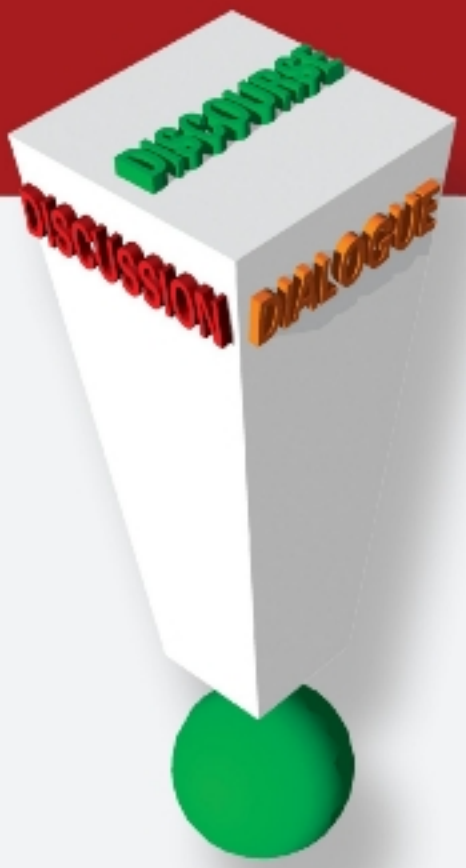
January-June 2011 – Volume-3 – Issue-1 ISSN 2230-7524




# 3D... IBA JOURNAL OF MANAGEMENT & LEADERSHIP

**Theme:**

## Locating New Perspectives in the Knowledge Economy

*Guest Editor*
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**3D... IBA Journal of Management & Leadership**

*Publisher*

**IBA Publications**
IBA Campus
Lakshmipura, Thataguni Post
Kanakpura Main Road
Bangalore 560 062

Printed at
**Sadguru Screens**

*Subscription*

IBA Journal of Management & Leadership is published twice a year.

Annual subscription: Rs 400/-

# Guest Editor's Note


We are at a cusp of change. Cliché apart, the change is a transformation of a structural underpinnings from an analog brick and mortar firms and markets to a foundation resting on three commodities viz information, knowledge and culture ( Benkler, 2006). The transformation is not simple and is not merely about technology. It goes beyond to the changes in consumer behavior attaining a critical mass that transforms the value propositions in the industry (Wurster and Evans, 2005). The facilitator has been the PC and the internet which, thanks to their generative nature, facilitates variety of transactions and shifts in production models (Zittrain, 2007). The impact apart from the impact on business extends to the public sphere and to public activism. The subterranean pressures that the manifest on the surface owing to the transforming information access equations between the firm, market, government and society is visible across the world. Therefore research frontiers in tapping the diverse influence of these developments need to be understood. The journal gives pointers to research directions in the current digital era.

In the opening paper Dr. Sorab Sadri and Dr. Jayashri Sadri highlight the need for organizational sustainability. Adapting from the sustainability guidelines developed by APEGBC, they bring out their own model of sustainability guidelines that would go a long way in preserving the environment and social structure while delivering excellence.

Further contribution to sustainability, excellence and identifying and locating the frontiers in nation-business-society interfaces is provided by Hemjith Balakrishnan and Samuel Talari. To them an approach in totality would be captured by a matrix that attempts to account for social preferences and function with the business preferences and functions. In a simple yet profound insight, they categorize businesses as progressive and retrogressive while the social dimensions are captured through the prism of value consciousness and value latent. Drawing from both Western and Indian philosophical and business thought they posit a need for business resonance calling for a thriving of progressive business with value consciousness.

Prof. N. Narayanan recognizes the dimension of strategy emergence as opposed to strategic decision making. This complements deliberate strategies and gets shaped by the reconciliation of dichotomies that exist in the organization decision making. He premises the development of polychtomy and views in terms of process development that mere outcome which many a theorists seem to be obsessed with.

SEZ and their public purpose are facing criticism across board. The violent manifestations of the people dispossessed of their land has been visible in incidents like Singur, Nandigram, Kalinga Nagar etc. Land acquisition and economic progress are believed to be linked but the controversies associated with this linkages and the costs thereof are

examined by A. Bhavna in her paper. She also attempts to build a roadmap in reconciling the interests of the industry and the society.

Climate change, carbon emissions, global warming are all attracting increasing attention and as we move further in building our technological led economy, the final answer is yet to be achieved. Since Al Gore's book 'Inconvenient Truth' and Stern Commission Report (2007), the debate has taken off to wider context apart from increasing polarization. Prof. B. M. Jani makes an economic analysis of carbon emission and studies the prospect of the development of market for Clean Development Mechanism (CDM) in the Indian context. He further lays of series of steps that are essential for building these blocks

A similar yet different look is undertaken by Prof. Navdeep Kaur and others in their paper on Climate Change and Technology Transfer. Calling climate change as defining force for human development, they stress a need of reducing carbon dependence while maintaining the developmental goals. They present a list of innovative mechanisms that could lay the foundation for international collaboration in developing skills and technologies needed to tackle climate change

An article by Victoria Ferris studies the experiences of mobile usage on bottom of pyramid markets. Surveying the different models that operate at the bottom of the pyramid, she integrates her own experiences into developing an analytical framework. A similar analysis using IBM's experiences in innovation is presented by Prof. Soni Srivatsava and Prof. Gangawar. A paper by Prof. T.V.P. Chowdry and others looks at the Indian cities, their emergence at the center of economic activity and the directions they can lead in societal thrust forward.

Digital technologies, as observed earlier, play a key role in transformation of economic growth, progress and development. Rojers Joseph and Prof. Shishir Jha survey the emerging business models that are taking shape in the digital domain. Further, their work highlights the role of copyright and the exclusivity it fosters hindering growth of industries. In the current legislative battles in the US seeking to extend the arm of Intellectual Property rights to more domains and assume dictatorial dimensions in the existing arena, this paper serves a vital reminder the need to foster and strengthen the culture of sharing

Prof. Subhash Sharma's insights to institution building using his Theory-J formulation brings about a new and radical change in institutional building literature. If education is key to human progress as elucidated by Amartya Sen among others, an analysis of successful educational institutions becomes imperative. Since empirical research in the Indian context is limited and confined to top tier institutions, Prof. Sharma goes beyond the conventional stream and suggests framework suggesting the possibility of institutions operating in niche dimensions emerging triumphant in the competition. The model serves as an underpinning for other B-schools to follow.

