the potential for disruption comes in many forms, from large-scale natural disasters and terrorist attacks to plant manufacturing fires, wide-spread electrical blackouts, and operational challenges such as shipping ports too small to handle the flow of goods coming into a country. Today's leaner, just-in-time globalised supply chains are more vulnerable than ever before to natural and man-made disasters — a reality that creates greater demands on companies to keep supply chains flexible and integrate disruption risk management into every facet of supply chain operations.

So many companies are trying to get their piece of the global advantage, as the operational risks and possibilities of disruption are pretty high. And one of the biggest challenges in managing these disruption risks "has to do with the fact that global supply chains are in a state of continuous evolution."

Prof.Jose Paul, Professor of Marketing and Strategic Management, Holy Grace Academy of Management Studies, Kuruvilassery P.O., Mala, Thrissur, Kerala, Email: jos4paul@yahoo.com

Like Murphy's Law, disruptions in supply chains seem inevitable and should be a high priority topic for senior management and share-holders.

Disruption risk has received increasing attention in the last few years. The reason is undoubtedly that, with longer paths and shorter clock speeds, there are more opportunities for disruption and a

smaller margin for error if a disruption takes place.

Managing supply chain disruptions revolves around two goals:

a. To thoroughly understand the potential of identified risks; and

b. To increase the capacity of the supply chain — within reasonable limits — to sustain and absorb disruption without serious impact.

Identifying the Risks

There are three main sources of supply chain disruption risk:

1. Operational contingencies - equipment malfunctions and systemic failures, abrupt discontinuity of supply (when a main supplier goes out of business), bankruptcy, fraud, or labour strikes;
2. Natural hazards such as earthquakes, hurricanes, storms;
3. Terrorism or political instability

Which category would a company consider the most threatening? Companies generally focus on the risks that they can see and most of us focus on those risks that someone would hold us accountable for. So when you get to a risk such as political instability or terrorism, most people don't worry about it that much or they worry but they don't focus on it. For instance, you generally are not going to get fired for not having a plan if a terrorist blows up your building. When it comes to developing a strategy to reduce the risks of future terrorist activities, we do not know who the perpetrators are, their motivations, the nature of their next attack and where it will be delivered. Hence it is extraordinarily difficult to know what protective actions to take.

Individuals and companies are *not* very concerned about the natural disasters prior to their occurrence. Only after the event when it is often too late do they want to take protective action. Over time this concern dissipates. Thus it is very common for people to cancel their flood or earthquake insurance policies if they have not experienced losses from one of these events in several years.

Discovering Vulnerabilities

Supply chain experts suggest that the key to first mitigating and then managing disruption risks understands a company's vulnerabilities.

Experts note that vulnerabilities need to be analyzed throughout the supply chain — from critical processes and equipment to manufacturing and warehousing sites, from technology and transportation to distribution and management. Granted, this is not always easy, because it requires information sharing across supply chain participants. Typically, a company with "special vulnerabilities may have every incentive to hide these from other supply chain participants." While current communication and information technologies such as ERP (Enterprise Resource Planning) systems and CPFR (Collaborative Planning, Forecasting and Replenishment) methods allow for improved information integration and supply chain visibility. Vulnerabilities to disruption are, by their very nature, more difficult to identify.

The following Four steps will help companies identify their vulnerabilities:

1. Obtain senior management understanding and approval, and set up organizational responsibilities for managing the disruption risk management process.

2. Identify key processes that are likely to be affected by disruptions and characterize the facilities, assets and human populations that may be affected. Key processes typically include new product development, supply chain operations, and manufacturing. Key assets include both tangible assets (property and inventory) as well as intangible assets (brand image, public perceptions).

3. Traditional risk management is then undertaken for each key process to identify vulnerabilities, triggers for these vulnerabilities, likelihood of occurrence, and mitigation and risk transfer activities. This is the heart of the traditional industrial risk management process for disruption risks.

4. Reporting, periodic auditing, management and legal reviews of implementation plans and on-going results (e.g., of near-miss management and other disruption risks) complete the business process for disruption risk management. The audit process is essential to providing on-going feedback to management and supply chain participants on the performance of their facilities and their compliance with agreed, supply-chain wide standards.

Contingency Planning and the 'Triple-A' Threat

What happens when a company that understands its vulnerabilities as well as its overall risk architecture confronts disaster?

Contingency planning — the act of knowing secondary sources to turn to for supplies, manufacturing, or transportation needs when primary sources are interrupted. Great companies create supply chains that respond to sudden and unexpected changes by building "Triple-A" supply chains that are agile, adaptable and aligned:

- **Agile Supply Chains** - respond quickly to sudden changes in supply or demand. Continuously provide supply chain partners with data on changes in supply and demand so they can respond promptly; collaborate with suppliers and customers to redesign processes, components, and products in ways that give you a head start over rivals; finish products only when you have accurate information on customer preferences; keep a small inventory of inexpensive, non-bulky product component to prevent manufacturing delays.

- **Adaptable Supply Chains** - adjust supply chain design to accommodate market changes. Track economic changes, especially in developing countries; use intermediaries to find reliable vendors in unfamiliar parts of the world; create flexibility by ensuring that different products use the same components and production processes; create different supply chains for different product lines, to optimize capabilities for each.

