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The Chairman speaks ...

Perhaps, the most crucial strategic decisions which a company makes are those concerned with its capital investment. The purpose of these investment decisions includes allocation of the company's resources most effectively in order to ensure the best return possible.

These decisions become so vital because of the consequential heavy costs involved and also due to the long term commitment to be made, usually spread over several years. The pace of changes taking place in the socio-economic and political environment and the increasingly unpredictable nature of the business environment make these decisions all the more complex and difficult to arrive at.

Traditional tools commonly used for capital investment analysis had certain limitations and are considered to be totally inadequate today, because of the fast-changing socio-political and economic environment.

Nevertheless, recent developments in real options analysis have provided a better tool and have unlocked the possibilities to revolutionize the process of capital investment decision making. It offers a fresh look at evaluating capital investment strategies by providing a method to properly account for managerial flexibility and strategic adaptability. Therefore real options analysis has been widely accepted as a better tool to guide a company's strategic plans and to create more value for the company. Environmental factors are treated as major ingredients in real options analysis.

In the present context of economic slowdown this tool assumes greater relevance. Therefore, I hope you will find the lead article in this issue, which deals with the merits and demerits of *Real Options* interesting and informative.

Pricing options on stocks give a person using them high leverage while speculating. Volatility is an important factor of option trading and at the same time the least understood by common traders. Hence, we bring to you a study paper on *Pricing Options: The Volatile versus the Actual.*

As usual, you will find many other interesting topics like mutual funds, performance measurement, alleviation of stress, workaholics, service quality, etc, discussed at length in various articles in this issue. I am sure you will enjoy the assortment.

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

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Editorial

Manage the manna we get from the mother earth

"Drip, dribble, trickle, and drizzle." Don't you hear the "splash" sounds? They are the sounds of water.

Water is one of the commonest substances in the universe. Water wraps the planet. But ninety percent of water so available is salty. Much of the rest is locked up in ice. The human ingenuity and passions demand an adequate supply of water. It has been the prize in conflicts around the world.

Even in the century ahead, we cannot boast to procure and conserve adequate water to satisfy the increasing demand. Despite our progress, half of the world's population till suffers with water services inferior to those available to the ancient Greeks and Romans.

Local mismatches between demand and supply could push groups to violence, retard economic progress, and devastate populations.

Pure water marks off heaven from Hell. Future days are not too far off for us to think that the place bestowed with water is the place blessed with sanctity. God of water will be the power centre in the near future. Human life on earth will be hydrocentric. Water god will be the chief among deities.

We drink it. We generate energy from it. We soak our crop with it. We have stretched our supplies to the breaking point. Do we have enough clean water to fulfill our water requirement?

If we invoke the Purana to justify our argument that a war between the demons and gods took place for manna, we can well hope that a similar scene will be re-enacted soon for the sake of pure water as the scanty availability of this life sustaining liquid will make it manna. Myths, legends and written histories reveal repeated controversy over fresh water sources since ancient times. Scrolls from Mesopotamia indicate that the states *Umma* and *Lagesh* in the Middle East clashed over the control of irrigation canal some 4,500 years ago.

As the world's population continues to grow, dams, aqueducts and other kinds of infrastructure will have to be built in countries where basic needs have not been met. The fastest and cheapest solution is to expand the productive and efficient use of water. In many countries, more than thirty percent water never reaches the intended destinations owing to the leaky pipes, faulty equipment, and properly maintained distributive system.

Business shall turn its focus on Man's Basic Needs including tapping and generating Water. Management shall take up the tasks to preserve Water to sustain the life of all the living.

Dr.D.Radhakrishnan Nair

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Investment Decision Tool: "Real Options"

Pankaj M.Madhani

Current era is characterized by increased uncertainty because of changed market conditions, globalization, increased competition, and emerging technologies. The typical approaches to project investment evaluation are based on DCF based measures like NPV and IRR. However, the era demonstrates weaknesses in dealing with uncertainty, complexity, and flexibility. The paper discusses application of real options in emerging technologies like RFID.

In the current era of new economy, managers the world over are facing increasing uncertainty while taking complex strategic decisions of investments in emerging technologies. Such decisions are having an enduring impact on firms long term profitability and sustained growth. Usually, this type of uncertainty erodes real value when such investment decisions are evaluated using conventional capital budgeting techniques such as Discounted Cash Flow (DCF) based Net Present Value (NPV) or Internal Rate of Return (IRR). They are too limited a basis on which to make emerging technology investment decisions as they undervalue returns and focus management attention on short term cash flow when, perhaps, the biggest benefits lie in building a strategic asset for long term growth and competitive advantages.

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Traditional Capital Budgeting Tools

Capital budgeting tools help firms in the decision making process of allocating resources to investment projects, normally on a long-term basis. Managers are required to make capital investments decisions on a regular basis. These decisions are especially challenging when they involve the commitment of large quantities of assets to a particular course of action that is not easy to reverse ex post - getting them wrong can be very expensive. Traditional project evaluation approaches on expected values and ability to make future decisions. The typical approaches to project evaluation are based on DCF based measures like NPV and IRR.

NPV is defined as the difference between the present value of the estimated net cash inflows and the present value of the estimated net cash outflows. It is used when the discount rate (the cost of capital, required rate of return, hurdle rate) is known or specified. The classical rule for making capital budgeting decision is to take projects that maximize shareholder value. Firms have as primary objective the maximization of its shareholder's wealth, and consequently, of the return from their investments. NPV is consistent with this objective. In an ideal market where there are no capital constraints or constraints for any other input, shareholder value is maximized by choosing projects with positive NPV. Other valuation measures used in industry, such as the ARR and the IRR, are considered to be inferior.

A firm optimizes its market value when it successfully implements strategies that generate positive discounted cash flows applied against initial investments with NPV greater than zero. In the absence of risks, the risk free opportunity cost of capital is used to discount back the cash flows associated with the strategy. If risks are involved, and the level of uncertainty is presumably known for the cash flows generated by the strategy, the corporate weighted average cost of capital is used to calculate the worth of the strategy. For innovative strategies, with higher level of uncertainty, the discount rate is raised to compensate for risky ventures. Many built-in assumptions behind the discount rate used are implicitly created to account for the real facts of how little we know about how the projects will unfold.

Limitations of Traditional Capital Budgeting Tools

Over the years, several techniques have been used in capital budgeting and investment decision. Its simplicity and consistency made NPV tool the most widely used capital budgeting decision tool for practitioners. Nonetheless, it demonstrates weaknesses in dealing with uncertainty, complexity, and above all, flexibility. In an NPV approach, different management forecasts of project values are weighted in order to get a single forecast of the average project value, thereby neglecting the extra information in the entire data set. NPV approach fails to fully incorporate the myriad options that are usually associated with many projects. Because the project is a set of different options, a model is needed to account for uncertainty and to permit flexibility.

While conceptually and relatively simple, NPV rule has the following shortcomings which limit its scope for valid application:

1. It does not explicitly deal with uncertainty when valuing the project.
2. It does not consider the extent of management's flexibility to respond to uncertainty over the life of the project.
3. It ignores the value of creating options. Sometimes an investment that appears uneconomical when viewed in isolation may, in fact, create options that enable the company to undertake multiple investments in the future, should market conditions turn favourable. By not accounting properly for the options that investments in emerging technology may yield, naive NPV analyses lead companies to invest too little.

When these shortcomings exist in a project, the NPV consistently underestimates the value of a project as it ignores the value of the implicit options that managements have in the project. Despite the wide use of the traditional capital budgeting techniques such as NPV and IRR among organizations, criticism has been raised against the static use of them. The techniques only use tangible factors and do not take into account intangible factors such as future competitive advantage, future opportunities, and managerial flexibility.

Dealing with Uncertainty

Traditional NPV calculations do not factor the project's risk except for an increase in the discount rate used in the calculation. They also leave no scope for changing the course of action when new information becomes available. Decision under conditions of uncertainty should be made on the basis of the current state of information available to decision makers. Current project valuation by NPV method has proved itself to be incomplete as it fails to properly account for uncertainty. If the expectation of the NPV were negative for the investment, the conventional approach would be to reject the investment. However, if one has the ability to delay this investment decision and wait for additional information, the option to invest later has value. This implies that the investment should not be undertaken at the present time. It leaves open the possibility of investing in future periods. The weakness of NPV approach is its failure to account as to how uncertainty, rather than implying a higher risk-adjusted discount rate, can increase the value of a project investment. Therefore, by assuming management's passive commitment to a certain operating strategy, DCF based method such as NPV usually underestimates the upside value of investment.

NPV based approaches provide an easy and instructive way to analyze the decision whether to commit resources to a new investment in a stable environment. Nevertheless, they are likely to fail in cases when markets move unpredictably and managers have the possibility to adapt their decisions in real-time. To implement NPV, we need estimates of expected future cash flows and an appropriate discount rate but an NPV calculation uses only information that is known at the time of the appraisal. The NPV rule requires the decision maker to generate point estimates of all the project's cash flows over its entire economic life. A discount rate is then used to identify the present value of these uncertain cash flows. There are several problems with this approach to dealing with risk.

1. The use of a single risk adjustment to the discount rate has the effect of masking the multiple sources of uncertainty as it defines risk in terms of a single measure. This approach does not facilitate a consideration of the multiple sources of uncertainty that project cash flows face over the life of the project.

2. By defining risk in terms of the variance, the skewness of future cash flows is ignored. Again these can be vitally important especially if they affect the extent of the project's downside risk.

3. The use of the variance as a risk proxy also makes it vital that unbiased cash flow forecasts are used when calculating the NPV.

Dealing with Flexibility

In the context of managerial flexibility, determining the priority of potential investments is vital in strategic planning. NPV rule assumes a fixed scenario without any contingencies. Static NPV fails to factor in the full range of opportunities that a new and innovative strategy may create for a firm in the future. NPV approach assumes that all future cash flow is static, neglecting the real-world options to stop investing in the project or change course because of market circumstances. NPV has then no regard of flexibility through the life of the project. Managers of the investment may take strategic decisions along the investment process according to the way conditions (market or others) evolve. Traditional NPV tool fails as it neglects the value of flexibility: how managers would respond to unfolding events in uncertain markets. This approach assumes project risks remain constant over the life of the strategy. It also, fails to factor in the full range of opportunities that a new and innovative strategy may create for a firm in the future. These rules can mean very wrong decisions, for investments in projects in which waiting is better, or not investing in good emerging technologies with high growth options.

Managers have the flexibility to sell the asset, invest further, wait and see or abandon the project entirely. NPV based approaches assume implicitly that a project will be undertaken now and operated on continuously at a set time scale, until the end of its expected useful life, even though the future is uncertain. Therefore the NPV ignores the upside potential of added value that could be brought to the project through the flexibility and innovations of management to alter the course of investment. The NPV rule also has the effect of ignoring the presence of any flexibility that management has to respond to a changing environment. This can fundamentally change the realized (as compared to the expected) value of a project. The NPV rule would provide an accurate estimate of a project's value only if there is either no flexibility or if there is no uncertainty. However, the combination of uncertainty and managerial flexibility leads to the presence of real options in capital investment decisions. Where this combination exists, the NPV approach is flawed as a decision rule. It gives estimates of project value that are biased downwards because it ignores the value of the real options incorporated in the project.

Dealing with Options

Traditional investment appraisal techniques such as NPV can be conceived as being concerned with a one-shot valuation of an investment in an asset. The initial investment is followed by a series of (often) uncertain cash flows over time. NPV approach neglects the insight which arises from recognizing the phased nature of many investment decisions, which may begin with exploratory phases before final asset investment decisions are made. Many investment projects have in effect an options phase prior to the asset phase. During the options phase, investments are not being made in an asset to generate a stream of cash flows but to establish the opportunity (but not the obligation) to invest subsequently invest in such an asset. In the case of investment in emerging technologies, a pilot study is a meaningful option - i.e. an exploratory phase, which is the necessary precursor in order to allow future investment in the final asset phase – which in this case is the future commercialization project, if the pilot is successful.

With a standard NPV analysis, it is not practical to capture the full value of an investment strategy that involves real options. The NPV method implicitly assumes pre-commitment to future plans and defines an investment decision as a now (go) or never (no go) proposition; it does not properly take into account the value of a wait-and-see strategy to make decisions as the value of the project evolves and uncertainty is revealed. Standard NPV approach missed incorporation of option value completely. NPV techniques are inappropriate to value projects in options phases, such as new and emerging technology investment, because first they do not take into account the value of the option phase, and second they neglect the fact that commitments to future investments are contingent on how the future unfolds. In the case of emerging technology, they will be contingent on technical success as well as market circumstances. The ability to abandon a project - i.e. not to exercise the option for further investment - means that downside risk can be reduced to the initial investment when things go wrong. If circumstances are favourable, however, the full upside benefit can be captured. This asymmetry generates the real options value.

Current Scenario: Transition from Traditional to New Economy

Current era of new economy or information economy is characterized by increased uncertainty because of changed market demand, globalization, increased competition, and advent of new and emerging technologies. Another type of environmental uncertainty in knowledge economy is technological uncertainty. When a firm intends to invest into a new technology, it will be uncertain whether the technology will be successful or not. Technological uncertainty affects the success of an investment in a new technology. Therefore, it can have an impact on the level of future revenues. Firms are using new IT based tools and technologies for creating competitive advantages. The option to invest in new and emerging technologies can be interpreted as an option to expand into a new business area while it is uncertain whether the technology will be successful or not.

Following is a partial list of emerging technologies in new economy:

1. RFID deployment in supply chain
2. Bioinformatics for drug discovery and research
3. Biomaterials Integrated biochips
4. Embedded sensors and computational devices in commercial goods
5. Hydrogen fuel cells
6. Microelectronics
7. Nano biotechnology
8. Quantum-based cryptographic systems for secure information transfer
9. Telecommunications and Wireless technologies
10. Third generation (3G) wireless broadband internet & mobile technologies.

Today, the world is characterized by major changes in market and economic conditions, coupled with rapid advances and emergence of new technologies. Management is often confronted with the dilemma whether or not to invest in emerging technologies given market and technology uncertainties surrounding such a decision in current situation. The changing economic conditions and technologies combined with increased domestic and global competition, changing customer needs, rapid product obsolescence and the emergence of new markets require fast investment decisions and resource allocation process for new and emerging technologies. At the same time, market and technology uncertainty demand flexibility in the decision; therefore it requires trade-off between speed of new technology adoption for gaining competitive advantage or waiting for emerging technology to stabilize but loosing the growth opportunity.

The key parameter of uncertainty is very crucial during the emerging technology adoption stages and after the implementation stages. When uncertainty is high, there is high probability that a high (low) project value turns out to be low (high). Since management has the flexibility to opt out the new technology process at all stages, downward risk is limited while upward potential is not. Therefore, a higher uncertainty is beneficial during the initial stages of the emerging technology process. However, with high uncertainty at the final stages, the options approach induces firms to postpone full scale deployment and there is high risk of failure.

Following are some of the characteristics project investments in emerging technologies of new economy:

1. Large investment
2. Some sunk costs that can't be recovered if the project is abandoned (irreversibility)
3. High degree of uncertainty (multiple and interdependent sources of uncertainty) in the return to such investments (risk) and highly profitable if successful (reward)
4. Significant time lag between investment and realization of return
5. Some leeway in the timing of the investment
6. Abundant flexibility to react as uncertainties unfold.

Adapting to emerging technologies is crucial for success in vibrant new economy. In a dynamic high-tech business environment, adaptability is essential in capitalizing on favourable future strategic investment opportunities or responding appropriately to competitive moves. In fact in the new economy it is precisely the intangible and strategic value of its growth opportunities that determines most of the market value of firms in a continuously changing environment. Firms operating in a changing and turbulent marketplace of new economy must be flexible and agile and by making the right business moves today, they open up windows of opportunity for learning and future profitability. In many business today the risks and uncertainties have increased manifold. Firms have to take crucial decisions which can make or break them. They learn from mistakes, learn faster than competitors, and make quick adjustments to seize opportunities by exercising the options presented to them.

In today's business scenario, traditional measures of capital budgeting are no longer adequate to reflect the dynamic world of new economy. The corporate business world has changed notably over the past decade; unfortunately many management strategies and approaches have not changed with this transformation. Traditional financial measures, such as NPV and IRR are still commonly used to evaluate investment opportunities in new and emerging technologies project. But they fail to value correctly projects that contain embedded options.

Real Options: An Introduction

The term 'real option' was coined in 1977 by Stewart C. Myers of Massachusetts Institute of Technology. Real options approach is a method of evaluating and managing strategic investments decisions in an uncertain business environment. It seeks to quantify numerically each of the investment options available in a particular situation. A real option is an option relating to real things, as opposed to illusory things. An option is the power of choice, or the freedom of alternatives. It refers to the application of option pricing theory to investment of non-financial or real or brick and mortar assets. Real option can also be defined as a right to take an action in the future, without an obligation to do so.

Real options analysis is a very exciting development in the practice of capital budgeting. It promises much in terms of providing improved estimates of capital project's expected value. This does come at a price the extra analysis required and the additional complexity of the valuation model. However, it does bring other more subtle yet fundamental benefits to the capital investment decision making process. This approach has the potential to include the value of the project from active management and strategic interactions. NPV assumes passive management; the end result is known in advance, and managers aren't expected to add significant value to a project. Real option valuation, by contrast, recognizes that firms can and do obtain valuable information after a project is launched, and that their informed actions can make a huge difference. Thus, Real option seeks to uncover and quantify a project's embedded options, or critical decision points. The greater the uncertainty and flexibility, the greater the value of management's options.

Although conceived 30 years ago, real-options analysis is put into wider use only recently. Its earliest applications were in oil, gas, energy, copper and gold mining sectors. What's hot now is the extension of real options beyond commodities—into different fields of new economy such as biochips, biotechnology, pharmaceuticals, RFID and other emerging technologies. Chip manufacturer Intel Inc., computer and periphery manufacturer Hewlett-Packard and biotechnology giant, *Genentech* are using it to analyze a number of new and emerging technology capital investment projects. Such financial tools can offer companies significant competitive advantages over their rivals.

The real option approach emphasizes three characteristics of firm's investment decision:

1. Investments are irreversible in the sense that when taking the decision to invest a firm incurs a certain irrecoverable sunk cost.

2. The investment decision is assumed to be taken in the conditions of uncertainty, and thus the payoffs from investment are not sure.

3. An investment decision is not a take-it or abandon-it type, in the sense that the decision about the timing of an investment constitutes a vital part of the overall decision making process.

The new economy is well characterized by these three characteristics. Unlike the traditional economy, the new economy is largely based on knowledge, and adaptation to a changing environment. The market value of a firm is not completely captured by the expected cash flow generated by the tangible assets that are currently in place and measured by NPV approach. In the current scenario, investment appraisal methods should capture the components of flexibility and strategic value, as they may contribute significantly to the firm's market value in the uncertain competitive environment of the new economy.

Real options provide a useful framework for strategic decision making. It is precisely the way in which real options deal with uncertainty and flexibility that generates their value. Real options analysis has its foundations in NPV, but it provides an improvement in the way of handling of uncertainty, complexity and flexibility. Therefore this approach is more consistent and powerful. Real options valuation offers a method of incorporating managerial flexibility options into the investment decision, calibrating the contributions that these options provide to the investment's strategic value. Real option is not a simple calculation, to be sure, but it gives better answers than the methods that most companies use today to make major investment decisions.

There are several other benefits for decision makers if they decide to use real options analysis.

1. It forces a change in the emphasis of decision makers (and the valuation process) from 'predicting the future outcome perfectly' (the NPV rule) to identifying what can (or rather should) be done about responding to business uncertainty.

2. It gives decision makers the ability to identify the optimal levels of flexibility.

3. By focusing management's attention on responding optimally to uncertainty as it evolves, it promotes a sense of discipline in the

management of assets that extends over the entire life of the project –not simply when the decision is originally made.

Analogy between Real and Financial Option

Real option is a right but not an obligation to acquire the present value of expected cash flows by making an irreversible investment outlay on or before the date the opportunity will cease to exist. Real options only have value when investment involves an irreversible cost in an uncertain business environment. And the favourable asymmetry between the right and the obligation to invest under these conditions is what generates the option's value. Real option is compared with financial option in following way:

Real Option		Financial Option	
1.	Option to invest	1.	Call Option
2.	Present value of project	2.	Stock price
3.	Present value of investment	3.	Exercise price
4.	Length of deferral time	4.	Time to maturity
5.	Time value of money	5.	Risk-free rate
6.	Volatility of project's returns	6.	Variance of stock returns
7.	Project cash flow	7.	Dividends
8.	Longer maturity (in years)	8.	Short maturity (in months)
9.	Personal assumptions and actions drive the value have no bearing on valuation	9.	Personal assumptions and actions
10.	Outside factors drive the value	10.	Competitive or market effects are irrelevant to its value and pricing
11.	Not traded and propriety in nature with no market comparable	11	Marketable and traded security with comparable and pricing information

Benefits of Real Options in New Economy

In the current era of knowledge-driven economy, there is increasing emphasis on new and emerging technologies to enhance competitive advantages of firms. Strategic investment and budget decisions within any organization are now increasingly focused on decisions to acquire, exercise, abandon or let expire real options related to investment in knowledge assets. Real-options analysis simply says that companies benefit by keeping their options open. Unlike NPV, which fails to incorporate the full objective of management, real options management can properly analyze and quantify the value worth of options of an investment proposal an uncertain and dynamic world of new economy. Management's outlook now shifts from avoiding risks to leveraging on risks derived form uncertainty. By managing and controlling downside risks, management distinguishes itself from the traditional thinking of risk-reduction and diversification strategies. NPV does not correctly value project options, Real options aims to correct NPV deficiencies.

An early investment in emerging technology is a prerequisite for opening up future growth opportunities where strategic actions are important for long term survival and growth in new economy. In contrast with the traditional NPV method, this approach recognizes the ability of managers to delay, suspend or abandon a project once it has started. This approach helps to structure the project as a sequence of managerial decisions over time, clarifies the role of uncertainty in project evaluation. Instead of viewing an asset or project as a single set of expected cash flows, the asset is viewed as a series of compound options that, if exercised, generate another option and a cash flow. To maximize a firm's value its managers must match internal capabilities to external opportunities. Flexibility in timing of decisions about the firm's capabilities and opportunities give managers 'real options.'

At any point in the developmental process, the company reserves the right to abandon the project because of changing market or technology conditions, competitive movements or internal budgetary limitations. Thus, the risk profile of a project can be altered considerably by controlling downside risk (e.g., abandoning the project in response to adverse market conditions) and increasing upside potential (e.g., continuing development under favorable market conditions). In this way, emerging technology investments provide options that firms can subsequently choose to exercise. Often, exercising an option involves investing in further development; scale up facilities, and so on. Thus, the investment needed to exercise an option may be much larger than the investment needed to create an option. However, the decision to make this larger investment is contingent on improved knowledge of a variety of market and technology factors. Traditional investment analysis is not well suited for addressing investments that have an initial investment option and a later investment option that is contingent on factors that will not be known until the contingent decision is to be made. Real options approach provides a means for representing this type of decision-making problem. The real options approach can be viewed as a method of optimization under uncertainty of a real asset i.e. investment in emerging technology projects, given the available options. The real options approach is dynamic in the sense that it includes the effect of uncertainty along the time, and what / when / how the relevant real options shall be exercised.

Real Options in New Economy: RFID Deployment in Supply Chain

Wal-Mart, the world's largest retailer had directed that its 300 top suppliers use RFID tagging on pallets and cases. Wal-Mart's RFID directive was well-suited to a real options analysis. In RFID adoption, there was a great deal of technology uncertainty (i.e. higher cost of RFID tags and reader, RFID technology standards, supplier RFID compliance), a steep learning curve with probable course-corrections along the way, and the value of the investment based on future growth opportunities rather than current cash flow. Skeptical of the NPV outcome, the retailers have turned to real options. Real options analyze the financial and business logic behind investing in RFID technology. Suppliers and retailers discovered hidden sources of value in the RFID project, which they would not have found using the traditional NPV technique. The benefits included the option to expand more aggressively to realize benefits from superior customer experience and from reductions in unsaleable goods, product shrinks, inventory write offs, shipment errors, out-of-stocks, labour and inventory holding costs.

Measuring the value of investment in emerging technology such as RFID becomes very difficult due to its wide scope of application coupled with embedded options in its adoption. Projected cash flows seem meager in comparison to the initial investment required, or the discount rate chosen to compensate, for the risk is so high that it renders the calculated NPV unpalatable. RFID being a disruptive technology i.e. it cannot match the performance that users expect from product and services in the short term, real options analysis should be a better way to evaluate its adoption in the supply chain.

The cash-flow calculations significantly undervalue RFID adoption since it fails to account for all the effects of better customer centric strategies, learning benefits, innovation skills, reduced risk and improvements in shareholder value. To realize customer and business related benefits of RFID more broadly, real options approach evaluates these managerial intangibles and builds a stronger business case for RFID investments and focuses managerial attention on the areas of RFID that would perhaps offer the firm greater value than cash flow alone. Real options may be a better means of valuing such strategic investments decisions. Investment in RFID is of strategic nature since it is clearly linked to business strategy in the following way:

1. By process innovation and better positioning of the firm,
2. By importance of its adoption in Business Process Reengineering (BPR),

3. By enhancing IT capabilities and acting as IT enabler.

In the short run RFID can be deployed for focused differentiation i.e. providing something unique that is valuable to the customers beyond simply offering a lower price. For example, this can be done by deploying RFID technology exclusively in a warehouse or distribution center and only for some class of items in compliance to retailer's (e.g. Wal-Mart) mandate. The key is creating value initially for few customers and subsequently be utilized for full differentiation to cost leadership through staged investment approach i.e. from pallet level to item level tagging. This "staged investment approach" makes RFID a good case of real options analysis. After availability of more field data about the results and further developments in technology and cost, it can be extended to other facilities as well.

Traditional capital budgeting tools neglect the value of flexibility achieved through RFID deployment. Emerging technologies require a new logic for investment in IT enabled applications and other similar strategic assets. A typical RFID investment project requires significant initial capital outlay and is generally irreversible or partially irreversible. RFID investments usually have huge business and technological uncertainties. All these characteristics make real option an appropriate approach in evaluating RFID investment projects. Managers must recognize that the uncertainty associated with current strategic business opportunities in RFID is manageable because flexibility can be used to both avoid losses and to tap opportunities that unexpectedly emerge. Uncertainty is the driver of upside potential and the real options approach captures this value-creating aspect of RFID investments.

Wal-Mart commissioned a pilot study to examine the influence of RFID on out of stocks (i.e. improvement in the in-stock position of products on the shelf) from February 14 to September 12, 2005, out of stocks were examined daily in 24 Wal-Mart stores (12 RFID-enabled stores, 12 control stores) representing all store formats. All Wal-Mart formats — Super centers, Discount Stores and Neighbourhood Markets — were included in the study. During the 29-week study, the researchers conducted daily inventories of 4,554 different SKUs, representing products from all store departments, looking for out-of-stocks. As the net option value of pursuing an investment in RFID technology was positive, Wal-Mart expanded RFID adoption. The total number of its retail locations using the RFID technology already crossed 1,000 (total 3900 in US). Beginning January 2007, more than 600 of largest suppliers have started using RFID technology in concert with Wal-Mart.

RFID Deployment in Supply Chain: Types of Real Options

Following are various options available for RFID deployment in supply chain.

Waiting-To-Invest Options

The value of waiting to adopt RFID, till better market information becomes available, may exceed the value of its immediate adoption. The option to postpone can be applied when current investment decisions would impede or hurt future ones. An early adoption of the wrong RFID technology or substituting it could increase future costs of adopting a more appropriate one. Similarly, in applications where technology standards are important, there is a clear value in the option of waiting "to see" which technology becomes the industry standard.

Growth Options

This involves investing in an emerging technology to develop a platform for future growth opportunities. An early investment may create opportunities to pursue valuable follow up on projects. The most obvious options in RFID implementation projects are the future possibilities of using infrastructure to further applications. This is particularly evident in a ubiquitous technology like the RFID, in which existing tags and readers can be used for multiple purposes e.g. from pallet level to item level tracking.

Flexibility Options

The value of a project, viewed as an option, lies in the ability to exploit beneficial scenarios (call) and to reduce losses in case of adverse scenarios (put). Real call option involves flexibility to expand projects if uncertainties are beneficial (high demand, successful pilot study etc.) while real put option involves flexibility to shrink projects if uncertainties are adverse (high input costs, low demand, etc.). An option to reallocate resources or switch has a value. By adopting RFID at two locations instead of one to serve need-based requirements by switching the resources (e.g. reader) as conditions dictate. RFID reader, which is used at the checkout process, can be utilized for cycle counting operation (for inventory accuracy) when there is no rush in the retail store.

Exit (or Abandonment) Options

Option to abandon a project is a viable option when project can be pursued in phases with initial emphasis on pilot study. If conditions turn out for the worse, the firm may abandon the project before the end of its economic life, thus avoiding loss.

Following are main features of option to abandon

- Initial efforts can be small, hence limited downside
- Information from each phase drives subsequent decisions
- Continue only if promising and advantageous

The option to walk away from a project in response to new information increases the value of the project. Similar to the flexibility options, the options to disinvest are related with technology failures. The possibility of selling the RFID infrastructure and partially recovering investment in case of adoption failure has to be considered and valued in early adoption decisions.

Example of Real Options in New Economy

What impact can real options have on evaluating emerging technologies projects? Suppose corporate planning team thinks that they can install an emerging technology such as RFID that could radically change the way the firm competes.

Problem Statement

Invest $10 million initially for RFID pilot study implementation; $50 million to develop business if we go ahead. With 40 percent chance of success with future decreasing cost of RFID tags and smooth implementation; 60 percent chance of dismal failure with high cost of RFID tags and implementation hurdles. If favourable, gross profit is $140 million, if not, loss is $60 million.

Under NPV, expected profit is negative $ 40 million as NPV ignores conditional nature of follow-up on investments

$$\$-40 \text{ million} = -10 - 50 + 0.4(140) + 0.6(-60)$$

As a real option, the value is

$$\$26 \text{ million} = -10 + 0.4(140-50)$$

Once the value of the option is accounted in the expected returns from the initial project investment, it may have been well justified, even though a traditional NPV would not have found it attractive. This flexibility has several strategic forms as described below:

1. Using real options values the ability to invest now and make follow-up investments later if the original project is a success (a growth option). These kinds of options characterize investment in new and emerging technologies.

2. Real options can also value the ability to abandon the project if it is unsuccessful (an exit option).

3. Real options can value the ability to wait and learn, resolving uncertainty, before investing (a timing option). And the option holder does not lose from increased uncertainty if things turn out wrong but gains if they turn out right. More uncertainty increases the likelihood of larger positive payoffs, and therefore the value of an option, as larger down-sides can be avoided.

The rigour of thinking about strategic decisions as real options can help in making better decisions. Real options focus on "dynamic complexity": the evolution of a few complex factors over time that determines the value of investment and cash flows. These are factors about which decisions can be taken at any time over a period. Valuing investment opportunities under uncertainty using NPV does not take into account flexibility of managerial options and treats capital assets as passively held. Wherever appropriate, real options will help in making better decisions. NPV analysis ignores the adjustments that an organization can make after a project is accepted. These adjustments are called real options. In this respect, NPV can underestimate the true value of a project.

Real option approach is most significant in following situations:

Uncertainty

There must be high uncertainty; e.g. new and emerging technologies. In fact, the option value increases with increasing uncertainty. This is in contrast to most traditional thinking; instead of fearing the uncertainty (risk), option thinking is actively taking advantage of uncertainty.

New Information

It must be very likely that new information is received (decreasing uncertainty) over time.

Managerial Flexibility

If there is high uncertainty and new information decreases this uncertainty, there is no option value unless management is able to respond appropriately to this new information.

Real option is a useful tool for stimulating thinking about a range of possible options and helping to make decisions on what to and where to invest in. Real option helps to keep investment options open, and enable riskier approaches to be explored, without making long-term commitments to them. It also enables analysis of the range of options available both now and in the future, while identifying in advance investment cut-off points. Those firms that develop methodologies for evaluating and pursuing emerging technology investment opportunities, while controlling risk and uncertainty, will inexorably outperform more timid competitors who do not. The classical application of real option is to show that a given investment with a negative NPV may in fact have substantial value, thanks to its embedded option. Increasingly, that's the way managers are thinking in industries characterized by large capital investments and quite a bit of uncertainty particularly emerging technologies such as RFID, biotechnology, nanotechnology etc.

Real option offers potential advantages over traditional DCF approaches such as NPV, which leads to under-investment in high-risk areas. It places a positive value on risk by exploiting the opportunity to phase investments and stage key decisions so as to allow termination of initial exploratory projects which turn out to be unsuccessful, and investing more in those projects showing positive future prospects. By contrast, NPV views risk negatively and, by ignoring the option approach, impose higher discount rates to 'adjust' for higher risk, thus reducing the value of future expected income streams.

Real-options analysis persuades companies to create lots of possibilities for themselves. As events unfold, many options won't be worth pursuing but a few could be blockbusters. Uncertainty has the potential to be friend, not foe. Traditional capital budgeting tools would have had firms not to adopt emerging new technologies because it wasn't earning its cost of capital. But real-options analysis says that a period of losses can be a worthwhile price to pay for keeping alive an enterprise that might earn well in the future. Competing in the new economy with inflexible investment tools is ineffective. Firms in the fast-growing, ever-changing industries of the new economy require dynamic approach such as real options in investment decisions.

Limitations of Real Options

Real option analysis is a significantly more complex approach to valuation and decision making than the NPV approach and does require a greater investment in time, effort and judgment by the decision makers. Real option is an interdisciplinary subject combining finance, strategy and IT. It's computational intensive and like a black box causes lack of proper understanding by users. The sophisticated mathematics such as partial differential equations of real options, and the consequent lack of transparency and simplicity, are real concerns. But thanks to more-powerful PCs and spreadsheets, one can model multiple options comfortably. Also it's too complex to be worthwhile for minor decisions. And it's not useful for projects that require a full commitment right away, since the value of an option lies in the ability to spend a little now and decide later whether to forge ahead or not. The information requirement for making capital investment decision using real options is voluminous. Real options often overestimate the value of certain projects.

Conclusion

The new economy, which is marked by rapid changes and lots of uncertainty, demands speed and agility from firms. Better valuation approach for capital budgeting decision should incorporate both the uncertainty inherent in business and the dynamic strategic decision making required for an investment plan to succeed. Real options analysis is a powerful financial tool that meshes nicely with the complexities of emerging technology projects that inherently carry significant uncertainty, but also represent great potential value for the firm. Real options analysis rewards flexibility—and that's what makes it better than today's standard decision-making tool, NPV. Though NPV is not useful in presence of high uncertainty, it will always be useful for basic analysis. Real option is a new economy tool and gives a better structured decision making process for complex and interdependent investment decisions of new economy. However, real options analysis is not a technique that replaces NPV technique - rather it expands on and improves the insights of strategic valuation.