The journal concludes with an attempt to find new directions in current research frontiers. Prof. Isha Gamlath presents a new idea which she terms 'Subhashism' . She draws upon Prof. Subhash Sharma's work and seeks to model an Indian answer to the puzzles confronting the decision makers of today.

**Prashant Kulkarni**
Guest Editor

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
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# Organisational Excellence and Business Sustainability

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We shall begin this paper with trying to understand the concept of business sustainability. As the battle for competition intensifies, capital will become increasingly concentrated and centralised. With this will surely come the imperative for companies to thrive on the cutting edge of both technology and competition. It is no wonder therefore that management in the 21st century is being marked by the twin concerns for excellence and sustainability.

If sustainability principles will guide us to a secure future, then nowhere do these principles need more urgent application than within the fields of science and technology. What do these principles mean in practice? What knowledge, skills, and actions are required to shift sustainability theory to practical application? What are the current initiatives and best practices locally and globally? This quest for excellence and sustainability is a long pilgrimage in search of a response to the question: What can we do? Indeed, sustainability is an incredible complex concept, subject to a multitude of interpretations. And maybe the answer can be found outside science and technology in the soft side of art, philosophy and sociology.

With more than 300 definitions of sustainability, it is little wonder there is some ambiguity over what exactly the term means. The best-known definition comes from Our Common Future (the so-called "Brundtland Report") prepared under the auspices of the World Council on Environment and Development in 1987, which defines sustainable development as that which "…meets the needs of the present without compromising the ability of future generations to meet their own needs". While this hints at a number of important principles, it provides little concrete guidance about what to do differently. In 1993, APEGBC took the position that sustainability from an engineering and geo-science perspective

can best be understood as a process of complying with seven principles, known as the Sustainability Guidelines. Sustainability Guidelines should, in our opinion, essentially embody the following fundamentals of sustainability:

**Systems Thinking:** We need to acknowledge the fact that seemingly discrete projects or activities are in fact a part of many interacting or interdependent social, ecological, and economic systems that together form one complex global system. Such thinking encourages us to critically assess the boundaries we assume our projects or activities lie within, and to expand or modify those boundaries where appropriate.

**Temporal and Spatial Scales:** We also need to assess the environmental, social, and economic impacts of our actions over varying scales of space and time. Are space and time mere illusions as Schopenhauer would have us believe or are they an aspect of objective social reality as Russell would say? Should be forget the past and stop worrying of the future as Osho had suggested or should we get caught up with the proponents of Game Theory and weigh the pros and cons of every action and its probable outcome? As Peter Senge puts it, cause and effect are separated by time and often they get mixed up.

**Risk, Uncertainty, and the Precautionary Principle:** For any business to prosper, three concerns are critical. (i) Identifying and actively managing both risk and uncertainty. (ii) Recognizing the value and limitations of both quantitative risk analyses and subjective risk perception in situations characterized by significant uncertainty, and (iii) Maintaining a level of precaution in the face of potentially major negative consequences that is cognizant of stakeholder concerns and values.

**Values-Focused Thinking:** Developing alternative solutions to problems based on human needs and values, and evaluating these options based on those values allows us to keep the end goal in sight. This implies that management simultaneously behaves in both a value based and a value driven manner at all times.

**Engagement and Integration:** Engaging stakeholders and forming integrated design and consultation teams at the onset of appropriate projects to take advantage of a pooled body of knowledge to help define and solve the issues at hand. Unless this is done with an open mind and on a continuing basis management could easily develop managerial myopia or a "frog in the well" syndrome.

**Equity and Disparity:** Ensuring that the equity and disparity of current and future generations has to be considered and that a fair and consensus-seeking process is in place to ensure that the benefits and costs are distributed fairly among various stakeholders. This equity and disparity of managing corporate affairs in a fair and transparent manner is known to work wonders.

**Efficiency:** Management must not only be engaged in but also be seen to be engaged in seeking to maximize the contribution to wellbeing of humans and ecosystems while minimizing the stress on people and ecosystems, seeking win-win situations and clarifying irreducible trade-offs.

**Process and Practicality:** With emergent and growing concerns regarding the environment and its degradation, management should be seriously concerned with applying sustainability in engineering and geo-science in practical and rewarding ways. Perhaps paradoxically, sustainability is best seen as a dynamic process rather than a static end-point – within a small number of fundamental physical constraints at a planetary scale, the scope for living sustainably in the context of changing technology and human values is enormous.

What is driving our interest in sustainability? For technocrats worldwide, an abiding interest in sustainability is being driven by a number of factors, including:

1) Mounting evidence that certain forms of technological and economic development are either physically or socially

unsustainable, and that the usual feedbacks that modify development patterns might not reveal themselves in time for us to make those changes in a controlled and timely manner. In some respects, sustainability is taking a feed-forward control philosophy to socioeconomic development in the hope of avoiding some of the negative impacts and inefficiencies associated with feedback control systems.

2) Social changes in the past forty years or so have lead to a more complex and demanding role for engineers and geoscientists in society. It is no longer acceptable (if ever it was) for engineers to focus exclusively on technical issues; almost every "technical" decision has social, economic and environmental implications that we must recognize and balance in ways that reflect a complex mixture of interests and values. Increasingly, technical professionals of all disciplines (including physicians, for example) are obliged to be more open, inclusive and accountable in the way their skills are exercised.

3) Many engineers and geoscientists believe that embracing sustainability will help shift the focus of professional engineering leadership to a well-defined, confident and less defensive footing, and may enhance the otherwise waning image of engineering in society – one of the primary concerns of engineers throughout the western world.