- **Aligned Supply Chains** - establish incentives for supply chain partners to improve performance of the entire chain. Provide all partners with equal access to forecasts, sales data and plans; clarify partners' roles and responsibilities to avoid conflict; redefine partnership terms to share risks, costs and rewards for improving supply chain performance; align incentives so that players maximize overall chain performance while also maximizing their returns from the partnership.

Redundancy and Other Strategies for Flexibility

The companies should carefully segment their products and product lines in order to understand which ones is more time sensitive and critical than others. If I'm going to spend time thinking about how I can bullet-proof the supply chain or make it more resilient, I'm going to do it around products or processes where time is most critical.

Once these areas have been identified, identify along that path the sources of greatest risk and look for ways to manage that — hedging inventories, looking at redundant carrier options, for instance. You can build in redundancy for those critical items.

When planning for redundancy, companies have to ask, "How much protection can you take? It's like insurance — only some things are worth insuring against. It will depend a lot on what your business margins are and what the costs of failure are. When it comes to redundancy planning, transportation options or redundant carrier options are often high on a company's list. To figure out why, look no further than the shipping backlog in London last winter. But building in transportation redundancy or shipping flexibility is tricky. If your shipment is on one of 50 ships waiting to unload, your choices are a bit limited. Often, companies can only hedge these risks by making sure their shipments are last on and first off.

In anticipation of rail or trucking strikes, companies often split their shipping business in order to build transportation relationships with more than one company. People do this a lot. They offer 80 to 60 per cent to one supplier, and 20 to 40 per cent to the other. But how important are they if they are only doing 20 per cent of their business with a company? Do you really achieve anything?

Identify the 'choke points' along the supply chain that would completely harm a business if disruption occurred; and then taking the right set of preventative measures to allow for some protection, remembering to periodically review your supply chain plans and risk assessment priorities.

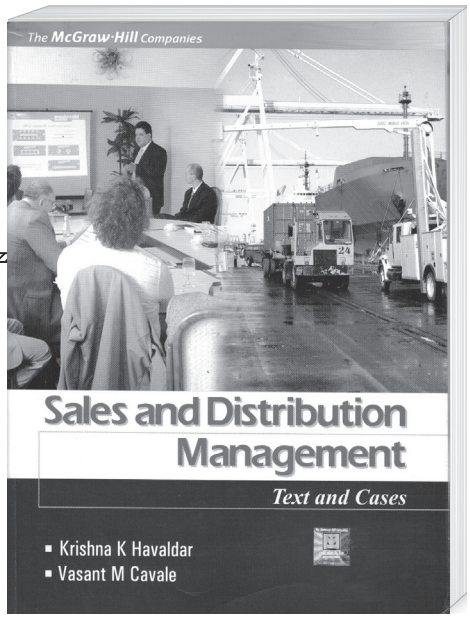
But the real story is that you don't have to run faster than the bear; you just have to outrun the folks you are with. If

you can figure out that there has been a disruption faster than others in your industry, you have a lot more options. If you are the first person to come to a DHL and say, 'We are going to have a problem and need your help' — you get a good response. If you are the fifth guy to come over, now they have a problem because their capacity is full.

The Bottom Line?

You can't protect against every risk. But if you can be quick to identify that there is a problem emerging and you've thought about it a little bit in advance and mobilized your options that are the essence of risk management.

Skimming and Scanning



Book Title	:	***Sales and Distribution Management Text and Cases***
Authors	:	**Krishna K.Havaldar and Vasant M.Cavale**
Edition	:	**2007**
ISBN	:	**0-07-061190-4**
Content	:	**16 Texts and 11 Cases**
Publisher	:	**Tata McGraw-Hills Pblg. Co.Ltd., New Delhi.**

Sales and Distribution Management written by Krishna K. Havaldar and Vasant M. Cavale could be easily rated as one of the better text books of its kind that have been published recently on this topic. Although the principles and theories in the management of both sales and distribution have remained mostly unchanged, the emerging scenario of new markets, products, services, and even new customers have been always challenging the sales personnel and the channel members. An organization is able to excel in its sales or distribution performance by constantly improving the competences of the concerned personnel and this book, expected "to fulfill the need to have an integrated course on sales management and distribution," should help the business students perform better as effective managers in the future.

One of the striking features of the book could very well be that the authors have followed a lucid narrative style coupled with a highly structured format. Each chapter is summed up and followed by a sort of glossary, questions of conceptual, objective, and application nature, and short cases relating to the main topic covered. In the end, some longer versions of cases too have been appended. A student can evaluate his/her comprehension of the subjects covered in the chapter by going through these simple exercises.

Internet, the versatile tool as it has emerged by now, complemented by the speed and facility of the digital technology do not however receive full focus during the discussions on various approaches toward an efficient and effective sales management. In B2B particularly, the influence of Internet as a great enabler or facilitator cannot quite be altogether sidestepped or overlooked. Even an ordinary sales executive has been greatly empowered by the Internet in not only compiling and filing his reports online but also in the matter of preparing himself most adequately to make the next call. A separate chapter provided to gain a highly focused discourse on sales administration through the use of Internet would have proved to be of splendid value.