Keywords: Capital Budgeting; Emerging Technology; New Economy; NPV; Real Options

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Pricing Options: The Volatile versus the Actual

Charles V. and Parasuraman N.R.

The Black-Scholes model is widely used as the first guess determinant of option prices. One of the key inputs in the model is volatility. Opinions differ in the methodology of computing volatility. Hence, both historical volatility and empirical volatility are widely in use. This paper seeks to make an exploratory study on data relating to call prices for three months and tests the applicability of historical volatility in this price. The test reveals that there is significant difference between the theoretical and actual prices. The test also finds significant correlation between the prices as per historical volatility and actual prices.

The Black-Scholes model of Option Pricing is universally considered as the most useful valuation model for determining option prices. The Model centers around changes in the basic Stock Price, Time to expiry of the option, Risk free rate of interest, Exercise Price and the Volatility of the stock. Of the above, the first four are readily available for incorporation. The factor of volatility is one that involves some subjective considerations.

The impact of volatility can be assessed from various angles. From the angle of checking the validity of the model itself, the test would involve comparing the historical volatility of scrip or a basket, with the implied volatility arising out of the going option price. The latter is used taking the Black-Scholes assumptions to be valid for the case in point. Alternatively, the option price that should have been there given a historical volatility can be compared with the actual option price for testing the significance of the differences, if any.

The question of estimating

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the volatility and plugging this in to an option pricing model has always been a matter of contention. Let us examine the major issues involved.

First, the underlying asset volatility can be estimated on the basis of past experience. The question arises as to how far back one goes to get a correct estimate. The problem is similar to the estimation of returns and comparison under the Capital Assets Pricing Model. In analysing stock prices, it can be noticed that there are two types of volatility that they suffer from. The first is the result of the inherent risk of its projects not going through to expectations, the extent of its own growth potential, the competition from within and outside the country and changes in its management and financing patterns. These are company-specific risks that stem occasionally from industry-specific risks. These are called by the technical name "unsystematic risk." It is demonstrated by portfolio theory that unsystematic risk could be diversified away by combining it with other stock that have a different element of such risk, in a manner that will result in the portfolio combination having a combined unsystematic risk that is negligible.

The other type of risk is the "systematic" risk or market risk. Here, depending on the overall market movements, the scrip will move up or down depending on its "connection" with the market. We are all aware that there are certain incidents that affect the entire stock market such as changes in budget policy, fall in agricultural production, changes in RBI policy and fluctuations in foreign exchange position. Apart from these, there is something called "market sentiment" which takes the overall stock prices up or down from time to time. Depending upon each stock's relationship with the overall market, it will be affected by some degree. Some stocks move exactly with the market, which some move more than proportionately on the same side of the market, while some others move inversely.

From the angle of the trader, it is necessary to go by some historical volatility as a starting point. True, some embellishments can be made to such historical data, but to have a basis, it will necessarily have to begin with some historical data. The question often arises as to how far back one should go to get an estimate of volatility that is good enough. The questions are:

1. **Is there sufficient evidence to show that these prices are based on a clear historical volatility?**

If the market is perfect and information asymmetry is minimal, one would expect all market players to have homogenous expectations. In such a scenario, price movements have to follow the historical volatility pattern, unless there are changes in circumstances. In the semi-strong form Efficient Market Hypothesis, all the reported information is also within the reach of the market and the price is reflective of that.

2. **If so, what period does the market reckon to be a suitable indicator of volatility for option price determination?**

Here there cannot be unanimity. Just as in the case of estimation of Beta, the period to be reckoned becomes a matter of subjectivity. Unless the market is highly volatile in the short run, it may make more sense to take the long-term (say 3 years) volatility as the basis. However, because changes in Government policy have a great bearing on the systematic risk, it may be right to take a 1-year horizon ,since policy changes in India have shown remarkable change almost on a yearly basis since 1992.

3. **Or, will it be right to conclude that the market prices of options are not based on any clear estimate of volatility but are arbitrary?**

The implication of such a suggestion is that the Black-Scholes Model itself has then no applicability to the price determination model. In any nascent options market, we find that market prices will not correspond to a model-determined price. This is because the writers charge a special premium and there are few combinations going around which act as an effective mechanism for checking radical price changes. However, as the market becomes a little experienced (as in India now), it becomes increasingly adept at using option combinations and other synthetic instruments, which make sure that the prices are based on uniform assumptions. Since the Black-Scholes model describes options-price determination in the most scientific way, we will have to take the postulates of the model to be right unless evidence is overwhelmingly different. As such, the estimates of volatility by the options market has to be based on volatility estimate for the spot asset market, with some modifications for the period of the option.

Literature Review

As Hull [2003] says, the major issue in testing the applicability of the Black-Scholes model is that there are two basic hypotheses involved. The first is that the pricing formula is correct and the second is that the markets are efficient. If our test proves the theoretical pricing to be wrong, it does not necessarily mean that the formula is at fault or that the market is not efficient. Further, the question of estimating volatility cannot be easily accomplished. This is because historical volatility might differ substantially from the implied volatility. Also, if the options in question are traded only in small volumes, they may not reflect the volatility implications inherent in the stock price.

Several studies have gone into the question of volatility, historical prices, implied volatility and the applicability of Black-Scholes model to short-term and long-term prices.

Whaley [1982] has made a detailed study of the empirical evidence of pricing of stock options. The data in this study spans a three-year period. Based on a week's option prices, the author arrives at the implied volatility, which is used in the price of the subsequent week. Basically, the Black-Scholes Model has been used. The study finds a prediction error of 1.08 percent with a standard deviation of 23.82 percent.

In his study, Rubinstein [1985] focuses on the Black-Scholes formula and uses a transaction database for finding the prices of two options on the same underlying which differ only in some characteristics. Since the two options should have identical implied volatility, if there is an actual difference in their actual implied volatility, it would suggest that there is a bias in the formula itself. The author finds significant differences in implied volatility.

Stulz [2003] refers to the empirical evidence on negative correlation between stock prices and volatility for small firms. He avers that if volatility were to change randomly, but is not perfectly correlated to the stock price; the binomial model will no longer work: Consequently we may have to incorporate other models into the Black-Scholes framework to get a fair prediction.

Dennis and Mayhew [2006] study the "dynamic relationship between daily stock returns and daily innovations in options-derived implied volatility." Their finding is that asymmetric volatility is due to market-level changes rather than firm-level factors. They also argue that innovations in implied volatility are more stable than innovations in stock volatility.

Bent and Prabhala [1996] have taken a different approach to volatility. They claim that their results differ from those reported previously due to differences in the data and sampling procedure. They use volatility time series that cover a relatively higher period of time and use lower frequencies. According to them this ensures that "implied and realized volatility estimates pertain to each time period under consideration." They conclude that "a higher signal-to-noise ratio explains why implied volatility is less biased in our study, whereas the inefficiency of implied volatility documented previously appears to be an artifact of a spurious regression phenomenon, which (i) is induced by the use of overlapping data and (ii) overstates the predictive power and regression coefficient associated with past realized volatility."

Haeberle and Kahl [1991] have studied the comparison between historic and implied volatility for predicting agricultural option premiums. Premiums of corn and soybean options during the period 1986-88 were calculated by substituting a direct estimate of implied volatility and a 10-day historic volatility into Black's Option Pricing formula. They find that premiums estimated using the implied volatility method is more accurate.

Eraker [2004] performance of jump diffusion models of stock price dynamic from joint options and stock markets data. As given in the abstract "the paper introduces a model with discontinuous correlated jumps in stock prices and stock price volatility, and with the state-dependent arrival intensity. We discuss how to perform likelihood-based inference based upon joint options/returns data and present estimates of risk premiums for jump and volatility risks. The paper finds that while complex jump specifications add little explanatory power in fitting options data, these models fare better in fitting options and returns data simultaneously."

Bollen and Whaley [2004] look at the implied volatility function in its relationship with the net buying pressure. The analysis has been carried out for both index and individual stock options. They conclude that changes in implied volatility are directly related to the net buying pressure. They also find that changes in implied volatility of index options – S&P 500 options are affected by buying pressure for index puts and those changes in implied volatility of stock options are dominated by call option demand. They state that "simulated delta-neutral option-writing trading strategies generate abnormal returns that match the deviations of the implied volatility functions above realized historical return volatilities"

In developing a market model for implied stochastic volatility, Schonbucher [1999] seeks to provide a framework for market-based pricing and hedging of exotic options and options on volatility indices. The model draws out the conditions that prevent arbitrage.

Another phenomenon that has been observed is the positions when deep-in-the-money or deep-out-of-the-money contracts are observed. The Black-Scholes model does not seem to price these correctly. In their paper on implied volatility skews and stock index skewness and kurtosis, [Corrado and Su 1997] refer to this volatility as "skew" or smile. They examine S&P500 index option prices using the Black-Scholes Model and an extension of the model by Jarrow and Rudd. They say that "we find that non-normal skewness and kurtosis in options-implied distributions of index returns contribute significantly to the phenomenon of volatility skews."

Fleming [1998] looks at the performance of S&P 100 implied volatility as a forecast of future stock market volatility. He finds that the implied volatility is an upward biased forecast, but that it would contain information regarding future volatility. He says that "implied volatility dominates the historical volatility in terms of ex-ante forecasting power, and its forecast error is orthogonal to parameters frequently linked to conditional volatility, including those employed in various specifications."

Ederington and Guan [1998] examine whether implied volatility can be taken as an unbiased predictor of future volatility and if so its predictive power. If the markets are efficient and the pricing model used for determining option prices is correct, then implied volatility can be taken as a good predictor of future volatility. They say that "at least part of the apparent inefficiency of implied volatility from past studies stems from measurement error which biases estimates of the importance of implied volatility downward and of the importance of historical volatility upward. Once we correct for this error, there is no significant inefficiency." They say that implied volatility has strong predictive power and that stock market volatility prediction results are quite sensitive to forecasting horizon and the period to which they relate.

In his study on the stock volatility in NASDAQ, Schwert [2001] says that the factor that seems to explain unusual volatility is technology and not firm size or the immaturity of the firm. His sample relates to NASDAQ shares which "tend to be smaller companies with more growth options, in relation to the more seasoned issues reflected in the S&P 500 portfolio."

Gwilym and Buckle [1999] study UK companies in their relative predictive performance of historical and implied volatilities. They find that historical volatility estimators to be more accurate for forecasting than implied volatilities. They say that "although implied volatility is a biased estimator of realized volatility, regression tests show that it contains more information than historical volatility. Also, a simple trading rule using historical volatility estimators is unable to exploit the forecast improvements since it fails to earn abnormal profits after transaction costs."

Objectives, Scope and Methodology

This paper seeks to

1. Formulate a well-defined methodology for testing the applicability of historical volatility in the actual option prices,

2. To make clear distinction among historical volatility of various periods, and

3. As a sample measure test the system over a three-month period

The scope of the study is limited to the volatility of the parent NSE index NIFTY over a period of 36 months up to 31/03/05. Separate volatility estimates have been taken for a 3-year, 1-year, 6 month and 3-month horizon, leading to the start of the sample period.

Historical Volatility

Log return at time t is defined as $R_t = \ln(S_t/S_{t-1})$, where S_t is the stock's price at time t, S_{t-1} is the stock's price at time t-1, and ln refers natural logarithm. The average logarithmic return and variance over n period is defined as $R_m = \Sigma_n R_t / n$, and $\sigma^2 = \Sigma_n (Rt - R_m)^2 / n\text{-}1$ respectively. $\sigma_{annual} = \sigma_{daily} \sqrt{(\text{number of trading days per annum})}$, is the relationship that helps to scale from daily volatility to annual volatility.

B.S. Model

Black-Scholes formula for option pricing is as follows:

$$C = S\, N(d_1) - X\, e^{-rt} N(d_2), \text{ where}$$

$d_1 = [\ln(S / X) + (r + \sigma^2/2)t] / [\sigma/\sqrt{t}]$, $d_2 = d_1 - \sigma\sqrt{t}$, N(.) is cumulative distribution function of normal distribution, ln – natural logarithm, S – spot price of the stock, X – exercise price of the stock, r – risk free rate of return, and t – time of expiry of the option.

The Model

The following procedure was followed in the study:

- Historical data was taken from the NSE web site in respect of closing prices of NIFTY for the period from 01/01/02 to 31/12/05. This data was grouped into the 3-year, 1-year, 6-month and 3-month periods up to December 2005.

- Daily Returns on index were calculated based on closing prices, the standard deviation of the daily returns were computed, the standard deviation of daily returns in respect of the relevant range period was annualized using Section 3.1.

- In annualizing, the actual number of trading days for the 3-year period (758) was reckoned in arriving at the 3-year volatility. For the 1-year volatility, the actual number of days in the sample i.e. 251 was taken for the purpose. For the other estimates of volatility, the number of trading days was taken as 252 in accordance with the practice in Hull [2003].

- Using Section 3.2, the Black-Scholes theoretical price for each of the trading days from 01/01/2006 to 31/03/2006 was arrived at by putting in the daily stock price (S) (based on the previous trading day's closing price), time to maturity (t) (based on the number of days remaining to the settlement date of the option concerned), risk-free rate (r) (taken as five percent, based on T-Bill and Bond rates prevalent) and exercise price (X) as applicable. To the above, separate figures of volatility were put in based on the 3-year, 1-year, 6-month and 3-month periods.

- The above process resulted in four separate theoretical Black-Scholes prices. These are separately compared with the actual call prices on the dates (taking the closing price).

- A correlation analysis was performed between the separate theoretical prices and actual prices.

- Further, paired t-tests were run for ascertaining the significance of the differences between the actual and the theoretical call values for said periods.

Findings

Table 1, provides us various descriptive statistics information of NIFTY values for various periods, and the last column is of our interest which depicts the annualized volatility of NIFTY values based on daily log returns (ignoring dividends).

Table 1: Descriptive Statistics of NIFTY for Various Periods

Period	Number of trading days (n)	Average log return (R_m)	Daily volatility (σ_{daily})	Annualized volatility (σ_{annual})
3 years (Jan 2002 to Dec 2005)	758	0.00125	0.01400	0.22254
1 year (Jan 2005 to Dec 2005)	251	0.00123	0.01114	0.17643
6 months (Jul 2005 to Dec 2005)	125	0.00196	0.01149	0.18243
3 months (Oct 2005 to Dec 2005)	62	0.00140	0.01261	0.20014

Table 2: Paired Samples Statistics

Pair		Mean	Sample Size	Std. Deviation	Std. Error Mean
Pair 1	Theoretical call value - 3 years volatility	85.5140	94	45.93956	4.73830
	Actual call price	63.9899	94	33.54781	3.46019
Pair 2	Theoretical call value - 1 year volatility	69.5454	94	38.18675	3.93866
	Actual call price	63.9899	94	33.54781	3.46019
Pair 3	Theoretical call value - 6 months volatility	71.6194	94	39.18811	4.04194
	Actual call price	63.9899	94	33.54781	3.46019
Pair 4	Theoretical call value - 3 months volatility	77.7522	94	42.15985	4.34846
	Actual call price	63.9899	94	33.54781	3.46019

Imputing this volatility along with other factors in the Black-Scholes formula viz, stock price (S), strike price (X), risk-free return (r), and time to maturity (t), defined in Section 3.2 , we get the theoretical price for call options on the Index. These theoretical prices are thus based on the historical volatility.

The theoretical values of calls as found out above are compared with the actual option prices on the trading days in the sample period and the required statistics is listed out in table 2-4.

Highly significant levels of correlation coefficient are found between the theoretical call prices based on volatility estimates over various periods on the one hand and the actual call prices on the other, which is exhibited in table 3.

Table 4, gives the clear picture of mean differences among the theoretical call value based on volatilities over various periods with the actual call prices.

Since p-values of the considered pairs are less than that of five percent level of significance, the null hypothesis that there is no significant difference between the two prices has to be rejected; and we have to conclude that there is a significant difference between theoretical call values of various periods with the actual price. And also t-values for each pair is positive hence actual price is less than that of theoretical call values, which is substantiated in table 4, column 2 (mean).

Table 3: Paired Samples Correlations

Pair	Sample Size	Correlation	Sig.
Theoretical call value - 3 years volatility & Actual call price	94	0.810	0.000
Theoretical call value - 1 year volatility & Actual call price	94	0.807	0.000
Theoretical call value - 6 months volatility & Actual call price	94	0.808	0.000
Theoretical call value - 3 months volatility & Actual call price	94	0.809	0.000

Table 4: Paired Samples t - Test

Pair	Paired Differences					t	df	Sig. (2- tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Theoretical call value - 3 years volatility & Actual call price	21.5241	27.1826	2.8037	15.9575	27.0916	7.677	93	0.000
Theoretical call value - 1 year volatility & Actual call price	5.5555	22.7157	2.3429	0.9029	10.2081	2.371	93	0.020
Theoretical call value - 6 months volatility & Actual call price	7.6295	23.1904	2.3919	2.8797	12.3793	3.190	93	0.002
Theoretical call value - 3 months volatility & Actual call price	13.7623	24.7936	2.5573	8.6841	18.8405	5.382	93	0.000

Conclusion

The actual call values of stock options in the sample period are significantly different from the theoretical prices based on volatility for various periods indicated. While the difference is significant in all cases, it is relatively less significant in the case of 1-year volatility.

There appears to be good correlation between the theoretical prices and the actual prices. But this only indicates the direction of the movement of change and not the magnitude. Intuitively the direction can be more easily predicted than the magnitude.

In tune with other empirical studies the world over; indications in this study are that the actual call values of the index are quite different from the indications of volatility. Further it appears that the market relies more on the volatility estimate of a one-year historical period in arriving at the call values.

One factor that makes studies of this nature not conclusive is that the volumes for various specific options are not uniformly high and this results in inaccurate price finding. Further, the study can be extended to a longer horizon.

Keywords: Black-Scholes, t-test, Volatility, Option pricing, NIFTY.

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Workaholics Perceive How Bosses Behave

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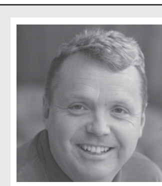
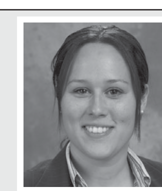
This research examines the inter relationship between workaholism and employee perceptions of leadership style. The former consists of inner pressure driver feeling and work enjoyment. The latter comprises five leadership behavioural styles and employee perceptions of leadership behavioural style. Inner pressure drive feeling and work enjoyment form the former's components. Employees scoring higher on Feeling driven would perceive higher levels of destructive leadership behavioral styles. Employees scoring higher on work enjoyment would perceive higher levels of constructive leadership behavioural styles. Employee's ratings of his/her supervisor's leadership behavioural styles were influenced by their employee's stable traits. The research opens further avenues for research in the subject.

Leadership is a much researched topic in studies of organizational careers and to a lesser extent in studies of work team and organizational performance. It is difficult to quarrel with the belief that leadership is critical to organizational success (Kaiser, Hogan and Craig, 2008). Unfortunately there is emerging evidence that many in leadership positions are falling short, despite the thousands of articles and books devoted to this topic (Burke and Cooper, 2006; Charan and Colvin, 1999; Dotlitch and Cairo, 2003;







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Finkelstein, 2003; Kellerman, 2004; Padilla, Hogan and Kaiser, 2007). It has been estimated that over half of the men and women holding supervisory and executive leadership positions are not doing a successful job (Hogan, 1999; Hogan and Hogan, 2001; Lubit, 2004).

Our understanding of leadership may have been limited by the common assumption that leadership should be defined in constructive terms; leadership research has focused on effective leadership with the unstated assumption that ineffective leadership is either the absence of leadership or the opposite of effective leadership (Tierney and Tepper, 2007).

Researchers have begun to address this gap in understanding of leadership by devoting attention to the "dark side" of leadership (Burke, 2006). We are beginning to understand why leaders fail and why so many organizations and individuals tolerate bad leader (Kellerman, 2004; Lombardo and McCall, 1984; Lipman-Blumen, 2005; Einarsen, Aasland and Skogstad, 2007).

This research explores both the "dark side" and the "bright side" of leadership, using a differentiated conceptual framework and measures developed by Einarsen and his colleagues. Einarsen, Aasland and Skogstad (2007) define destructive leadership as "the systematic and repeated behaviour by a leader or manager that violates the legitimate interest of the organization by undermining and/or sabotaging the organization's goals, task, resources and effectiveness, and/or the motivation, well-being or job satisfaction of subordinates" (p.208). Using two dimensions (behaviours directed towards subordinates; behaviours directed toward the organization itself) and whether those behaviours are pro or anti, they identify three types of destructive leadership behavioural styles (Tyrannical, Derailed, Supportive but disloyal), one type of constructive leadership behavioural style (Constructive) and another potential type of destructive leadership behavioural style (Laissez faire).

Let us first consider their five leadership behavioural styles.

Tyrannical leadership – behaviours that undermine the motivation, well-being or job satisfaction of subordinates without necessarily being destructive of the organization's goals.

Derailed leadership – a combination of anti-subordinate behaviours and anti-organizational behaviours

Supportive but disloyal leadership–behaviours supporting the well-being of subordinates but undermining organizational tasks and goal attainment.

Laissez-faire leadership–behaviours indicating an abdication of leadership duties and responsibilities.

Constructive leadership–behaviours supporting both subordinate well-being and the attainment of the organization's goals.

Leadership – In the Eye of the Beholder?

The behaviours of leaders and managers have been most commonly evaluated and described by their own self-reports or by perceptions of their leadership behaviours held by their subordinates (or other observers). An emerging line of research has begun to explore the relationship of particular stable individual difference characteristics of subordinates and their perceptions of leadership-behaviours. Are some individual traits of subordinates more likely to be associated with favourable or unfavourable perceptions of leadership behaviours?

Recent research on leadership has shown that subordinates' perception of leadership is influenced by more than the actual behaviour of leaders. Factors influencing follower's perceptions of leadership include mood (Schyns and Sanders, 2003, 2004a), the implicit leadership theories held by followers (Schyns and Sanders, 2004b) and the personality of followers (Felfe and Schyns, 2006). Keeler (1999) reported that preference for charismatic and transformational leadership was influenced by follower's personality traits on the basis of perceived similarity of follower and leader. Schyns (2001) noted a small but positive relationship between perceived transformational leadership and occupational self-efficacy. Schyns and

Felfe (2006), in a study conducted with 81 employees of an accounting firm in the US, reported that subordinate extraversion and agreeableness were related to perceptions of transformational leadership.

Transformational leadership has been most frequently studied in the context of the leader-follower relationship as several writers have discussed the personality of followers that seek out, prefer and accept this leadership style.

Schyns and Sanders (2007), in studies of students and followers from three different companies, observed relationships between personality and perceptions of transformational leadership. Among students, those scoring higher on extraversion and neuroticism rated leaders higher on perceptions of transformational leadership. In a sample of followers in an accounting company, followers scoring higher on conscientiousness rated their leaders higher on transformational leadership. In a sample of employees from two organizations (a hospital, a telecommunications company) there was a relationship in the hospital sample between agreeableness of subordinates and perceptions of charisma in supervisors, and followers in the telecommunications company scoring higher on agreeableness and conscientiousness rated leaders higher on transformational leadership.

They suggest that the setting – field studies versus experimental studies – may play a role in the nature of these relationships. They also note that some characteristics are more visible in particular contexts. Thus in accounting firms, conscientiousness is very important. In the telecommunications company, being agreeable may be more important. Thus there was the suggestion that context had an impact on the relationship between personality and subordinate perceptions of leadership. National culture may also play a role in the nature of these relationships.

Personality was also found to act as a moderator of the relationship between work place experiences and employee behaviour (e.g., workplace injustice and counterproductive work behaviours, Flaherty and Moss, 2007; leader-member exchange and work tensions, Brouer and Harris, 2007). Brouer and Harris (2007) assessed negative affectivity, a dispositional characteristic associated with feeling driven to work, and found that high negative affectivity coupled with high levels of leader-member exchange produced the highest levels of work tension. Negative effect amplified the impact of injustice on various outcomes; negative affectivity served to increase one's sensitivity to injustice.

Consistent with what is known more generally about perception, perceiver characteristics such as motives, needs and personality are likely to influence assessments of leadership behavioural style. Leadership assessment, being then in the eye of the beholder, may tell you as much about the observer as the observed.

Workaholism Components and Perceptions of Leadership Behavioural Styles

This research explores the relationship of particular stable individual difference characteristics and perceptions of leadership style behaviours. Two workaholism components identified by Spence and Robbins (1992) were selected for study: Feeling driven to work because of inner pressures and Work enjoyment. Measures of these two concepts have been shown to be reliable in a number of different occupational samples in various countries and both have been found to be only weakly correlated.

In addition, feeling driven to work and Work enjoyment were correlated with different work and well-being outcomes (Burke 2007). Feeling driven to work has been found to be correlated with burnout and psychological distress; work enjoyment with indicators of job and career satisfaction and success.

It has been suggested that workaholics have more difficulty in relationships (Killinger, 1991; Porter, 1996; 2001; Robinson, 1998). Porter (2001) reported that individuals scoring higher on Perfectionism, a workaholic behavioural manifestation, were more likely to question the value of co-workers as individuals, and see co-workers as not conscientious. This is likely to be seen as a lack of respect for co-workers. Individuals scoring higher on perfectionism also though that management reacted more strongly to mistakes than to positive contributions. Perfectionists believed they were more assertive, more responsive, more aware of detail and were better workers than others in their organization. Perfectionists also believed that they held higher standards than they thought existed in their organizations. Individuals scoring higher on Work enjoyment believed that management would recognize positive contributions.

Burke, Mattheisen, Einarsen, Fiksenbaum and Soiland (2008) found that Norwegian oil rig workers scoring higher on Feeling driven to work reported more negative organizational acts whereas oil rig workers scoring higher on Work enjoyment reported fewer negative organizational acts.

The following general hypotheses were then offered.

1. Employees scoring higher on feeling driven to work were more likely to ascribe destructive leadership behavioural styles to their managers and less likely to ascribe constructive leadership behavioural styles.

2. Employees scoring higher on work enjoyment were more likely to ascribe constructive leadership behavioural styles to their managers and less likely to ascribe destructive leadership behavioural styles to their managers.

Method

Procedure

Data were collected from oil rig workers using a questionnaire. Questionnaires were distributed by mail to 1800 randomly selected off shore workers representing various companies and installations. All were members of either NOPEF (Norsk Olje-og Petrokjemisk Fagforbund) or OFS (Oljearbeidernes Fellessammenslutning) - later renamed SAFE (Sammenslutingen Av Fagorgoniserte: Energisektoren), the major unions for offshore workers in Norway. A total of 1017 individuals returned completed questionnaires to the research team, in pre-stamped envelopes that were provided, a 59 percent response rate.

Respondents

Table 1 shows the demographic characteristics of the sample. Most respondents were male (86 percent), between 35 and 55 years of age (76 percent), were about equally represented by the two unions, were employed by the installation operator (54 percent), had non-supervisory jobs (71 percent), had long off shore and platform tenure (66 percent had 11 or more years of off-shore tenure and 52 percent had six or more years of platform tenure), most worked 100 percent off-shore (95 percent), were permanent employees (86 percent), worked the same work schedule – 2 weeks on and 3-4 weeks off (93 percent), and worked in Maintenance, Drilling or Catering (26 percent, 19 percent, 16 percent) respectively.

Table 1: Demographic Characteristics of Sample

Age	N	Percent	Gender	N	Percent
35 or younger	169	16.8	Males	87	85.9
36-40	179	17.8	Females	143	14.1
41-45	195	19.3			
46-50	186	18.5	Union		
51-55	147	14.6	NOPEF	490	48.2
56 or older	131	13.0	OFS	527	51.8

Employer			Offshore tenure		
Operator	544	54.1	1 year or less	4	.4
Contracted	320	36.8	1-5 years	99	9.9
Ship company	92	9.1	6-10	237	23.7
			11 or more	658	65.9
Organizational level					
Non-supervisory	722	79.7	Platform tenure		
Supervisor	123	13.6	Less than 1 year	107	11.0
Group leader	60	6.6	1-5	359	36.9
Platform manager	1	.1	6-10	206	26.2
			11 or more	360	36.9
Function					
Production	89	8.8	Time off-shore		
Administration	31	3.1	100%	949	94.9
Drilling	197	19.4	Less than 100%	51	5.1
Maintenance	269	26.5			
Service	89	8.8	Work status		
Deck crew	82	8.1	Permanent	860	86.3
Construction	3	.3	Temporary	137	13.7
Catering	165	16.2			
Other	91	9.0	Work schedule		
			2 weeks on,		
			3-4 weeks off	878	92.8
			Other	68	7.2

Measures

Some of the measures used were developed in Norway; others were translated from English to Norwegian using the back translation method.

Personal Demographics

These were measured by single items and included age, gender and marital status.

Work Situation Characteristics

These were also measured by single items and included job function, off-shore and platform tenure, organizational level and employer (see Table 1 for a complete listing of these).

Workaholism Components

Spence and Robbins (19922) derived three workaholism components on the basis of an extensive literature review, work involvement, feeling driven to work and work enjoyment, and developed measures of each. Two of their measures were used in this study.

Feeling driven to work (alpha=.80) had seven items (e.g., "I often feel that there's something inside me that drives me to work hard").

Work enjoyment (alpha=.88) had ten items (e.g., "My job is more life fun than work").

Leadership Behavioural Style

Leadership behaviour was measured by a questionnaire developed by Einarsen and his colleagues (2007) that contained 33 items. Respondents indicated how frequently their supervisor exhibited each behaviour (0=never, 3=often/almost always). Constructive leadership consisted of 6 items (alpha=.83), an item was "Gave positive recognition for good work performance." Tyrannical leadership had nine items (alpha=.85); "Has humiliated you or some of your subordinates if you have not met his/her standards."

Derailed leadership was measured by six items (alpha=.74), "Has exposed you or your subordinates to angry outbursts, or sulking, and spent time on this instead of doing his/her own work." Popular but disloyal leadership contained seven items (alpha=.63). "Has been friendly and encouraged you/your subordinates to extend their lunch break." Laissez-faire leadership had five items (alpha=.69).

Results

Inter-correlation among Study Variables

Table 2 shows the correlations among the five leadership behavioural styles and the two workaholism components. 18 of the 21 correlations (86 percent) were significantly different from zero (p<.05), reflecting in part, the large sample sizes. Correlations ranged from .02 to .79 (Constructive leadership and Feeling driven to work, Tyrannical and Derailed leadership).

Table 2: Inter-Correlations among Main Study Variables[a]

Variables	2	3	4	5	6	7
1. Constructive	-.34***	-.31***	.24***	-.41***	.02	.28***
2. Tyrannical		.79***	.15***	.58***	.14***	-.06
3. Derailed			.16 ***	.53***	.15***	-.04
4. Popular but disloyal				.08*	.08*	.12***
5. Laissez faire					.16***	-.13***
6. Feeling driven						.20***
7. Work enjoyment						

*** p<.001
* p<.05
a
Ns range from 973 to 1006.

The following comments are offered in summary. First, the four destructive leadership behavioural styles were significantly and positively correlated. Second, the constructive leadership behavioural style was significantly and negatively correlated with three destructive leadership behavioural styles (tyrannical, derailed, laissez-faire) but positively correlated with the Positive but disloyal scale. Third, feeling driven to work and work enjoyment were significantly and positively but weakly correlated. Fourth, feeling driven to work was significantly and positively correlated with four of the five leadership behavioural styles (all destructive styles). Fifth, work enjoyment was significantly correlated with three of the five leadership behaviours; positively with Constructive and Popular but disloyal, negatively with Laissez-faire leadership.

Predictors of Leadership Behavioural Styles

Hierarchical regression analyses were undertaken in which each of the leadership behavioural styles were separately regressed on three blocks of predictors entered in a specified order. The first block of predictors (n=3) consisted of personal demographic characteristics (e.g., age, gender, marital status). The second block of predictors (n=5) consisted of work situation characteristics (e.g., organization level, off-shore tenure, platform tenure). The third block of predictors (n=2) consisted of the two workaholism components (Feeling driven to work, Work enjoyment).

When a block of predictors accounted for a significant amount or increment in explained variance (p<.05), variables having significant and independent relationships with a leadership behavioural style were identified (p<.05). These analyses controlled for both personal demographic and work situation characteristics before examining the relationship of the two workaholism components with each of the five leadership behaviours.

Table 3 shows the results of these analyses. The following comments are offered in summary.

Table 3: Predictors of Leadership Behavioural Styles

Leadership Behavioural Styles	R	R2	Change R2	P
Constructive (N=791)				
Personal demographics	.07	.00	.00	NS
Work situation	.21	.04	.04	.001
Union (-.11)				
Platform tenure (-.09)				
Work status (-.08)				
Workaholism components				
Work enjoyment (.28)				
Tyrannical (N=790)				
Personal demographics	.09	.01	.01	.05
Age (-.10)				
Work situation	.14	.02	.01	NS
Workaholism components	.17	.03	.01	.05
Feeling driven (.10)				
Derailed (N=781)				
Personal demographics	.09	.01	.01	.05
Age (-.09)				
Gender (-.07)				
Work situation	.17	.03	.02	.01
Platform tenure (.11)				
Workaholism components	.20	.04	.01	.05
Feeling driven (,.11)				

Popular but disloyal (N=790)				
Personal demographics	.21	.04	.04	.001
Age (-.19)				
Gender (-.07)				
Work situation	.24	.06	.02	.05
Union (.09)				
Work status (.08)				
Workaholism components	.28	.08	.02	.01
Work enjoyment (.12)				
Laissez faire (N=787)				
Personal demographics	.05	.00	.00	NS
Work situation	.18	.03	.03	.01
Platform tenure (.16)				
Work status (.08)				
Workaholism components				
Work enjoyment (-.12)				
Feeling driven (.12)	.			

Constructive Leadership

Both work situation and workaholism components accounted for significant increments in explained variance on constructive leadership. NOPEF union members, employees having less platform tenure, and permanent employees rated their leaders higher on constructive leadership (*B*s= -.11, -.09, and -.08, respectively). Oil rig workers scoring higher on Work enjoyment also rated their supervisors higher on Constructive leadership (*B*=.28).

Tyrannical Leadership

Two blocks of predictors accounted for a significant amount or increment in explained variance (personal demographics, workaholism components) on tyrannical leadership. Younger oil rig workers rated their leaders higher on tyrannical leadership (*B*=-.10). Oil rig workers scoring higher on Feeling driven to work also rated their supervisors higher on tyrannical leadership (*B*=.10).

Derailed Leadership

All three blocks of predictors accounted for a significant amount or increment in explained variance on perceptions of the derailed leadership behavioural style. Younger oil rig workers, and males, rated their supervisors higher on Derailed leadership (Bs=-.09 and -.07, respectively). Oil rig workers having longer platform tenure also rated their supervisors higher on Derailed leadership (*B*=.11). Finally, oil rig workers scoring higher on feeling driven to work also rated their supervisors higher on derailed leadership (*B*=.11).