The all important question then posed is this: How is economic development currently unsustainable? At various stages of history, human societies have engaged in a variety of activities that were literally unsustainable. Modern western societies have avoided collapse to date because techno-economic developments have limited the duration of particular unsustainable activities; for example, in the early days of the Industrial Revolution, wood was used as a primary fuel and construction material at an unsustainable rate – until focus shifted to the use of coal and iron for a variety of technological and economic reasons.

Market forces have, in other words, proven quite adept at modifying human behaviour in time to avoid the negative impacts that would otherwise have resulted from continuing that behaviour too long. No doubt many of our current activities will be modified by the same mechanism without much conscious effort. However, several of the major information feedback loops upon which market forces now rely appear to contain within them sufficient uncertainties and lag times (and the activities are creating sufficient irreversibilities) that by the time reliable information is available to drive a market solution, the damage may have been done. Also, many of the foreseeable impacts appear likely to occur outside the time horizon of current political and commercial frameworks. Just as a process engineer would look to employ some form of feed-forward controls to compensate for a delay in information feedback, so it makes sense for us to identify how we might modify current activities to avoid some of the negative unintended consequences of our actions.

There are many environmental, social, and economic "indicators" of sustainability that we can use to inform a feed forward control strategy. Some of these include:

**Population:** From 1961 to 2001, human population doubled, to 6.2 billion. Forecasts show that the Earth's population will grow to 9 billion by 2050. The significance of population on material sustainability can be approximated by the so-called "IPAT" equation, which suggests that the environmental impact over a given area (I) can be estimated by finding the product of appropriate indicators of population (P), affluence (A) and technological sophistication (T): $I = P \times A \times T$. Much has been written on the relative value of this approach, which has seen widespread application since its development by population scientists in 1972. Some of the debate centres around the metric for "T", that some argue should be arch-shaped – increasing T increases I up to a point, but then begins to decrease I as advanced technologies become less energy and materially intensive.

**Climate Change:** Although climate change is a naturally occurring phenomenon, the Intergovernmental Panel on Climate Change now believes that there is "new and stronger evidence that most of the warming observed over the last 50 years is attributed to human activities." Climate change is not inherently negative, but human societies are not well prepared to deal with its likely impacts. On a global level, climate change may lead to widespread hardship, species loss and could introduce instability to a range of critical socioeconomic systems.

**Ecological Diversity:** In the second half of the 20th century, the Earth lost 300,000 species, and species are disappearing between 100 and 1000 times faster than before Homo Sapiens evolved. This rate of loss in diversity may be unappealing to us and may cause ecological instability, but also reduces our option value -- the option we have to take advantage of these species in the future, for medical, economic or other gain. For example, at least 25 percent of all modern drugs originally came from rainforests, and over 2,000 plants have been clinically shown to have anti-cancer properties

**Energy Use:** Global energy use will increase by about 2% per year to 2010. The vast majority of this will come from non-renewable resources such as gas, coal and oil, and more significantly, will create emissions that contribute to global climate change and local air quality problems. While these and related indicators report worrying trends, the Earth itself is, of course, a finite ecosystem. Like bacteria in a petri dish, there are limits to the extent to which we can use non-renewable resources and create waste before the reality of our planet's scale begins to affect our lives. One way or another, sooner or later, logic demands that this lack of equilibrium must eventually end. Are existing institutions up to the task of ensuring that this occurs on terms favourable to us?

**Achieving and Sustaining Global Competitiveness**

India started liberalizing its economy since 1990. Today it markets are fast integrating into the world markets. Trade barriers are going down. License Raj is almost over. Foreign capital is being welcomed with open arms. On the global scene, technology has become the driving force of change. Businesses world over are globalizing.

As our business globalizes and interlinks itself with the world, the nature and range of business opportunities as well as challenges for us are extensive. Present day competitiveness in the global market place is determined by organizational and technological innovations, superior and consistent product quality, customer satisfaction by delivering more than he expects at competitive prices.

The threat that the emerging trends in the world markets will render us un-competitive in the coming years looms larger. Already we are facing the pinch with Indian buyers looking overseas for products that are either of superior quality, of lower cost or both. In other words, they are looking for value for money. They are demanding customized solutions, excellent service at competitive prices. In this quest, they do not hesitate to look beyond the shores. With the rapid advancements in telecommunications, information flow is instantaneous.

In this scenario, we find ourselves at crossroads. Do we go on to the front foot or the back foot? In other words do we take the battle into their territory or merely try to defend our territory. Looking at the global trend where businesses are trying to outsource all items and services except for a critical few. At a situation where emphasis is on partnership in the production process where each player produces only what he is most competent at, an inward looking strategy is bound to fail. We either have to join the mainstream of corporate life in the global village or we will be at best left as a small player in a small niche.

In our endeavour, we have to move from the state of international pessimists to international achievers. We will have to shed the negative attitude towards competing in the global markets. We have to bury our

fears for once and all. We need to develop an increasingly positive attitude towards international business and being competitive in the global marketplace. We have to move to a state where the globe will be our marketplace, both for sourcing and selling. We have to develop the skills and knowledge to become world-beaters, i.e., reach the state of being international achievers.

How do we do it? What are the necessary steps that will ensure that we are able to build up on our competitiveness and become global players in our product markets? I have tried to identify some critical strategic initiatives, to progressively build organizational competence, capability and competitiveness. However, it will be crucial that organization wide consultations are held to determine the exact policies with participation across all managerial levels. These are:

**Customer driven approach:** In the global market place, the customer has a wide range of choices, and as such, he is more demanding and selective in his choice. He demands more value for money both in the tangible form such as a superior product and intangible form such as courteous and prompt service, proper guidance and training. Today service is becoming the biggest determinant of satisfaction. Right from the time when the Company first comes into contact with a potential customer, the service starts. Be it in the form of replying to queries, giving a demonstration of the product, training to use the product, sales, delivery and after sales follow-up and service. The emphasis is clearly on building a mutually beneficial relationship. The customer gets greater value for money and the company benefits from his patronage for the existing as well as new products. The customer is the greatest carrier of brand equity. By his word of mouth recommendations, which are more effective than many advertisements, he can build a brand overnight.