The text seems to have pretty well covered all the important areas in the management of distribution channels. What perhaps could have been dealt with particular emphasis on was the need and relevance for identifying and overcoming the "gaps" that many times plague the distribution system. The design module could afford to have more of an in-depth discussion on the supply and demand side factors that would have to be considered while designing and improving the efficiency and effectiveness of the distribution channels.

Another area which needed to have been dealt with in some details could have been the growing trend of disintermediation evolving in the channel systems (not withstanding the coverage

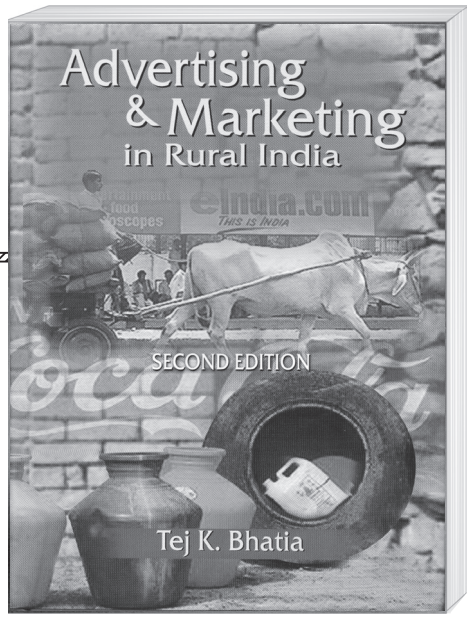
in the text under 10.36, 10.37). Once again, the Internet is mostly responsible for speeding up transactions and reducing distribution costs by enlarging the scope of reaching out more customers whereever they are (death of the distance) and whenever they want (24 x 7). The challenges posed by the e-tailers to the brick and mortar retail outlets by providing more and more products and services to the customers are quite severe and to some extent, create heart burns among the retail industry. The brick and mortar outlets have to axiomatically turn toward multi-channel retailing to overcome these challenges. In the Indian context too, these trends are bound to gain further momentum with the tremendous growth that is being registered in the number of individuals and households gaining access to personal computers and broad band connectivity.

Although it might be considered a new approach to number all pages in a chapter separately, the traditional method of numbering all pages in an ascending order could still be retained especially since the texts runs into nearly 520 pages. A few snapshots of business situations through colour pictures or drawings would also have enhanced the presentation.

In all broad respects, the book does seem to have achieved the prime objective of the authors in generating sufficient interest and value by focusing on the importance of integrating the sales and distribution functions to such an extent that some times it appears difficult to separate the boundaries between these two functional areas in marketing. The book should definitely be considered as a first class text for use in the class room and as an authoritative source for reference by the managers.

Prof.Varma R.T.R.
HOD-Marketing
SCMS-COCHIN
Prathap Nagar, Muttom
Aluva-683 106, Cochin
Email: rtrvarma@gmail.com

Skimming and Scanning



Book Title	:	***Advertising & Marketing in Rural India***
Edited by	:	**Tej K.Bhatia**
Edition	:	**Second**
Price	:	**Rs.465/-**
ISBN	:	**0230-63389-7**
Pages	:	**327**
Publisher	:	**Macmillan India Ltd., New Delhi.**

Tej K.Bhatia is Professor in Linguistics and Cognitive Sciences Programmes at Syracuse University, Syracuse, New York. As a veteran of linguistics he had gone to explore the various facets of rural marketing communication, especially rural advertising in India with a clear purpose and firm commitment. The result is an authoritative book on rural communication in the Indian context – *Advertising and Marketing in Rural India.*

Rural India had grown at a fast pace during the past two decades, thanks to the economic liberalization and globalisation processes initiated by the Indian government. The Indian rural market with its vast size and demand base is growing steadily. It offers enormous opportunities for those who want to expand their customer base.

Rural India has a large consuming class with 41 per cent of India's middle class and 58 per cent of the total disposable income. The rural market accounts for 70 per cent of toilet soap users, and almost 50 per cent of TV sets, fans, pressure cookers, bicycles, washing soaps, detergents, tea, salt and tooth powder. The rural market for FMCG products is growing much faster than the urban counterpart.

While the rural market may be alluring it is not without its problems. Low per capita disposable income, acute dependence on vagaries of monsoon, seasonal consumption linked to harvests and festivals, poor connectivity, power problems, inaccessibility to conventional communication-advertising media, cultural and language barriers etc. are some of the important problems influencing the rural population.

This makes capturing rural consumer more difficult. Yet, the marketers who understand the rural consumer and fine-tune their strategies are sure to reap rich benefits.

It is in this context that Tej K.Bhatia's book *Advertising and Marketing in Rural India* becomes important to us. He has written a number of books on linguistics. But this is his first book on Rural Advertising and Rural Marketing. Soon after its publication in 2000, the book went out of print. Requests for the book poured in. It led to the publication of this revised second edition with necessary updating and improvements.

This book explores the various facets of rural media and integrated marketing communication in India. It is indeed a formidable task to reach the more than 638,000 villages in India with a wide variety of cultures and a vast diversity of languages. Yet, there are many who had ventured into this market with guts and determination and successfully

translated their efforts into rich dividends. Therefore, Bhatia calls our attention to how the Indian advertisers could devise new forms of advertising to radically transform the rural advertising scene of the 1990s in terms of reach and customizing of messages.