Popular but Disloyal Leadership

Each block of predictors accounted for a significant amount or increment in explained variance on perceptions of popular but disloyal leadership. Younger oil rig workers, males, and OFS union members, rated their supervisors higher on Popular but disloyal leadership (*B*s=-.19, -.07, and .09, respectively). Temporary oil rig employees rated their supervisors higher on popular but disloyal leadership (B=.08). Finally, oil rig workers scoring higher on work enjoyment also rated their supervisors higher on Popular but disloyal leadership (*B*=.12).

Laissez Faire Leadership

Two blocks of predictors accounted for significant increments in explained variance on oil rig worker perceptions of the laissez faire leadership behavioural style (work situation characteristics, workaholism components). Oil rig workers having longer platform tenure, and temporary oil rig workers, rated their supervisors higher on the laissez faire leadership behaviour style (*B*s=.16 and .08, respectively). In addition, oil rig workers scoring higher on Feeling driven to work, and oil rig workers scoring lower on work enjoyment, rated their supervisors higher on laissez faire leadership (*B*s=.12 and -.12) respectively.

Discussion

This exploratory study examined the relationship of two workaholism components identified by Spence and Robbins (1992) in their research on work addiction and perceptions of leadership behavioural styles. The Spence and Robbins measures are the most widely used measures in the growing study of workaholism (See Burke, 2007).

There is both conceptualization and empirical evidence that workaholic behaviours (e.g., perfectionism, high performance expectations) are likely to be associated with problematic relationships, both inside and outside the workplace (Oates, 1971; Porter, 1996; 2001; Robinson, 1998). In addition, particular workaholism components have been found to be associated with negative affect (see Burke, 2007), and with other personality traits (e.g., Type A behaviour, neuroticism) also likely to be associated with higher levels of conflict in work relationships and elevated levels of workplace stress (Burke, 2007). Particular workaholism components, and particular types of workaholics (e.g., Work addicts versus Work enthusiasts) and particular motives for working hard (addiction versus passion) are also likely associated with lower respect for co-workers. Thus, extending this line of reasoning, it was hypothesized that workers scoring higher on feeling driven to work because of inner pressure would perceive their supervisor's leadership behavioural style in a more negative light, whereas workers scoring higher on work enjoyment would perceive their supervisor's leadership behavioural style in a more positive light.

Given the emphasis in the leadership research and writing on leadership being equated with effective or successful leaders, it was important to include areas of failing leadership as well. Einarsen, Ausland and Skogstad (2007) conceptualized four destructive leadership styles along with a definition of a constructive leadership behavioural style. Their leadership framework and measures were included here.

What did we find? First, the four destructive leadership behavioural styles were positively inter-correlated and the measure of constructive leadership was generally negatively correlated with the destructive leadership behavioural styles (see Table 2). Second, the two workaholism components, consisting with previous findings, were positively but weakly correlated.

The results of hierarchical regression analyses examining the relationship of the two workaholism components with each of the five leadership behavioural styles, controlling for both personal demographic and work situation characteristics, provided considerable support for the general hypotheses underlying this research (see Table 3). That is, oil rig workers scoring higher on Feeling driven to work described their supervisors higher on Tyrannical, Derailed and Laissez faire leadership behavioural styles while oil rig workers scoring higher on work enjoyment described their supervisors higher on constructive and popular but disloyal leadership behavioural styles and lower on laissez fair leadership.

In addition, these findings were consistent with emerging findings on the important role played by subordinate stable personality characteristics in leadership assessments.

Practical and Theoretical Implications

Practitioners and research commonly use subordinate employee perceptions of their supervisor's leadership behaviours as the basis for evaluations of supervisor and managerial performance and as criteria of supervisory effectiveness. Our findings, however, suggest that employee perceptions of their supervisor's leadership style may be affected by work situation characteristics such as organizational tenure or experience, and stable dispositions (e.g, workaholic components such as feeling driven to work because of inner pressure). This raises the question of the extent these factors need to be considered in understanding perceptions of leadership style and behaviour This seems to be a fertile area of inquiry. More attention likely needs to be devoted to the larger context in which leadership is observed. Typical or expected leadership behavioural styles are likely to be different on oil rigs than in a critical care unit in a hospital.

Limitations of the Research

Some limitations of the research should be acknowledged to put the findings in a larger context. First, all data were collected using self-report questionnaires raising the possibility of response set tendencies and common method bias. Second, data were collected at only one point in time making it difficult to determine causality. Do workaholism components affect perceptions of leadership behavioural style of does leadership behavioural style affect workaholism components? Third, the two workaholism components considered here address different domains; work enjoyment may be seen as an attitude while feeling driven to work may be seen as a stable personal trait. Fourth, it is not clear the extent to which these findings would generalize to other occupations.

Future Research Directions

It is suggested that future research in this area address at least three major issues. First, other dimensions of workaholic more reflective of behaviours (e.g., perfectionism, inability to disengage from one's work) would complement the two dimensions included in the present research. Second, it would be useful to collect data at two points in time to consider questions of causality. Third, extending the study to other occupations would determine the robustness of the present conclusions. It is likely that working on an oil rig in the North Sea for extended periods of time would not be representative of work and leadership experiences of the typical blue collar job.

Footnotes

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Key words: workaholism components, leadership perceptions, oil rig workers

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Performance Measurement TQM Perspective

Puja Chhabra Sharma

A well-designed and dedicated Performance Measurement System helps any organization to improve and change quickly as per everchanging customer requirements. A balanced scorecard is a new technique developed by Robert Kaplan and David Norton. It is a multidimensional tool for communication, improvement and control. It integrates non-financial performance measures into basic management structure of the organization and helps managing most effective indicators of future strategic success. The researcher has developed a performance measurement tool to measure corporate performance in TQM perspective of select IT Companies in India. Two Case Studies of TATA INFOTECH and DCM TECHNOLOGIES are presented.

Today, in competitive business environment, it is imperative that organizations monitor organizational performance. For years this has been done primarily in terms of purely financial indicators such as Return on Investment, Return on Assets, Operating Profit Margin, Profit after Tax, Earning Per Share etc. These are too simplistic and backwardly focused to be efficient for successful modern competitive organizations.

If a company's existing performance measurement system is largely financial it may undercut its strategy especially if the latter focuses on customer service and satisfaction.

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Enhanced Competitiveness Depends on

- identifying improvement measures of performance for a given strategy.
- understanding inter-relationships of measures,
- focusing on measures which truly predict long term financial success of the business.

Income-based financial measures are better at measuring consequences of yesterday's decisions than they are an indication of tomorrow's performance. What organisations need to do is to evolve a 'Balanced Score Card,' which provides a composite set of performance measures comprising both financial and non-financial with emphasis on latter, and use it for tracking their performance. Many organisations are already doing so as part of TQM and related programs. Various leading organisations and service providers have committed substantial resources to developing non-financial measures such as defect rates, response time and delivery performance on their products, services and operations. Quality measures represent most positive steps taken to-date in broadening basis for business performance measurement. Quality awards such as Malcom National Quality Award require that a company before applying for the award must devise criteria to measure performance of its entire operation, not just its products or services.

Just as quality related metrics have made performance measurement revolution more real, so has the development of Benchmarking. Benchmarking gives managers a methodology that can be applied to any measure, financial or non-financial. It has a transforming effect on the mindsets and perspectives. An externally oriented approach of Benchmarks makes people aware of improvements that are order of magnitude beyond what they would have thought possible. In contrast internal yardstick that measures current performance in relation to prior period results or current budgets rarely have such an eye opening effect. These internally focused comparisons have disadvantage of breeding competition in market place. Therefore, organizations first have to devise a suitable performance measurement system, which is 'Balanced' in its approach and then use it for Benchmarking to gain a competitive advantage in the market.

Essentials of a Performance Measurement System are as under:

- Emphasis has to be on measurement of performance of business processes critical to the corporate goals. Processes need to be managed on a basis of measurable data.
- Performance measures will have a strong customer orientation.
- Measures are congruent with organizational priorities.
- Measures will be, broadly along six dimensions namely – effectiveness, efficiency, quality, timeliness, productivity and safety.
- Customer Satisfaction Index based on customer survey be an integral part of the system.
- Measures be generic in nature to facilitate collection of Benchmarking data.
- It is imperative that the performance appraisal and reward system is aligned with it.
- It measures effectiveness and efficiency of business processes.

Review of Literature

Initially, performance measurement research was focused on measurement problems attributed to traditional cost accounting system in manufacturing firms adopting world-class manufacturing techniques. Kaplan (1983) was among the first to point out shortcomings of traditional Cost Accounting in today's dynamic manufacturing environment. In 1989, Finch and Cox wrote an article, which challenged the assumption that inventory was an asset and illustrated how this assumption misrepresented plant and business performance. In 1989, Fry and Cox wrote an article on how traditional cost accounting systems promote local optimization of resources within a manufacturing facility. The authors called for adoption of global measures that optimize performance of the entire business. As performance measurement research, researchers began to explore a relationship between functional and business unit performance. In recent literature, a majority of useful evidence is based on case studies Bossink et al., 1982.

Different National Quality Awards generally accepted TQM framework for establishing a link between TQM and business performance. However, awards guidelines are not based on empirical evidence. This contributes to a lively debate concerning suitability of the awards, which have persisted since inception. Every individual involved in the debate has his own distinct perception of the award framework as applied to organizations. This range of viewpoints is inevitable in the absence of a scientifically established framework. Since there is no conceptual reference, people view the same phenomenon from radically different perspectives. The literature has focused on factors, which contribute to success. This is briefly summarized below:

Lu, et al., discuss the factors that contribute to success in a TQM programme, and identify improvement opportunities in the approach adopted by Australian organisations. They also give some common myths concerning TQM and its implementation. Factors likely to contribute to success are:

1. Identification of the direction of the business is mission, vision, and policies.
2. Determination of customer expectations and measurement of perceptions i.e. market research, surveys, and focus groups.
3. Formal structure to control, monitor and maintain improvement initiatives (steering committee, improvement teams).
4. Train the trainer concept (participants will train own staff eventually).
5. Quality assurance system (ISO 9000, other standards).
6. Use of external consultants.

Capon et al. provide evidence in their research that measuring and displaying results increases chances of success in a TQM programme. They take a set of six monitors based on the Baldrige award and recommend as the most effective measure to use. Their work is carried out in one of the industries of UK by forming different teams with checks on the effects of such monitors.

Kasul, et al., identify critical factors and supporting performance measurements of TQM in the manufacturing environment. Their study was only a review of literature on quality. World class manufacturing management was performed for the purpose of clarifying the critical factors and measures that constitute TQM.

Bossink et al., have reported a method for diagnosing TQM programme based on interview of managers and employees. From extensive literature research a TQM model was developed. Their model described basic element of TQM, and provided the way in which basic elements can be made operational in practice. Based on this model a quality-diagnostic instrument was developed to establish actual TQM-situation in an organisation. Two case studies have been used to test the instrument (basic element of model totality; line-staff relationship; technological perspective; cultural implantation; management commitment; upstream emphasis; market-in-approach; and integration).

Gravin (1987) has identified eight important quality dimensions. These are performance, features, reliability, conformance, durability, serviceability, aesthestics, and perceived quality.

Saraph et al.(1987), have used data collected from 162 general managers and quality managers from 20 companies in the Minneapolis/St. Paul area to identify the critical factors for quality management practice.

Black et al. (1994) have developed a firmer understanding of how TQM can be used in industry for performance measurement. Their survey was performed on a sample of managers from UK organizations. Their results provide new information concerning current quality management practices in UK industry and through empirical study they reached ten critical factors of TQM; based on the Baldrige criteria. The results generated a new model of TQM and a tool for TQM programme assessment and performance measurement.

Sinclair and Zairi (1996) highlight a case study which examined the implementation of a total quality-based performance measurement system. The organisation selected is responsible for repair and maintenance of photographic, photocopying and medical imaging equipment. The analysis revealed that there is a gap between information sought by people and what they tend to receive. It shows that personal involvement in performance measurement is vital for effective performance measurement. The performance measurement criteria mentioned are: quality, productivity, financial performance, customer satisfaction, employee factors, and environmental performance.

Lokamy et al. (1995) have carried exploratory research by examining integrated performance measurement systems of six manufacturing firms identified as world class by academic and practitioner experts. Case study methodology was used to collect detailed information on division and plant strategic objectives, performance measurement system, and performance measurement system linkage. The result of this study was the development of the principles on the above issues.

The study by Maddu et al. (1986), was an attempt to test through an empirical study, if there is any significant association between quality dimensions, (customer satisfaction, employee satisfaction, employee service quality) and organizational performance. They used middle managers' perceptions to make some inferences about the association between the variables that are compared. They validate some of claims that are largely made by quality experts and practitioners regarding the importance of TQM to organisational success. The study provided some insight into the perception of managers on the relationship between changes in quality dimensions performance items.

Venkataraman et al. (1996) focussed their study to different approaches to the measurement of business performance in strategy research and to highlight the benefits and limitations of each approach. They complement recent discussions on the operationalization of key strategic management concepts such as, organisational strategy; business-level strategies; and organisational slackness. In addition, specific data analytic issues and their implications for operationlizing business performance in future strategy research were highlighted.

The study provided a two-dimensional classification scheme highlighting ten different approaches to a measurement of business performance in strategy research.

The following is a summary of literature of Case Study findings and Performance Measurement in TQM perspective.

Table 1: Authors and Research Findings

Sl.No.	Author (year)	Findings
1.	Garvin, A.D. (1987)	Lists dimensions that improve quality performance, features i.e. reliability, conformance, durability, serviceability, aesthetics, and perceived quality.
2.	Saraph et al. (1987)	Lists eight critical factors based on literature that may be used for implementation improvement programmes of their organisation.
3.	Sink (1991)	Lists seven criteria measuring performance of an organisation and provides way as how to implement TQM.
4.	Janz et al., (1993)	Illustrates team approach as the basic building blocks of a TQM organsiation.
5.	Kolay M.K. (1993)	Total performance of an organisation is reflected not by the returns alone but also by its impact on the consumers, the national economy and the society at large in relation to its investment base.
6.	Bossink, et al., (1993)	Indicating a diagnostic study of TQM programme.
7.	Lu, E. et al., (1993)	Provides a review of progress to data of TQM in Australian organisations.
8.	Spencer, B.A. (1994)	Examines role and impact of TQM culture model in an organization.
9.	Black et al., (1994)	Lists 10 critical factors. Their study provides the initial stages for further investigation of CSFs research.
10.	Schlnerg. MV (1994)	Necessity for performance measurement as an instrument for quality management.
11.	Kasul, R.A. et al. (1995)	Lists factors that support performance measurement of TQM in manufacturing environment.
12.	Sinclair, D; et al., (1996)	Shows how personal involvement in performance measurement, is vital for effective performance measurement system, identifying the gaps of measurement system.

Objective of the Study

The objective of the study was to measure impact of total quality management on corporate performance in selected IT companies; with reference to Leadership, Strategic Planning, Customer and Market Focus, Human Resource Focus, Supplier Focus, Process Management and Information Management.

The researcher has adopted Case Study Method for the present Study.

Research Methodology

A Comprehensive questionnaire was designed to survey TQM practices being followed in selected IT related organizations. The survey questionnaire was based on Malcolm Baldrige National Quality Award Model. It focuses on a Business Excellence Model comprising of twelve key variables including seven TQM Enablers and five TQM Results.

TQM Enablers

1. Leadership
2. Strategic Planning
3. Customer and Market Focus
4. Human Resource Focus
5. Supplier Focus
6. Process Management
7. Information management

Results

1. Human Resource Satisfaction
2. Customer Satisfaction
3. Supplier Satisfaction
4. Impact on Society
5. Organization Specific Results

All twelve variables were further classified into subcategories and respondents were asked to evaluate each factor on five point Likert scale as per practices followed in their respective companies. For the purpose of survey five point Likert scale was defined as shown below.

Table 2: Relationship of Scores with Organizational Quality Maturity

5 – Point (Likert) Scale	Achievement	Characteristics	Grade	Description
5	Excellent (80% & above)	World Class Quality Performance	A	Excellent Approaches. Full Deployment. Continuous Improvement. Sustained Results
4	Very Good (60% to< 80%)	Superior Quality Performance	B	Good Systematic and Effective approaches deployed. Results Good to Excellent in most key areas. Continuous Improvement in place. Positive Improvement Trends.

3	Good (50% to <60%)	Strong Quality Implementation	C	Strong Systematic & Effective approach to Quality. Good Results & improvement Trends in most key areas. No major gaps in deployment.
2	Average (Less than 50%)	Quality Awareness	D	Awareness Exits. Need to begin to formalize quality effort. No systematic approaches. Results are week & poor.
1	Fair	Traditional Find & Fix	E	Main emphasis is on quarterly profit Maximization, Cost Control & Cost Reduction.

Case study methodology was used to collect detailed information through a questionnaire, personal and telephonic interviews. Company literature and websites of the respective companies were also used extensively. Data collected related to Company profile, TQM implementation, TQM analysis to reveal performance of the company through TQM enablers and results. Two case studies are presented to highlight performance measurement of TQM variables.

Case Study I: Tata Infotech

Analysis of TQM Variables:

A review of responses and analysis of TQM variables as per score card placed at appendix 1 indicated the following scores:

The foregoing scores envisage the following observations relating to TQM variables under study relating to corporate performance.

Table 3: Tata Infotech - Analysis of TQM Variables

Sl. No.	Variable	Numeric Score	%
1	Leadership	65/70	92.85
2	Strategic Planning	31/35	88.57
3	Customer and market Focus	48/55	87.27
4	Customer Satisfaction	40/50	80.0
5	Supplier Focus	9/10	90.0
6	Supplier Satisfaction	9/10	90.0
7	Human Resource Focus	50/60	83.33
8	Human Resource Satisfaction	65/80	81.25
9	Process Management	30/35	85.71
10	Information Management	40/45	88.88
11	Impact on Society	20/25	80.0
12	Organization Specific Results	22/25	88.0
	Overall Average Score	429/500	85.80
			GRADE 'A'

Leadership

Leadership variable having a score of 92.85 percent is indicative of a visionary, highly committed and dedicated Leadership. There is top management's personal and visible involvement in all aspects of quality management. The Leadership has successfully managed change process.

Strategic Planning

The company has a score of 88.5 percent for strategic planning. To remain competitive company sets measurable goals emerging from strategic planning that serve to align the work of every one in the organization. The strategic planning incorporates the needs of the customers after a thorough understanding of their needs. The profile of the company's strengths, weaknesses, opportunities and threats form the basis of strategies. Efforts are made to integrate quality i.e. quality planning, quality control, quality improvement with business strategies. The organizational strategies are targeted for quantified measurable improvement in quality cycle, response time and waste reduction.

Information Management

Effective Information management has improved quality of decision making. The success of the company is based on decisions taken based on facts and figures and not on the basis of intuition and gut feelings. The power of Information Technology is fully used to coordinate various activities and information access across departments through shared databases information transformation takes place rapidly and across large distances. Decisions based on shared information are very important for effectiveness of any organization. Company periodically evaluates and improves its processes with the help of Information technology to further improve overall performance and organization gives priority to quality improvement decisions vis-à-vis financial performance. The average score of 40/45 (88.88 percent) shows that the above performance is due to an excellent leverage of IT for the overall management of the organization.

Customer and Market Focus

Appropriate customer and supplier partnerships are to be promoted on the basis of added value and joint strategies. Organization regularly determines customer requirements and expectations using customer listening technology like QFD etc. Information on customer loss / gain and product performance to develop future strategies. To cement strong relationship with customers, commitments like guarantee / warranty are made simple and effectively communicated and are regularly evaluated to improve service performance and to match customer expectations. Average score of 87.27 percent clearly establishes an excellent customer focus and resultant customer satisfaction.

Supplier Focus

For success of TQM, the company gives great importance to suppliers and treats them as business partners. With the company, the process of improvement of supplier rating system, supplier training and development form an on going activity. It has emphasized QS-9000. Major suppliers work jointly in teams on issues like new product development, resource saving and energy conservation. The company shares with them resources and systems like financial and accounting system, information system, production planning system, quality system and technical expertise. An average score of 9/10 i.e. 90 percent is indicative of the achievements of the company in sharing resources for mutual benefit and improving quality, lowering cost and delivery.

Process Management

The company firmly believes that TQM success depends upon effective implementation of process management. This includes, project activity, corrective and preventive action, cost of quality, suppliers auditing, competitive bench marking and measured customer satisfaction and dissatisfaction. An effective use of PDCA circle helps in continuous improvement. An overall average score of 30/35 (85.71 percent) corroborates increasing awareness of a need for process management. The company continuously validates its product design considering customer's implied and future needs.

Human Resources

The success of TQM depends upon full use of potential of all employees. In the Survey, four areas of HR satisfaction were focused i.e. Human Resource

Satisfaction monitoring, team work, value system and individual relationships. A high score of more than 80 percent vindicate company's high performance in the above areas. HR satisfaction is continuously monitored and corrective actions taken when necessary. TQM approaches have successfully organized teamwork and engrained core values into the heart of the organization and have helped employees to have superior individual relationships.

Impact on Society

A score of 80 percent shows that organization has balanced societal responsibilities with the demands of shareholders. An effective implementation of TQM has involved all employees who value and promote their organizational culture within the community. Company has established prevention–based systems for environmental management, considers quality of life while deciding employees' service conditions. The Company effectively conserves energy and global resources/raw materials.

Organization Specific Results

A balanced view is taken by the company in respect of organization specific results to understand if the organization is becoming good or merely looking good. An assessment against this criterion confirms the organizations TQM approaches have successfully imbibed the core values into the mainstream of enterprise. A score of 88 percent presents a balanced interest of all stake-holders is being watched fully and results are encouraging.

Conclusion

Tata Infotech is a global systems integrator. The company develops and commercializes products in pioneering XML Technology. Its manufacturing division offers Customers Value-added services (EMS) and hardware embedded design services. Tata Infotech imparts concept-based Computer Education to companies, institutions and students. It has developed products in the areas of CRM (Customer Relations Management), document engineering, business excellence, finance and banking, interactive voice response and messaging etc. Tata Infotech was conferred several distinguished awards, in export performance, supplier excellence, Networking, as technology pioneer, quality in manufacturing and national award by Computer Society of India etc.

The company has emerged as most respected corporate group of India. Tata group continues to be the first movers in emerging business and technology, which meaningfully impact on India's march into the global economy. Tata Infotech is a member of Tata Council for Community Initiatives and supports Tata group's united effort directed towards community development programs. Information Technology is Tata Infotech's core competence. It takes up projects in IT education and imparts voluntarily training to teachers who in turn transfer knowledge to students. Company has donated Personal Computers and other infrastructure to support the cause of computer education.

An analysis of TQM Variables has indicated that it has an overall average score of 81.18 percent. This shows that there are excellent TQM approaches. There is a full deployment. A continuous improvement is a part of the system and there are sustained results. TATA Infotech has evolved into a company where TQM philosophy is a way life. A World Class Quality Performance is achieved.

It may be noted that TATA INFOTECH Ltd. has merged with TATA Consultancy Services Ltd., on July 19, 2005.

Case Study II: DCM Technologies

Analysis of TQM Variables

An analysis of TQM variables as per score card placed at appendix 2 indicated the following scores to monitor performance measurement.

Table 4: DCM Technologies - Analysis of TQM Variables

Sl.No.	Variables	Numeric Score	%
1.	Leadership	56/70	80

2.	Strategic Planning	30/35	85.71
3.	Customer Focus	51/55	92.72
4.	Customer Satisfaction	42/50	84
5.	Supplier Focus	8/10	80
6.	Supplier Satisfaction	8/10	80
7.	Human Resource Focus	49/60	91.66
8.	Human Resource Satisfaction	71/80	88.75
9.	Process Management	30/35	85.71
10.	Information Management	38/45	84.44
11.	Impact On Society	23/25	92
12.	Organization Specific Results	24/25	96
	Overall Average Score	430/500	86
			GRADE 'A'

A detailed review of scores and responses under various TQM variables revealed the following notable features:

Leadership

Top management leadership is having personal involvement in quality management. It is always active in providing and receiving training. It encourages core team to set high performance goals and provides appropriate resources. It is supportive; it pays due attention to the needs of the people and it welcomes suggestions by employees. It encourages incremental efforts.

Strategic Planning

Strategies are targeted for quantified measurable improvement in quality, cycle/response time and waste reduction. Commitment of resources for new facilities, processes, improvements and training is done considering long term objectives.

Customer Knowledge

Organization regularly evaluates and improves upon its processes based on changing customer expectations. It determines specific product features and relative importance using customer listening techniques like QFD etc.

Customer Satisfaction

Company has an effective system to reward and motivate customer-contact employees. It regularly evaluates and uses customer feed back to improve performance standards. Customer satisfaction level is compared with key competitors by using independent survey and in-house scientific studies.

Supplier Focus

Organization constantly tries to develop capabilities of its supplier. Company shares with its suppliers, financial resources and accounting system.

Human Resource Focus

Company makes efforts to integrate employee's job performance with key quality improvement targets and business results. Employee motivation level is high and consistently high performance is effectively rewarded.

Human Resource Satisfaction

Employees believe in superior quality and superior service, and they understand that each and every job is essential and every individual makes a difference. Company has cordial and good Industrial Relations.

Product Management

Company's product designs consider customers implied and future needs. They effectively use alternate technology, process research and testing for business process improvement.

Information Technology

Information Management system is easily accessible throughout the organization. IT and communication technology are used to spread information and to reduce time lag. IT has transformed unstructured processes into routine transactions through shared date bases.

Impact on Society

Company effectively promotes ethical conduct in all its activities.

Organization Specific Results

TQM implementation has significantly helped improve bottom-line year-after-year and has significantly reduced product cost and improved product quality.

Conclusion

DCM Technologies value proposition is to integrate human resources, development process and expertise in diverse technologies to provide solutions and services with specific emphasis on "time to market" and "cost to market."

In order to serve customers better, Company is constantly evolving newer and better solutions. They have developed IP blocks in select technologies that can be used to deploy customized solutions. Company clients include several Fortune 500 OEMs.

The Company has developed strategic relationships with various technology providers and is member of several bleeding edge technology SIGs, which enables delivery of end-to-end solutions encompassing architecture, design and support activities in ASIC, Wireless and Embedded markets.

Ever since its inception, the company has striven hard to continuously improve the quality of products and services, with a constant emphasis on delighting customers. The quality management system is a passion in the company. This has led the company from ISO 9000 certification in 1994 for its hardware and software development processes to straight SEI-CMM Level five certification in the year 2000. The company feels honoured to be in an elite group of few companies world-over.

At DCM Technology, Quality improvement and cost reduction are perennial objectives that support business missions. Rapid advances in technology and product development have been constantly threatening obsolescence of contemporary manufactures and weakening of the business. In such an environment, management has to sustain their strength and effectively compete in the race for leadership.

The product and system design is first made defect-proof from the production and operability angles. TQM makes rapid strides to avert crises in inspection and testing, quality control and assurance in production management. The bulk of the effort is transformed into verification and confidence building demonstration exercises. Design review, a specialized effort in upstream control, is applied. The basic aim is to make the design defect-free and economical.

Technology advancement and optimization exercise has been receiving global attention in recent years. R and D, engineering, quality and marketing specialists are the prime participants in the exercise. Top management at DCM Technologies is aware that investment in this area pays rich dividends. Design and analysis of experiments is a valuable tool that does not call for much investment and has yielded positive results.

TQM Variables analysis brought to light that the company has excellent approaches. Customer Focus and Human Resource Focus have yielded excellent results. Top Management Leadership displays personal involvement in quality management and is highly supportive. Resources are fully deployed. Continuous Improvement is a way of company life. There are sustained results. TQM has emerged as a company philosophy. The company is placed in Grade 'A' indicating excellent quality performance.

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Store Brands: A Perspective

Kisholoy Roy

In the past, often customers had the idea that private labels or store brands were inferior alternatives to national brands. The store brands enjoyed very little trust among the customers. However, as fallout of innovative marketing, branding and packaging tactics adopted by some of the world's leading retailers, the very idea about store brands has undergone a paradigm shift. Now-a-days, retailers are increasingly using store brands as a potent tool to create differentiation and strong customer loyalty. Private labels are not just seeking greater market penetration abroad but also in India. There are various apparel and grocery brands that have been introduced by leading retailer like Pantaloons, Spencer's and Food Bazaar in India that are appealing to regional palettes and are finding greater customer acceptance.

Store brands, also called private labels, are products that are developed by a retailer and are available for sale only through that retailer. The brand names of such products are owned by the retailer. It has been generally observed that store brands are priced 20 percent - 30 percent lower than the national brands. Moreover, if properly created, private labels can contribute handsomely to the sales revenues of a store. In the US, private labels contribute to 15 percent of sales; while in Canada and Europe, private labels account for 25 percent to 50 percent of sales revenues. The figures clearly indicate the kind of potential that private labels have as far as enhancing the financial prospects of a store is concerned.

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Store brands have been found to serve the following roles for retailers:

1. Differentiation – that reduces Price Competition
2. Customer Loyalty
3. Higher Margins
4. Consumer Value

There are certain key steps of developing a store brand:

- Benchmark, the Brand Leader
- Look-a-likes
- Category Segmentation
- Space Allocation
- Selective Listing of Brand Leader SKU's

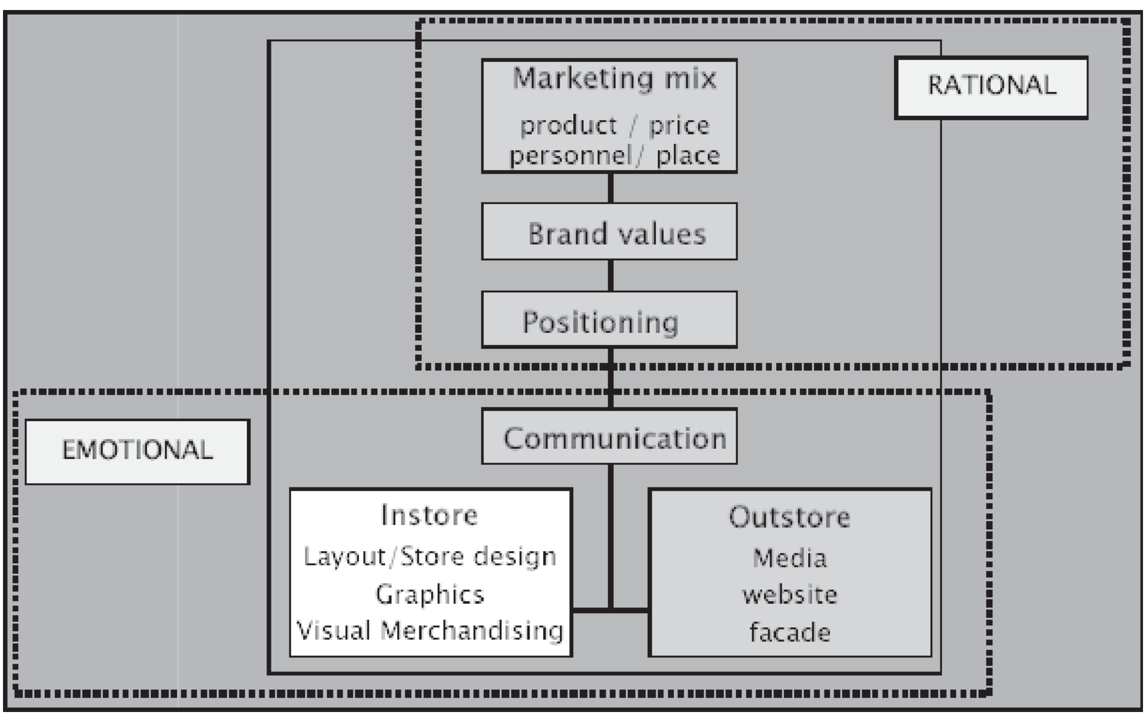
Store brands offer certain definite advantages. Firstly, through store brands, a retailer assumes greater control over the development process of a product which allows him to gain more control over his business. Private label strategy is an effective option for a retailer in case he wants to market high quality products. There are no competitors in the market for any store brand which motivates sales people to sell the product to customers. There are significant cost savings to be considered for store brands vis-à-vis national brands. Globally, private labels offer the following categories and extent of cost advantages:

Suppliers Cost Saving	:	10.6 percent
Lower Supplier Margin	:	18.8 percent
Retailers Purchase Saving	:	29.4 percent
Lower Retail Price	:	19.3 percent
Higher Retail Margin	:	10.1 percent

Store Brands: The Prerequisites

There are various key ingredients that go into the making of private labels or store brands (Exhibit-I). They can be mainly classified into types – rational and emotional. Apart from conforming to the 4Ps of marketing viz. product, price, place and promotion, any successful store brand needs to possess brand values and distinct positioning. All the above mentioned elements constitute the rational ingredients of store brand building. The key element constituting emotional ingredient is communication. A store needs to communicate to customers both within and outside the store. Media plays an important role as far as communicating with customers outside retail stores is concerned. Visual merchandising plays the defining role as far as communicating with customers within the store and creating a favourable appeal for a store brand is concerned.

Exhibit-I: The Ingredients of a Store Brand



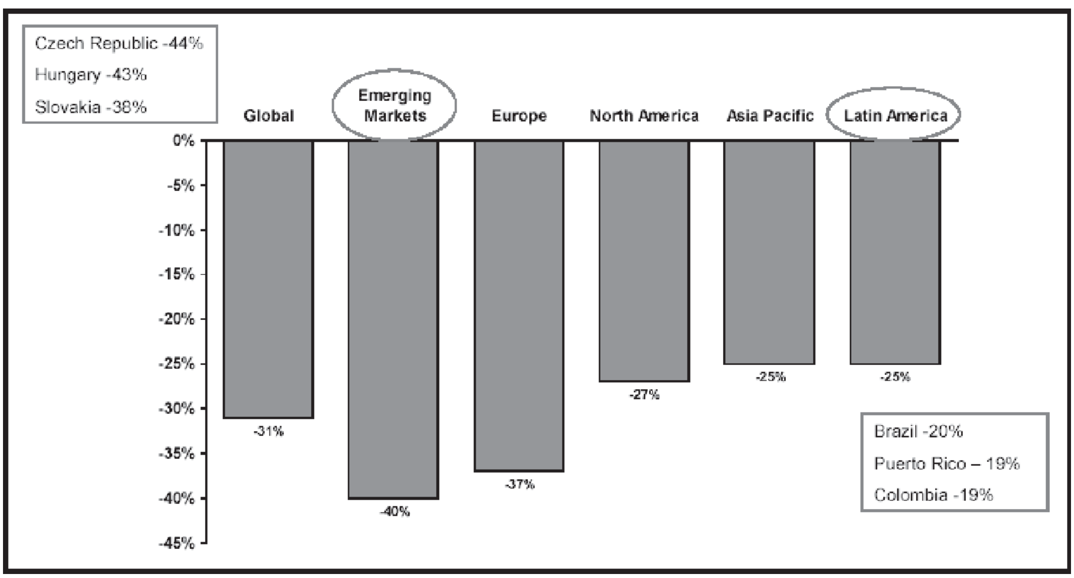
Source: http://www.presston.com/contenidos/prensa/anceco/Jos%20de%20Vries.pdf

There are certain critical elements that need to be taken into consideration by retailers, both before as well as during the introduction of private labels. The first and foremost requirement for a private label to be successful is that it needs to launch after adopting suitable targeting strategy. Generally, it has been observed that retail stores target the middle income and the high income group with their own brands as because these segments visit retail stores frequently. In other words, the 'consuming class' and the 'climbing class' are two consumer segments that offer lucrative opportunities to retailers as far as store brands are concerned.