The most important characteristics of successful organizations such as Sony, 3M, Microsoft have been their nearness to the customer. In our endeavour to become global players, we have to put the customer at the centre of our strategy. This customer-based focus will provide the foundations for developing the organization's vision, strategy and structure.

**Strategic Outlook:** Strategy is a deliberate search for a plan of action that will develop a business's competitive advantage and compound it. This search is an iterative process that begins with recognition of where we are and what all we have. We will have to embark on this exercise of determining where we stand in the present market and what resources we have.

The fundamental basis of above-average performance in the long run is sustainable competitive advantage. There are two basic types of competitive advantage that we can possess: cost leadership or differentiation. The results of the above exercise and the vision that we determine for ourselves will decide whether we go for being the cost leaders or offer differentiated products that will ensure our competitiveness and leadership in the global arena. However, the sustainability of either requires that we possess some barriers that make imitation of the strategy difficult. Since, barriers to imitation are never insurmountable; it is imperative that we keep moving, updating our skills and erecting yet newer barriers. A moving target is the most difficult to hit by the competitors.

**Corporate Governance:** The quality of corporate governance depends on the quality of the Board. The Board must be compact and balanced. It should be made of individuals from different disciplines having diverse viewpoints. It should be capable of appreciating the issues put forward by the management and discharge its duty towards the various stakeholders in the organization. It should also keep the company abreast of the latest happenings in the corporate world and evolve strategies to maximize the welfare of

the various stakeholders towards which it is responsible.

In the not too recent past, we have confused to role of the Chairman and the Managing Director. Taking a cue from the PSU's we had a single individual occupying both these posts. However, today it has become necessary to separate the offices of Chairman and the Managing Director. Division of powers at the top and the concept of "four eyes" has come to stay. Business Ethics must combine with Corporate Governance if Organisational Excellence has to be approximated.

The Chairman will be responsible for re-vitalizing the Board of Directors. He has to ensure that fresh talent is inducted into the board to keep it fresh. A proper succession program has to be developed. He will have to set up a committee for evaluating the performance of the CEO and fresh appointment of directors.

The Chairman should ideally be a multidisciplinary professional. He should be a leader of men. He should be capable of enthusing the employees with a sense of purpose to achieve the organizational goals. He should also be a visionary, as he is the one who would provide the direction to the company in the years to come.

The Chairman along with the Board should be responsible for defining the vision of the organization that derives realistically from the company's strengths and that builds on a distinctive competitive advantage.

A good system of corporate governance will ensure that we do not lose sight of our vision and purpose. It will also ensure that we are fair to all stakeholders in the company. In the long run this relationship with the stakeholders will determine the corporate image, which is essential for the growth and diversification of the company.

**Quality Process & Innovations:** Up until now our approach to quality has been the final test carried out by the Quality Assurance department. This concept has to be thrown into the trash box. Quality will have to become an ingredient into our products and services if we are to be competitive. Every member of the organization will have to strive for achieving the highest standards in quality. We have to get the products right the first time. In the competitive market place there may be no second chance. Today everything is being finely scheduled to the last second. There are simply no lags. For any product, the whole of the supply chain has to perform its part, in time. Getting it right the first time is the only option available to a global player.

We, have to remove the misconception that better quality increases costs. Rather, multitudes of companies have shown that having better quality in fact brings down the costs. This is true if we see the cost of rejections, reworking, production time lost, labour time lost and the time spent in fire fighting once a bad lot has been dispatched.

In the past, we have basically followed the approach of doing old things better and faster. Improving productivity through removal of inefficiencies and improvement in process efficiencies becomes a managerial priority. While this would still be required, in a world where change is the only certainty, these measures would be unable to sustain our organization for long. What we need today is bringing about an organization wide cultural change to commitment towards innovations, development of new products and services. A dedication to become pioneers in areas, which merely exist as remote possibilities today, becomes necessary if competitiveness has to be achieved and sustained. This means that the corporation has to be value based i.e. ethical and exhibit a total dedication for creating value for the customer i.e. be value driven.

For this, we have to learn to tolerate failures. If there are no failures, it implies we have not tried our hands at lots of things. For an

organization to be a learning organization in the spirit, we have to develop a culture where a failure does not mean a setback in the career for a highly talented individual. Rather he should be evaluated on the criteria of the quality and quantum of effort that he has put in. From another angle using the Harvey Liebenstien model of X Inefficiency we can argue that there is an inbuilt inefficiency in all persons, processes and systems. Unless it were to be so technological progress would not be possible.

**Learning Organization:** It is beyond doubt that there exists immense opportunities in the world market. Yes, they are there for us too. However, starting from behind, our managers will need to perform much better than their counterparts in the developed world. If we are to move out of our slumber and move ahead towards the vision of not only catching up with the global players in our areas of operations but forging ahead of them and becoming the trendsetters we have to strive to develop a culture of continuous improvement. Business it becoming increasingly knowledge driven as we make progress with technology. Innovations both organizational and technological are setting the pace for change. In the past few years, capital and labour accounted for only 25% of the total growth in developed countries. The remaining 75% come predominantly from technological innovations. That the technological and managerial innovations are going to shape up the coming competition more intensely is under no doubt.

In today's technologically driven business paradigm, it is knowledge that commands premium in the marketplace. Thus, acquiring and assimilation of knowledge becomes an essential ingredient in the strategy for global competitiveness. For this, we require to develop systems that foster the process of knowledge acquisition and dispersion within the organization. To see how well we are doing we will have to consistently benchmark ourselves against the best, not only in our line of business, but also in other businesses where similar processes might be used. We have to keep abreast of the happenings in the world and embrace new developments/ ideas faster than our competitors. In short, the organization has to constantly update its knowledge and develop new skills. The process of learning in the organization has to be a continuous one.