In 1997, Bhatia spent about five months in India traveling in the North, West and East zones to collect core data for the book.

Bhatia's exploration brings out very valuable insights into the peculiar behavioural patterns of the Indian rural audience and the unique tried and tested methods used to reach them. According to him, since there had not been any such systematic study done earlier on rural advertising in India, his study has become the first of its kind.

The scientific study made by him has brought to light several bright spots and blind spots as well, in the rural advertising field. In a way it provides a platform for us to develop our own strategies for a more effective means of communicating our messages to the rural population. It also points out to the need for a rethinking on the present way things are being done by many marketers.

Language being an important vehicle to transmit the advertising message, he discusses the various aspects of communication and language in relation to advertising, especially structural, semantic, and psycho/ neurolinguistic factors with a view to uncover the complexity of advertising language. Analyzing several cases he concludes that advertisers can optimize the strength and appeal of their messages by mixing languages and scripts. Mixing is gaining more and more popularity in the advertising field not only because it enhances communication but also because it helps more creativity. In effect, while diversity of languages in our country is an impediment to free flow of communication, viewing it from a different angle, the impediment can also be converted into an advantage by appropriately mixing different languages and even scripts.

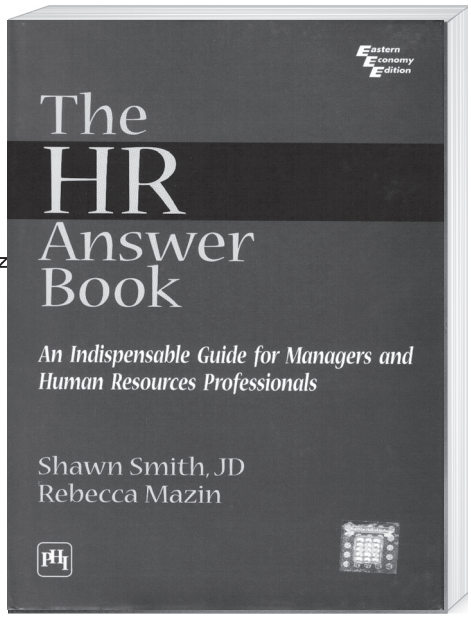
Religion and spirituality have come to represent major forces in rural advertising in India, the author makes another notable observation. Religious appeals had played a powerful role in shaping and reshaping rural advertising in the past. It will continue to be so in future too, according to Bhatia.

The book also discusses other interesting topics like non-conventional media, social and developmental campaigns, imaging women, television serials, films, audio cassettes, music videos etc. The illustrated book comes with plenty of colour plates of samples of advertisement campaigns.

The book is useful to every one concerned with rural marketing and advertising – advertisers, advertising agencies, academicians, students of management etc.

Prof.B.Unnikrishnan
HOD - Mass Communication and
Editor - *'SCMS NEWS'*
SCMS-COCHIN
Prathap Nagar, Muttom
Aluva-683 106, Cochin
Email: prof_unnikrishnan@hotmail.com

Skimming and Scanning



Book Title	:	***The HR Answer Book***
Edited by	:	**Shawn Smith , JD and Rebecca Mazin**
Edition	:	**2007**
Price	:	**Rs.325/-**
ISBN	:	**978-81-203-3125-9**
Pages	:	**244**
Publisher	:	**Prentice Hall of India Pvt. Ltd., New Delhi.**

In this highly volatile, turbulent and competitive business environment, getting and keeping good people is a major challenge for every manager. This book serves as a guide for business owners or executives with HR questions, managers (looking for guidance as HR issues in their day-to-day activities), HR professionals (relatively new to the field hoping to broaden their knowledge on the wide range of work place employment issues), or those (operating without a corporate office) or senior HR manager to look to.

This book touches all the essential HR functions, from core employment practices, such as hiring, compensation and benefits to the emerging hot button issues in HR management such as workplace privacy, internet, e-mail, and technology issues. The language is simple and it is a practical guide to practising managers.

The book comprises ten chapters. Each chapter deals with a particular HR function. Chapter 1 which is employee selection deals with how we find, attract and select the best. It has handles all the hiring process from placing an advertisement to making a job offer. The second chapter which is on HR policies tackles the issues on "why do we need them and what should they look like?" This chapter deals with the relevance of an employee handbook and what all should be its contents. It concludes with a remark on 'how about an electronic handbook.' Chapter three is about performance management and it deals with how to evaluate employee performance and conduct meaningful performance reviews.

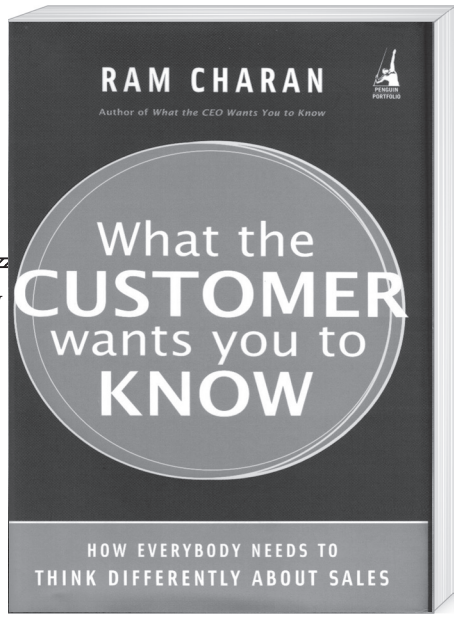
Chapter four which is about training and development deals with how successful companies improve and enhance workforce skills. Employee relations and retention are dealt with in chapter five, and chapter six states how compensation has critically taken up the issues regarding stock options.