Before a store brand is introduced, a retailer needs to identify the relevant needs and wants of customers. The needs and wants can be identified either by conducting a survey on the target customers or the information can be obtained through a few key customers. The demand gaps have to be identified and products need to be designed accordingly by retailers in order to successfully tap the demand gaps.

Besides the quality aspect another key factor that needs to be considered by any retailer before introducing its private label is the pricing strategy. Until and unless a store brand is launched to fill a significant demand gap of customers, a premium pricing strategy is not followed by retailers. The extents to which retailers reduce the prices of their private labels depend upon the product category in which a particular brand is launched. Generally, store brands are priced a third lower than national brands. However, emerging markets have the largest differential in this context (Exhibit-II).

Exhibit-II: The Pricing of Store Brands



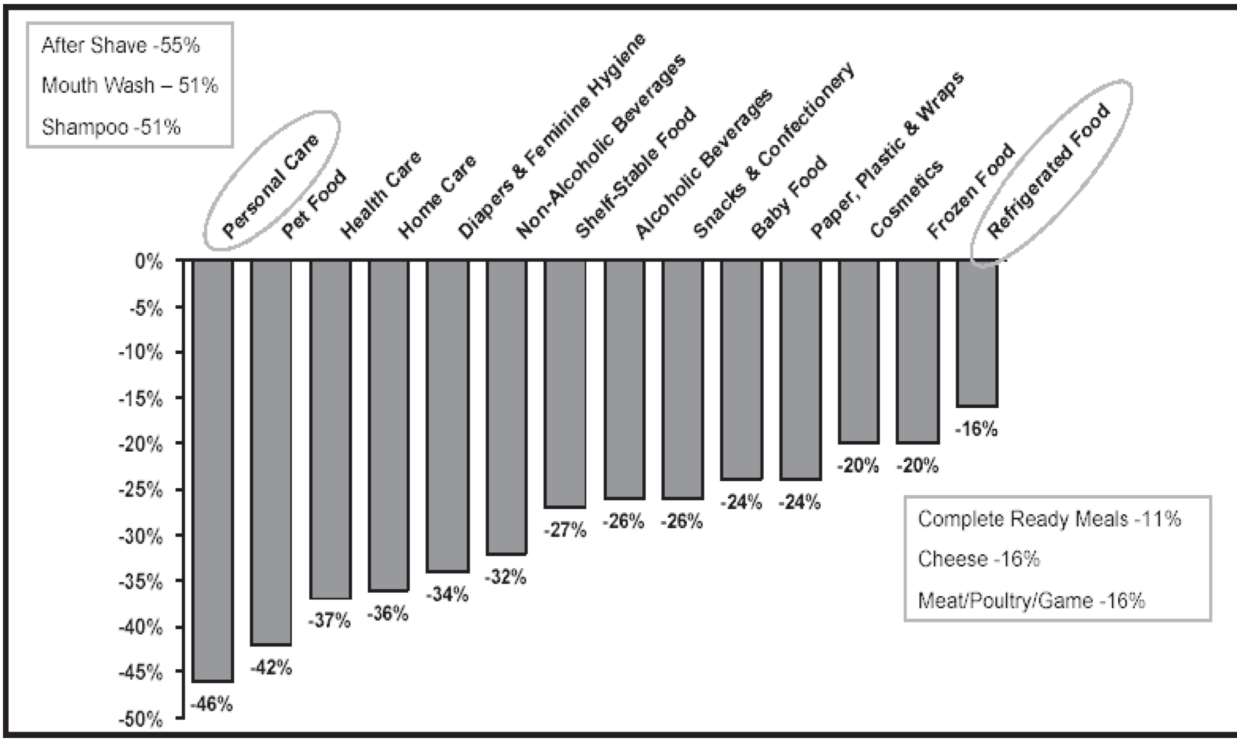
Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

Among the product categories, Personal Care products are priced the lowest compared to other product categories vis-à-vis national brands (Exhibit-III). Refrigerated foods have been found to reflect the smallest differential in this regard.

There needs to be a well-thought positioning strategy before a private label is introduced by any retailer. Generally, retailers across the globe follow two kinds of strategy while positioning their store brands. One of them is the differentiation strategy where retailer launches quality brands that differentiate them form national brands. Sam's Choice from Wal-Mart is one example which can be cited in this context. But then more than 50 percent of private label introductions are based on imitation strategy where retailers introduce a me-too product in comparison to a well recognized national brand.

Packaging is another aspect which retailers need to focus on. Since store brands are not advertised in the mass media, packaging of products should be such that when customers browse through the merchandise in a store,

Exhibit-III: Product Categories and their Respective Pricing



Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

they should be attracted to private labels due to their packaging and design. The packaging should be in tune with the tastes and temperaments of the two major consumer segments frequenting the retail stores.

The sales people on the shop floor needs adequate product training when it comes to store brands since they are the people who will be handling customer queries regarding store brands. Customers generally will have no idea about the functions of a brand until and unless they visit a store and the sales people should be so trained that they can actually act as substitutes for mass-media advertising.

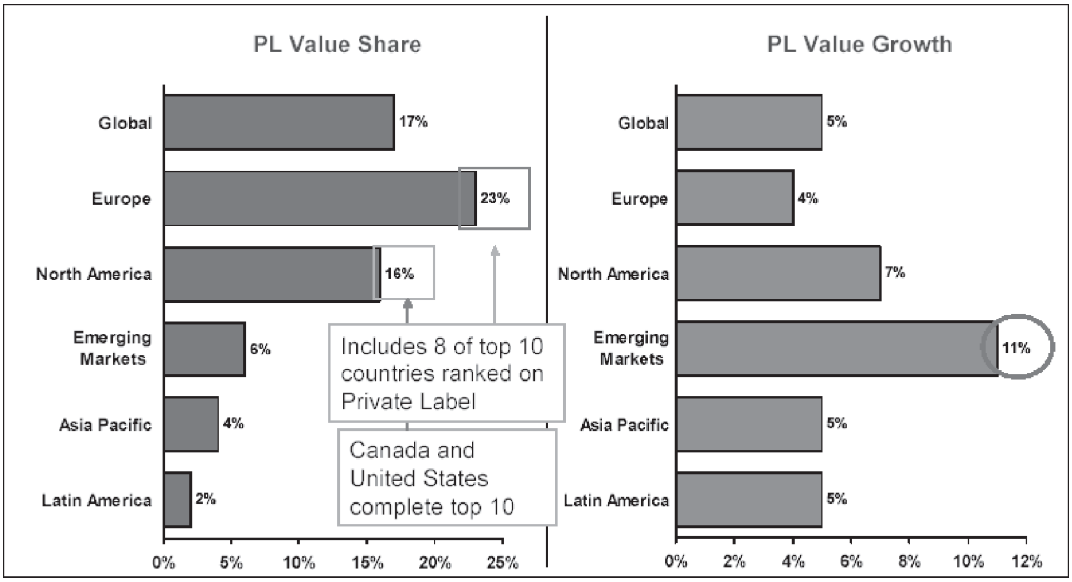
During the introduction of store brands, promotion plays a major role. Strategies like advertising, personal selling; sales promotions and publicity play a significant role in introducing a store brand to its customers. Advertising on signages, handbills, posters within the store can be some effective means to make the consumer aware about the arrival of some latest store brand. Customer feedback enables a retailer to understand the implications of launching a store brand. Such an exercise allows a retailer to make tangible changes to the store brand if required in order to improve the quality of the brand.

Store Brands: The Global Scenario

In recent times, sales of store brands outpaced manufacturer brands in two-thirds of the countries across the globe. Sales of private labels increased by five percent overall in these countries while manufacturer brands grew by just two percent. Europe has been found to occupy the 'numero uno' position as far as value share of private labels is concerned while emerging markets witnessed the fastest growth in value of store brands (Exhibit-IV).

The growing presence of discount chains and supermarkets across the globe has been the reasons for the significant growth of private labels. Store brands

Exhibit-IV: Private Label Value Share and Value Growth



Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

Exhibit-V: Discount Retailers and their Percent Sales in Store Brands

UK		Germany		France	
Safeway	47	Aldi	90	Carrefour	20
Tesco	51	Rewe	22	Auchan	16
Sainsbury	54	Tenglemann	19	Intermarche	29
Asda	54	Metro	14	LeClerc	18
Somerfield	36	Markant	6	Casino	23
National Av.	**45**		**33**		**22**

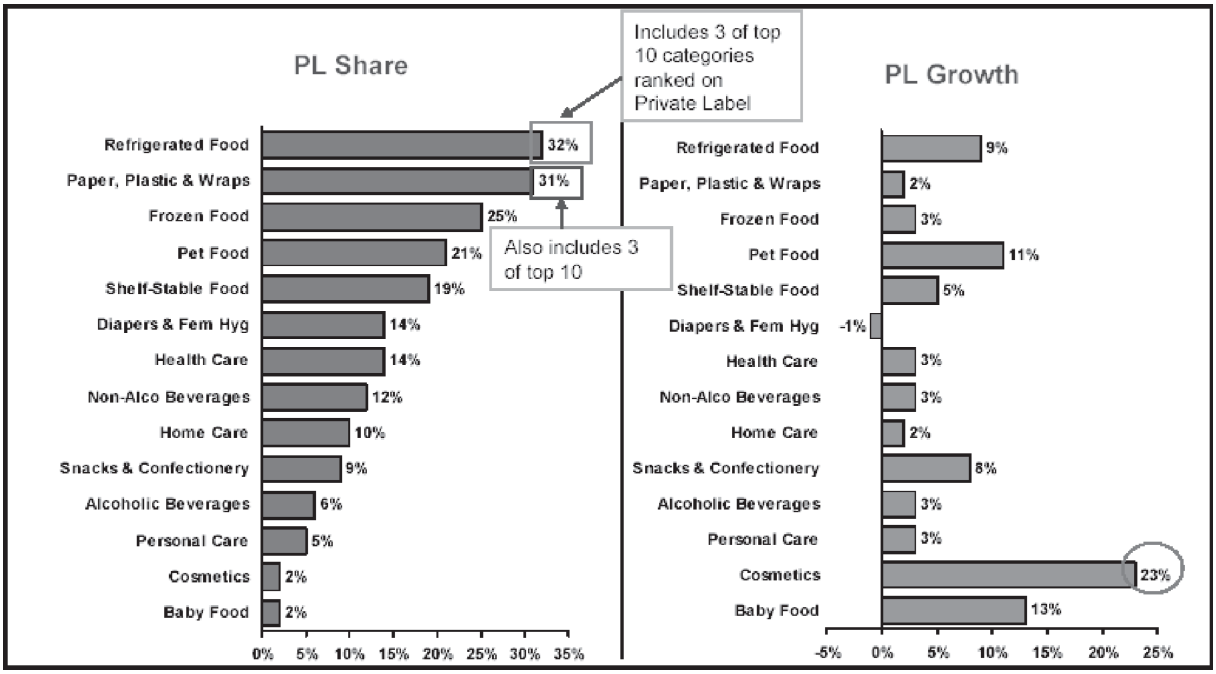
Source: http://PrivateLabel/DickBell/Oxford/2005.pdf

account for almost 95 percent of sales of Aldi, the German discount retailer. One major reason behind Europe being the leader as far as private label retailing is concerned is the presence of a large number of discount retailers in countries like Germany, France and the UK (Exhibit-V).

Among the product categories, refrigerated food is the most saleable category followed by paper, plastic and wraps. As far as baby food is concerned, consumers prefer to go with private brands the least. However, as far as growth of private labels category wise is concerned, cosmetics have been found to witness the fastest growth (Exhibit-VI).

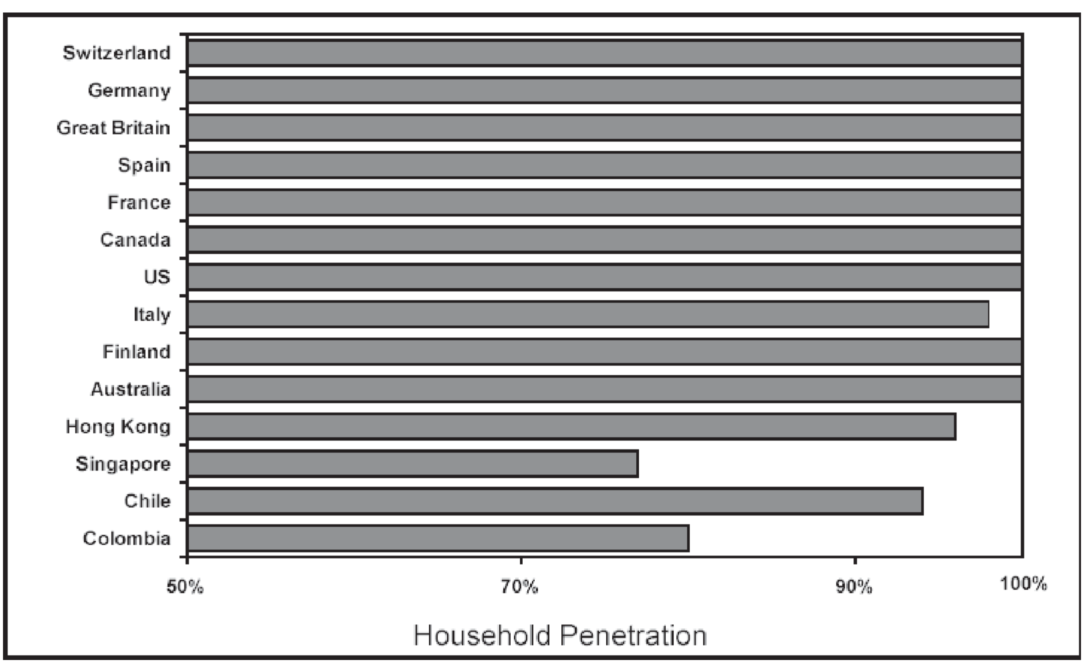
In various European countries and in the US, all consumers were found to purchase store brands. In other words, 100 percent household penetration was reported in these countries (Exhibit-VII).

Exhibit-VI: Private Label Share and Growth Rate for Product Categories



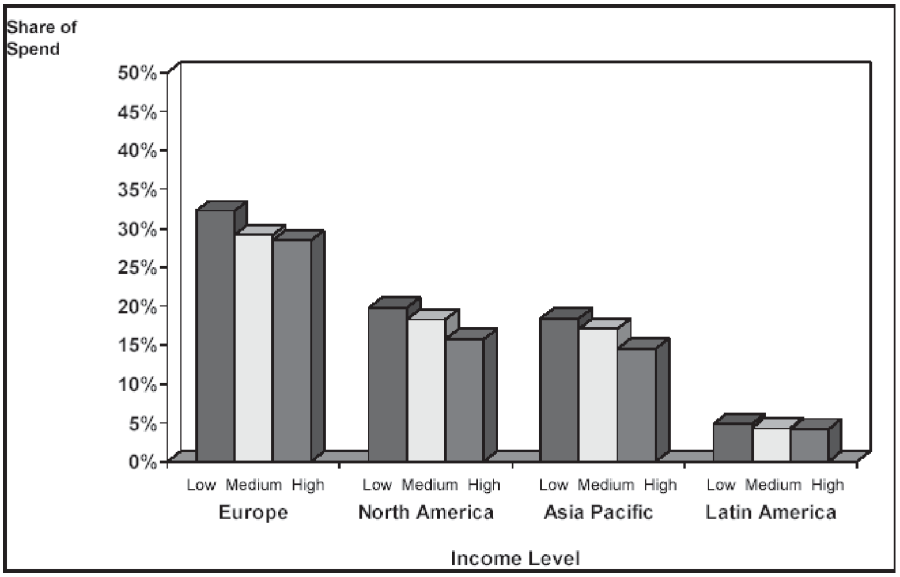
Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

Exhibit-VII: The Penetration of Private Labels



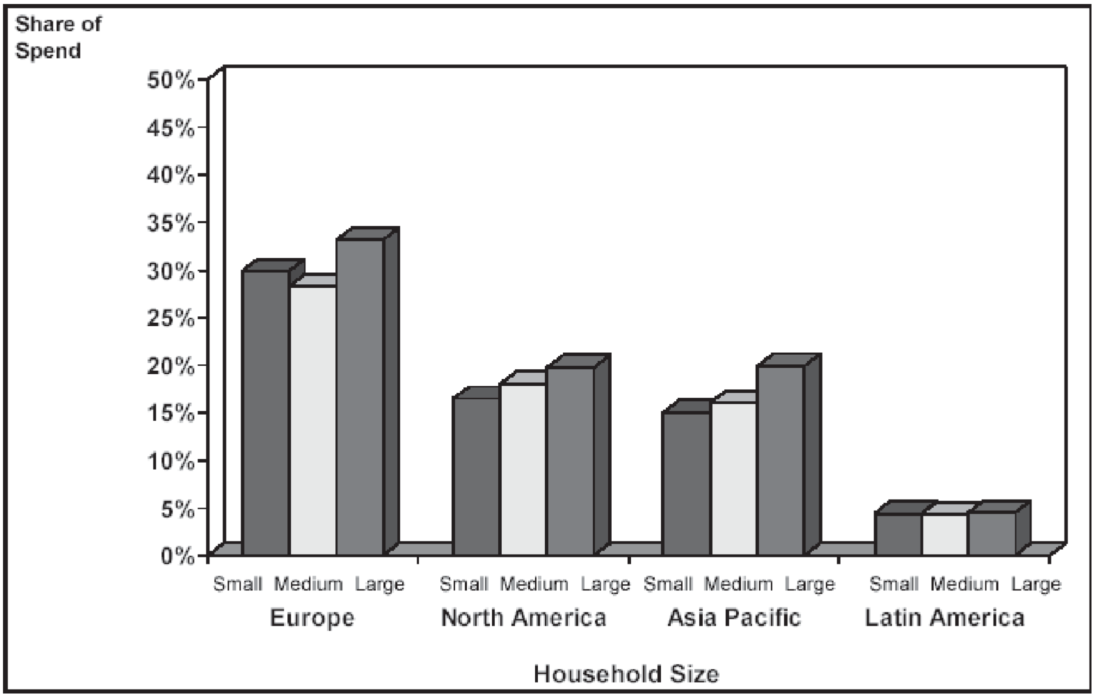
Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

Exhibit-VIII: Private Label Buying: Based on Income



Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

Exhibit-IX: Private Label Buying: Based on Family Size



Source: http://at.nielsen.com/pubs/documents/PrivateLabel_RMS.pdf

It was further observed globally that low income customers were found to go for private labels in a bigger way compared to customers belonging to the premium strata (Exhibit-VIII). It was also noted that buyers with large families were purchasing store brands more compared to nuclear families (Exhibit-IX).

Store Brands in the Indian Context

In India, store brands presently contribute to a turnover of INR 700 crores. There are various retail entities that have launched their private labels in the recent past and most of them have been either from the food or from the apparel industry. However in India, people's awareness level regarding store brands is pretty low and hence when it comes to acceptance, they shy away from store brands and want to stick with the tried and tasted national brands. The requirement thus for the organized retailers is to educate the customers and under their buying behaviour properly in order to make inroads into their perceptual territory.

Although organized retailing in India is presently at a nascent stage, it is set to take off in a big way by the year 2010. Presently, it accounts for three to four percent of the retail market in India (US$ 350 billion). India has been rated the fifth most attractive emerging retail destination and the number of organized retail outlets in India is around 12 million and this has largely been due to the corporatization of the Indian retail trade. Corporate houses like RPG, Future Group, Bharti Group, Raheja Group and Tata Group are executing ambitious plans to tap the growing potential of the organized retail market. They are not just expanding their retail operations but are also actively toying with various innovative private label strategies.

However, private labels have a long way to go before they enter the active consumption radar of Indian customers. As Nirmalya Kumar (Kumar), Director of the Aditya Birla India Centre at the London Business School puts it, "…organized retailing in India is still at a nascent stage and private labels occupy less than five percent of the total Indian market." Echoing similar opinion, Jan-Benedict Steenkamp, Professor of marketing at University of North Carolina observed, "The highly fragmented nature of the Indian retail market has limited the growth of private labels in India." Private labels or store brands offer certain definite advantages to retailers but then there are certain critical prerequisites for the creation and sustainability of store brands. The organized retailers need to adhere to the prerequisites and must also be aware of the possible challenges for the private labels in India. If properly nurtured, store brands can prove to be an effective tool in generating significant revenues for any organized retailer.

In Indian context, it has been observed that when it comes to local tastes (in food products), people prefer private labels or store brands as because they are not just reasonably priced but also cater more to local palettes. Food Bazaar did something similar with its Tasty Treat line of food products that included pickles, ketchup and jams. The move contributed to 5-10 percent of its overall sales. Speaking on the areas where store brands have an advantage over national brands, Arvind Chaudhury, CEO of Food Bazaar observed, "When it comes to local tastes and preferences, private label brands have an advantage over national brands. For example, the mustard kasundi (sauce), which is very popular in east India, is not sold by any national manufacturer, but only through small regional players. We introduced our private label brand Tasty Treat Kasundi to customers looking for a quality offering which cannot be met by small regional players."

Indian retailers in the organized sector have been found to offer quality products at competitive prices. Food Bazaar was found to launch a premium health salt and priced it like an ordinary salt. Food Bazaar followed differentiation strategy and tasted success with it as it was found to enjoy 40-45 percent market share in its category among all the Food Bazaar outlets. However, experts within the industry have different opinions regarding private labels. While some feel that private labels in India have lots of challenges to counter and hence lot of caution needs to be exercised by the entities of the organized retail sector when it comes to developing and introducing private labels, there are others who are quite optimistic about the emergence of store brands.

It has been widely felt that private labels as of now will yield returns only if they are introduced in niche demographics. Moreover, the retailers should be cautious that such introductions are not made in highly branded spaces or in high-involvement product categories. In this context, Samar Singh Sheikhwat, Vice-president marketing at Spencers Retail said, "We are developing private labels in unbranded spaces, which are currently dominated by the unorganized market. Spencers Retail has a chain of 320 supermarkets across the country, and houses 25 private labels, which contributes to a quarter of the turnover." He added, "Currently we are staying out of high involvement and high technology products as these require a high level of trust, and it will take a while before consumers accept [our] brands in these categories."

Although retailers like Food Bazaar have introduced products like Mustard Kasundi after suitably identifying a demand gap, it will be too early to forecast the consumer behaviour if and when such products are launched as extensions to brands like Maggi and Kissan. After all, these have been household brands for decades and consumers have developed a deep trust in such brands. How will store brands compete to sustain in such a scenario is a critical issue to consider?

Many experts feel that Indian consumers need to be educated so that they accept the logic behind the making of store brands. Today, most private labels are introduced in food categories like grains, peas, beans and lentils which are normally bought from local markets in less hygienic packing formats. The value addition that organized retailers are imparting to such products is hygiene which needs to be highlighted. Retailer like Food Bazaar has been observed to go a step further in educating customers and winning their trust as far as their private labels are concerned. Arvind Chaudhury of Food Bazaar observed, "Many Indians believe in the age old tradition of 'chakki atta' (making and using freshly ground wheat flour). Hence, in most of our stores we have a person grinding wheat in front of our customers to educate the shopper that the branded atta (wheat flour) we sell is also freshly ground, and packaged to retail its aroma."

With the increasing number of organized retail outlets across the country and the increase in the disposable income among the Indian middle-class, private labels do have a very promising future. The rising power of the youth in the country and their tendency to experiment with new products and services is another favourable trend for private labels. But then, for the private labels to thrive in India, the Indian organized retail industry needs to undergo a significant makeover. As Nirmalya Kumar puts it, "A key factor in the growth of private label brands in India will be retail consolidation. Developing a private label brand has huge fixed costs and to be able to absorb these costs, Indian retail chains will need to scale up."

Store Brands: Future Trends

Over the years, store brands have been found to offer customers not just cheaper alternatives but also quality products. Quality products at competitive prices are what have made customers to adopt private labels globally and in India. A trend that has been widely observed is that while some product categories have fared well as private labels, there are many categories that have not been able to make significant penetration. Perhaps people's reliance on a store brand is more for in cases where low-involvement purchases are involved. Where a product is critical to human well-being, customers rely more on national brands. A case in point is Baby Foods category.

There are many challenges facing organized retailers as far as store brands are concerned. One of the foremost challenges facing the private labels is that organized retailing in India is yet to develop in a big way. Majority of customers across the country still shop at kirana stores and they trust the neighbourhood vendor for their shopping needs. There is a very powerful bonding that exists between the kirana owners and the customers. In the present scenario thus, acceptability of private brands by a significant chunk of customers is a distant possibility. Apart from managing the psychology of customers and countering their resistance new brands, entities in the organized retail sector have various other challenges. Supply chain efficiency, overcoming high initial fixed costs and upgrading management operation with the aid of technology are some of them. The above said factors have either a direct or indirect role to play as far as private labels are concerned.

However, with the growth of organized retailing, innovative solutions will be devised for promoting store brands which in turn will witness their growth and acceptability.

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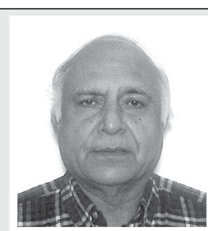
Nap Recharges Labour Force

Jitendra M.Mishra and Ram Mishra

Naps, forty winks, siestas have caught on a slow-natural acceptance of positive thinking managers. Napping has lost its taboo invoked a few years ago. Napping enhances productivity. A short nap of 40 minutes improves performance by 34 percent and alertness by 100 percent. Slowly, a number of companies have incorporated "napping" into their workplaces and some are allowing supervised siestas. Taking naps midday enhances creativity, and a 15 to 20 minute nap boosts productivity (Klie, 2007).

Long stigmatized, napping in the workplace has gained more attention due in large part to an increasingly sleep deprived population. The National Sleep Foundation (NSF) released some alarming statistics concerning overworked and under-rested Americans. While sleep experts recommend at least eight hours of sleep a night, 33 percent of adults are getting only 6.5 hours or less. Over half of the American workforce reports that absence of sleep interferes with the amount of work they get done on the job. Employees estimate that the quality and quantity of their work is diminished by about 30 percent (Fox, 2000). Workplace napping is a natural no-cost way to increase worker productivity. Most employers do not mind coffee break but if employees take a nap break they will probably get fired. In today's fast-paced society, cut-throat- global-competition, most companies frown on the idea of "napping" in the workplace. Some bosses fear napping allows workers to slack off. Others feel that it is kind of giving up. But if, the concept of napping is going through a slow evolution it is because of the concerns about



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the "bottom line," reduced productivity, profits due to sleep deprivation. Sleep deprivation is estimated to cost the U.S. businesses $18 billion annually (Paul, 1998).

Napping has been scientifically proven to boost alertness and creativity. This has interesting implications for the workplace. If managers were to let their employees take a short 20-30 minute nap during the afternoon, it could boost productivity. Today's 24/7 culture has created a sleep-deprived nation, with too many people cheating on their sleep to get through all their activities. Traditionally many companies have been against letting their employees take a nap, but many Americans are sleep-deprived and a short nap makes a lot of sense. While more companies are now allowing a short nap, they are a small minority.

Sleep and Sleep Deprivation

Shakespeare called 'sleep' the 'chief nourisher of life's feast.' But sleep is a rare commodity in stressed out America. Overachievers used to state loudly "Lunch is for Losers" and believed "Sleep is for Suckers" Additionally, social culture glorifies sleeplessness. Encouraging a culture of sleepless is nonsensical and downright dangerous. The ultimate perk for the truly successful is now eight (8) hours of sleep (Ann-Jeffrey, 1999). Nearly two thirds of adults get less than eight (8) hours of sleep at night, according to the National Sleep Foundation, Washington, D.C. And nearly one third (1/3) of Americans go with 6½ (six and a half) hours or less sleep a night during the work week.

Sleep deprivation is not just an individual health hazard, it is a public one (Czeisler, 2006). Sleepy workers are dangerous, less productive, and a major source of increased Health care costs and corporate liability. Studies of the workplace and transportation industries reveal that human error causes up to 90 percent of accidents, with inadequate sleep representing a major factor in human error (Time, 1990). In the U.S they are responsible for a fifth of all motor vehicle accidents and 8000 deaths annually. Estimates are that 80,000 drivers fall asleep at the wheel every day, 10 percent of them run off the road and every two minutes, one of them crashes (Czeisler, 2006). Sleepy employees experience potentially dangerous degrees of impairment-essentially comparable to that of substance abusers. Their impairment can jeopardize your bottom line-in virtually identical manner. And you probably employ even more of them.

Yawning through Life

Many Americans are yawning their way through life. According to the National Sleep Foundation, Washington, D.C., about 62 percent of adults have driven while drowsy during the past year and 27 percent have dozed off behind the wheels. About 40 percent of adults are so sleepy during the day that it interferes with their jobs, family duties and other daily activities (Ann-Jeffrey, 1999). In the old days of the "organization man," when moving up the corporate ladder meant working longer and staying later than your co-workers, sleeping eight (8) hours never paid off. But in today's high-tech, information driven economy, the fresher, more creative mind often wins today. Changes in technology such as e-mail, voice mail, intranets, the World Wide Web (www.), hand-held PC's, notebooks, etc., - has made the 24 hour work day possible. And the old macho idea "I work, work and I don't sleep is saying that the organization man is everything and I'm nothing doesn't cut any more. The days of the boss showing up at 6:30 a.m., and going home at 8 p.m., are really passé. "The more balanced and rested and resilient you are, the more you are going to produce" (Ann-Jeffrey, 1999). Even Madison Avenue is spreading the gospel of well-restedness. Sleep restores energy to the body particularly to the brain and nervous system. Most adults sleep from seven to eight-and-one-half hours every night. Persons who go without their normal amount of sleep lack concentration and become quick tempered. Extreme sleep deprivation (two days or more without sleep) can result in hallucinations. Sleep loss affects our communication skills by reducing the number of words in our vocabulary, both in verbal communication and in writing. This results in stilted conversation and a greater use of clichés. Learning and memory can also be impaired. Tests done on 10-14 year olds who slept about ten hours had performed far better on tests of memory, verbal fluency, and overall creativity, than students who only slept half that time. This test and many others have shown that there is a direct connection between sleep loss and the ability to concentrate and remember. Dr.Esra Tasali, assistant professor of the University of Chicago Medical Center recently reported that disrupting sleep damages body's ability to regulate blood sugar levels and that poor sleep may lead to type two diabetes (The Grand Rapids Press Jan.2, 2008).

Perhaps most dangerous of all is the fact that our motor skills are impaired because of lack of sleep. According to the National Highway Traffic Safety Administration, there is a direct connection between sleepiness and impaired hand-eye coordination. In the workplace, this impaired hand-eye coordination has contributed greatly to the $150 billion in losses in productivity, not to mention the thousands of work-related accidents each year. Some of the biggest victims of sleep deprivation are adolescent teenagers in high school and college students. 30 percent of high school students fall asleep in class weekly. There are four main effects of acute sleep loss: sleepiness, motivational aspects of tiredness, emotional changes, and alterations in attention and performance. One of the most drastic effects of sleep deprivation is that it takes an increased effort to perform the same cognitive, emotional, or physical tasks. Due to lack of refreshing sleep, everything is harder for people to do because they must focus harder. A person's sleeping patterns develop gradually. Teens require 9-9.5 hours of sleep per 24-hour period compared to 7.5-8 hours in adulthood. Newborn babies sleep for periods throughout the day and night. Four-year-olds average from 10 to 14 hours of sleep a night and ten year olds average 10 to 14 hours of sleep a night and ten-year-olds average from 9 to 12 hours. At age 60 you may need less sleep say seven hours of sleep.

Sleep Deprivation

Sleep Deprivation affects some 70 million Americans. Sleep Deprivation impairs the ability to make good judgments on the job. They become quick tempered. Sleep Deprived workers are less productive and make mistakes. It affects the ability to concentrate, remember, communicate. They do complex tasks and make sound decisions and results in deficit in performance. (Hartmann, 1973). People who go without sleep for two days or more have difficulty in thinking, hearing, seeing clearly. Lower level of employee productivity occurs, as workers want to nap rather than work. Clark states that lack of sleep impairs speech, memory and innovative flexible thinking. Sleep-deprived individuals have difficulty in finding and delivering the right words and ideas. Their communication skills are severely compromised. Sleep loss reduces the ability to cope with unforeseen changes and to revise information and adapt to new circumstances (Clark, 1998). What is the main cause of Sleep Deprivation? Tools of technological society-TV and Internet. Fifty-one (51) percent of men and 42 percent of women would go to sleep earlier if they didn't have a TV or access to the Internet said the National Sleep Foundation Survey (Dougan, 1998). The age group that is most affected by sleepless nights are those in their late teens and early 20's. One of the easiest ways to detect sleep problems is to view work patterns. "About 40 percent of adults are so sleepy during the day that it interferes with their jobs, family duties and other daily activities" (WSJ, April 2, 1999). Other little signs of sleep disorders or lack of sleep are also easily detected. If one sleeps less than six hours per night, relies on an alarm clock to wake up, or simply dreads mornings then that individual probably suffers from some sort of sleep problem.

Sleep Deprivation and Accidents

The National Transportation Safety Board estimates that out of 100,000 crashes, there were 1,500 fatalities and 71,000 injuries due to drivers that drifted off to sleep while driving. Higher rates of motor vehicle accidents occur at night, rather than during the day. Shift workers report an increased incidence of traffic accidents or near misses due to sleepiness on their commute home. Sleep Deprivation is a huge issue in the trucking industry where drivers are prone to micro sleep, where they just kind of go in and out of sleep while driving. (Dougan, 1998). Disasters such as Three Mile Island, Bhopal, and Exxon Valdez have all been associated with workers suffering from lack of normal sleep.