**Integration of IT in every day work:** Today the advances in IT are fundamentally changing the way business is done. The concept of supply-chain management, electronic commerce etc has been made possible with the huge strides in computing and telecommunication technology. The fusion of increasing computer power available cheaply at the users desktops and rapidly growing telecommunication technology will provide the kind of energy yet unseen. This will propel organizations into changes at a very rapid pace almost on a daily basis. Those who lag behind will be obliterated. For us this calls for a fusion of computing and networking technologies into the corporate strategy and in the organizational structure. We have to move towards where we would be able to source and distribute information, products and services across the globe. The concepts that will make these happen are Internet, Intranet and electronic commerce. With Internet, customers can access information from any corner of the world. With electronic commerce, they would be able to place their orders and make payments online. With Intranet, we will be able to decimate information to our branches and plants across, include the suppliers, distributors and key customers. Thus, this would extend our reach to the remotest areas with great speed and very little investment.

With on-line discussions and brainstorming sessions, the ideas can be put through much faster across the organization. It will carry new concepts and get people started on new things. Decision-making and implementing time will be cut dramatically and the inputs for it will be superior and versatile. Confusions in

communication will be avoided, leading to better functioning of the company. Thus our ability to become global leaders will depend to a large extent on how we are able to harness the powers and flexibility provided to us by the growth in IT. And how IT fits into the corporate environment becomes the task of Strategic HR.

**HR on the corporate map and appropriate HR systems:** As a result of liberalization and globalization, human resource management (HRM) has acquired strategic importance. The quality of human resources available to the company and the relationship will determine whether we succeed in achieving our vision or be relegated to being an also-ran. Thus, attracting, developing and retaining superior knowledge in the form of human resources will be a priority for the organization.

However, before we do that there has to be a paradigm shift in the employee-manager relationship. It would be imperative to have flat and non-hierarchical organization if such people are to flourish. It would call for breaking down the communication barriers, with information and knowledge to be shared across the organization. It also calls for empowerment in the decision making process. Thus, the people will have greater freedom and latitude for developing and delivering to their potential. Proper HR planning and HR development activities have a very important role in achieving this.

Logically one can visualize a corporate culture that values trust, honesty, ethics and transparency in all actions for the modern organisation. This will negate the need for controls at every step. Peer pressure and the culture of the organization will become the controlling and motivating factors.

All these calls for integrating HRD in the corporate strategy formulation and developing appropriate HR systems that will ensure the acquisition, development and retention of the vital human resources and provide them with the climate in which their talents would flourish and they would be able to achieve their potential.

**The Manager of the Future**

Today the global trend is that of an intrapreneur (an entrepreneur within the organization) being the ideal individual for bringing about innovations. Many of the product and process innovations are brought about by teams rather than isolate individuals working under large corporate settings. Sony and 3M instantly come to mind when one visualizes such an organization. One expectation here would be that the new breed of intrapreneurial managers will be pioneers. They would be able to develop new markets, new products and innovate the entire industry, set the pace for the participants in that industry. At the more local level, it would require monopolization of market niches, having complete supremacy in them by making available superior products at competitive prices and providing high valued services, i.e., aiming for total customer satisfaction and surpassing it.

The work will increasingly be done by cross-functional teams, which will progressively become self-managing. Managers will now be more of facilitators rather than commanders. The managers will be exposed to virtually unlimited data requiring an ability to visualize common pattern between seemingly disparate phenomena.

For this, we want managers who will not only have sound management and technical skills, but more importantly should possess imaginative and creative thought process and are good team players. Our vision of a modern day professional manager is thus of a dynamic professional who combines risk taking with risk management, infuses academic rigour to practice vigour, merges cold analysis with creative synthesis, possesses hindsight with foresight and exhibits spontaneous verve with steely nerves. It is a tall order for one no doubt. However, if we are to succeed in the global arena we have to achieve this.

**Conclusion**

Survival and growth in the coming century will depend upon the speed at which we are able to respond to and predict the environmental conditions. The key resource for competitiveness would be knowledge and skills that are available to us and how fast we are able to upgrade it. Delivering value to the customers will form the base on which our vision and strategy will be based. A clear formulation of strategy would give focus to our efforts. And all this would be possible with quality people in each sphere of company's activity.

Today, we need to get together to give direction to our company, determine its vision and objectives. Let us initiate a debate on the issues and adopt a schedule for action based on the results of the company-wide discussion. We have to move fast, for time is running short.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Interface Congruence: The Synonym for Progress

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*"Real sustainability is about simultaneously being profitable and responding to the reality and the concerns of the world in which you operate. We're not separate from the world. It is our world as well."*

*– John Browne, CEO of BP Amoco*

The world is buzzing with the term, *'corporate social responsibility'* and to a large extent of comprehensible studies, *the evolving frontiers,* as far as many are concerned is embedded in the above mentioned syndromic verbal expression, which we understand is the genesis of the evolution of the frontiers in the *'business-society-nation'* interface but we presume that it's not its totality. The interfacing between the three interspersed environments is more to develop and decipher, for their congenial co-existence and sustainable development. According to American Heritage, one of the meanings of the word, *'frontier'* is – "An undeveloped area or field for discovery or research"[1].

The paper presentation is on the 'evolving frontiers of business-society-nation' interfaces, which is a search-light operation in understanding the undeveloped areas in between the interfaces and their symbiotic relation, in the evolution of a recognizable model for existence and sustainability, for the process and growth of the above said three interfaces. This is a tangible need and calls for an altruistic approach towards providing the ways and means towards a generic living of the overall population in the country, or the world. There has been considerable work done in all the fields of business, sociology and global sustainability which concentrates on ethics of productivity, sustainability, cultural integrity, environmental and social accountability and contribution for the balanced sustenance of the same. But, somewhere and somehow the lacuna continues to be there and the frontiers are still evolving for scholars to research and the rest of the world to understand and argue.