Chapter seven, eight, nine and ten have dealt with employee benefits, regulatory issues (when bad things happen to good employers), and termination and discharge respectively.

The HR Answer Book is a recommendable book because it is meant for HR practitioners and this objective is fulfilled. It can be recommended for management students and also for the academicians who handle the various courses on HR Management.

Dr.Susan Chirayath
Principal-SSTM
Prathap Nagar, Muttom,
Aluva-683 106, Cochin
Email: susanchirayath@rediffmail.com

Skimming and Scanning



Book Title	**:**	***What the CUSTOMER wants you to KNOW***
Author	**:**	**Ram Charan**
Edition	**:**	**2008**
Price	**:**	**Rs.295/-**
ISBN	**:**	**067008185-X**
Pages	**:**	**178**
Publisher	**:**	**Penguin Books India Pvt.Ltd., New Delhi.**

The latest book from Ram Charan, famous for his ability to explain complex business issues in simple terms, explains why in this era of internet the conventional price-centric approach will not make sellers succeed. Sellers may have excellent products, customer relationships, great strategies, differentiated technologies, faster times to market high operational efficiencies etc but still fail to get the sale. Sellers have to actually help customers meet their financial expectations, win against their competitors and succeed in the market place or help customers' businesses to succeed in many dimensions. While customers may not articulate their requirement in explicit terms, they want their suppliers to help them accomplish their goals by acting as partners and not as one-time transactors.

In order to achieve such a scenario, the seller or supplier should know how the customers' business works so that you as a supplier/seller can make it work better. And, the conventional sales approach will not enable you to achieve this. One has to adopt a new radical yet practical approach. Such an approach will help a supplier to release itself from the hell of commoditization and low prices. It can help one to differentiate from competition, lead to better prices & margins and, even higher revenue growth. At the heart of this new approach to selling is an intense focus on the prosperity of one's customers. The approach is radical because no longer you measure your own success first. Instead you measure your success by how well your customers are doing with your help. You are not selling a specific product or service; you are focused on how your company can help the customer succeed in all the ways that are important to the customers. In short, you help customers meet their business goals & priorities by adding value to them. Charan says that this ability to create value for customers will differentiate you in the marketplace and you will be able to command a price for it and he calls this new approach Value Creation Selling or VCS.

According to Charan, VCS is radically different from how most companies sell today in five ways:

- Ø The seller and its organization devote large amounts of time and energy much more than it devotes today to learn about the customer's business in great detail. One should probe to find out what are the customer's goals, which financial measures they concentrate on, how they create market value and what key factors differentiate their products or services from competition etc. While one may be tempted to look at these from a short term, Charan advises that greatest opportunities lie in the medium and long term.

- Ø Use your capabilities and tools to understand how your customers do business and how you can help them to improve that business. The sales force alone may not be able to achieve this. You need to muster support from many parts of your company in order to achieve that. People from every department will have to become intimately familiar with your customer. You have to compile large amounts of information, both facts and impressions in order to determine the best approach for helping your customers win. This may necessitate frequent formal and informal interaction between people and departments within your company and between your company and the customer.

- Ø You have to gain knowledge about not only your customer but also your customer's customers. To tailor your solution to your customer's markets, you have to know who their customers are, what they want, what their problems and attitudes are and what decision making process they use. You have to work back from the needs of the end customers to the needs of your customer or you should have knowledge about the customer value chain.

- Ø The execution of this VCS approach needs longer cycle times to lead to generation of orders and revenues. The approach requires patience, consistency and determination on your part to build a high degree of trust with your customers. This is necessary as this new relationship between you and the customer has to be far deeper than in the past for two-way information exchange to take place.

- Ø The top management has to reengineer the reward and recognition systems to make sure that the organization as a whole is fostering the behaviours that will make the new approach effective. It is not just the sales target but also other efforts mentioned under the four points above. Members of the other departments who contribute to the new approach also shall be recognized and rewarded for their efforts.

The sales people have to develop an ability to research and understand the customer's business, like market segments and trends in the customer's industry and more important how the customer's business makes money today and how it will continue to make money in future. They must develop a very clear idea about the customer's business needs. They should also understand that VCS doesn't end once the sale is made. The VCS is most relevant for any B2B company. And everybody in the organization must understand this is no quick-fix solution. Value creation selling is not just reducing the costs for the customers, it is also about increasing revenues for them. Author cites the experience of Tyco Electronics which supplies equipments to Toyota, Japan. Tyco's people are located in Toyota's factories where they can get and give ideas to improve Toyota's cars by improving their own products. Tyco, according to Charan, is selling value and not just products to Toyota.

Charan has identified nine malaises which act as indicators of the breakage of the selling process:

1. Your sales force spends most of their time with the customer's purchasing department. Purchase department is mostly a mere order executor and the decision maker regarding the purchase may be located elsewhere: in marketing , production, product design, engineering etc.