Another unfortunate accident that the entire nation witnessed in disbelief was the Challenger space shuttle tragedy. On January 28, 1986, the space shuttle lifted off only to explode in midair less than eight minutes after it left the ground. Key managers of that launch had been seriously sleep deprived. A Presidential Commission cited ground crew fatigue as a significant factor in causation of that disaster. The study concluded that the crew who worked on the Challenger shuttle was greatly sleep deprived and that this accident may easily have been avoided if the crew had been properly rested so as to not overlook any critical errors in the preparation of the shuttle mission. In the U.S they are responsible for a fifth of all motor vehicle accidents and 8000 deaths annually. Estimates are that 80,000 drivers fall asleep at the wheel every day, 10 percent of them run off the road and every two minutes, one of them crashes (Czeisler, 2006). Harvard Women's Health Watch indicates that sleep deprivation can cause headaches, irritability and fatigue. Sleep debt can result in weight gain, diabetes, heart disease, stroke memory loss (HWHW, 2006). Short naps may be answer to many of the above problems.

Short Naps

A new approach to increasing productivity in the workplace is to allow employees to take naps. Taking naps during the workday has been shown to increase the alertness of employees, which leads to increased productivity. Despite this positive relationship, many employers have been hesitant to allow employees to take naps. In fact, less than one percent of companies allow employees to nap on the job taking a short nap in the early afternoon has been practised for ages in China, India, Italy, Greece, North Africa and Latin America. The idea originated from the fact after eating a large meal, a chemical is released from the brain that makes one tired. 30-40 minutes was found necessary to refresh, recuperate. Born out of siesta culture and now supported by scientific research, a short-nap has proven to improve alertness and the mood. In down-under country, Australia workplaces allow naps for firemen, truck drivers, doctors and interns. It is interesting to note that David Johnson, managing director of Deloittle Consulting Company in Pittsburg feels his company has increased productivity due to "nap-room." "They love it, they lap it up" (O'Connor, 2004). At Yarde Metals branches have "nap rooms." This helps workers enhance performance, teamwork. Craig Yardee, president of Yarde feels that napping contributes to higher sales, higher productivity, efficiency and zero turnovers. Anthony and Camille of Boston University conducted a survey and found that 70 percent of 1000 respondents admitted that they nap at work and it benefits them. Gould Evans installed 10 by 12 foot "nap room" and according to its spokesperson, there is no stigma attached to those using it. Workers at Gould Evans found that napping helps them get refreshed and revitalized (Meyer 2001). Ben and Jerry Ice Cream of Waterbuy, VT has no formal napping policy but does provide make-shift napping rooms and feel that naps help workers get recharged. It appears that providing workers a place to rest is along the lines of providing them time to get snack or have a coffee break Karl Rose director of Time Warner Inc states that two beds are used by tired workers who need to catch 40 winks (Haupt,1993). Mac World and PC World has "nap rooms" and claim that workers are taking advantage of nap rooms. The nap rooms are equipped with two futons, including down comforters and curtains for privacy and "nap rooms" have never been misused (Flynn, 1994). Other companies seeing benefits from nap rooms are California consulting firms who have cut down on soda and coffee by 30 percent (Paul 1998).

Jim Lehrer of public television closes his office door every day at 12:30 p.m. for an hour's nap while an assistant holds all the calls (Markels, 1995).

Some companies have concerns about the "napping place." Common questions that rose are: Who should supply pillows, beds, alarm-clocks? etc or should the "nap place" be gender specific? Metro Naps a company which sells high-tech sleeping pods to organizations for $12,485 has some answers. The chairs recline to scientific napping position where legs are at the same level as the heart. The pods have a sound-proof dome that provides privacy and a timer wakes you up. Metro Naps sleeping pods look like a recliner that elevates a person's legs with an overhang that covers a person's head and torso, providing privacy and blocking out noise and light (Weintraub 2007). The sleeping pods not only put you in a space to nap, they put you in a more fatigue reducing position. Vancouver hospital has three Metro-Nap-pods which they monitor the usage and the effects of naps in the workplace.

Procter and Gamble and Cisco Systems are among the 30 plus clients. Sligh Furniture Co., Holland, Michigan offers a $2700 File-A-Way-Desk Bed that contains two twin size mattresses (Markels, 1995). Companies in Japan are investigating using napping as a rejuvenation tactic for their employees. Japan Matsushita Electric Co. has invested $4700 in relax and refresh chair that has a built-in-massager.

Napping has been practised in countries like Mexico and Spain for ages (Haupt, 1993).

In other countries, it is catching on as well. In Australia, the government has sanctioned napping rights for firemen, truck drivers, doctors and interns on long shifts (O'Connor, 2004). Studies suggest that the solution to sleep deprivation is to take a short nap 20-30 minutes. Napping does help employees to be more alert, recharge batteries, perform better and lead to higher efficiency and productivity (National Sleep Foundation, 2007).

The Importance of Sleep

How much sleep did you get last night? Studies by sleep research centers indicate that most adults need approximately eight hours of continuous sleep to function at full efficiency. However, one-third of adults only average six hours or less per day (Frazee, 1996). Unfortunately, many adults may not even recognize how much sleep they need. Dr.Tasali, of the University of Chicago Medical Center, recently reported that poor sleep may lead to type two diabetes (The Grand Rapids Press Jan.2, 2008)

It is recommended that the average adult get 7-8 hours of sleep a night, but 63 percent of adults do not get the recommended amount of sleep per night (Hellmich, 2004). Teens require 9-9.5 hours of sleep per 24-hour period compared to 7.5-8 hours in adulthood. Newborn babies sleep for periods throughout the day and night. Four-year-olds average from 10-14 hours of sleep a night and ten-year-olds average 9-12 hours. At age 60 you may need less sleep than 6 hours of sleep per night.

A person's sleep pattern develops over time. Experts seem to agree that there are individual genetic factors so there may be variations in sleep requirements among individuals. However, there is general agreement among experts that each individual has to get whatever amount of sleep that is required. The next section of our paper will focus on the importance of sleep.

Why is sleep so important?

Sleep is a process during which a person rests body and mind. Sleep restores energy to the body, particularly to the brain and the nervous system (World Book, 1998). There are two kinds of sleep distinguished by the presence or absence of rapid eye movement (REM). During REM sleep brain waves are faster and less organized and eyes can scan back and forth under the lids. REM sleep is good for improving creativity and perceptual ability. During non REM sleep, brain waves become slower and more synchronized and are good for restoring muscle function (HWHW, 2006).The purpose of sleep is rest and recovery from the "wear and tear" of wakefulness. The wear and tear that results from not getting the required amount of sleep prevents employees from being as capable as they could be during the course of the work day. Employees might find concentration and being motivated to work difficult. It is hard to pay attention when you feel sleepy. Two-thirds of U.S. workers (an estimated 36 million Americans) believe that sleeplessness harmed their job performance. A byproduct of sleeplessness may be illness, depression, forgetfulness, irritability, negative attitudes, and impaired judgment and slowed reaction time (Simmons, 2004). The problems associated with sleeplessness have been compared to substance abuse. Sleepy workers are dangerous, less productive, and a major source of increased health-care costs and corporate liability. Sleeplessness has been found to be a factor in ninety percent of accidents resulting from human error (Toufexis, 1990).

Concern with the negative effect of sleeplessness is paramount in aviation, nuclear power, mining, military, healthcare, transportation and other areas where employees have to perform over extended periods (Driskell and Mullen, 2005). The National Sleep Foundation estimates that over-tired employees lacking sleep cost businesses $18 billion a year (Pappas, Daurat and Gordon, 1998). Despite the costs associated with sleeplessness for business, there is a stigma in America associated with sleeping at work; after all, our 24/7 culture requires service on demand. Between cell phones and e-mail there is no escape. However, as stated earlier, there are companies that do not follow the anti-napping norm and allow their employees to nap during the workday. As stated earlier, Nike, Spring, Deloitte Consulting and Gould Evans are some of the prominent companies that have allowed their employees to take naps.

Workplace Napping

Workplace Napping is an innovative no-cost method being introduced in some areas. Businesses with nap rooms are experiencing an increase in production and are seeing less human errors than previously. Napping has considered an indulgence, perhaps allowed to idiosyncratic greats like Albert Einstein, Thomas Jefferson. But even Churchill took brief naps. He once scolded his colleagues when he was caught taking a nap, "Don't think you will be doing less work because you sleep during the day. That is a foolish notion held by people who have no imagination." Many feel that napping also seems to be leading to increased job satisfaction and better health for employees of the business. By napping 15-20 minutes, you can reestablish creativity and problem solving skills. (Mulrine, 1998). And many companies have found that since they created companies nap room, money spent on coffee and soda has declined by 30 percent. Nova corp. found that 25 percent of workers, who took a nap, did report a feeling of more alert and less stressed at night (Elash, 1998). So nap is inching its way into corporate culture. Many companies have found what employees really need is nap room. Martin, Professor of Physiology at Harvard Medical School recommends that companies establish napping policies, because sleep deprivation can cause short-term memory loss, loss of alertness etc.

Napping in America Today

Employees interested in taking a nap while working are also receiving assistance from office furniture manufacturers. Manufacturers are designing furniture—for instance office chairs—with back rests to enhance comfort if the employee wants to take a nap (Baker, 2002). Baby Boomers are given credit for creating this more relaxed and comfortable work environment. They were the first to wear jeans to school and now they wear them to work. Baby Boomers created a change in America's attitude toward work. Although America continues to focus on work and achievement, more employees today are concerned with balancing work along with family and other activities. Work is important but it isn't everything. There is research that indicates that younger individuals are more likely to make napping a normal part of their daily routine. For instance, 38 percent of adults in the U.S. on average nap at least once during the work week. However, 41 percent of 18-29 year olds nap during the work week while 35 percent of 30-64 year olds nap during the work week. Younger individuals seem to have a different attitude toward napping (Vangen, 1999).

There are studies that suggest that naps do improve employee performance and productivity. A study from Harvard University indicated an hour-long nap at work resulted in computer programmers writing better code. The study suggested that the brain uses sleep to restore overused brain circuits and consolidate the memories of actions and skills learned during the day. Harvard concluded that any amount of sleep, even a short nap less than an hour, appears to improve our ability to process information and to teach (Jackson, 2003). The Harvard researchers indicated that 15-30 minute naps revive and refocus sluggish employees, thus improving their productivity and overall job performance. The researchers concluded that for some employees, such as pilots, truck drivers and night shift labourers, taking a nap should be mandatory (Barnes, 2004). Despite the developing evidence, American employers continue to resist napping in the workplace. However, this is not the case when one looks at businesses throughout the world and other cultures.

Napping is an established part of the culture in many countries such as India, Italy, Mexico, Spain, Germany, Japan, and Portugal. For example, Spaniards take *siestas*, Germans enjoy *ein Schlafeen*, Japanese professionals like to *power snooze*. Naps are a time-honoured part of many cultures and between 40-60 percent of the world's adult population naps. The actual Spanish word *siesta* is derived from the Latin word *sexta*, which stands for the sixth hour or the middle of the day. Argentinean workers begin work at eight in the morning and work until noon. Then they have their *siesta*. Argentinean workers are not required to return to work until four-o'clock and finish their day at eight in the evening.

Despite the evidence that suggests sleeping at work improves performance and companies throughout the world allow it, there continues to be a stigma attached to napping at work in America. In fact, the stigma against napping in America may be increasing or getting stronger. There is research that suggests that employers are less likely to permit napping at work today. For instance, research that focused on shift workers (e.g., call center workers) reported that in 2001, 48 percent allowed employees to nap at work on their breaks and in 2002, 44 percent allowed it. By 2003, however, only 21 percent of shift workers were allowed to nap at work. The study also found that more employers—52 percent in 2003 compared to 38 percent in 2002—were punishing workers for catching a few Z's at work, even when they were on break (Shellenbarger, 2003).

Famous Nappers

Some of the famous nappers are Winston Churchill, Albert Einstein, Thomas Jefferson, Brahms, Napoleon, Stonewall Jackson, Salvador Dali, and George W. Bush. Winston Churchill always loved his midday naps while Brahms napped at piano. Painter Salvador Dali napped in his chair with a spoon in his hand and when the spoon fell and made noise he went back to work(Shumard, 2001). Napping has been used as a battery charger. Society should have an open-minded attitude allowing for a planned workplace napping.

Conclusions and Recommendations

In today's competitive global society, cut-throat-global competition, the importance placed on productivity and efficiency cannot be overlooked. Over half of the American workforce reports that sleepiness on the job interferes with the amount of work they get done. Employees estimate that the quality and quantity of their work is diminished by about 30 percent (Fox, 2000). Workplace napping is a natural no-cost way to increase worker productivity. Often management will have an ad hoc napping policy where managers allow employees to take naps at their desks. We aren't fan of ad hoc policy. First they are uncontrolled. We don't refresh and rejuvenate. Workplace naps should help us refresh and rejuvenate. Naps, if they are brief-less than a half-hour, are effective in restoring performance (Czeisler, 2006). A 30 minute nap in the afternoon would be ideal. You don't want to get into deep sleep because you need to be alert. Short nap will allow you to be productive right after the nap. Organizations can invest to buy a pod or rent one or they can go simple cost-efficient way of laying down on yoga met or having a recliner chair somewhere away from the work station. The evidence suggests that naps improve an employee's performance and overall productivity. American businesses will be wise to review the approach taken by businesses throughout the world regarding employees' napping at work. We feel that implementation of napping will be beneficial in aviation, nuclear power, mining, military, healthcare, transportation and other areas where employees have to perform over extended periods but not in retail industry where customer service is a must at all times. 24/7 culture requires service on demand. Companies can think of implementing napping policy on a trial basis. A good sleep policy is a smart business strategy for American companies. Supervisors and middle level managers should undergo training in sleep and fatigue management. NSF (National Sleep Foundation) reports

U.S. companies lose about US $18 billion a year because employees are not functioning at their best (Traves, 2005). Detroit News attests that, "Daytime snoozing is an important part of "full spectrum fitness." Workplace napping is a natural no-cost way to increase worker productivity.

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Service Quality for Patient's Loyalty

Vanniarajan T.

India's waxing concern in health care service since globalisation and liberalization policies, is laudable. The awareness on health care services is high. The establishment of patient's loyalty among the health care centres is a very difficult task. Service quality is a powerful tool to establish the patient's loyalty to health care centres. The present study analyses the impact of service quality in health care centres with reference to patient's loyalty at three different dimensions: physician's behaviour, supportive staff, atmospherics and operational performance.

India has been witnessing an increasing concern regarding the quality of health care services especially after globalisation and liberalization policies. Due to urbanization and improved standard of living of the people, the awareness on health care services is high. The consumer's expectation on the quality in health care services grows at a faster rate. Service quality has been shown to be an important element in the consumer's choice of hospitals (Lynch and Schuler, 1990). Quality in health care is defined as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs (Korwar, 1997). Health care service quality is giving patients what they want (patient quality) and what they need (professional quality), and doing so using fewest resources, without error, delays and waste, and within higher level regulations (management quality; Overtreit, 1992). The health care deals with different services such as hospital services, diagnosis services, physician's consultancies and some other emerging fields. In the present study, the focusing services are all health care services together.

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SERVQUAL and SERVPERF Model: An Overview

The SERVQUAL model was originally developed by Parasuraman et al. (1988) and later redefined in 1991 as a multi-dimensional scale to capture customer perceptions and expectations of service quality which involves the calculation of the differences between expectations and perceptions on a number of specified criteria (Brown et al., 1993). SERVQUAL highlights the major quality requirements of delivered service in five dimensions namely Reliability, Responsiveness, Assurance, Empathy and Tangibles (Zeithaml and Bitner, 2003; Zeithamal, 1990; and Buttle 1994).

The SERVQUAL model developed by Cronin and Taylor (1992), and Babakas and Boller (1992) received a significant conceptual and empirical support in services research. The study of Brady et al., (2001) replicated the superiority of SERVPERF model for measuring service quality. The strategic value of using SERVPERF model can be better addressed through a focus on specific dimensions of service quality, especially with respect to their relevance to satisfaction and outcome variable (Smith 1995). The SERVPERF model measures the perception on various dimensions of service quality. In the present study, the SERVPERF model has been used to measure service quality.

Literature Review

The research literature on service quality has thrown numerous models by different researchers across the world. Lehtimere and Jukka (1985) present a holistic view to measure, monitor, and operationalise customer perceptions of service quality in health care organisation. John (1989) opined that there are four dimensions of health care service quality: the cure dimension, the caring dimension, the access dimension, and the physical environment. Babakus and Glynn (1992) evaluated SERVQUAL for its potential usefulness in a hospital service environment. Sharma and Chahal (1999) identified the need of evaluating the service quality of health care service. Bowers et al., (1994) studied the five common attributes of quality from SERVQUAL model. Caring and communication were found to be significant. Three of the generic SERVQUAL dimensions were found to be significant to patient satisfaction: empathy, responsiveness and reliability.

Takeuchi and Quelch (1983) assessed the service quality of health care services by six dimensions: a) reliability, b) service quality, c) prestige, d) durability e) punctuality and f) ease of use. Walters (2001) judged the quality of service in health care organisation by reliability, availability, credibility, security, competence of staff, understanding of customer needs, responsiveness to customers, courtesy of staff, comfort of surrounding, communication between participants and associated goods provided with the service. Griffth and Alexander (2002) compared the service quality rendered by private and public hospitals in UAE. Rohini and Mahadevappa (2006) stratified the hospitals on the basis of speciality-non-speciality, Government-private; and missionary, ISO-9000 certified and ISO-9000 non-certified. Abu Naser et al., (2006) analysed the customer's expectations and perceptions towards health services through SERVQUAL model especially in Diagnosis services at Bangaladesh.

The literature review identifies a research gap discussing service quality of health care organization and the patient's loyalty in India. To fill this research gap, a service quality perception study was undertaken in two corporate and non-corporate hospitals in Madurai, Tamilnadu.

Research Objectives

The specific objectives of the study were to determine

- the important service quality factors in the health care organisation,
- how well the patients perceive the service quality factors of health care organisation,
- the patient's loyalty on the health care centres, and
- the impact of service quality factors on the patients loyalty on the health care organisation.

Data Collection and Generation of Scale Items

The study is based on the primary data collected through the construct which was tested and refined at three different stages (Sharma and Chahal, 2003). A standardized questionnaire was developed after the discussions on the aforesaid research problem with the panel of patients, academic and medical experts. The items in the construct used, take care of basic and integral components of health care services. Besides the demographic profile, the tested questionnaire consisted of 34 items on service quality pertaining to the components of health care delivery system designed within the framework of a Likert five point scale (Chahal, Hardeep, 2003; Bhat Ramesh, 1999; Sharma and Chalal, 1995; Youseef and Boviard 1995; and Lein and Tang, 2000). The finalized questionnaire was initially subjected to necessary alternations by administering a pre-test among 50 randomly selected patients in corporate and non-corporate health care organisation equally. The final list of service quality variables given in Table 1.

Table 1: Variables Related to the Service Quality of Health Care Service

Sl.No.	Variables	Sl.No.	Variables
1.	Physician knowledge	18.	Helpfulness of supportive staff
2.	Caring of supportive staff	19.	Water facility
3.	Natural lighting at hospital	20.	Physician's co-operation
4.	Well equipped operational centre	21.	Prompt service
5.	Initial Diagnosis of Physician	22.	Delivery of staff's service to the patients' expectation
6.	Working hours	23.	Polite attempt by support staff
7.	Querries handling support staff	24.	Operation theatre facility
8.	Cleanliness in the hospital	25.	Helpfulness of physician
9.	Handling querries by physician	26.	Power facility
10.	Conducive internal environment	27.	Regularity in attending patient by staffs
11.	Reliability of supportive staff's service	28	Welcoming the suggestions
12.	Satisfactory functioning	29.	Bathroom facility
13.	Work of physicians according to patient's expectation	30.	Physicians check-up
14.	Neatly dressed staffs	31.	Bedding management
15.	Grievance redressed system	32.	Active participation of supportive staff
16.	Careful understanding by supportive staff	33.	Physicians honest
17.	Personal attention of physician	34.	Implementation of the suggestions

Sample Design

Keeping in mind, the representative character of corporate and non-corporate health care organisations' services, the health care organizations located at Madurai City, Tamilnadu were purposively selected. In total, 100 each patients who visited the two types of health care centres during January-March 2007 were contacted for data collection. The appropriate statistical tools were applied with the help of Statistical Package for Social Sciences.

Results and Discussion
Descriptive Analysis

The important sex among the patients in the present study is male which constitutes 70.50 percent to the total. The patients from urban Madurai constitute 68.5 percent to the total. The important level of education among the patients is graduation and above graduation which constitutes 34.00 and 29.00 percent to its total respectively. The important annual income categories among the patients are below Rs.2.00 lakhs and Rs.2.0 to 3.0 lakhs which constitute 37.50 and 35.00 percent to the total respectively. The important nature of patient among the patients is in patients which constitute 57.00 percent to the total. The details of demographic profile of patients are given in Table 2.

Service Quality factors in Health Care Organisation

For determining the service quality factors, principal axis procedure of factor analysis in SPSS was used. Initially, the data reliability for factor analysis has been conducted

Table 2: Demographic Profile of Respondents

Sl.No.	Profile variables	Male	Female	Total
	A. Location			
1.	Rural	39	24	63
2.	Urban	102	35	137
	Total	141	59	200
	B. Level of Education			
1.	High school and below	57	17	74
2.	Graduation	44	24	68
3.	Above graduation	40	18	58
	Total	141	59	200
	C. Income			
1.	Below 2,00,000	56	19	75
2.	2,00,000-3,00,000	49	21	70
3.	Above 3 lakhs	36	19	55
	Total	141	59	200
	D. Nature of Patient			
1.	In-patients	91	23	114
2.	Out-patients	14	17	31
3.	Minor operation	22	13	35
4.	Major operation	14	6	20
	Total	141	59	200

with the help of Kaiser-Meyer-Ohlin measure of sampling adequacy and Bartlett's test of sphericity. Measure of sampling adequacy is a statistic which indicates the proportion of variance in the variables, which is common variance, i.e., which might be caused by underlying factors. High values (Close to 1.0) generally indicate that a factor analysis may be useful with the data. If the value is less than 0.50, the results of the factor analysis probably could not be very useful (Hair, et al., 2003). Bartlett's test of sphericity indicates whether the correlation matrix is an identity matrix, which would indicate that the variables are unrelated. The significance level gives the result of the test. Very small values (less than 0.05) indicate that there are probably significant relationships among the variables. A value higher than about 0.10 or so, may indicate that the data is not suitable for factor analysis (Rao and Saikia, 2006). In the present study, the KMO measure of 0.8017 and significance of chi-square at zero percent level satisfy the validity of data for factor analysis. The extracted service quality factors of health care organizations are shown in Table 3.

Table 3: Service Quality Factors in Health Care Organisation

Sl.No.	Service Quality Factors	Number of Variables in each SQF	Reliability Co-efficient	Eigen Value	Percent of Variation Explained
1.	Physician behaviour	9	0.8687	4.3684	20.68
2.	Supportive staffs	9	0.7903	3.9033	18.84
3.	Atmospherics	8	0.8144	2.5642	17.68
4.	Operational performance	8	0.7639	2.2609	15.36
KMO measure of sampling adequacy: 0.8017			Bartletts' Test of sphericity: Chi-square: 114.43*		

*Significant at zero percent level.

This factor rotation resulted in four service quality factors (SQF) explaining 72.56 percent of the overall variance. The most important SQF is physican behaviour since its Eigen value and the percent of variation explained are 4.3684 and 20.68 percent respectively. It consists of nine service quality variables with the reliability co-efficient of 0.8687. It is inferred that the included nine SQ variables explain the physician behaviour to the extent of 86.87 percent. The next two SQFs are supportive staff and atmospheres since its Eigen values are 3.9033 and 2.5642 respectively. The supportive staff consists of nine SQ variables with the reliability co-efficient of 0.7903 whereas the atmospherics consist of eight SQ variables with the reliability co-efficient of 0.8144. The last factor narrated by the factor analysis is operational performance with the Eigen value of 2.2609. It consists of eight SQ variables with the reliability co-efficient of 0.7639. The factor analysis results in four important SQFs namely Physician Behaviour, Supportive Staff, Atmospherics and Operational Performance for further analysis.

Status of Service Quality Factors

The perception on each service quality factor among the patients is drawn from the mean score of perception on all SQ variables involved in each service quality factor. The perception on SQ factors in two different health care organization is calculated separately. The 't' test has been applied to find out the significant difference among the patients' perception on corporate and non-corporate health care centres (HCCs). The results are shown in Table 4.

Table 4: Perception on Service Quality of Health Care Centres

Sl.No.	Service Quality Factors in Health Care Organization	Mean score in		t-statistics
		Corporate HCC	Non-corporate HCC	
1.	Physician behaviour	3.9289	2.9127	2.3089*
2.	Supportive staff	3.6141	2.5068	2.1708*
3.	Atmospherics	3.7306	2.6644	2.4172*
4.	Operational performance	3.8187	2.6033	2.5991*

*Significant at five per cent level.

The perception on SQFs in corporate HCCs is identified as higher among the patients compared to the perception on SQFs in non-corporate HCCs. The highly perceived SQFs among the patients in corporates HCCs are Physician Behaviour and Operational Performance since the respective mean scores are 3.9289 and 3.8187. Among the patients in non-corporate HCCs, these SQFs are Physician Behaviour and Atmospherics since their mean scores are 2.9127 and 2.6644 respectively. Regarding the perception on SQFs the significant difference among the patients in corporate and non-corporate HCCs is identified in all SQFs since the respective't' statistics are significant at five percent level.

Patient Loyalty

The service quality is a mean of achieving organizational success in the competitive market since it is one of the non-price strategies available to the service organizations. The customer's relationship management and customer's loyalty are the two sides of a coin. To sustain patient loyalty in an era of heightened competition, the quality of interpersonal experiences with staff, the operational quality of the hospitals and overall satisfaction and quality of the health care services are highly essential. The patient loyalty is more important since the cost of acquiring new customer is greater than the cost of retaining existing customers (Jain and Gupta, 2004). In the present study, the performance of the HCCs is measured by the patient's loyalty. The patient's loyalty is measured by UPAS (Using the Provider Again for the same treatment), UPAD (Using the Provider Again for a Different Treatment) and RPO (Recommending Provider to Others). The above said three measurements are observed from the patients with five each related statements measured at five point scale (Hardeep Chahal, 2007). The reliability test has been administered to findout the validity of the statements to each measure. Since, all the three reliability co-efficients support the validity of the instrument; the mean score of the five statements have been treated as the score of the UPAS, UPAD and RPO respectively.

The mean score of three measures of patient loyalty has been computed to exhibit the level of loyalty among the patients on corporate and non-corporate HCCs. The 't' test have been applied to test the significant difference among the two HCCs regarding the patients loyalty. The results are shown in Table 5.

The higher patient loyalty has been identified on the corporate HCCs since the mean score on UPAS, UPAD and RPO are relatively higher in Corporate HCCs. The significant difference among the two group of HCCs have been identified regarding the three measures of patient loyalty since the respective 't' statistics are significant at five percent level. The lesser mean difference is noticed in the case of Using the Provider again for the same treatment. It infers that patient loyalty on corporate HCCs is higher in the case of UPAD and RPO.

Table 5: Patients Loyalty on Health Care Centres

Sl.No.	Measures of Patients Loyalty	Mean Score in		t-Statistics
		Corporate HCCs	Non Corporate HCCs	
1.	UPAS	3.6894	3.0063	1.9806*
2.	UPAD	3.9193	2.5674	3.0782*
3.	RPO	4.2176	3.1718	2.8674*

*Significant at five per cent level.

Impact of SQFs on the Patient Loyalty on HCCs

The perception on SQFs of HCCs may have its own impact on the patient loyalty on HCCs. It is highly imperative for the policy makers to formulate suitable strategy to enrich the patient loyalty at the HCCs. Hence the present study has made an attempt to analyze the impact of perception on SQFs on the patient loyalty with the help of multiple regression analysis. The fitted regression model is:

$$Y = a+b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Whereas

Y = UPAS or UPAD or RPO
X_1 = Score of perception on physician behaviour
X_2 = Score of perception on supportive staffs
X_3 = Score of perception on atmospherics
X_4 = Score of perception on operational performance

b_1, b_2, b_3, b_4 = Regression co-efficients of independent variables

a = Intercept and
e = error term.

Impact of Service quality factors on Using the Provider again for Same Treatment (UPAS)

The impact of perception on SQFs in HCCs on the patient loyalty especially (UPAS) have been examined with the help of multiple regression analysis. The ordinary least square method has been followed. The fitted regression model is:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Whereas

Y – Score on UPAS
X_1 – Score on perception on Physician behaviour
X_2 – Score on perception on supportive staff
X_3 – Score on perception on atmospherics
X_4 – Score on perception on operational performance

b_1, b_2, b_3, b_4 – regression co-efficient of independent variables

a – Intercept and
b – error term

The below table reveals the regression co-efficients of service quality factors on USAS among the patients in corporate and non-corporate HCCs. In the corporate HCCs, all the service quality factors have a significant and positive impact on USAS. A unit increase in the perception on physician behaviour, supportive staff, atmospherics and operational performance results in an increase in USAS by 0.4384, 0.3968, 0.2911 and 0.4506 units respectively. The changes in the perception on SQF explain the changes in UPAS to the extent of 70.14

Table 6: Impact of SERVPERF Scale on SQFs on UPAS

Sl.No.	SQFs	Regression Co-efficient in		
		Corporate HCC	Non-Corporate HCC	Pooled Data
1.	Physician behaviour	0.4384*	0.1344	0.3672*
2.	Supportive staff	0.3968*	0.1968*	0.3141*
3.	Atmospherics	0.2911*	0.1243	0.2406*
4	Operational performance	0.4506*	0.2064*	0.3191*
	Constant	2.1787	0.9785	1.3845
	R^2	0.7014	0.6534	0.6939
	F-statistics	11.3918*	9.8646*	12.7168*

*Significant at five per cent level.

percent. In the case of non-corporate HCCs, the significantly influencing perception on SQF on UPAS are only supportive staff and operational performance since their respective regression co-efficients are significant at five percent level. The analysis infers that the increase in the perception on physician behaviour, supportive staff and operational performance results in an increase in UPAS.

The analysis of pooled data reveals that the changes in the perception in SQFs explain the changes in UPAS to the extent of 79.08 percent. Hence, the analysis reveals the importance of physician behaviour, supportive staffs and operational performance in the determination of using the provider again for same treatment (UPAS).

Impact of SQFs on Using the Provider Again for Different Treatment (UPAD)

The patient loyalty has been also measured with the help of UPAD. Since the perception of various SQFs among the patients may have its own influence on UPAD, the present study has made an attempt to analyse the impact of SQFs on UPAD among the patients in corporate, non-corporate HCCs and also for pooled data. The multiple regression analysis has been used to find out such impact. The results are shown in Table 7.

The significantly influencing SQF on the UPAD among the patients in corporate HCCs are all four SQFs. A unit increase in the perception on the physician behaviour, supportive staff, atmospherics and operational performance among the patients in corporate HCCs results in an increase in UPAD by 0.4018, 0.2344, 0.1829 and 0.2738 units respectively. Among the patients in non-corporate HCCs, the significantly influencing SQFs are physician behaviour, supportive staff and operational performance. The analysis of pooled data reveals that a unit increase in the perception on physician behaviour, supportive staff and operational performance among the patient's results in an increase in UPAD by 0.2968, 0.2245 and 0.2904 units. The changes in the perception on SQFs explain the changes in the UPAD to the extent of 79.08 percent. The analysis infers that the most influencing SQF in corporate HCCs is physician behaviour whereas in non-corporate HCCs, it is operational performance. The degree of influence of SQF is relatively higher in corporate HCCs compared to the non-corporate HCCs.

Table 7: Impact of SERVERPF Scale on SQFs on UPAD

Sl.No.	SQFs	Regression Co-efficients in		
		Corporate HCCs	Non Corporate HCCs	Pooled data
1.	Physican behaviour	0.4018*	0.1409*	0.2968*
2.	Supportive staff	0.2344*	0.2807*	0.2245*
3.	Atmospheres	0.1829*	0.1144	0.1209
4.	Operatial performance	0.2738*	0.3681*	0.2904*
	Constant	1.5089	0.9197	1.1989
	R^2	0.8144	0.7499	0.7908
	F-Statistics	12.4041*	10.1423*	11.4924*

Impact of SQFs on the Recommending Provider to Others (RPO)

The service quality of the HCCs is an important motivator to recommend the HCCs to other patients by the existing patients. It is highly imperative to understand the degree of influence of four SQFs on the RPO among the patients for some policy implications. The impact of SQFs on RPO is examined with the help of multiple regression analysis through ordinary least square method. The impact of SQFs on RPO among the patients in corporate, non-corporate HCCs and also for pooled data is shown in Table 8.

The significantly influencing SQF on the RPO among the patients in corporate HCCs are physician behaviour, supportive staff and operational performance since their respective regression co-efficients are significant at five percent level. In the case of non-corporate HCCs, the significant impact is identified by the SQFs namely physician behaviour and supportive staff. The analysis of pooled data reveals that a unit increase in the perception on physician behaviour, supportive staff and operational performance results in an increase in RPO among the patients by 0.3174, 0.2508 and 0.1524 units respectively. The change in perception on SQFs explains the RPO among the patients to the extent of 71.41 percent. The most important SQFs influence on RPO in corporate HCCs is supportive staff whereas in non-corporate HCCs, it is physician behaviour.

Research Implications

It is clearly evident from the findings that the important Service Quality Factors in Health Care Centres are Physician Behaviour, Supportive Staffs, Atmospherics and Operational Performance which support the previous findings (Chahal and Sharma, 2004; Wallridge et. al., 1993; Roberts and Fred, 2003). The service quality in corporate HCCs is rated high by the patients compared to the non-corporate HCCs regarding all four service quality factors. The significantly associating profile of patients on the perception of overall performance of the HCCs are education and nature of patient which resembles the findings of Elbeck, (1987); Naucer and Mohammed, (2003); and Reidenbarch and Sandifer (1990).

Table 8: Impact of SERVPERF Scale on SQFs on RPO

Sl.No.	SQFs	Regression Co-efficient in		
		Corporate HCCs	Non-corporate HCCs	Pooled Data
1.	Physician behaviour	0.2896*	0.3962*	0.3174*
2.	Supportive staff	0.3402*	0.1741*	0.2508*
3.	Atmospherics	0.1047	0.1016	0.0917
4	Operational performance	0.1924*	0.0969	0.1524*
	Constant	1.3496	0.9317	1.2082
	R^2	0.7217	0.6981	0.7141
	F-statistics	9.3687*	8.2342*	9.0866*

*Significant at five per cent level.

Regarding the patient loyalty, the significant difference among the corporate and non-corporate HCCs is identified in the case of all three loyalty measures (UPAS, UPAD and RPO). The higher patient loyalty is identified in the case of corporate HCCs. The significantly influencing SQFs on UPAD and RPO are perception on physician behaviour, supportive staff and operational performance whereas the significantly influencing SQFs on UPSD are perception on Physician Behaviour, Supportive Staff, Atmospherics and Operational Performance. The present study infers the patient loyalty is higher in corporate HCCs especially because of the physician behaviour Supportive staff and Operational Performance.