On 8th December 1927, Mahatma Gandhi wrote in Young India *"A time is coming when those who are in the mad rush today of multiplying their wants vainly thinking that they add to the real substance, real knowledge of the world, will retrace their steps and say: 'What have we done? [2].'*

Decades elapsed, but the spirit of the quotes still haunts the conscience of the every second person in the world. Creating wealth, however, through unbridled consumerism and proliferation of products that create unneeded wants can be disastrous for the global sustainability. A saving grace of poverty is that it reduces the human footprint on this planet. If the rapid rate at which the developing economies are growing translates itself into consumerism, our mission of the bridging the gap is going to result in an ecological catastrophe.

Business is defined as, *"An economic system in which goods and services are exchanged for one another or money, on the basis of their perceived worth. Every business requires some form of investment and a sufficient number of customers to whom its output can be sold at profit on a consistent basis."*[3] This is a basic definition of business and it is true to its every word. It's an economic system. There are goods and services. There is an exchange between one another for money or the perceived worth. There are customers. There is a sale happening. There is a profit. There should be consistency, failing which a loss can be ascertained or the transaction is not sustainable. This is how most of the definitions for business go and for an economist or a business entrepreneur, this makes sense and is very authentic. A sociologist sees a human perspective and an environmentalist sees an ecology footprint, and the government sees the GDP, which is often considered as an indicator of a country's *'standard of living'*[4].

The recent swing of activities which resulted in seepage in the economies, called for study and research into "Business Ethics", which can be defined as the *critical, structured examination of how people & institutions should behave in the world of commerce. In particular, it involves examining appropriate constraints on the pursuit of self-interest, or (for firms) profits, when the actions of individuals or firms affects others*[5] The word that interests us is *'others'*; it contains in itself the myriad and billions of the people, who form the internal customers, *external customers and passive customers.* People buy the positives and negatives of the products or the produce, often negatives being undiscovered at that context of space and time, sometimes disguised and many a time unnoticed. Business ethics addresses this largely and there has been considerable change in the world business scenario. Before we go deep into the research of the subject, let us understand few more definitions.

**Values:** Values are the rules by which we make decisions about right and wrong, should and shouldn't, good and bad. Dictionary.com defines values as: - *n: beliefs of a person or social group in which they have an emotional investment (either for or against something).*

**Morals:** Morals have a greater social element to values and tend to have a very broad acceptance. Morals are far more about good and bad than other values. We thus judge others more strongly on morals than values. A person can be described as immoral, yet there is no word for them not following values. Dictionary.com defines morals as: - *n: motivation based on ideas of right and wrong.*

**Ethics:** Ethics tend to be codified into a formal system or set of rules which are explicitly adopted by a group of people. Ethics are thus internally defined and adopted, whilst morals tend to be externally imposed on other people[6]. *In other words, Values are the fundamental beliefs that an individual or group holds to be true. Ethics are the more formalized rules or guidelines of an organization or society. Morality is simply the values and ethics of a society.* [7]

In the above definitions, what interests us is the word, 'codify', because it allows the thought process to move through the maze

of analysis and synthesis of the origins or creators of the ethical code, the adherents of the ethical code and the process of imbibing it as a 'value system' in all the three interfaces discussed in the paper. In the end, everything has to crystallize and form the value system of an individual, business or nation to make that code of conduct or behavior, a natural and intrinsic denominator in all the three systems. Consequential attitudes merely involve communication and lobbying actions, the question of good faith lies in the consistency between beliefs and discourse, which eventually forms the value system. Appropriate strategies, policies, instruments and partnerships can reverse the negative impacts of a devaluation of values in a society. This is what the history tells us.

Whether it is the greedy encumbrance, or the right word is exploitation by the Russian business class post-perestroika or the ending 550 years of uncertainty in China by a team of intellectuals, who were educated in the west, whether it is the fighting hyper-inflation in Bolivia or purposeful suppression of aid to develop Yugoslavia, whether it was Cambridge-educated Finance Minister of India, later its Prime Minister, who was un-intimidated by the fact that the country was annexed by a privately held foreign company for centuries together and merged the country into the global economic map or the gradual endearing of liberalization by Gorbachev which triggered a series of unwanted but necessary changes in the Soviet Union – it was all a specific value driven initiative by a set of people who represented the society – the values which deliberately need a sieve to understand their standing in terms of cognizable good and not-good to the business, society and nation, independently and collectively.

When the world talks about the ethics, values, social responsibility and may other words, which form the jargon of development socio-economics, the sense of superficiality overflows. This is evident with the crises that emerged through the centuries in the industry, social circles, environment and eventually, made way into the societies, where people have gathered to exchange profit and loss only instead of life and happiness. The fact that we talk about the irresponsibility of organizations in spilling poisonous gas in Bhopal, oil by Exxon-Valdez in the pacific and Tylenol crisis of Johnson & Johnson, and forget to mention the aftermath of US IRAQ war, the ethnic massacre of Bosnia and very recent communal riots in Gujarat – is itself a reflection of value retrogression or should we say value-latency.

Infact, when the World Values Survey, 2006 was conducted by *Ronald Inglehart and Christian Welzel,* which is designed to measure all the major areas of human concern, from religion to politics to economic and social life, the outcome is clear. It turns out that two dimensions dominate the picture: *(1) Traditional vs. Secular-rational values and (2) Survival vs. Self-expression values*[5]. These two dimensions explain more than 70 percent of the cross-cultural variance on scores of more specific values. Traditional/Secular-rational values dimension reflects the contrast between societies in which religion is very important and those in which it is not. A wide range of other orientations is closely linked with this dimension. Societies near the traditional pole emphasize the importance of parent-child ties and deference to authority, along with absolute standards and traditional family values, and reject divorce, abortion, euthanasia, and suicide. These societies have high levels of national pride, and a nationalistic outlook. Societies with secular-rational values have the opposite preferences on all of these topics. The second major dimension of cross-cultural variation is linked with the transition from industrial society to post-industrial societies, which brings a polarization between Survival and Self-¬expression values. The unprecedented wealth that has accumulated in advanced societies during the past generation means that an unprecedented share of the population has grown up taking survival for granted. Thus, priorities have shifted from an emphasis on economic and physical security

above all, toward increasing emphasis on subjective well-being, self-expression and the quality of life.[9]