2. Entire discussion about a possible sales revolves around price rather than value addition possibilities.

3. Sales training is mostly focused on improving conventional sales techniques of being persistent and working under pressure. Charan says this will not result in any improved results as you are not trying to solve the real problems of the customer.

4. Incentive schemes are designed to toughen the sales force to get better prices and better margins. These may not result in any value addition for their customers.

5. More intense focus is on customers. While the intensity increases, it doesn't solve the fundamental problems that affect sales.

6. Sales people are not included in the design of the company's offering. Nobody recognizes that sales person is the single person in the company who knows about what customers want or need. This robs the company of its insights into the customers.

7. Little thought is given about and less interaction with the customer's customers. Delivering what the customer's customers want only will make customer's customers happy and hence you should have developed an idea how you can help the customers to achieve their aim.

8. Sales people are internally focused. They are mostly concerned about how to meet the administrative demands on their jobs rather than helping the customers to improve his benefits.

9. Sales management is convinced it is doing a good job. Mostly they will be chasing new orders or satisfying the existing customers with after sales service. Sales people don't get time to develop a business acumen about how the customer makes money.

Charan quotes Lou Eccleston, former President of Global Sales, Marketing & Services at Thomson Financial "Your success is governed by how well you understand what you can do to create value for the customer. If you can't impact the customer's performance in a positive way, then you are going to be a commodity product and you are going to get commodity prices." Charan cites the experience of the company Unifi Inc, a North Carolina based textile company to underscore how VCS can dramatically achieve a turnaround in the fortune of a company. Sales people have to become business thinkers, developing their business acumen to diagnose their own and their customer's businesses.

VCS is a customer-centric strategy. Hence sales people and companies must make enough efforts to put the customer at the centre of whatever the company does.

Information: The key to VCS: According to Charan, information is at the heart of the VCS. Detailed information, both facts and impressions are required. The more you know about your customer, the better you and your company will be at identifying his concerns and take initiatives that address those concerns. When it comes to information, it is not the quantity that is important but the quality. In order to get information, you have to become the customer's trusted partner.

In order to become a trusted partner you must understand the following:

1. The customer's opportunity and the competitive structure in which he operates.
2. The customer's customer and the customers and the customer's competition.
3. How decisions are made in the customer's organization.
4. The customer's company culture, value system etc.
5. The goals and priorities of the customer for short term and as well as long term.

Charan suggests that a company should prepare what he calls a Value Account Plan (VAP), which defines the value proposition and the business benefits the customer can expect to get from it. VAP demands great deal of indulgence. There are three components for VAP:

1. A customer snapshot which gives the details of the customer like its locations, business, key executives, decision makers etc.

2. The value proposition defining the customer need you plan to meet, the customized offering to the particular customer, the prices and the implication of these on your company's revenues, costs, cash, investments and profitability. This has to be differentiated from the conventional approach in that it should come out with a list of benefits to the customer beyond the cost savings to him. You should look at your offering as a solution to customer's problems and do "value pricing" so that customer looks at it from a total benefits point of view and not only cost savings.

3. List out the business benefits of the value proposition. A change has happened from thinking about value in terms of Total Costs of Ownership (TCO) to the Total Value of Ownership (TVO) which is an estimate of all the benefits the customer stands to gain. Benefits have to be listed over a period of time rather than immediate benefits. Not only quantitative measures like margins, cash flows, ROI, revenue growth, market share etc but also qualitative benefits may be listed.

While preparing a VAP, constant interaction with customers may be required. When you are trying to protect their interests and benefits, such constant interaction will be welcomed by the customers.

Charan deals in detail how a Value Creations Sales force can be developed. He cites to pre-requisites for achieving this: buy-in for the change and extensive training. He is clear that for creating a VCS, the present way of working cannot be stopped altogether and the new process started. The new approach has to be tried in parallel while the existing practices continue. Charan suggests that a start has to be made with sales personnel who possess the personal attributes to understand and execute the new approach. Senior people from sales must enthusiastically support the initiative for it to become a success.

Charan quotes the examples of Unifi, Thomson Financial and Infonxx to tell the reader about the qualities one has to look for in the sales people. According to Charan, the following factors assume importance while selecting people suited for VCS:

1. Affability: Must be socially affable to establish excellent relationship with the customer's organization, within his own organization, a great communicator who acts as a link between the two organizations.

2. Conceptualizing problems and solutions: He should be able to sift through large amounts of unrelated data to generate alternative ideas about offerings that work for both the customer and the seller; able to identify specifically what the customer needs and how his own organization can create more value for the customer

3. Leadership: Leadership in the VCS context has more to do with the ability to manage a team of people over whom he may not have any hierarchical authority. He may be required to facilitate a dialogue between the seller and the customer and get others involved to suggest ideas, devise solutions and make decisions faster, better and deeper than the competition while keeping profitable revenue growth in sight.

4. Tenacity: Extracting customer information necessary for the VCS is not an easy task. It takes extensive effort and time. Collecting and analyzing information about the customer is a never-ending process. Sales people must have the patience and tenacity to keep driving the team and the process.

5. Business Acumen: Sales people must understand the customer's business and its processes all expressed in the language of business. Companies may have to create courses internally to teach these skills.