Managerial Implications

In order to enhance the present level of service quality in Health Care Centres, the present study offers some managerial implications for a paradigm shift from medical service to customerized service in the medical field.

Initially, the attitude of the physicians and their behaviour towards the patients can be enriched by providing continuous and on-going training programmes especially in the case of human technology. The physicians should be impartial, friendly, sympathetic and courteous to patients under all circumstances. The workshops, counselling and training courses on the human psychology may show a considerable positive impact on the enrichment of service quality of physicians (Sharma and Gupta, 2004; Boyt and Schi Browskey, 1998).

Since the patient's loyalty is highly influenced by the Physician Behaviour, Supportive Staff and Operational Performance in the HCCs, the HCCs have to concentrate more on these aspects. The Supportive staff should also be properly trained mentioning about the management of HCCs and method to interact with the patient. Since the supportive staff spent more time with the patients than the physician, the management has to give equal importance on this aspect. Nowadays, it is very difficult to establish the patient's loyalty since their level of awareness and knowledge on medical services are increasing to a greater extent. Hence, the management has to understand the present needs of the customers and position the customized service at the right market at right time. The operational performance in the HCCs should be enriched by the establishment of a permanent Research and Development Cell in their HCCs. The personnel in the cells have to be trained to predict the future requirements for the HCCs and also ensure the optimum utilization of available resources at HCCs.

Directions for Future Research

The present study focuses on the patient oriented study especially in corporate and non-corporate HCCs. This study may extend to the staff as well as to doctors. Apart from that, the comparative study on the service quality of various aspects like doctors, supportive staff, operational performance, nursing staff, and para-medical staff may also be conducted. The present study is based on the performance only (SERVPERF). The gaps model formulated by Parasuraman et al (1988) could be used for better understanding of patient's expectations and their respective perceptions on service quality at HCCs. The service quality at public HCCs may be focused in future. Thus the scope for future research is very broad. The results would be more effective if a holistic approach is considered.

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Alleviate Stress for Cyber-ambience

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The study attempts to investigate the type and extent to which how top level, middle level and lower level IT employees apply coping strategies to alleviate stress at their work place. A total of 600 respondents (40 top level employees, 154 middle level employees and 406 lower level employees) working in Information Technology Companies in and around Mysore and Bangalore participated in the study. The respondents completed the Coping Check List by Rao et al (1986).One-way ANOVA was employed to find out the significance of the difference between managerial levels, in different coping strategies employed by the IT personnel. The results revealed that Software employees of different managerial levels differed significantly on subscales of coping-healthy cognitive mechanisms, physical activity related coping and unproductive coping mechanisms, where lower level IT professionals, were found to possess higher scores. In unproductive coping mechanisms, middle level IT professionals were found to possess least scores and lower level IT employees possessed the highest.

Coping behaviour is mainly considered in the stress research as a moderator variable between job demands and negative or positive outcomes (e.g., anxiety, satisfaction).The concept of coping is a central aspect of contemporary theories of stress. Coping refers to person's efforts to manage (minimize, reduce, master or tolerate) the internal and external demands of the person-environment transaction that is viewed as taxing or exceeding the person's resources (*Folkman and Lazarus* 1986).

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Coping refers to the behaviour that protects people from being psychologically harmed by problematic social experience, a behaviour that importantly mediates the impact that societies have on their members. The protective functions of coping behaviour can be exercised in three ways, by eliminating or moderating conditions giving rise to problems, by perceptually controlling the experience in a manner that neutralizes its problematic character and by keeping the emotional consequences of problems within manageable bounds *(Pearlin and Schoolar*, 1978).

The Stress and coping paradigm hold that life stresses are associated with a wide range of disorders, while coping resources are compensatory factors that help maintain health (*Billings and Moos*, 1984). Coping is viewed as a stabilizing factor that may help individuals maintain psychological adaptation during stressful periods (*Folkman and Lazrus*, 1980).There is a longstanding and widely held conviction that among practitioners and researchers in the field mental health, the ways in which people cope with the demands of stressful situation determines or influences how they feel emotionally.

"Coping" is a combination of responses made in a stressful situation, to, in some way; reduce the adverse qualities of that situation. *Lazarus and Folkman* (1984) considered coping to be a response in cognitive or behavioural terms to the stressful demands of a given situation. "Coping," then, is used to refer to the aspects of the stress process which include the individual's attempts to deal with the stressors. It is a response brought about by the stressful situation and implemented in order to deal with, or neutralize it. This assumes the existence of excessive demands and attempts by the individual to restore the balance (*Rodríguez -Marín*, 1995).

Obviously, just as stressors affect each person differently in each situation, each person will likewise try to cope with stressors in a different way, in accordance with individual variables and with their resources. If we consider the type of response employed to deal with stressors, coping strategies can be of the "approach" or "avoidance" type, depending on whether the subject opts for fight or flight. One could also add, according to *Perrez and Reicherts* (1992), "passive" coping, where no action is taken, involving strategies is often referred to as "wait and see." Although coping strategies have chiefly been considered as defensive, from another angle, closer to positive psychology, they are seen as being related to well-being and health (*Taylor, Kemeny, Reed, Bower and Gruenewald,* 2000). Coping need not only be reactive, but can also take active forms to prevent situations from becoming stressful. These forms of proactive coping are proposed from a perspective of the promotion of health and quality of life.

Deborah and Callan (1997) tested the utility of stress-coping model of employee adjustments to organizational change. It was proposed that the characteristics of the change situation, employees' appraisals of the situation, their coping strategies, and the extent of their personal resources would influence employees' adjustment to this type of work stress. Results revealed high levels of psychological distress were related to a reliance on informal sources of information, high appraised stress, low appraised certainty, and use of avoidant rather than problem focused strategies; whereas poor social functioning was associated with low self esteem, high levels of disruption across the period of change, a reliance on informal sources of information, and use of avoidant coping strategies. There was no evidence that coping strategies mediated the effects of the event characteristics, situational appraisals, and personal resources on adjustment; however there was some evidence linking these variables to coping strategies, in particular problem-focused coping.

The present study aimed at comparing the coping strategies adopted by top level, middle level and lower level employees of IT companies. These three groups were analyzed on the dimensions of Coping Checklist. It was hypothesized that the three groups differ on these dimensions because of their different role demands, working conditions and application of coping strategies to alleviate the stress in, day to day, work place.

Sample

Stratified random sampling was adopted to gather data. A total of 600 respondents (40 top level employees, 154 middle level employees and 406 lower level employees) working in Information Technology Companies in and around Mysore and Bangalore participated in the study.

Tools and Procedure

Coping Checklist (CCL) by Rao et al (1986) was administered to assess the coping strategies among the three groups. The questionnaire was given to each participant, who was requested to fill up and to return the same in four days. They were also briefed about the purpose of the study and their informed consent was obtained. Rao developed the Coping Checklist within the transactional perspective to be used on the urban Indian population. The transactional model used, referred to individual's "Cognitive and Behavioural efforts to manage the internal and external demands of the person-environment transaction that is appraised as taxing, or exceeding the person's resources. Coping behaviours selected for this tool was required to serve one of the three following functions: (a) to change a stressful situation (b) to control the meaning of the situation (c) to control emotional distress in relation to stress. Therefore problem-focused, emotions-focused and appraisal focused coping behaviours were included in this instrument.

The CCL comprised 56 items and the responses were scored in binary fashion-Yes/No indicative of the presence or absence of a particular coping behaviour. The total of positively responded to items were summed up to represent the size of the coping repertoire. This procedure assessed the individual's coping patterns or resources in terms of the tendency for use in certain stressful situations. The response categories were modified to include frequency of coping behaviours, rated on a five point scale. The scale ranged from 'never' (1) to 'always' (5). The response categories were as follows: *Never*- If the method of coping was never used at all, *seldom* - if the method was used 25 percent of the time, *sometimes* -ilf the method was used 50 percent of the time, *often* - if the method was used 75 percent of the time, *always* - if the method was used 100 percent of the time. The various dimensions are: healthy cognitive mechanisms, social support coping, spiritual religious coping, physical activity related coping, problem solving coping, unhealthy coping habits, unproductive coping mechanisms and high risk coping.

One way ANOVA has been employed to test the significance of the difference between means of subscales of coping strategies, of top level, middle level and lower level IT employees.

Table 1 presents mean scores of each subscale of Coping Check List (CCL) of top level, middle level and lower level IT employees along with results of one way ANOVA.

Table 1: Presents mean scores of each subscale of Coping Check List (CCL) of top level, middle level and lower level IT employees along with results of one way ANOVA.

Sub scale		Mean	SD	F	P
Healthy Cognitive Mechanisms	Top-Level	45.78	9.01	4.804	.009
	Middle-Level	47.78	8.14		
	Lower-Level	49.15	7.12		
	Total	48.57	7.57		
Social support coping	Top-Level	14.95	4.09	.201	.818
	Middle-Level	14.90	4.10		
	Lower-Level	15.12	3.63		
	Total	15.05	3.78		
Spiritual Religious Coping	Top-Level	15.10	4.89	.849	.429
	Middle-Level	14.28	3.99		
	Lower-Level	14.67	4.01		
	Total	14.60	4.07		
Physical activity related coping	Top-Level	18.70	4.19	4.647	.010
	Middle-Level	19.44	3.80		
	Lower-Level	20.17	3.46		
	Total	19.88	3.62		

Problem solving coping	Top-Level	17.95	4.21		
	Middle-Level	18.57	3.06	.630	.533
	Lower-Level	18.47	3.04		
	Total	18.46	3.13		
Unhealthy coping habits	Top-Level	8.40	3.52		
	Middle-Level	7.82	2.70	.896	.409
	Lower-Level	7.82	2.53		
	Total	7.86	2.65		
Unproductive coping mechanisms	Top-Level	27.00	7.87		
	Middle-Level	26.03	6.69	3.179	.042
	Lower-Level	27.56	6.15		
	Total	27.13	6.44		
High risk coping	Top-Level	7.53	2.60		
	Middle-Level	7.67	2.58	.267	.766
	Lower-Level	7.50	2.49		
	Total	7.54	2.51		

Influence of Secondary Variables on Coping Mechanisms

Healthy Cognitive Coping

Results of one way ANOVA revealed that top level, middle level and lower level employees of IT differed significantly in their 'healthy cognitive coping'($F=4.804$; $p< 0.009$). The respective mean cognitive coping values of top level, middle level and lower level IT employees were found to be 45.78, 47.78 and 49.15 respectively.

Social Support Coping

Software employees belonging to different managerial levels did not differ significantly in subscale social support coping, as the F value of .201 was found to be non significant ($p=.818$). The mean 'social support coping' scores obtained by top-level, middle-level and lower levels software employees are, 14.95, 14.90 and 15.12 respectively.

Spiritual Religious Coping

Managerial levels did not influence 'spiritual religious coping' as the F value of .849 was found to be non-significant (.429). The mean spiritual religious coping scores obtained by top-level, middle-level and lower level software employees are 15.10, 14.28 and 14.67 respectively, which are statistically all same.

Physical Activity Related Coping

In this subscale also top-level (mean 18.70), middle-level (mean 19.44) and lower level (mean 20.17) software employees differed significantly ($F=4.647$; $p<.010$).

Problem Solving Coping

A non-significant difference was observed between software employees belonging to different managerial levels as the obtained F value of .630 was found to be non-significant ($P=.533$). The mean 'problem solving coping' scores obtained by top-level, middle-level and lower level software employees are 17.95, 18.57 and 18.47 respectively, which are all same statistically.

Unhealthy Coping Habits

Results of one way ANOVA revealed that software employees belonging to different managerial levels had statistically equal scores on 'unhealthy coping habits' subscale as the obtained F value of .896 was found to be non-significant ($P=.409$). The mean 'unhealthy coping habits' scores obtained by top-level, middle-level and lower level software employees are 8.40, 7.82 and 7.82 respectively.

Unproductive Coping Mechanisms

Employees in different managerial levels differed significantly in 'unhealthy coping mechanisms' subscale, as the obtained F value of 3.179 was found to be significant (P=.042). The mean 'unhealthy coping mechanisms' scores obtained by top-level, middle level and lower-level software employees are 27.00, 26.03 and 27.56 respectively. This indicates that the influence of managerial level on the stress in the subscale 'unhealthy coping mechanisms' is significantly more among the lower level employees and least among the middle level employees.

High Risk Coping

A non-significant difference was observed between software employees belonging to different managerial levels as the obtained F value of .267 was found to be non-significant (P=.766). The mean 'high risk coping' scores obtained by top-level, middle-level and lower level software employees are 7.53, 7.67 and 7.50 respectively, which are all the same statistically.

Findings and Suggestions

The major findings that have emerged from this study are:

1. Software employees of different managerial levels differed significantly on subscales of coping- healthy cognitive mechanisms, physical activity related coping and unproductive coping mechanisms, where lower level IT professionals have found to possess higher scores.

2. In unproductive coping mechanisms, middle level IT professionals were found to possess least scores and lower level IT employees possess the highest.

3. In the remaining coping mechanisms the managerial level did not have significant influence.

According to Bonita (1998) the personality disposition of a genetic trait has a stranger influence on coping strategies for different levels of positions in an organization. The lower the level, lesser will be the coping resource, which might result in more distress and less satisfaction. Managers who had been declared surplus were less likely to engage in positive thinking and direct action coping, reported higher levels of strain and burnout, perceived less organization support (Majorie, 1997). Coping strategies also depend upon job satisfaction, mental and physical ill health. It was also found that role efficiency and job anxieties were negatively related (Singh and Mohanty, 1996). They also found that managers differed significantly from supervisors with respect to their role efficacy.

Active coping involves active coping and behavioural attempts to manage stress. This includes a meaning based coping process, in which the individual actively seeks and finds positive meaning in a stressful event, and attempts to engage in activities to alleviate the stress. This form of coping can be equated with problem-focused coping, which is a goal directed strategy including information gathering, decision making, planning and conflict resolution in order to manage or solve the problem obstructing the goals and creating distress (Peter *et al* 2005). Problem focused coping is associated with reduced depression (Mitchell *et al* 1983 Folkman, 1997; stein *et al* 1997).

Reappraisal is an expansion of appraisal, incorporating a feedback system of stress related information involving subsequent evaluations of reactions to the environment and a process of ongoing reflection. Positively re-appraising the event as less stressful or reframing the situation to see it in a positive light, can sustain coping efforts to deal with the ongoing stressor (Folkman, 1997).

Social Support Coping is an interpersonal approach to coping, involving social support, and, confronts approach. Increased use of social support was associated with high stress and high anxiety. There may be instances when an IT employee's social support may be restricted. Consequently, they may feel isolated from the rest of the organization, and therefore are unable to receive adequate support from other personnel, which might contribute to higher levels of stress and anxiety being experienced (Huarng, 2001).

Conclusion

In the present study we did not find any statistical difference in the 'coping strategies' of social support, spiritual religious, problem solving, unhealthy coping, and high risk coping. Surprisingly, IT professionals in lower managerial levels were found to use significantly more of healthy cognitive mechanisms which were expected otherwise. At present we do not have any study supporting this finding. However, IT employees at lower levels found to use more of physical activity related coping and unproductive coping mechanisms, which is likely.

The increasing demands being imposed on firms by customers to deliver services and products more efficiently and effectively is often reliant on IT personnel being able to be adaptive and responsive to the environment within which they work. In addition, IT personnel are also confronted with the demands of users, and increasingly, the stakeholders who are reliant on the information system and the data produced. If IT personnel are not able to manage and cope with the job strain that they are confronted with, then there is a danger that customers could be lost to competitors, which are considered more reliable. Consequently, if firms are to improve their performance, then they need to provide their IT personnel with an environment that encourages problem-focused coping through improved training and skills development. As there has been limited research undertaken that has addressed psychological adjustment and coping of IT personnel, the findings reported in this paper provide the impetus for future research in this area.

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Online for Apparel Customers Smile

Malmarugan D.

Online shopping is a recent trend in apparel purchase by Consumers. Online shopping makes use of the Internet to gather information and to purchase Apparel. It is an innovative marketing channel. In India its acceptance will depend on the penetration of Internet connections all over. Innovativeness of the consumers is another important factor which will decide the success of this channel in India. The propensity to take risk and try new means is very much essential for Online shopping to grow into new dimensions. The parameters of Service Quality are discussed and the customer expectations are analyzed. Web site facilities, Delivery Reliability Online Uniqueness, Inclination to buy are the factors prominent in online buying of apparel. This article outlines the Decision making process in Online shopping for apparel products. Online channel is made use of for information seeking and buying of apparel. The results are significant to marketers of apparel through the innovative online channel.

Online shopping makes use of the Internet to gather information and to purchase through the web. It is an innovative marketing channel, where the potential is tremendous. Apparel shopping by consumers through the web is gathering momentum. The consumers may either gather information and/or purchase through the web.

Literature Review

Nature of Apparel Shopping

Purchasing over the Internet is one of the most rapidly expanding channels of shopping, and online shopping is the fastest growing application of the Internet. Online apparel sales are estimated to total $12 billion in 2002. However, this figure is dwarfed by apparel sales from other distribution channels, totaling around $200 billion, and total US online sales, estimated at about $2.5 trillion. Growth in online apparel sales lags far behind other online product sales, such as books or CDs, and online apparel sales figures currently stand at only 27 percent of all online sales.

In India, there are 38.5 million Indians Online Today. The Internet offers an audience that will grow to a 100 million users by 2007-08.

One key reason for this is the nature of apparel shopping. When

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consumers are shopping for apparel, they like to physically examine the products to assess colour, size, design, and fabric. Also for apparel, fit is very important. Due to the sensory and interactive nature of the apparel purchase process, apparel products are categorized as high-risk items and apparel shopping has been associated with high perceived risk. Several studies found that the inability to examine apparel products contribute to the high risk associated with the in-home shopping channel found that non-catalog shoppers tended to have higher risk perceptions related to catalog apparel purchases than catalog shoppers. For Internet shopping, consumers consider apparel products to be risky to purchase on the Internet because of uncertainty about colour, fabrics, and fit.

However, highly innovative people, who tend to have higher incomes higher levels of education greater risk propensity (venturesome) and higher occupational status, are more likely to adopt new products and services than people with low general innovativeness. Research shows, for example, that innovators are frequent catalog apparel shoppers, despite the higher risk. Therefore, an innovative person might adopt and utilize the Internet for apparel shopping even though high risk is associated with purchasing apparel on the Internet.

We might also expect gender differences in Internet apparel shopping behaviours. Previous research has shown that women tend to be more innovative than men.[8] In addition; research has shown that women are still the primary shoppers for personal clothing in married households. And, among students, gender stereotypes exist relative to shopping formats and product types with both males and females perceiving the typical shopper to be a woman. Thus, men and women might exhibit different adopting intentions and utilization behaviours about using the Internet for apparel shopping.

Internet Apparel Shopping and the Innovation-Decision Process

In adopting the innovation-decision process, this study assumes that each stage of the innovation-decision process applies to Internet apparel shopping. In the current study, Internet shopping refers to online information search for apparel products and online purchase of apparel products. In the knowledge stage, consumers become aware of and understand Internet apparel shopping in terms of information search and actual purchasing based on previous conditions such as prior Internet usage, previous in-home shopping experiences, and personal characteristics of the shopper such as general innovativeness and demographic characteristics (e.g. gender). To reduce uncertainty about Internet apparel shopping, consumers seek information about Internet information search and Internet purchasing for apparel products. In the persuasion stage, based on their knowledge about Internet apparel shopping in terms of information search and actual purchasing, consumers develop favourable or unfavourable attitudes and beliefs about Internet apparel shopping. These attitudes and beliefs are influenced by the five perceived characteristics of Internet apparel shopping as an innovation. For example, in terms of relative advantage, if consumers perceive Internet apparel shopping to save time and money compared to traditional retail shopping, then the adoption of Internet information search and purchasing for apparel products may increase rapidly. In terms of compatibility, if consumers perceive Internet apparel shopping to be compatible with their lifestyles, then they may rapidly adopt the Internet for information search and purchasing of apparel products. In the case of complexity, if consumers think that the Internet is easy to use for information search and actual purchasing for apparel products, then they may rapidly adopt the Internet for apparel shopping. For trial ability, if consumers can try out the Internet, then they may be more comfortable using the Internet for information search and purchasing for apparel products. And for observability, if consumers observe the results of adopting the Internet for information search and actual purchasing for apparel products, they may rapidly adopt the Internet for apparel shopping. During the decision stage, consumers will decide whether or not to adopt the Internet for information search or/and actual purchasing for apparel products based on their attitudes and beliefs developed in the persuasion stage. In the implementation stage, consumers who decide to adopt Internet apparel shopping actually engage in Internet shopping behaviours (e.g. information search and actual purchasing). For example, if consumers decided to adopt the Internet to search for information about apparel products, then they would use the Internet for apparel information search and if consumers decided to adopt the Internet for actual apparel purchasing, then they would purchase some apparel products online during this stage. In the confirmation stage, based on satisfaction with the actual shopping experience during the implementation stage and new information about Internet apparel shopping, consumers will reconsider whether or not to continue to use the Internet for information search and actual purchasing for apparel products.

Internet Apparel Shopping Behaviour

From the shopping process, people derive several different outcomes such as products, information, and pleasure. In other words, shopping includes both information searching behaviour and purchasing behaviour investigated differences among Internet apparel purchasers, browsers, and non-purchasers. They found that purchasers were significantly different from browsers and non-purchasers in terms of perceptions of relative advantages and ease of Internet shopping. In addition, compared to browsers and non-purchasers, Internet apparel purchasers tended to perceive Internet shopping as safe for using credit cards. Browsers and non-purchasers showed similar attitudes toward Internet apparel shopping. Researchers have studied how and why consumers use the Internet to make purchases. They have discovered two basic consumer usage patterns: information search and purchase.

Online Information Search

Information search is the process by which consumers gather information about goods or services before a purchase is made. Due to the ease of viewing the vast amount of information available and to the interactive nature of the Internet, information search on the web (a.k.a. browsing or "exploratory behaviour") is a crucial element in online consumer decision-making. When a consumer has enough information about a product's price, size, colour, function, etc., he/she will make a decision as to the purchase of that product. Therefore, information search can be directly linked to purchasing behaviours. In fact, it is crucial to purchasing behaviours proposed that intention to search for information online is a predictor of intention to buy online.

Online Purchasing Behaviour

Online purchasing behaviour is the act in which consumers actually pay for goods over the Internet. Many consumers are hesitant to buy online, and more than half abandon their selections before payment occurs. For apparel purchases, this fear of purchasing may be related to many factors, including perceived financial or product risk. However, due to convenience, good price and product variety, consumers used the Internet for product purchasing as well as information search. The present research intends to discover how innovativeness of the consumer is related to information search and purchasing behaviour.

Service Quality in Online Retailing

Services are the results that customers want, which can be obtained by the interactive processes between customers and service providers. Traditionally, such interactive processes primarily refer to human-to-human interactions through either face-to-face meetings or traditional communication media, such as telephone, fax, and mail.

However, in the context of online retailing, there are almost no face-to-face interactions. Instead, the following two types of interactions may occur:

1. The interactions between customers and online retailers' employees via either Internet-based communication tools, such as e-mail, chat room, and message board, or traditional communication channels; and

2. The interactions between customers and online retailers' Web sites, through which customers can search and retrieve necessary information, and place their orders.

Particularly, these customer-to-Web site interactions in online retailing, to a great extent, have replaced traditional customer-to-employee interactions such as sales clerk services.

The unique interacting processes between online retailers and customers present a serious challenge to both practitioners and academicians regarding online service quality measurement. Currently, one of the most widely known service quality measures is SERVQUAL which consists of 22 items measuring five key dimensions of service quality:

1. tangibles;
2. reliability;
3. responsibility;
4. assurance; and
5. empathy.

However, prior research suggests that service quality tends to be context-bounded and service-type-dependent. Hence, SERVQUAL may not be sufficient enough for measuring service quality across industries and situations, not to mention online service quality. The SERVQUAL does not embrace the unique facets of online service quality, such as customer-to-Web-site interactions, since this instrument was constructed based mainly on customer-to-employee interactions.

Accordingly, various researchers have recently attempted to identify key service quality attributes that best fit the online business environment. have found 11 dimensions of online service quality in a series of focus group interviews:

1. access;
2. ease of navigation;
3. efficiency;
4. flexibility;
5. reliability;
6. personalization;
7. security/privacy;
8. responsiveness;
9. assurance/trust;
10. site aesthetics; and
11. price knowledge.

Later, develop a measurement instrument of online service quality, SITEQUAL, which consists of four dimensions: ease of use, aesthetic design, processing speed, and security have noted that traditional service quality dimensions, such as competence, courtesy, cleanliness, comfort, and friendliness, are not relevant in the context of online retailing, whereas other factors, such as accessibility, communication, credibility, and appearance, are critical to the success of online businesses. Similarly, propose the following 15 dimensions of online service quality based on the relevant literature review: performance, features, structure, aesthetics, reliability, storage capacity, serviceability, security and system integrity, trust, responsiveness, product/service differentiation and customization, Web store policies, reputation, assurance, and empathy. In the same vein, through focus group interviews, a content analysis, and an online survey, have uncovered four factors of online retailing experience: Web site design, reliability, privacy/security, and customer service (this factor is primarily related to the customer-to-employee interactions). In addition, other studies have attempted to identify key dimensions of service quality in the context of narrowly defined online businesses, such as online banks, portal services, and travel agencies or a certain segment of online business processes, such as Web site design, contents, and online exchange processes.

Yet, it should be noted that most of the inquiries have dealt with online service quality primarily from the online buyers' perspective.

Objective of the Study

Based on Literature Review, the objective of the research was to identify the factors influencing online purchase of apparel.

Research Design

Secondary data and objective of the study were arrived from Extensive Literature Review. Primary data to be collected by Questionnaire administration.

Questionnaire Design

The tool of data collection, Questionnaire was designed based on the Literature review. It was pretested and a pilot study was conducted. The reliability of the instrument was found to be 0.66 (cronbach's alpha). Reliability is good.

Sampling Design

A sample of 500 respondents was interviewed in the city of Chennai, which included both online shoppers of apparel and online users for information gathering on apparel. The age group of the respondents was among 18-60 of both genders. Random sample approach was followed.

Data Analysis and Discussion

The data were analyzed with SPSS software. Factor analysis with Principal Component analysis and varimax rotation was used. The components with Eigen values of more than 0.9 were taken as factors. In all 12 factors were extracted. These 12 factors explained more than 65 percent of the variances. From the rotated component matrix, the variables contributing to these factors can be obtained.

Factors influencing Customer Satisfaction in Online Purchase of Apparel

Table : 1 Rotated Component Matrix(a)

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Credit card information	-1.717E-03	.358	6.867E-02	9.982E-02	.306	-.164	.361	-.245	-3.981E-03	-.255	-1.958E-02	-.258
Personal information	-2.575E-02	.164	.135	9.815E-02	.612	-9.168E-03	9.686E-02	-.381	-.177	.103	-.114	.113
Trustworthy	8.444E-02	-7.319E-04	4.742E-03	3.430E-02	.116	6.758E-02	4.254E-03	1.056E-02	4.637E-02	8.029E-02	-802 .802	-2.695E-02
Timely delivery	-.120	.731	.161	.147	-.144	6.991E-02	6.195E-02	7.900E-02	5.433E-02	1.341E-02	.119	-.107
Products importance	.254	.682	5.183E-03	-.153	9.382E-02	-2.233E-02	-.204	-8.141E-02	6.895E-02	-2.329E-03	-.107	.241

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Undamaged delivery	6.322E-02	.151	.145	.138	.208	-.164	8.851E-03	6.269E-02	.586	-.339	.268	2.002E-02
Easy to return	3.026E-02	3.169E-02	2.059E-02	-7.313E-02	-.150	5.676E-02	.153	-6.342E-02	.777	.255	-4.584E-02	8.790E-02
Easy to contact customer service	-2.381E-02	9.703E-03	3.513E-02	.120	5.714E-02	-3.007E-02	-1.757E-02	-3.864E-02	8.954E-02	.809	.114	-.123
Will buy within next year	-2.378E-02	4.846E-02	-.120	9.249E-02	.148	5.172E-02	3.579E-02	4.580E-02	9.277E-02	-.111	-1.536E-02	.811
Will buy within Next Three months	.124 02	3.722E-	.210	.639 02	-5.237E- 02	-2.295E-	.181 02	2.145E-	-.165	.137 02	-5.567E-	.329
Ease in placing order	8.639E-02	1.050E-02	-5.150E-02	.799 02	7.990E-02	2.472E-02	-8.221E-02	2.626E-02	7.245E-02	8.785E-03	5.666E-02	-4.514E-02

	Component											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Access to website	.574	-.153	.235	.153 02	2.722E-	.317 02	8.539E-	-.138	.102	-.158	-.140	.104
Ease in touch & try	.764	3.218E-02	5.300E-02	.151	-6.203E-03	-.108	1.411E-02	5.455E-02	2.887E-02	-1.495E -02	.160	-6.272E-02
Security	.229 -02	9.766E	-.370	.255	.131	.122	.586	.189 02	5.079E-02	2.702E-02	-4.375E-02	-5.544E-
Payment options	.462	.260	.112	-.214 02	-5.700E-02	-4.435E-	.243 02	1.233E-02	-9.088E-	.242	.364	.128
Safe shipping	-2.321E-02	-.105	.144	-8.959E-02	-4.822E-02	7.520E-02	.726	-2.383E-02	.108	4.823E-03	3.884E-02	9.260E-02
Easy findings	7.645E-02	.180	.726	7.963E-02	-1.027E-02	8.988E-02	5.974E-02	3.515E-02	-6.838E-02	3.096E-02	6.338E-02	-7.230E-02
Quality products	4.226E-02	-2.537E-02	.277	-.215	.414	-2.620E-02	.178	.311	6.854E-02	.331	6.973E-03	.152
Unique products	.107	-1.181E-02	.597	-1.950E-02	.168	5.583E-02	-1.044E -02	9.416E-02	.368	2.028E-02	-6.899E-02	-4.696E-02

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Large selection (variety)	3.677E-02	-.149	-2.434E-02	4.109E-02	.683	5.087E-02	-7.350E-02	.158	5.636E-02	-3.548E-02	.223	5.293E-02
Immediately	-4.305E-02	.158	-5.027E-02	3.267E-02	-6.417E-02	.758	2.146E-02	-.138	4.091E-02	5.248E-02	.313	8.119E-02
Lowprice	6.244E-02	-.103	.195	-1.834E-02	9.070E-02	.668	.108	.199	-6.182E-02	-6.381E-02	-.163	-3.698E-02
Price comparison	.461	.205	-.197	-5.985E-03	.256	.246	-.196	.254	8.855E-02	9.510E-02	-.132	-.363
National brands	1.519E-02	1.769E-02	8.517E-02	6.375E-02	3.098E-02	2.641E-02	2.938E-02	.830	-3.391E-02	-2.578E-02	2.935E-03	3.233E-02

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 26 iterations.

The variables coming under the first factor (F1), Web site facilities, are 24 hours accessibility, enabling customers to touch and try, providing multiple options for payment and enabling price comparison.

The variables coming under the second factor (F2), Delivery Reliability, are online purchases are delivered in a timely manner, and Delivered products match those described on the website.

The variables coming under the third factor (F3), Online Uniqueness, are in online shopping it is easy to find merchandise and online shopping provides unique merchandise, available only through web.

The variables coming under the fourth factor (F4), inclination to buy, are whether the customer will make an online purchase for a product within next three months and It is easy to place an order through website.

The variables coming under the fifth factor (F5), Variety and confidentiality, are personal information provided for online purchase is confidential, Online shopping provides quality merchandise and online shopping provides large selection (variety) of merchandise.

The variables coming under the sixth factor (F6), Prompt and economical, are online shopping provides immediate availability of merchandise and online shopping provides low prices.

The variables coming under the seventh factor (F7), Safety and security, are credit card information used for online purchase is secure, online shopping provides safety and security and online shopping provides reliable, safe shipping of purchased goods.

The variable coming under the eighth factor (F8), National Brands availability, is online shopping makes available well known national brands.

The variables coming under the ninth factor (F9), Delivery Safety, are Products purchased online are delivered undamaged and Product returns are easy for online purchase.

The variable coming under the tenth factor (F10), Customer service accessibility, is contacting customer service is easy for online purchases.

The variable coming under the eleventh factor (F11), Trustworthiness, is –Online retailers are trustworthy.

The variable coming under the twelfth factor (F12), Purchase after sometime, is –Whether the customer will make an online purchase for a product within the next year.

Conclusion

This article outlines the decision making process in Online shopping for apparel products. Online channel is made use of for information seeking and buying of apparel. The SERQUAL frame work is applied to online shopping and its suitability is discussed. The Service Quality parameters sought after by consumers are vital inputs into the strategic plans of organizations, who intend to tap this channel to reach the consumers. Managers in the industry and Academics and Research scholars, will find it useful as leads for further research. Thus, the findings of the study are not easily applicable to attracting and transforming information searchers, who are the potential customers targeted by many online retailers, into loyal online buyers. Therefore, it would be necessary to investigate key online service quality dimensions as perceived by two groups of Internet users, online buyers and information searchers. From the online retailers perspective, these dimensions could serve as core service quality evaluation criteria that transcend various types of Internet users. These will be the scope for further research.

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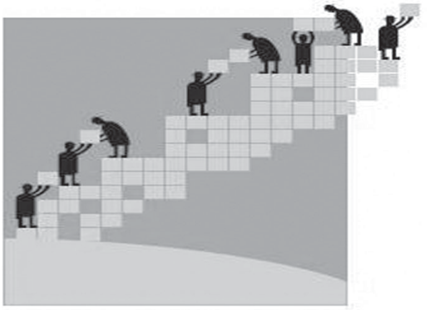
Mutual Funds: Expanding Horizons



Raj Kumar and Priyanka Sharma

Household savings play an important role in domestic capital formation. Only a small part of the household savings in India is channelised to the capital market. Attracting more household to the capital market requires efficient intermediations. The mutual funds have emerged as one of the important classes of financial intermediaries which cater to the needs of retail investors. As a traditional investment vehicle, the mutual funds pool resources from the households and allocate various investment opportunities as in mature markets. In emerging markets, mutual funds have been among the fastest growing institutional investors. The study aims at evaluating the impact of FIIs and mutual funds on Sensex. The paper also analyzes the trends in mutual funds resource mobilization, scheme wise as well as objective wise during last five years. It has been concluded that FIIs affect the sensex significantly due to large number of FIIs and huge amount of investment by them where as mutual funds investment is less significant due to small numbers and small amount of investment compared to FIIs.