With all the heritage and self-expressed cultural pride that we carry as Indians, still could not sustain us on the positive scale of measurement, in either of the values (Traditional/Secular –Rational Values at -0.36 and Survival and Self-¬expression values at -0.21 in Ronald Inglehart and Christian Welzel, *Modernization, Cultural Change and Democracy* New York: Cambridge University Press, 2005). But for a information, India has a positive 'Corruption Perception Index' of 3.3, which gives us a global rank of 87 and an Asia Pacific rank of 16 in 2010[10]. Evidently, it gives us no surprise when not even one Indian company figures in the recently released *Ethisphere's '2010 World's Most Ethical Companies' list*[11]. What do we derive from these? We will go further and understand, keeping aside all these parameters of value, corruption and ethics, did we manage to climb the ladder for economic expression with loaded economic stabilizers and business alleviation schemes – the answer is still a 'no'. The recent 'Economic Freedom Index' calculated by Heritage Foundation in association with the Wall Street Journal, reiterates the same statement by keeping India at global ranking of 124 with an overall score of 54.6, which according to their indexing parameters says that we are 'Mostly Unfree'[12].

This a ongoing trend with most of the countries in the world, with negative growth marking in most of the economies, even though they are blessed with industries depleting the fossil fuels, for reference, let's take Saudi Arabia (World Bank Data, 2004). The Asian countries like Pakistan, Afghanistan, Nepal, Myanmar etc., and South American countries topping the Corruption Perception Index list of 2010, it leaves little to decipher the fact that most of the countries which were 'Happy' as per *Ruut Veenhoven's* World Database of Happiness[13] like Denmark, Canada, China, Denmark, Finland, France, Italy, Japan, Luxembourg, the Netherlands, Poland, South Africa, Spain, Sweden and three countries, the U.S., Switzerland and Norway, which show flat trends from the earliest to latest available survey, have clearly shown *'Clean CPI' (Corruption Perceptions Index 2010).*

One of the results, that called for our attention is that India has shown *'steeply rising'* trend in Happiness Trends Analysis but got locked in the CPI framework as one of the 'highly corrupt nations', which is topic for debate and study. Are we happy being corrupt or does this make our value statement to the world. The future, *Parag Khanna* says, isn't about whether the United States is going to remain the world's solo superpower. Or whether India is going to squeeze past China….he further goes on to add, *"Kashmir, the North East, endemic corruption, Naxalite problem, the youth bulge without jobs to match — these are the things India needs to watch 24 hours a day, not worry about China."* [14]

Apart from ethics, values and morals, what calls for attention is the responsibility towards the world we live in. The 'ecological footprint' *(Wackernagel and Rees),* an analysis which compares human demand on nature with the biosphere's ability to regenerate resources and provide services, tells and warns that we are overboard already. The WWF claims that the human footprint has exceeded the bio-capacity (the available supply of natural resources) of the planet by 20%.[15]. Under the "business as usual" scenario, the projected earth supply to meet the demand for resources in 2050 would be twice as much as what the Earth could provide[16]. In the definition of the *'ecological footprint'* what really calls for attention is two lines of demand – one, the human demand on nature and two, the biosphere's ability to regenerate the depleted resources – it accounts from the very common necessity like water to the fossil fuels. Centuries ago, Thomas Malthus in 1798, itself has said that, *"Assuming then my postulata as granted, I say, that the power of population is indefinitely greater than the power in the earth to produce subsistence*

*for man. Population, when unchecked, increases in a geometrical ratio".* [17].

Recently in 2006, when UNEP was discussing about pathways for sustainability and recommended 'Green Economy' as a solution, it highlighted that, *'Over the last quarter of a century, the world economy has quadrupled, benefiting hundreds of millions of people. In contrast however 60% of the world's major ecosystem goods and services that underpin livelihoods have been degraded or used unsustainably"*[18]. It is not only delight creation to the customer that should rule the book, but also how we arrive there, is to be a major concern when it comes to ecological responsibility. Just to quote, according to *Fraser Consultancy's 'ethical Reputation Index'* [19], McDonald tops the list of *'most unethical companies'* [20] and the *why has* a very simple yet complex answer, in terms of budding environmental crisis and how the value system in people retaliates it – "McDonald's has a negative impact on the environment in more ways than one. Aside from the pollution from factories where the food is produced, the unusable waste from nearly all the food they sell, and the massive amounts of power and energy that are required to keep all of the branches up and running, this corporation is destroying natural rain forests. McDonald's likes to purchase their meat from privatized farms, which is not a problem in and of itself[21]. The conflict arises when these privatized farmlands are built on the land where a lush rainforest once resided. So not only is McDonald's polluting our air, but they are destroying a large part of what would help to clean it out. The trees that are leveled do more than just clean the air, though. They are also homes to thousands of animals that are likely killed or made homeless as the trees are torn down. This is not exactly a healthy step in making our world a better place and the list of unethical practices goes on with inclusions of underpaid employees, underpaid vendors or the farmers in one case etc." [22].

Is the world listening? The specialists are busy advising the organizations how to grow and sociologists are researching standard of living indexes in the world, and lastly but not least the environmentalists are busy drafting protocols, but at the end all of this bounces back to the very basics of social structure, the human society and its future existence. What makes a common sensible approach is to understand primarily, the apertures or lacunae in existing value system, businesses, governance and any other process that intertwines the three interfaces. Then, go for a thorough research, survey, analysis and synthesis of the feedback or opinions from the people who are not active or positive towards the existing happening or contingency, or in other words from the *'passive customers'* who are always watching the shopping spree!