While these skills are essential requisites in the sales people, training the sales force for the behaviours needed for VCS is essential. The top management must make sure that the head and regional heads of sales are inducted into the VCS process and take ownership for the training. Even a certification process can be planned. Linking a sizable portion of the rewards, say up to 40 per cent, of the incentive pay to implementation of VCS can ensure that leaders take it seriously. One must keep in mind that this doesn't happen overnight and require tremendous effort and persistence. The best training has to come from the company's senior leaders. Representatives of the customers' organization shall also be involved in the training process. For handling highly specialized areas, outside experts can be sourced.

Charan also explains the process of making the sales pitch in the VCS scenario. The sales force must be able to present the quantitative and qualitative benefits to the customers. The sales pitch team must have at least one expert in finance to provide the quantified benefits. While power point presentation can be used, one must be able to establish the various points of value proposition. One must be devoted to listening rather than telling. The purpose is to encourage dialogues so as to result in better total benefits to the customers. While customers may not be very articulate about their concerns, one has to be prepared to deal with three critical questions that will be at the back of his mind:

1. Is the value proposition realistic? Credibility rests on making only those promises you are confident of fulfilling.

2. Are the proposed benefits exaggerated or realistic? Your presentation should precisely demonstrate how the benefits are delivered and how their value to the customer calculated.

3. Can the value proposition be executed in the customer's shop? Despite all the information collected about the customer, it is for the customer to implement the value propositions you make. Depending on how candidly the customer discusses his ability or inability will help you to make the changes to accommodate his concerns. The process of dialogue with the customer has to be continued indefinitely in the VCS process.

Charan ends the book with advice on how to sustain the VCS process momentum and taking it to the next level. Management has to make VCS its top priority or it will become just another fad. Top management has to show lot of persistence and energy to drive the change. They have to bring about a change in the work ethic. And since the sales force can't do this alone, linkages between various functions must be established. Charan underscores the importance of linking rewards to the whole VCS process not only for the people in the sales organization but also for the members of the other functions as their contributions are also important in the successful implementation of the VCS.

In order to take VCS to the next level, Charan advises that the sales people shall not be afraid to raise issues with the customers. The sales team must be fully prepared when they go for a discussion or meeting with the customer. Organization should have developed reasonably thorough knowledge of the customer's industry and their customers. And the whole process requires a huge change in the way the company thinks and operates in putting the customer first.

While those who have already read his earlier books, especially *What The CEO Wants You To Know* and *Profitable Growth Is Everybody's Business* may find a few concepts repeated, the book provides engrossing reading.

About The Author

Dr. Ram Charan is a highly sought after advisor to businesses and many chief executives and a prolific writer on business and an award-winning teacher. He has helped boards and top executives of a number of companies like GE, Novartis, Dupont, Honeywell, Bank of America, Home Depot etc on strategy sessions, successions, self-evaluations, and CEO compensation. He is co-host of the Fortune Boardroom Forums and has served on the National Association of Corporate Directors'(NACD) Blue Ribbon Commission on Corporate Governance. He is a director on the boards of Austin Industries, Tyco Electronics, and Emaar Manufacturing in India. He has won a number of Best Teacher awards from many institutions like Northwestern & GE's Crottonville Institute.He was rated as one of the top ten resources for in-house executive development programmes by *Business Week*. Dr.Charan has written a number of best-selling books *like What The CEO Wants You To Know*, *Boards At Work, Profitable Growth Is Everyone's Business* etc and co-authored *Every Business Is A Growth Business* (with Noel Tichy and Charles Burck*), Execution* (with Larry Bossidy) and *Confronting Reality*(also with Larry Bossidy).He is based in Dallas, Texas.

Prof. Satheesh Kumar T.N.
Icfai Business School,
Chakrampilly Towers, Puthiya Road
Palarivattom, Kochi-25
Email: satheeshkumartn@rediffmail.com

CERTIFICATE OF REGISTRATION

Title of Newspaper	:	*SCMS JOURNAL OF INDIAN MANAGEMENT*
Language (in which it is to be published)	:	English
Registration Number of the Newspaper	:	
Periodicity of the publication and the day on which it is published	:	Quarterly 1 January, 1 April, 1 July, and 1 October
Retailing Selling price of the Newspaper	:	Rs.1000/- (One Year Subscription)
Publisher's Name	:	Dr.G.P.C.Nayar
Nationality	:	Indian
Address	:	SCMS House, Alfia Nagar South Kalamassery, Cochin-682 022
Place of publication (with complete Postal address)	:	Prathap Nagar, Muttom Aluva-683 106, Ernakulam District, Kerala
Printer's Name	:	Mr.George P.A.
Nationality	:	Indian
Address	:	Jomini Nivas, Alexander Gardens Kalamassery, Cochin-683109
Name of the Printing Press (with complete address where printing is to be conducted)	:	Maptho Printings, Kalamassery, Cochin-683104
Editor's Name	:	Dr.D.Radhakrishnan Nair
Nationality	:	Indian
Address	:	25/74, Ambady, Kothamangalam-686 691, Ernakulam
Owner's Name	:	SCMS-COCHIN
Place	:	Kalamassery

SCMS JOURNAL OF INDIAN MANAGEMENT

Aims and Scope

The *SCMS Journal of Indian Management* is a peer-reviewed Journal. The Journal deems it its mission to submit to the readers fresh fruit of management thoughts and rich cream of current innovative research. The format of the Journal is designed reader-friendly. The academia and the corporates have an easy access to the Journal.