In India, the stock market reforms were aimed at creating an active, efficient and competitive securities market subject to effective regulation by SEBI, which would ensure investor protection. There is almost unanimity among the academics that liberalization encourages the formation of equity markets where they did not exist previously and helps in their deepening where they predated the reforms.

In the financial industry, talk of the day is mutual funds. Of late, mutual funds have become a hot favourite of millions of people all over the world. The driving force of mutual funds is the 'safety of the principal' guaranteed, plus the added advantages of capital appreciation together with the income earned in the form of interest or dividend. People prefer Mutual Funds to bank deposits, life insurance and even bonds because with a little money, they can get into the investment game. Mutual funds act as a gateway to enter into big companies hitherto inaccessible to an ordinary investor with his small investment.

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In simple words, a mutual fund collects the savings from small investors, invest them in government and other corporate securities and earn income through interest and dividends, besides capital gains. It works on the principle of 'small drop of water make a big ocean.' Hence, a mutual fund is nothing but a form of collective investment. It is formed by the coming together of a number of investors who transfer their surplus funds to a professionally qualified organization to manage it. It has emerged as a popular vehicle of creation of wealth due to high return, lower cost and diversified risk.

The growth of mutual funds industry globally can be accredited to increase in the investment opportunities due to liberalization of capital market worldwide. In emerging economies, the demand for mutual funds product is expected to increase further due to privatization of the pension/ insurance systems. Indian investors prefer to invest in capital market through some institutional structure having professional expertise in fund management.

As in mature markets, mutual funds in emerging markets have been among the fastest growing institutional investors. Indeed, mutual funds assets under management in emerging markets grew by 214 percent between 1999-2000 and 2005-06. One key difference between mutual funds of mature and emerging markets has been the relative importance of bond and equity funds. In the mature markets, the assets under equity funds are often much larger than those of bonds funds (particularly in Japan, the UK, the USA). In contrast, emerging market bond funds in a number of countries have larger assets under management than do equity funds particularly in Brazil, Mexico, Korea and Taiwan. In part, this reflects the difference in the relative development of the local markets in mature and emerging markets. This difference reflects a search for higher yield on the part of retail investors. As the nominal interest rates have declined in many emerging countries since the late 1990s, retail investors have seen as extended decline in the interest rate of traditional savings instruments. To obtain higher yields, retail investors subscribe to bond funds with investment in longer terms government and corporate bonds. Mutual funds, as a class, have become an important segment of institutional investors.

Objective of the Study

The major objective of this study is to analyze the trends in mutual fund industry in India and to study the impact of FIIs and mutual fund on sensex.

Methodology

Under this backdrop the study aims at evaluating the impact of FIIs and Mutual Funds on Sensex. The paper also analyzes the trends in Mutual Funds resource mobilization, scheme-wise as well as objective-wise during last five years. The time frame of this study is taken from 2001-2002 to 2005-06. Data from 2001-02 to 2005-06 used in this study have been collected from secondary sources i.e. *SEBI Annual Report, SEBI Bulletin, SEBI Handbook, Monthly Bombay Exchange Review.* Besides these, other sources are acknowledged as and when data from such sources are used for the study. For analyzing data mathematical tool like percentages, ratios, averages, regression analyses etc, have been used.

Review of Literature

Massa (1998) argues that market segmentation and fund proliferation can be seen as marketing strategies used by families to exploit investors' heterogeneity, showing the positive spillover that having a star fund provides to all the funds belonging to the same family. Khorana and Servaes (1999) empirically analyze the determinants of mutual fund starts, identifying several factors that induce the family to set up new funds, such as economies of scale and scope, the family's prior performance, and the overall level of funds invested. Mamaysky and Spiegel (2001) derive an equilibrium model of the mutual fund industry in which families generate funds to allow investors to overcome their hedging needs. Bhattacharya and Daouk (2002) note that it is not the mere presence of insider trading regulations, but their enforcement, which is economically important. Similarly, when accounting standards are lax, investors may be more likely to invest through professional intermediaries such as funds, who can collect superior information. These arguments are most relevant for equities because information asymmetries are more pronounced for equities than for bond and money market investments.

Nanda et al. (2003) empirically investigate whether fund families seek to generate star funds by increasing the cross-fund return variance or the number of funds in the family. The authors find some evidence of this family-level behaviour and conclude that investors do not seem to benefit from such strategies in terms of subsequent period returns. Other evidence on fund family strategies not coinciding with simple risk adjusted performance maximization is uncovered by Massa (2003), who studies how industry structure affects fund behaviour and the relations among performance, fund proliferation, and product differentiation. In particular, the study shows that the degree of product differentiation negatively affects performance and positively affects fund proliferation.

Guedj and Papastaikoudi (2004) report that performance persistence is more prevalent within big fund families, suggesting that families purposefully allocate resources across funds in an unequal way.

Mutual Funds - Origin in USA

As with many other innovative financial products, Mutual Funds, as an attractive investment source started in the USA. MF is an investment company created under the Investment Company Act of 1940 that pools the resources of investors to buy a variety of securities, depending on the fund's stated objectives and management style. The investments typically are chosen by a professional manager. Mutual funds offered diversification and convenience even to small investors, and the thousands of mutual funds that came to be established cater to every conceivable investment need and taste.

Popularity of Mutual Funds in the USA

The popularity of the Mutual Fund has increased manifold. In developed financial markets, like the United States, Mutual Funds have almost overtaken bank deposits and total assets of insurance funds. As of date, in the US alone there are over 7,000 Mutual Funds with total assets of over US $ 3 trillion (Rs.100 lakh crores). According to "The Investing Kit" (Dearborn Financial Publishing, Inc., Chicago), mutual funds offer "professional portfolio management, diversification, a wide variety of investment styles and objectives, easier access to foreign markets, dividend reinvestment, ease of buying and selling shares and exchange privileges."

"Mutual funds have become the investment of choice for millions of investors. The basic idea of a mutual fund is simple. It is an organization whose only business is the investment of its shareholders' (Unit-holders') money into cash equivalents (money markets), stocks, bonds or a combination of stocks and bonds, for the purpose of achieving specific investment goals. To do this, it attracts funds from many individual and institutional investors, and it attempts to invest and manage those funds more effectively than investors could do on their own. More and more investors are using mutual funds to achieve at least some of their investment goals. According to Stephen Littauer, author of "How to Buy Mutual Funds the Smart Way" (Dearborn Financial Publishing, Chicago, 1993), one of the most important reasons why investors choose mutual funds is the availability of past performance records. You can see a complete and unquestionable picture of what a fund has achieved in the past. However, past performance may not be an indicator of future performance. To help you achieve your investment objective, mutual funds can provide you with the three basics of prudent investing: (1) careful selection of securities, (2) diversification and (3) liquidity.

Mutual funds have a number of advantages over individual securities. A key advantage is that mutual funds are generally more diversified. A typical fund invests in dozens of securities. Thus, small investors can achieve a level of diversification greater than they could on their own or with less effort than they could on their own. The funds are professionally managed, which logically should add to your investment returns in the long run. Investing in a mutual fund will also save you lots of paperwork headaches because the monthly and annual statements will summarize short- and long-term gains, dividends and interest earned on your account. Many offer telephone and online trading, which makes buying, selling or switching funds a snap. Idle cash can be automatically invested at competitive rates in a money market fund and many companies also offer unlimited checking privileges, debit cards and credit cards, much as a bank would. You can even designate a beneficiary so that, when you die, there will be none of the delays and expenses of probate.

Believe it or not, there are now more mutual funds than there are publicly traded stocks. As a result, you can find a fund that easily fits your own investment tastes. Some funds invest in stocks and bonds. Some invest only in U.S.-based companies, while others focus on overseas securities. Some even invest in other mutual funds! Some carry sales charges, called loads, and others do not. Choose carefully because less than one of three funds successfully beats the return on the S&P 500.

There are now approximately 7,000 actively managed mutual funds in the United States, with wide variations in size, age, purpose and policy. The oldest have been in existence for more than 65 years; many have been established in the last five years. Some have only several million dollars under management, while others measure their assets in the tens of billions. The greatest growth of mutual funds occurred after World War II and has continued since with only occasional pauses. In 1946 mutual fund companies managed just over $2 billion in assets. By 1956 this had grown to $10.5 billion and to more than $39 billion in 1966. In the 1980s growth exploded, jumping from $64 billion in 1978 to more than $1 trillion by the end of 1991. Today, there are approximately $3 trillion dollars invested in all types of mutual funds. While a great deal of this growth has derived from the return on invested assets, most growth has come from new money going into the funds. For example, according to the 1996-97 Directory of Mutual Funds (Investment Company Institute, Washington, D.C.), the number of funds has grown from 1,528 in 1985 to about 7,000 today. The number of shareholder accounts has grown from 45.1 million in 1986 to about 150

History of Mutual Funds in India and Role of SEBI in Mutual Funds Industry

THE INDIAN laws and rules governing mutual funds have borrowed heavily from similar pieces of legislation in the US.

A Comparison of the Mutual Fund Legal Framework

	US Laws	Indian Laws
Fund definition	Fund ab initio is defined as diversified or not	No Such delineation; Strict diversification rules
Registration Statement	Registration statement needs to be detailed. For example, industry concentration, if any, to be to specified.	Can afford to be vague; Funds have changed investment focus without unitholder approval
Fund Names	Fund names cannot be misleading	Fund names can be misleading
Disclosures	More meaningful and detailed	Cumbersome and add little value
Laws governing selling and Investment advisory services	Exist	No specific law exists
Personal Investment actions of associated persons of mutual funds	Regulated	No specific law exists

Over time, the framework of regulatory provisions of the US securities market has been put to test and, if found wanting, suitably amended. This would prima facie suggest that the Indian laws present a picture of stability, even if not superior to that in the US securities market. But for all the learning value that the US code offers, the Securities and Exchange Board of India (SEBI) has found it necessary to issue occasional clarifications to strengthen the degree of protection available to investors. Surprisingly, the clarifications too are based on the US laws, making one wonder why these clarifications were not incorporated in the first place. What ails the Indian legal framework governing mutual funds? A look at the US' Investment Companies Act of 1940 reveals that the Indian laws fail to go the full distance in outlining the intention of the law-makers in greater detail. Consequently, while the Indian laws are similar to their American equivalents, they are also fundamentally different.

This difference obtains in the definition of mutual funds and their function. While the Indian laws do not significantly weaken the protection available to the investor, the liberal framework provides fund managers greater operating leeway. Still, in certain areas, the detailed nature of the US laws appears desirable. This is especially true of disclosures.

In short, there is need for regulation to cover these two aspects — mutual fund selling practices and investment advisory services. In both instances, the American laws are well-defined and tested, especially by the events of the past two decades. It has to be debated if disclosure alone is sufficient. If that be the case, the disclosure norms need to be tightened further. However, it may be necessary to put in place a legal framework too. Given that the nature of mutual fund investments in India is fast changing with the advent of futures, options, asset-backed securities and so on, investors may feel the need for protection sooner rather than later.

In the year 1992, Securities and Exchange Board of India (SEBI) Act was passed. The objectives of SEBI are – to protect the interest of investors in securities and to promote the development of and to regulate the securities market.

As far as mutual funds are concerned, SEBI formulates policies and regulates the mutual funds to protect the interest of the investors. SEBI notified regulations for the mutual funds in 1993. Thereafter, mutual funds sponsored by private sector entities were allowed to enter the capital market. The regulations were fully revised in 1996 and have been amended thereafter from time to time. SEBI has also issued guidelines to the mutual funds from time to time to protect the interests of investors.

All mutual funds whether promoted by public sector or private sector entities including those promoted by foreign entities are governed by the same set of Regulations. There is no distinction in regulatory requirements for these mutual funds and all are subject to monitoring and inspections by SEBI. The risks associated with the schemes launched by the mutual funds sponsored by these entities are of similar type.

The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank. The history of mutual funds in India can be broadly divided into four distinct phases.

First Phase – 1964-87

Unit Trust of India (UTI) was established on 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988 UTI had Rs.6,700 crores of assets under management.

Second Phase – 1987-1993 (Entry of Public Sector Funds)

1987 marked the entry of non-UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non- UTI Mutual Fund established in June 1987 followed by Canbank Mutual Fund (Dec 87), Punjab National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92). LIC established its mutual fund in June 1989 while GIC had set up its mutual fund in December 1990.

At the end of 1993, the mutual fund industry had assets under management of Rs.47, 004 crores.

Third Phase – 1993-2003 (Entry of Private Sector Funds)

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed. The erstwhile Kothari Pioneer (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.

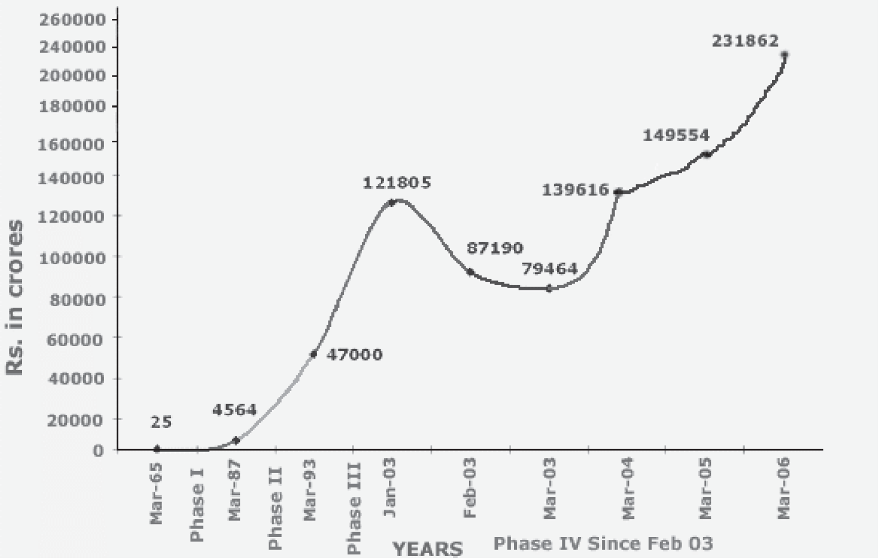
The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised mutual fund regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations 1996.

The number of mutual fund houses went on increasing with many foreign mutual funds setting up funds in India and also the industry has witnessed several mergers and acquisitions. As at the end of January 2003, there were 33 mutual funds with total assets of Rs.1,21,805 crores. The Unit Trust of India with Rs.44,541 crores of assets under management was way ahead of other mutual funds.

Fourth Phase – since February 2003

In February 2003, following the repeal of the Unit Trust of India Act 1963 UTI was bifurcated into two separate entities. One is the Specified Undertaking of the Unit Trust of India with assets under management of Rs.29, 835 crores as at the end of January 2003, representing broadly, the assets of US 64 scheme, assured return and certain other schemes. The Specified Undertaking of Unit Trust of India, functioning under an administrator and under the rules framed by Government of India and does not come under the purview of the Mutual Fund Regulations.

Chart: 1 Growth of Assets



Note: Erstwhile UTI was bifurcated into UTI Mutual Fund and the Specified Undertaking of the Unit Trust of India effective from February 2003. The Assets under management of the Specified undertaking of the Unit Trust of India has therefore been excluded from the total assets of the industry as a whole from February 2003 onwards.

The second is the UTI Mutual Fund Ltd., sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. With the bifurcation of the erstwhile UTI which had in March 2000 more than Rs.76, 000 crores of assets under management and with the setting up of a UTI Mutual Fund, conforming to the SEBI Mutual Fund Regulations, and with recent mergers taking place among different private sector funds, the mutual fund industry has entered its current phase of consolidation and growth. As at the end of September, 2004, there were 29 funds, which manage assets of Rs.153108 crores under 421 schemes. The chart 1 indicates the growth of assets over the years.

Status of Mutual Fund Industry

As in mature markets, mutual funds in emerging markets have been among the fastest growing institutional investors. Indeed, mutual funds assets under management in emerging markets grew by 96 percent between the end of 1997 and June, 2003 and as a result, it rose from eight percent of GDP to 15 percent. One key difference between mutual funds of mature and emerging markets has been the relative importance of bond and equity funds. In the mature markets, the asset under equity funds are often much larger than those of bond funds (particularly in Japan, the United Kingdom, the United States). In contrast, emerging market bond funds in a number of countries have larger assets under management than do equity funds particularly in Brazil, Mexico, Korea and Taiwan. In part, this reflects the difference in the relative development of the local markets in mature and emerging markets. This difference reflects a search for higher yield on the part of retail investors. As the nominal interest rates have declined in many emerging countries since the late 1990s, retail investors have seen an extended decline in the interest rate of traditional savings instruments. To obtain higher yields, retail investors subscribe to bond funds with investment in longer term government and corporate bonds.

In India the mutual fund industry started with the setting up of the Unit Trust of India in 1964. Public sector banks and financial institutions were allowed to establish mutual funds in 1987. Since 1993, private sector and foreign institutions were permitted to set up mutual funds. In February 2003, followings the repeal of the Unit Trust of India Act 1963 the erstwhile UTI was bifurcated into two separate entities viz the specified undertaking of the Unit Trust of India, representing broadly, the assets of US 64 schemes, assured returns and certain other schemes and UTI Mutual Fund conforming to SEBI Mutual Fund Regulations.World wide, Mutual Fund or Unit Trust as it is referred to in some parts of the world, has a long and successful history.

The popularity of Mutual Funds has increased manifold in manifold in developed financial markets, like the United States. As at the end of March 2006, in the US alone there were 8,002 mutual funds with total assets of over US$ 9.36 trillion (Rs.427 lakh Crores).

Exhibit: 1 Growth of Assets

Year	No of Schemes	Growth of Assets (Rs. In Crores)
1988-89	21	13455
1993-94	167	61028
1998-99	277	68472
2003-04	403	139616
2004-05	451	149554
2005-06	592	231862

Source: AMFI

Chart 2: No. of Schemes

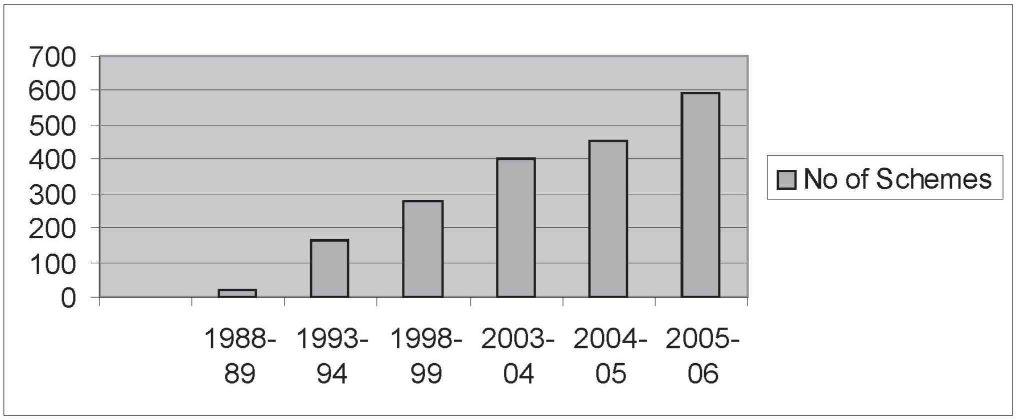
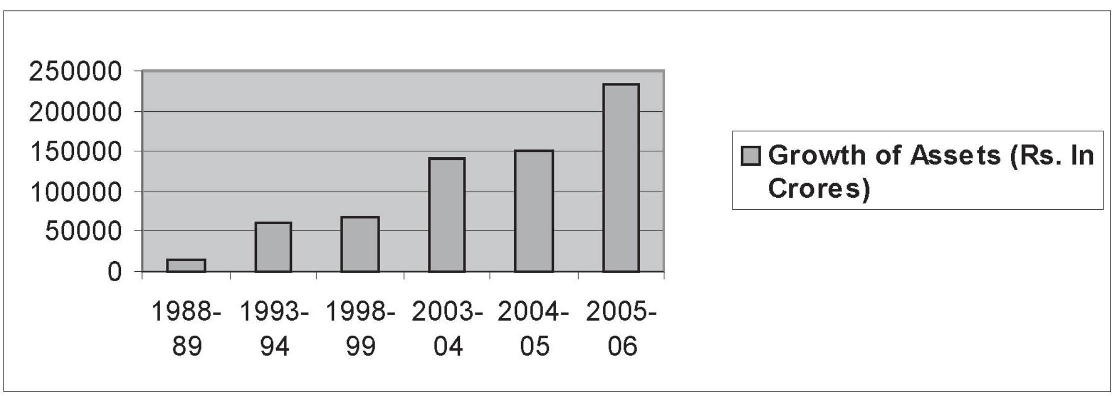


Chart 3: Growth of Assets (Rs. in Crores)



As at the end of March 2006, there were 29 mutual funds, which managed assets of Rs.231, 862 Crores (US $ 52 Billion) under 592 schemes. This fast growing industry is regulated by the Securities and Exchange Board of India (SEBI).

Resource Mobilization by Mutual Funds

Household savings plays an important role in domestic capital formation. Only a small part of the household savings in India is channelised to the capital market. Attracting more household to the capital market requires efficient intermediations. The mutual funds have emerged as one of the important classes of financial intermediaries which cater to the needs of retail investors. As a traditional investment vehicle, the mutual funds pool resources from the households and allocate various investment opportunities.

The gross mobilization of resources by all mutual funds during 2001-02, Rs.164,523 crores compared to an amount of Rs.92,957 crore, during the previous year 2000-01 recording a sharp growth of about 77 percent over the previous year. In 2005-06 it was Rs.10,98,149 crores compared to as amount of Rs.8,39,708 crores during the previous year 2004-05 recording a growth of 31 percent over the previous year (Exhibit 2 and 3). Gross mobilization by mutual Funds in the year 2005-06 was 567.47 percent over the year 2001-02.

The mutual fund industry has experienced slow growth in the year 2003-04, with assets under management nearly stagnant at Rs.1,50,537 crore. The bulk of mutual fund assets continues to be in debt securities. However, assets in growth funds rose sharply in 2004 to reach Rs.31,551 crore. These small magnitudes, compared with overall market size, are consistent with the picture of India being a highly retail market, where households directly own the bulk of securities. Mutual funds are an important avenue through which households participate in the securities market. Intermediation through mutual funds is particularly attractive from the viewpoint of systemic stability, because mutual funds only hold transparent assets, do daily marking to market, have no leverage, and all losses are instantly passed on to the balance sheets of households. While assets under management of all mutual funds had stagnated at roughly Rs.1.5 lakh crore between 2003 and 2004, there was a significant rise to a level of roughly Rupees Two lakh crore in 2005.

Exhibit 2: Trends in Mutual Fund Resource Mobilization

(Rs. in crores)

Period	Gross Mobilization			Redemption			Net inflow			Assets at the end of the period
	Private sector	Public sector	UTI	Private sector	Public sector	UTI	Private sector	Public sector	UTI	
1	2	3	4	5	6	7	8	9	10	11
2001-02	147798	12082	4643	134748	10673	11927	13050	1409	-7284	100594
2002-03	284095	23515	7096	272026	21954	16530	12069	1561	-9434	109299
2003-04	534649	31548	23992	492105	28951	22326	42545	2597	1667	139616
2004-05	736463	56589	46656	728864	58266	49378	7600	-2677	-2722	149600
2005-06	914703	110319	73127	871727	103940	69704	42977	6379	3424	231862

Source: SEBI

The net mobilization of resources by all mutual funds was Rs.52779 crore in 2005-06 is the highest ever in a single year compared to Rs.2200 crore in 2004-05 and Rs.46808 crore in 2004-05. In the year 2001-02 Net resource mobilization was Rs.71752 crore (Exhibit 4). The UTI Mutual Fund and other public sector Mutual Fund witnessed net inflow of Rs.3424 crores and Rs.6379 crore, respectively in 2005-06 as against net outflow of Rs.2722 crores and Rs.2677 crore in 2004-05 (Exhibit 2). However, the net resource mobilization by private sector mutual fund increased significantly in 2005-06. The major reason behind such performance of mutual fund has been the redemption pressure mainly on income and gilt schemes lost some of its appeal part of the proceeds redeemed from the Mutual Funds investments might have been reinvested in the small savings scheme due to attractive rates offered by the government along with the fiscal incentives.

Foreign Institutional Investors as well as domestic Mutual Funds have increased their stake in most of the public and private sector banks over the past one year. It is not just domestic IT giants and other heavy weight blue-chips that are attracting overseas investors on Dalal Street, banking stocks are also finding favour with them and have gone further up on their radar over the past one year.

The private Mutual funds continued to dominate resource mobilization efforts during 2005-06. Of the net amount of resource mobilized by all mutual funds, the private sector mutual fund accounted for 81.4 percent, followed by public sector Mutual Fund (12.1 percent) and the UTI Mutual Funds (6.5 percent). The share of private sector mutual funds, Public sector mutual funds and the UTI Mutual funds in the gross mobilization were 83.3 percent, 10.1 percent and 6.6 percent, respectively during 2005-06. The share of private sector Mutual funds in the gross mobilization of resources declined moderately in 2005-06 over the previous year. On the contrary, the shares of other two categories of Mutual Funds improved marginally during the same period. Further analysis of data shows that there was net inflow of funds of Rs.12069 Crore.

Mr.Kurian said that one of the big challenges for the mutual fund industry in the near future was to mount an educational campaign to bring investors into equity funds. Another area that requires to be addressed seriously is to spread to the semi-urban areas of India as mutual funds are currently confined to some of India's major cities. "There are now emerging pockets of high net worth investors in other urban and semi-urban areas and mutual funds have to create awareness in these areas," he said.

Exhibit 3: Mobilization of Resources by Mutual Funds

(Rs. in crores)

Period	Gross Mobilisation	Redemption	Net Inflow	Assets at the End of Period
1	2	3	4	5
1999-00	61,341	42,271	18,970	1,07,946
2000-01	92,957	83,829	9,128	90,587
2001-02	1,64,523	1,57,348	7,175	1,00,594
2002-03	3,14,706	3,10,510	4,196	1,09,299
2003-04	5,90,190	5,43,381	46,808	1,39,616
2004-05	8,39,708	8,37,508	2,200	1,49,600
2005-06	10,98,149	10,45,370	52,779	2,31,862

Source: SEBI

Exhibit: 4 Schemes Wise Resource Mobilization by Mutual Funds

(Rs. in crores)

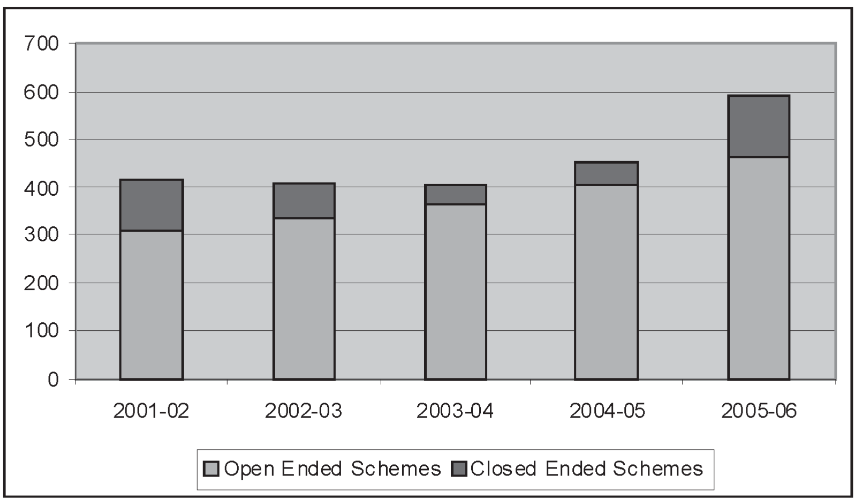
Schemes	Period				
	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6
A. Income (Debt oriented Schemes) (a +b +c +d)	130644(205)	57806(202)	396033 (197)	-5244(227)	16622(325)
a. Liquidity (Money market)	32914 (30)	50050 (32)	245765 (36)	10348 (39)	4205 (29)
b. Gilt	15633 (29)	-6905 (31)	22317 (30)	-1345 (30)	-1560 (45)
c. Debt (other than assured return)	71941 (120)	85510 (118)	128054 (131)	-14247 (158)	13977 (251)
d. Debt (assured return)	10156 (26)	-70849 (21)	-103(0)	0(0)	0(0)
B. Growth (Equity Oriented Schemes)(a+ b)	-5348 178)	433 (168)	72182 (169)	7100 (188)	35231(231)
a. ELSS	-2817 (63)	-6573 (47)	-4664 (43)	-194 (37)	3592 (37)
b. Other	-2531(115)	7007(121)	76846(126)	7294(151)	31639(194)
C. Balanced Schemes	-53544(34)	-16275(36)	-131(37)	345(35)	927(36)
Total	71752(417)	41964(406)	46808(403)	2200(450)	52779(592)

Source: SEBI

Note: figures in bracket indicate numbers of schemes

Scheme wise, resource mobilization witnessed an important shift in the pattern in the wake of strong rally in the stock markets during 2005-06. In consonance with the unusual buoyancy in the stock market, the amount of resource mobilized under growth and equity oriented schemes rose substantially in 2005-06. The net inflow of funds at Rs.35231crore in 2005-06 was the highest under growth/ equity oriented schemes in a single year, followed by income and debt oriented schemes (Rs.16622 crore) (Exhibit 3). The total assets under management went up by 7.2 percent to Rs.1,49,600 crore by end of March 2005 from Rs.1,39,616 crore as on March 31, 2004. In India, the assets under equity funds are meagre as compared to debt similar to many other emerging markets. There were 592 mutual funds as on March 31, 2006, of which 325 were income/debt oriented schemes, 231 were growth/ equity oriented schemes and the remaining 36 were balanced schemes.

Chart: 4: Numbers of Schemes by Investment Objectives



The break up of schemes between close-end and open-end and on the basis of objectives is provided in exhibit 5. The Indian market, like any other developed market is dominated by open-end schemes, with close-end schemes playing a distant second role. Numbers of open-ended schemes are increasing consistently over the period from 307 in the year 2001-02 to 446 in 2005-06.

Investment objective wise classification shows dominance of the open-ended schemes in India. As on March 31, 2006, 463 schemes were open ended and 129 schemes were close-ended schemes. Of the 129 closed ended schemes, 112 were debt-oriented schemes, followed by 15 growths/equity oriented schemes and two balanced schemes. The amount of resource mobilized (gross) under open-ended schemes during 2005-06 was Rs.1057117 Crore or 96.3 percent of the gross mobilization.

Similarly, resources mobilized under close-ended schemes stood at Rs.41031 crore, which constituted 3.7 percent of the gross mobilization in 2005-06. Of the total resource mobilized under open-ended and close-ended, private sector accounted 82.8 percent and 94.5 percent, respectively during 2005-06.

The total assets under management of all mutual funds rose substantially by 55 percent to Rs.231862 crore as on March 31, 2006 from Rs.149600 crore a year ago. All categories of mutual funds schemes, which witnessed a rise in the assets except, gilt schemes, which witnessed a declined 31.5 percent. The assets under management of growth / equity oriented schemes were Rs.99,456 crore while the same under income/ debt oriented schemes were Rs.124913 crore. The highest rise in the assets was noticed in 2005-06. As a result, the gap between two major categories of mutual fund schemes shrank during 2005-06.

Exhibit: 5 Resource Mobilizations (Net) By Mutual Funds

(Rs. in crores)

Year 1	Open Ended Schemes 2	Closed Ended Schemes 3	Total 4
2001-02	92196 (307)	-20444(110)	71752(417)
2002-03	36423(337)	-458(69)	35964(406)
2003-04	460332(363)	7752(40)	468084(403)
2004-05	-3972(403)	6173(47)	2200(450)
2005-06	25783(463)	26996(129)	52779(592)

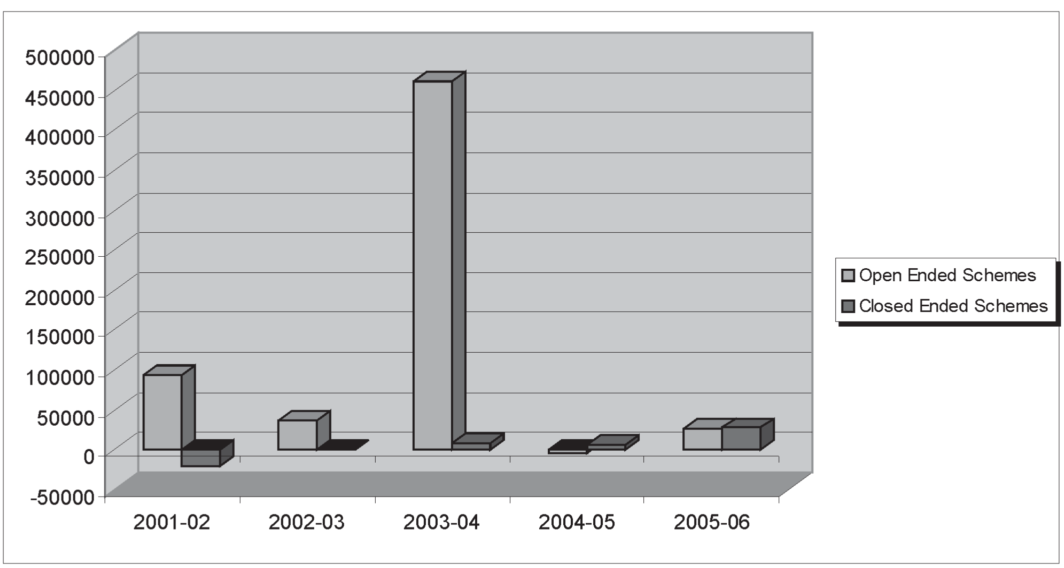
Source: SEBI

Note: *Figures in bracket indicate numbers of schemes.*

Mutual funds play a significant role in the purchase and sale of equity shares and debt in the secondary market. A close examination of the exhibit 6 at disaggregate level provides no clear-cut pattern in the equity segment. There is some amount of random behaviour in their purchase and sale of equity shares. The mutual funds have hither to been the major player in the debt segment of the Indian capital market. However, there was a change in the pattern of participation in 2005-06. Mutual funds were also active in the equity market for the greater part of the year. During 2005-06, the combined investment (net) by mutual funds in debt and equity was Rs.51104 crore compared to Rs.17435 crore in 2004-05. Their net investment in the equity market rose approximately by 32 times to Rs.14303 crore in 2005-06 from Rs.448 crore in 2004-05.