The Journal looks for articles conceptually sound, at once methodologically rigorous. The Journal loves to deal knowledge in management theory and practice individually and in unison. We wish our effort would bear fruit. We hope the Journal will have a long life in the shelves catering to the needs of b-students and b-faculty.

- § Proposals for articles that demonstrate clear and bold thinking, fresh and useful ideas, accessible and jargon-free expression, and unambiguous authority are invited. The following may be noted while articles are prepared.
- § What is the central message of the article you propose to write? Moreover, what is new, useful, counterintuitive, or important about your idea?
- § What are the real-world implications of the proposed article? Can the central message be applied in businesses today, and if so, how?
- § Who is the audience for your article? Why should a busy manager stop and read it?
- § What kind of research have you conducted to support the argument or logic in your article?
- § What academic, professional, or personal experience will you draw on to make the argument convincing? In other words, what is the source of your authority?
- § The manuscript of reasonable length shall be sent to the Editor—*SCMS Journal of India Management* (Both for postal and electronic submission details are given here under).

The manuscript should accompany the following separately:

- § An abstract (about 100 words), a brief biographical sketch of above 100 words for authors describing designation, affiliation, specialization, number of books and articles published in the referee journals, membership on editorial boards and companies etc.
- § The declaration to the effect that the work is original and it has not been published earlier shall be sent.
- § Tables, charts and graphs should be typed in separate sheets. They should be numbered as Table 1, Graph 1 etc.
- § References used should be listed at the end of the text.
- § Editors reserve the right to modify and improve the manuscripts to meet the Journal's standards of presentation and style.
- § Editors have full right to accept or reject an article for publication. Editorial decisions will be communicated with in a period of four weeks of the receipt of the manuscripts.
- § All footnotes will be appended at the end of the article as a separate page. The typo script should use smaller size fonts.

Address for Submission

Electronic Submission: E-mail: editor@scmsgroup.org/
scmseditorcochin@yahoo.com
The electronic submission must be in the form of an attachment with a covering letter to be sent as e-mail

Post Submission : The Editor
SCMS Journal of Indian Management,
SCMS New Campus, Prathap Nagar, Muttom,
Aluva – 683 106, Kochi, Kerala, India
Ph : +91 484 2623803, 2623804, 2623885, 2623887
Fax : +91 484 2623855

SCMS Journal of Indian Management

Subscription / Advertisement Form

Name :
Address :

City :
Zip Code :
Country :
E-mail :
Phone :
Draft Number :

(in favour of "SCMS Journal of Indian Management, Cochin")

Subscription Rates	1 year	2 years	Per issue
Companies/Academic Institutes :	1000 ($60)	1800 ($100)	250 ($15)
Individual :	400	700	125
Students :	280	450	100

Advertisement Rate

Outside back cover	:	Rs.30,000 in color, Rs.15,000 in black and white
Inside front cover	:	Rs.17,500 in color, Rs.10,000 in black and white
Inside back cover	:	Rs.15,000 in color, Rs.6,000 in black and white
Inner full-page	:	Rs.7500 in color, Rs.4,000 in black and white
Inner half-page	:	Rs.5000 in color, Rs.3,000 in black and white

For all communications contact:

Editor, SCMS Journal of Indian Management, SCMS New Campus, Prathap Nagar, Muttom, Aluva - 683 106, Kochi, Kerala, India.
Phone: 91-484-262 3803 / 262 3804 / 262 3885 / 262 3887 Fax: 91-484-262 3855
Website: www.scmsgroup.org E-mail: editor@scmsgroup.org / scmseditorcochin@yahoo.com

SCHOOL OF COMMUNICATION AND MANAGEMENT STUDIES
SCMS

VOLUME V, NUMBER I
JANUARY - MARCH 2008

SCMS JOURNAL OF INDIAN MANAGEMENT

Listed in Cabell's Directory

ISSN 0973-3167

MODEL

ENIGMA

"THE COUNTRY"

CYBERNETICS

TOURISM

MAPPING

AD-FRAMEWORK

MAN AND MONEY

AGRI-SITO-SYSTEM

SMARTNESS

COMPETITIVENESS

DISRUPTION

SKIMMING AND SCANNING

SCMS Journal of Indian Management

SCMS-COCHIN

SCMS New Campus, Prathap Nagar
Muttom, Aluva-683 106, Kochi, Kerala, India
Ph: 91-484-262 3803 / 262 3804 / 262 3885 / 262 3887 Fax: 91-484-262 3855
E-mail: editor@scmsgroup.org / scmseditorcochin@yahoo.com
Website: www.scmsgroup.org

SCMS Journal of Indian Management
a quarterly publication
of
SCMS-COCHIN

Dates of Release: -

Number I	–	January-March on 1 April
Number II	–	April-June on 1 July
Number III	–	July-September on 1 October
Number IV	–	October-December on 1 January

140 Aircraft.
120 Destinations.
392 Flights daily.

Welcome to The New Air India.

www.airindia.in
Toll Free: 1800 22 77 22

एअर इंडिया
AIR INDIA

SCMS Journal of Indian Management Volume V, Number I, January - March 2008 , Pages 1-125