Chart: 5 Resource Mobilizations (Net) By Mutual Funds

(Rs. in crores)



Month-wise data indicate that net investment by mutual fund in equity was positive in eight months. The net investment by mutual funds in equity was, in fact, higher than that of debt during, October 2005 and March 2006. Net investment in debt by all mutual funds during 2005-06 was positive in every month except in December 2005. The net purchase of both equity and debt securities by Mutual Funds amounted to Rs.17,435 crore in 2004-05 of which 97.4 percent was in debt. The debt-oriented fund segment witnessed the birth of a new category capital protection oriented funds. These funds offer investors with a low to moderate risk appetite, an opportunity to invest in a market-linked investment avenue without compromising on their risk profile. The

Exhibit 6: Trends in Transactions on Stock Exchanges by Mutual Funds

(Rs. in crores)

Period	Equity			Debt			Total		
	Gross Purchase	Gross Sale	Net Purchase/ Sale	Gross Purchase	Gross Sale	Net Purchase/ Sale	Gross Purchase	Gross Sale	Net Purchase/ Sale
1	2	3	4	5	6	7	8	9	10
2001-02	12098	15894	-3796	33557	22594	10963	45655	38488	7167
2002-03	14521	16588	-2067	46664	34059	12604	61185	50647	10538
2003-04	36664	35356	1308	63170	40469	22701	99834	75825	24009
2004-05	45045	44597	448	62186	45199	16987	107232	89796	17435
2005-06	100389	86081	14308	109551	73066	36486	209941	159146	50795

Source: SEBI

first fund to be launched in this segment in adherence to SEBI's guidelines is the Franklin Templeton Capital Safety Fund.

Two classes of institutional investors that play a significant role in the capital market are mutual funds and foreign institutional investors. Between these two, FIIs are significantly ahead of mutual funds in India. FIIs have been net buyers of equity and debt throughout the year. FIIs have invested more in equity and less in debt due to regulatory restrictions.

Another important institutional investor in the capital market was the Foreign Institutional Investors (FIIs). A positive contribution of the FIIs has been their role in improving the stock market infrastructure. The SEBI has no doubt contributed much in improving the stock exchange infrastructure. However, it is doubtful whether one would have witnessed such rapid developments in computerising the operations of the stock markets and introduction of paperless trading in the demat form if the FIIs had not built up pressure on the authorities to move in this direction.

Comparing both the classes of institutional investors, it was found that net investment by mutual funds in debt at Rs.16,987 crore was much higher than that by FII investment at Rs.1,759 crore. Reverse was the case with equity where net investment by FII was much higher (Rs.44,123 crore) as compared with mutual funds. Less investment in debt market by FIIs can be explained in terms of regulatory restrictions which put the cumulative limits of US $ 1.75 billion on G-sec including Treasury bills and US $ 500 million on corporate debt.

During the year 2003-04, total investment of FIIs have worked out to Rs.45,767 crore (US$ 9.950 bn) whereas total investment of mutual funds worked to Rs.24,009 crore. This picture may mislead to some extent, because out of the total investment of Rs.24, 009 crore, Rs.22, 701 crore was in the debt market and the remaining Rs.1,307 crore was in the equity market.

This is a difficult time for investors all over the world, India being no exception. The mutual fund industry in India is operating in an environment wherein market sentiment is down. Just when it seems that investor sentiment is improving, a fresh blow strikes the capital markets. Earlier, the Indian capital markets were less integrated with world financial markets, and hence could take a contrary view. However, with increasing convergence, adverse international developments have their impact on Indian financial market. The FIIs are playing an important role in bringing in funds needed by

Exhibit 7: Investments by MFs, FIIs and Sensex

Months	Net investment by Mutual funds			Net investment by FIIs			Sensex (Avg Monthly)
	Equity	Debt	Total	Equity	Debt	Total	
Apr, 04	-219	2452	2232	7638	-919	6720	5809.01
May, 04	1005	627	163	-3247	-300	-3545	5204.65
Jun, 04	-260	-1272	-1531	516	-790	-274	4823.87
Jul, 04	-470	350	-120	914	-200	713	4972.88
Aug, 04	-98	1355	1257	2892	-371	2521	5144.17
Sep, 04	-229	1209	980	2386	190	2575	5423.27
Oct, 04	-422	-465	-886	3263	-1235	2028	5701.61
Nov, 04	-695	-1182	487	6741	1445	8185	5960.75
Dec, 04	-356	2701	2345	6684	3456	10140	6393.83
Jan, 05	548	2680	3228	454	-774	-317	6386.99
Feb, 05	-102	2754	2855	8376	833	9209	6595.05
Mar, 05	1543	3413	4956	7502	424	-7927	6679.18
Apr, 05	1465	5035	6500	-654	-821	-1475	6379.29
May, 05	3340	4725	8065	-1140	-246	-1386	8272.32
Jun, 05	-1817	3597	1781	5329	-70	7760	8220.45
Jul, 05	482	3970	4458	7934	-174	7760	8552.09
Aug, 05	2293	6033	8326	5051	-430	4621	9162.07
Sep, 05	3233	4766	8000	4647	-188	4458	8272.32
Oct, 05	3020	2193	5213	-3694	-934	-4627	8220.45
Nov, 05	581	2633	3214	4039	-2164	1874	8552.09
Dec, 05	-1377	-770	-2147	9335	-974	8361	9162.07
Jan, 06	-1158	905	-254	3678	-922	2756	9539.67
Feb, 06	-246	925	679	7588	-152	7436	10090.08
Mar, 06	4487	2783	7270	6689	-258	6430	10857.03

Source: SEBI

the equity market. Additionally, they are contributing to the foreign exchange inflow as the funds from multilateral finance institutions and FDI are insufficient. However, the fact remains that FII investments are volatile and market driven, but this risk has to be taken if the country has to ensure steady inflow of foreign funds.

Mutual funds have emerged as dominant institutional player in the stock marketing 2005-06 their exposure in the equity segment increased significantly in the financial year. In fact, since the last quarter of 2004-05 there has been substantial mobilization of resources under equity schemes. The mutual funds have contributed substantially to the liquidity of the equity market by complementing the FII. During April and May 2005, when the FIIs investment turned negligible in the equity segment, mutual funds stepped into support it. The mutual funds investment in the equities had remained negative since December 2005. In March 2006, the trend was reversed with the highest investment in a single month by the mutual funds at Rs.4483 crore in the equities.

The combined investment by mutual funds in the equities and debt during March 2006 was Rs.7133 crore. During

2005-06, the total net investment by the mutual funds increased substantially by 1915 to Rs.50794 crore from Rs.17429 crore in 2004-05.

The correlation between net investment by FIIs and BSE Sensex was rather weak about 0.25. However, the correlation coefficient between gross purchase by FII and the BSE Sensex was high at 0.65 and the same between gross sales and BSE sensex was 0.60 during 2005-06. Mutual fund exposure to equity market improved significantly in the last quarter of the year 2004-05 reflecting large mobilization of resources under equity schemes.

Multiple Regression Analysis

Dependent variable: Sensex

Independent variables: FIIs

Total MFs

Parameter	Estimate	Standard Error	T Statistic	P-Value
CONSTANT	6073.66	516.518	11.7589	0.0000
FIIs	0.141748	0.0695607	2.03776	0.0544
Total MFs	0.264349	0.106579	2.48031	0.0217

R-squared = 29.2092 percent

R-squared (adjusted for d.f.) = 22.4672 percent.

One percent change in FIIs investment results in 0.141748 percent change in sensex in the same direction and one percent change in investment by mutual funds results in 0.264349 in the same direction.

The output shows the results of fitting a multiple linear regression model to describe the relationship between Sensex and two independent variables. The equation of the fitted model is Sensex = 6073.66 + 0.141748*FIIs + 0.264349*Total MFs.

Since the P-value in the ANOVA table is less than 0.05, there is a statistically significant relationship between the variables at the 95.0 percent confidence level.

One percent change in FIIs investment results in 0.141748 percent change in sensex in the same direction and One percent change in investment by mutual funds results in 0.264349 in the same direction.

The R-Squared statistic indicates that the model as fitted explains 29.2092 percent of the variability in Sensex. The adjusted R-squared statistic, which is more suitable for comparing models with different numbers of independent variables, is 22.4672 percent.

In determining whether the model can be simplified, notice that the highest P-value on the independent variables is 0.0544, belonging to FIIs. Since the P-value is greater or equal to 0.05, that term is not statistically significant at the 95.0 percent or higher confidence level. Consequently, you should consider removing FIIs from the model.

The market is going up purely on the back of momentum from inflows from overseas investors. Mutual Funds are not as aggressive as their foreign counterparts. As long as FIIs keep pouring money the benchmark indices will keep rising gradually. The moment there is a slowdown in foreign capital inflows, the market will find it difficult to sustain the advance. It would be prudent to remain a little cautious as the key indices are trading at all-time highs and the upside is limited. The market will face a lot of volatility. Though the correction, if and when it takes place, will not be as severe as in May and June, it pays to be on the safer side rather than repent later.

In our view, the 'feel good' has only served to mask some of the murkier issues that investors must not lose sight of. Another distressing trend in the mutual fund industry is the endless contests. The trouble is that mutual fund contests are not for rewarding investors, they are for rewarding mutual fund agents, for getting investors invested in mutual funds! Mutual fund contests are only a distraction for agents, the focus shifts from the investor's financial plan to the tempting prizes/ overseas trips. After all, its not like mutual fund agents do charity, they do make healthy commissions on every mutual fund scheme they sell.

Setting objectives before embarking on an investment activity is critical to the achievement of investment goals. That is why it is important to first identify your investment objectives/goals (child's education/marriage, retirement, buying a property) and then work resolutely towards achieving them. Of course, your financial planner plays an important role in chalking out a viable investment plan. But remember, it's your money and your goals at the end of the day; you must take the first step by short-listing the most important financial milestones of your life and then approaching your financial planner for his help on how best the objectives can be achieved.

Shortcomings in Operation of Mutual Fund

The mutual fund has been operating for the last five to six years. Thus, it is too early to evaluate its operations. However one should not lose sight to the fact that the formation years of any institution is very important to evaluate as they could know the good or bad systems get evolved around this time. Following are some of the shortcomings in operation of mutual fund:

1. The mutual funds are externally managed. They do not have employees of their own. Also there is no specific law to supervise the mutual funds in India. There are multiple regulations. While UTI is governed by its own regulations, the banks are supervised by Reserved Bank of India, the Central Government and Insurance Company. Mutual regulations funds are regulated by Central Government.

2. At present, the investors in India prefer to invest in mutual fund as a substitute of fixed deposits in Banks. About 75 percent of the investors are not willing to invest in mutual funds unless there was a promise of a minimum return.

3. Sponsorship of mutual fund has a bearing on the integrity and efficiency of fund management which are key to establishing investor's confidence. So far, only public sector sponsorship or ownership of mutual fund organizations had taken care of this need.

4. Unrestrained fund rising by schemes without adequate supply of scrips can create severe imbalance in the market and exacerbate the distortions.

5. Many small companies did very well last year, by schemes without adequate imbalance in the market but mutual funds can not reap their benefits because they are not allowed to invest in smaller companies. Not only this, a mutual fund is allowed to hold only a fixed maximum percentage of shares in a particular industry.

6. The mutual funds in India are formed as trusts. As there is no distinction made between sponsors, trustees and fund managers, the trustees play the roll of fund managers.

7. The increase in the number of mutual funds and various schemes have increased competition. Hence it has been remarked by Senior Broker: "mutual funds are too busy trying to race against each other." As a result they lose their stabilising factor in the market.

8. While UTI publishes details of accounts their investments but mutual funds have not published any profit and loss Account and balance sheet even after its operation.

9. The mutual fund has eroded the financial clout of institution in the stock market for which cross transaction between mutual funds and financial institutions are not only allowing speculators to manipulate price but also providing cash leading to the distortion of balanced growth of market.

10. As the mutual fund is very poor in standard of efficiency in investors' service; such as

despatch of certificates, repurchase and attending to inquiries lead to the deterioration of interest of the investors towards mutual fund.

11. Transparency is another area in mutual fund which was neglected till recently. Investors have right to know and asset management companies have an obligation to inform where and how his money has been deployed. But investors are deprived of getting the information.

Future Outlook and Suggestion

As mutual fund has entered into the Indian Capital market, growing profitable enough to attract competitors into this cherished territory encouraging competition among all the mutual fund operators, there is need to take some strategy to bring more confidence among investors for which mutual fund would be able to project the image successfully. The following are some of the suggestions. As there is no comprehensive law to regulate the mutual fund in India, uniform coordinated regulations by a single agency would be formed which would provide the shelter to the investors. *Secondly,* as the investors are not willing to invest in mutual fund unless a minimum return is assured, it is very essential to create in the mind of the investors that mutual funds are market instruments and associated with market risk hence mutual fund could not offer guaranteed income. *Thirdly,* due to operations of many mutual funds, there will be need for appropriate guidelines for self-regulation in respect of publicity/ advertisement and inter-scheme transactions within each mutual fund. *Fourthly,* the growth of mutual fund tends to increase the shareholdings in good companies, give rise the fear of destabilizing among industrial group, hence introduction of non- voting shares and lowering the debt-equity ratio help to remove these apprehension. *Fifthly*, as there is no distinction between trustees, sponsors and fund managers, it is necessary to regulate frame work for a clear demarcation between the role of constituents, such as shelter, trustee and fund manager to protect the interest of the small investors. *Sixthly,* steps should be taken for funds to make fair and truthful disclosures of information to the investors, so that subscribers know what risk they are taking by investing in fund. *Seventhly* infrastructure bottlenecks will have to be removed and banking and postal systems will have to be taken place for growth of mutual funds. *Lastly*, mutual funds are made by investors and investors' interest ought to be paramount by setting standard of behaviours and efficiency through self regularizations and professionalism.

Conclusions

The mutual funds have hither to been the major player in the debt segment of the Indian capital market. However, there was a change in the pattern of participation in 2005-06. Mutual funds were also active in the equity market for the greater part of the year.

Mutual funds have emerged as dominant institutional player in the stock marketing 2005-06 their exposure in the equity segment increased significantly in the financial year. In fact, since the last quarter of 2004-05 there has been substantial mobilization of resources under equity schemes. The mutual funds have contributed substantially to the liquidity of the equity market by complementing the FII.

Mutual fund exposure to equity market improved significantly in the last quarter of the year 2004-05 reflecting large mobilization of resources under equity schemes.

The market is going up purely on the back of momentum from inflows from overseas investors. Mutual Funds are not as aggressive as their foreign counterparts. The FIIs are playing an important role in bringing in funds needed by the equity market. Additionally, they are contributing to the foreign exchange inflow as the funds from multilateral finance institutions and FDI are insufficient.

The debt-oriented fund segment witnessed the birth of a new category – capital protection oriented funds. These funds offer investors with a low to moderate risk appetite, an opportunity to invest in a market-linked investment avenue without compromising on their risk profile.

In the past decade, Indian mutual fund industry had seen a dramatic improvement, both quality-wise as well as quantity-wise. The main reason of its poor growth is that the mutual fund industry in India is new in the country. Large sections of Indian investors are yet to be intellectuated with the concept. Hence, it is the prime responsibility of all mutual fund companies, to market the product correctly abreast of selling.

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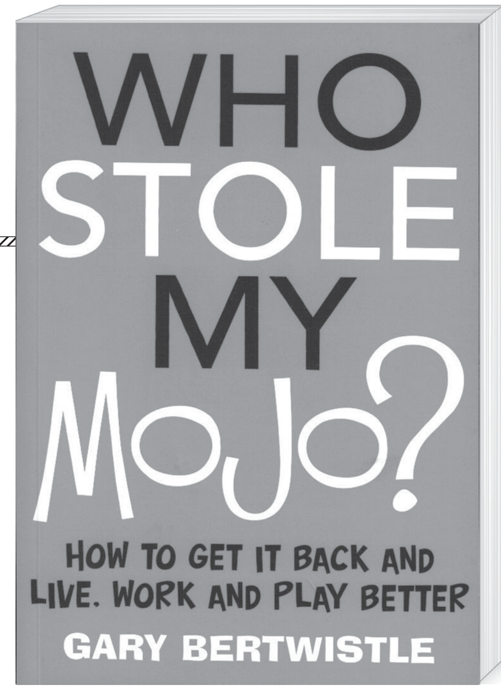

Book Title	:	***Who Stole My Mojo?*** ***How To Get It Back And Live Work And Play Better***
Author	:	**Gary Bertwistle**
Edition	:	**First South Asian Edition 2008**
Price	:	**Rs.225/-**
ISBN	:	**978-1-74175-533-6**
Pages	:	**200**
Publisher	:	**Allen & Unwin**
Indian Distributor	:	**Vikas Books Pvt. Ltd., New Delhi.**

Does your heart leap no more when it beholds a rainbow in the sky?

No books in running brooks, tongues in trees, sermons in stone, or good in everything?

Well then, chances are you are low on your mojo. Truer still, you have lost your mojo. In all probability, you let it slip through your fingers. You lost it. And now you want it back…that fizz, that spark…that something that charges up your life. You want your MOJO back.

In the first place, who stole your mojo? You have a pretty good idea, because it was you who stole your mojo. Don't panic. For, helping you get it back bit by bit, is a man who thinks differently…a man who has reshaped the definition and concept of the word "thinking."

Read Gary Bertwistle's runaway hit "Who stole my Mojo? How to Get It Back and Live. Work And Play Better'' and we'll be startled by the amazing power our thoughts can unleash provided they are channelised by positive forces which lie latent in all of us.

Call it magic, verve, pizzazz, oomph, zip or spark. That's what mojo is all about. Mojo's that feel-good factor that triggers the "get-set-go" gunshots that helps us leap over obstacles with élan.

"Who Stole My Mojo?" contains no mantras. It's a practical set of thoughts which have the power of helping us raise the bar for ourselves. Full of real-life experiences, it makes us sit up and think. And at the end of it all we hear ourselves saying: Hey, I can do it. I can. I can.

The book offers no quick-fix remedies for regaining mojo. Nor does it dish out instant two-minute solutions to life's problems. It should be allowed to grow on you. Striving for mojo is to be seen as a deliberate pursuit to push back mental blocks thereby helping us walk that extra mile.

Each page of the compact volume contains anecdotes…of how ordinary men and women made their lives look up for them by daring to think positively and making a willingness to work hard to concretize those positive thoughts.

Mojo is that extra spark that makes the difference between having a good day and a great day. It's the difference between getting good results and outstanding results, says Bertwistle.

Bertwistle got his Mojo working for him during the International Alliance of Learning Conference in Washington DC in 2006. Watching so many participants articulating their ideas with gusto and conviction, he felt that, sadly, this adrenalin-charged energy would wane within weeks. And all of them would settle into comfort zones of unproductive existence. He was sure they would ask themselves at a later stage: What happened to my mojo?"

This got Bertwistle thinking. He took upon himself the task of helping people have that extra something that helps them get a little bit more out of any situation. ...to help them have that twinkle in their eye, that zing in their life.....the mojo.

All the same, Mojo is not a work which you can refer to for trying to whip up solutions to everyday's tricky spots. As he himself says: "Now I'm not saying it's a matter of running around proclaiming that the world is perfect and that everything is great. It's about understanding that whenever something happens or an opportunity presents itself, you, and you alone have the choice of how you will react to it."

As you turn each page you feel your lost mojo creeping back into you, especially when Bertwistle tells you that curiosity sparks mojo which in turn triggers creativity.

Mojo has no place in the bland or the mediocre. To hell with modesty. When you raise the roof, you're not bragging or trumpeting that you are the best. On the contrary, it's the inner knowledge in our minds that sets the bar above the mediocre, above the bland. Let this not be misconstrued as arrogance. But the more you raise the bar for yourself, the more will you be up for censure by those who have set standards of mediocrity for themselves.

Let there be no misconception about the mojo book. It's earthy. And he tells us how our food habits condition our thought processes. There's a word of caution for all gluttons and guzzlers. Be kind to your digestive system. Clogged intestines can rob creativity. Want your mojo back? Eat less, eat good and feel great.

All the same, Bertwistle's conviction that from a physical point of view, sex is the other activity other than digestion which saps the mojo out of you may go up for debate.

In all, Who Stole My Mojo? is a bible of practicable ideas. However, the author himself sounds a word of caution. When you've read all about finding your mojo back, you're fired on all cylinders, ready to blast off. In the process you are likely to scare away those who are not yet ready for their mojo. Just wait for others to steal back their mojo, says Bertwistle.

Thus, Who Stole My Mojo? is all about you...your thinking and your mojo, from a thinker-trainer from Down Under. Gary Bertwistle has been working in the business of thinking and creating new ideas for the last 20 years inspiring people and helping them ignite the spark in them. A guide for the lay man and the corporate, it's a must-read in these days of general meltdown.

A great book. Worth every mojo word. Happy Mojoing!!

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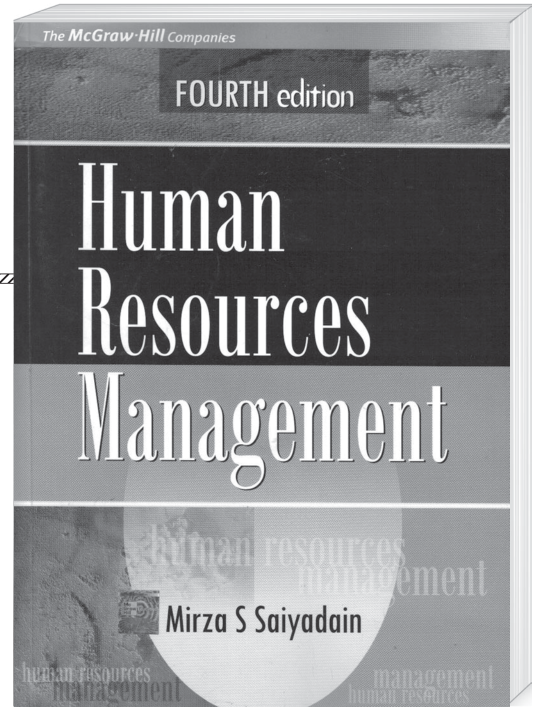
Skimming and Scanning



Book Title : ***Human Resources Management***
Author : **Mirza S.Saiyadain**
Edition : **Fourth**
ISBN : **978-0-07-026363-5**
Pages : **551**
Publisher : **Tata McGraw-Hill Publishing Company Ltd., New Delhi.**

The HRM functions are judged to be the amalgam of Human Resources Management, Industrial Relations and Labour Legislation enduring momentous changes in this express world. This book *Human Resources Management* by Mirza S. Saiyadain has endeavoured to stretch out and update, conceptually and empirically the significance of Human Resources Management in Indian milieu. The book will explicitly be of immense assistance to the executors of Human Resources Management.

The book deals with the Evolution of Human Resources Management and its functions, their impact on the organization and workforce. Increasing organizational size and its complexity, transition from the traditional to professional management, changing social and cultural norms, globalization, and information technology are persistently changing the profile of HRM functions. The role of HR has grown from the ambit of recruitment, training, payroll etc to more sophisticated and broader areas like competency mapping, succession planning, crisis and change management. Job satisfaction among the Employees and its influence on productivity are very much explored. A high-quality system for the selection of employees helps to build the image of the organization.

Retaining Human Resources is imperative controlled by various factors like work motivation, supervisory behaviour, organisational change, and performance appraisal. Even though the link between behaviour and motivation looks simple, motivation is a very complex and highly subjective phenomenon. Influencing group members to achieve common goals is the responsibility of the leaders. Strategies like T - groups and participative approach facilitate to bring changes in the organization. Whenever an organization goes for a change the role of HR is not only important but inevitable. On the other hand, Performance Appraisal is focused on the individual development to achieve the desired performance.

The other factors that serve to the development of Human Resources are training and development, perception and communication. The effect of training on performance is difficult to isolate because performance is a function of complex forces and motives. Perception and communication are two significant facets of an organizations' life. An effective strategy to motivate employees to perform their best is internal mobility. Compensation Management, developing structures of compensation packages becomes one of the major assignments of Human Resource Management. If the organization wishes to attract and retain talented people they have to be better pay masters. Human Resources spectrum as a whole is squashing into the Industrial Relations, Quality of working life, Working conditions, Work behaviour, HR audit, Information Systems, and finally to HRM ethics. The Quality of Work Life manifests itself in a variety of operational systems like workers participation, job enrichment, and quality circles. The higher the visibility of participation, the greater is its effectiveness. The working conditions and work behaviour are more associated with productivity, morale, absenteeism, accidents, fatigue etc. Safe working conditions, Incentive schemes, activities that induce greater motivation and morale create a supportive environment to attract and retain the worker on the job. Ethics and Human Resource Management are very much correlated and ethics are principles prescribing a behaviour code that explains what is good and bad, right and wrong. Ethics is interpreted in many ways and is a branch of philosophy considered normative. Unlike other functional areas Human Resource Management is more susceptible to violation of code of ethics because most of its activities are based on judgment. Author has quoted Kenneth Johnson's suggestion of EPIC approach for managing ethics. The author Mirza S. Saiyadian has tapped into the techniques of statistical analysis that which helps into the interpretation of Human Resource Behaviour.

The management of organizations today is the management of human resources. This book is ostensibly engraved with all the facts of Human Resources Management with solid real life case studies and perfectly guided to tailor the new techniques of Human Resources Management. Efforts are made not only to deal with basic issues but have also suggested the ways and means to effectively manage Human Resources. It is definitely a valuable input and should be referred by the executors of Human Resource Management and the aspiring HR Managers. By putting all these aspects into practice, the HR Managers can pull off themselves to personal as well as professional heights. This book is also a useful source of information for students, teachers, professionals and researchers.

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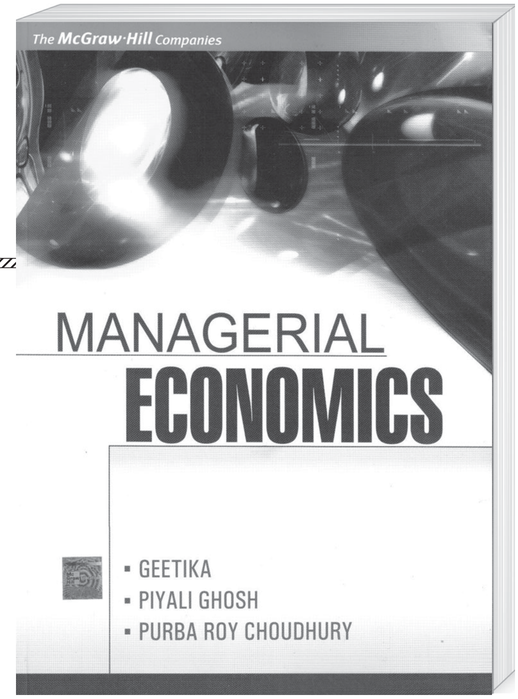

Book Title	:	***Managerial Economics***
Author	:	**Geetika, Piyali Ghosh, Purba Roy Choudhury**
Edition	:	**2008**
Price	:	**Rs.250/-**
ISBN	:	**978-0-07-026365-9**
Pages	:	**538**
Publisher	:	**Tata McGraw-Hills Publg. Co. Ltd., New Delhi.**

This book on managerial economics provides insights on micro-economic theories and concepts and macro-economic concepts pertinent to business economics. The micro-economics chapters (Part 1-5) provide a detailed description on the basic concepts and principles involved in economics and neatly have stressed the importance and relevance of economics to managerial decision making. The chapters in micro-economics are explained through the chapters on theory of the firm, demand and supply analysis, consumer preferences and choice, elasticity of demand, demand forecasting, production theory, cost concepts, market structure and market morphology, and product pricing.

As far as the macro-economic chapters (Part 6) are considered, the book concentrated on national income and its estimation, business cycles, and also covered the aspects of inflation and money supply, considering the growing problems of inflation in the economy.

Good things about this book!

1. The presentation of the book is lucid, as said by the authors "in the conversation mode," which is maintained throughout the book.

2. Every chapter has additional information on the mathematical models associated to the concepts and theories discussed in the chapter.

3. The remember keys and the consolidated points of the various concepts is very useful for quick reading and memorising.

4. The analytical corner and "Think out of the box" statements and questions facilitates true analytical thinking for hungry learners as well prompts the student to learn and apply further the neo-classical theories and propositions.

5. The case study presented at the end of each chapter is very interesting and more relevant to the Indian scenario. And also for the instructors it's very handy to use these case studies for driving discussions in the class.

Suggestions for Improvement:

1. Most of the times students from different streams do not understand the purpose of learning economics, at least until they attend placement

interviews or join a job. It's mainly because only until the first chapter or unit of managerial economics is completed, the role of managerial decision making is spoken about. I also do recognise that reality bites are built to address the application of economics in reality. However, it could be better if at the end of every chapter a brief note is made about, how the concepts described would be useful for a manager in decision making, what should be the factors a manager need to consider which could probably be the chapter outcome.

2. In the case of micro-economic chapters, although I appreciate the case study presented at the end of each chapter, more examples could be provided along with the explanation of concepts especially in the case of demand and supply, cost concepts, market structures, to enable readers to assimilate the concepts better.

3. In the book, an additional chapter pertinent to calculating the investment worthiness of projects (including the economic Impact assessments) in a similar presentation style. This could add benefits to purchase this book as a reference text book.

4. Many managerial economics text books lack the equal emphasis of macro and micro-economics. In the forthcoming editions a brief insight on balance of payment and its implication for managerial decision making, understanding the importance of budgets, monetary policy and trade policy, how to read the important indicators of macro-economic variables in decision making would solve the problem of students running around for different economic text books to cover their syllabus.

I would highly recommend this book as a reference at this stage for students of economics, as well as students pursuing management related courses. In simple words, This book takes you quickly and swiftly to learn the concepts, and think beyond with respect to reality and existing theories.

About the Authors

Geetika is Professor at School of Management Studies, Motilal Nehru National Institute of Technology, Allahabad. An avid researcher she is, she has to her credit four books and several research papers. She has twenty years of teaching experience in the areas of Managerial Economics, International Business and Strategic Management.

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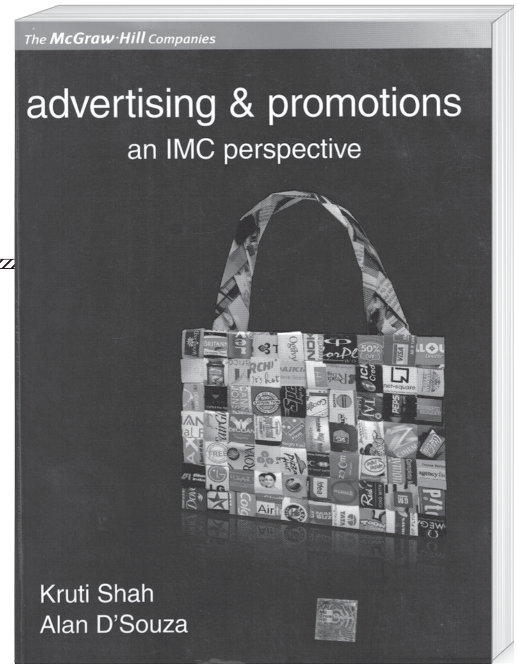

Book Title : *Advertising & Promotions an IMC Perspective*

Author : Kruti Shah and Alan D'Souza

Edition : 2009

ISBN : 978-0-07-008031-7

Pages : 987

Publisher : Tata McGraw-Hills Publg. Co. Ltd., New Delhi.

Communication remains the only differentiation tool for a marketer when products attain parity. In ***Advertising and Promotions an IMC Perspective***, Kruti Shah and Alan D'souza use the text to explicate the concept. As Madhukar Kamath (MD & CEO, Mudra Group) rightly points out that this book carries "Kruti's youthful enthusiasm and diverse industry and academic experience, with over three decades of wisdom that Alan has collected in the Indian Advertising industry." Nearly everyone in the modern world is influenced to some degree by advertising and other forms of promotion. This dynamic and fascinating field is undergoing dramatic changes from all corners.

A number of factors are influencing the way marketers are communicating with consumers. The audiences that marketers seek along with the media and methods for reaching them get fragmented down. Advertising and promotional efforts have become more regionalized and targeted to specific audiences. In recent past, there has been growth of innumerable broadcast and TV channels, national dailies and magazines. It has been the time for the advertisers to search for the right medium to reach the customers. Apart from the traditional medium, many other media options, which were never heard before, are now available. The web advertising and interactive media are prime examples of technological advancements.

Today companies are coordinating all these communication efforts to send cohesive messages to their customers (Integrated Marketing Communication (IMC)-Solutions). Some companies are building brand with little or no use of traditional media advertising. Marketers are changing the way they allocate their promotional spends and expect promotional rupees to generate immediate sales, demanding more accountability from their agencies. Retailers are becoming larger and more powerful, forcing marketers to shift money from advertising budget to sales promotion. Many experts argue that 'brand content' is the wave of the future, and there is growing movement to reinvent advertising and other forms of marketing communication to be more akin to entertainment. As IMC is gaining more importance, author has dedicated two sections covering all the elements with the example of "Incredible India" campaign that captures the world through integrated communications and case studies on Cadbury and VIP.

Authors are particularly inclined towards advertising, as they perceive it as a tool that offers highest opportunity for strategic and creative work. It is true in Indian context where advertising is the most used form of communication and any other form of communication almost always involves some advertising. Reviewing advertising these days reveals that a large chunk of it is neither creative, nor strategically sound and lost in clutter. Authors say "creativity that is not leashed by sound strategic rules or strategy that is not given creative wing can fall flat on a communicators face." At the same time, campaigns like "daag achche hain" [Surf Excel], 'Dimag ki batti jala de' [Mentos], "Dum lagake haisha" [Fevicol] are creating buzz with sound strategy and brilliant execution.

Nearly every day, an example of advertising and promotion in practice is reported in media but current books on the subject concentrate either only on theoretical aspect or on execution. The former focused towards academics and latter on professionals. The question, students or readers ask most often, is "How do I use this in the real world?" Rarely does one come across a book, which shows equanimity between theory and practice in this area of study. Though there are several international books on advertising and promotion, they lack Indian context and case studies (Indian Examples). A particular strength of this text is the integration of theory with practical application focusing Indian marketing and advertising industry.

The authors explain with the help of examples like Raymond's, *Hyundai, Tata Salt, Marico, Lifebuoy* and *Rasna*, how the process of communication is used for building brand image. In addition, a few examples on how the idea fails to achieve its objective, act as a revelation for the readers. Creators of communication must have 'Spark' burgeoned from understanding consumer behaviour. This will help to bring out ***"Big Idea"*** and help a brand to standout from clutter.

About Authors

Kruti Shah a young upcoming marketing and communications professional, is the founder of the marketing and communication consultancy outfit *Thinking Ink*. Kruti holds an MS in marketing communications from Stuart Graduate School of Business, IIT Chicago and a gold medalist in MBA from Nirma University, Institute of management. She has co-edited *Inspirational Gems to empower your Life* which has successfully run over five editions.

Alan D'Souza has over three decades of experience in industry, academics and institution building. A post-graduate from IIM-A, he has worked with companies such as Boehringer-Knoll, Glaxo and Mudra Communications. In the advertising arena he has contributed towards building brand such as Cera, Vimal, Rasna, Dhara, Symphony, Yera etc. He is one of the founder members of MICA (Mudra Institute of Communications, Ahmedabad). Mr. D'Souza is currently Director, Goa Institute of Management.

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Aims and Scope

The *SCMS Journal of Indian Management* is a **blind 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?
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- 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.
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