This calls for a peek in the past and ancient civilizations which flourished by the river banks, which details the merits of having an agronomic society, stratified according to the skills and work. China, after ascension of *Teng Hsiao-p'ing* to power in 1978, and under the advisory aegis of Chinese Economists Society(CES) in 1992, has bounced back towards its road to ascension of its lost glory of the 1500s, by returning to its very basic and traditional occupation, farming. This was done by a 'house-hold responsibility scheme' which assigned farming plots to each family and the later metamorphosis of this is the 'Township & Village Enterprises (TVEs)', which scaled for more than 60% of the employment *(Sachs & Woo, 1994).* Thus *'Collective Agriculture'* in China cascaded into its mellifluous growing economy, which is now evident as the Japanese Economy is displaced from its position of being the second largest economy in the world after the US, for 42 years [23].

In spite of a developing economy as its future course of action and having 19.4% population of the world[24], China's Ecological Footprint, marks it at 2.2*gha* in which far behind of USA at 8.0*gha* in 2007! But this is going to change rapidly. This was made possible by a set of 'value conscious' individuals in the society, who relinquished better opportunities after

getting educated in the West, came back to their native country, ardently tried to understand the best choices for economic reform and institutional change. Going back to the roots, and evaluating the course for future action, keeping in mind the ordained value system of the country and plunging into that action, has always worked itself towards success – whether it was yesterday or it is tomorrow.

Now let us revisit the acronym of the century, CSR or what we call as *'Corporate Social Responsibility'*, The recent study by Karmayog in 2009, with a sample 500 top-notch companies in India, only 16 companies are rated for the level 4 which denotes that *'CSR is embedded in the company operations* [25] and 147 companies are rated Level 1, wherein they would have taken at least *'one CSR activity'*. But there is a Level 0 which raises the alarm, and denotes companies which are in the *production of Liquor, Tobacco and genetically modified crops* – we have out of 500, there are128 companies with a Level 0 rating! Let us just have an imaginary extrapolation for the entire industry in the country and if we still have courage, let us include the global industry, the results are devastatingly true. We don't understand the jargon of CSR but we wanted to coin two terms which would categorize businesses into two types, keeping in view all the things we discussed above, in laymen terminology –

*1) Progressive Business and*
*2) Retrogressive Business.*

| Categorization of Society / Categorization of Businesses | Value-Conscious Scociety | Value-Latent Scociety |
|---|---|---|
| Progressive Business | *Sustainable Development* | *Wealth Coherence* |
| Retrogressive Business | *Value Coherence* | *Unsustainable Development Or 'Self-Defeating'* |

**Progressive Business** is one which takes into account all the nuances of modern business definition but also includes responsibility towards the environment, planet and people. The business prosperity is calculated and translated in terms of happiness that it distributes to the planet and people, with a value-conscious effort. Retrogressive Business is an economically aggressive ideology which considers and evolves with the parameter of modern business but misses out to include consciously driven value-system which encompasses environmental and social security. This results in economic growth but retrogression of the natural resources beyond the permissible ecological footprint and projects a threat for human life and existence in the future. We use the word *coherence*, because it denotes "the quality or state of cohering, especially a logical, orderly, and aesthetically consistent relationship of parts" in contrast to adherence denoting "Faithful attachment; devotion" – which we believe is less in percentage of rationality or reason.

*A progressive business*, in style and spirit, would reach the Level 4 of Karmayog's rating of CSR and attain the preferable positive values in all the indexes of sustainable growth. Thereby, the economy of that country would be more in the continuum of value perspective and induce more economic freedom, rather than being negative. A *retrogressive business* would undermine the existing value system or indulge in corruption to make things happen, thereby increasing the 'Corruption Perception Index' of the country in which it is functioning or existing. This is a consequence of bad administration of the state or its value-latency, to see the revenue scales grow or the GDP to bloat, which ultimately results in hyper-inflation, recession and sometimes, economic depression. All the economic disasters and business crises have reinstated the fact of state failure in effective governance. State failure and economic failures, because of *retrogressive businesses* can chase each other in a dizzying and terrifying spiral of instability. As Jeffrey Sachs, rightly says poverty traps and debt servicing of the poor countries or

the third world countries, or even developing economies should be alleviated by the rich countries[26]. This will, in our view, will reduce the genesis of 'retrogressive businesses' to a large extent and the existing positive forces in the value system of that particular society, will ensure that negative growth doesn't take place.

As a sieve to understand and classify businesses, to check the path being travelled towards sustainability, we have proposed the *matrix-representation above.* Businesses thrive in all the four Quadrants but sustainably develop in the first quadrant, when they understand and practice the fine-lines in values, social responsibility, and happiness co-creation. This is what we term, 'Business Resonance' – the lasting effect of business which re-manifests itself in the society and nation – and thereby affecting the 'Sustainable Development Pattern' of the world. The effort of the government, business leaders and society, is to bring themselves into the first quadrant, by conscious elimination of wrong values and practices, is the heralding factor of success and happiness. A further research in this subject can be made to categorize the world countries, into the respective quadrants of the matrix and understand their standpoint between the two positive variables – Progressive business and Value-Conscious Society. This will enable us to set the table for future discussions regarding the congruence of the three interfaces mentioned in the research topic.

The world is entering a perfect storm of calamities: a great game for scarce natural resources, financial instability, environmental stress, and failing states. In some respects, it isn't far off from that medieval landscape of almost a millennium ago. It is a multi-polar, multi-civilizational world in which every empire, city-state, Multi-national Corporation or mercenary army is out for itself. The 21st century's emerging geopolitical marketplace is dominated by three first world superpowers, the U.S., Europe and China. Each competes to lead the new century, pursuing that goal in the third world: select eastern European countries, east and central Asia, the Middle East Latin America, and North Africa. The U.S. offers military protection and aid. Europe offers deep reform and economic association. China offers full-service, condition-free relationships. Each can be appealing; none has obvious advantages. The coming years is being shaped by the race to win the second world—and in the case of the U.S., to avoid becoming a second-world country itself. We warn eloquently of the risks of imperial overstretch combined with declining economic dominance and deteriorating quality of life. It calls for a congruence of all the interfaces mentioned – business, society and the nation – which collectively address the beginning of a value-conscious and self-correcting ethical, progressive businesses that would make 'sustainable development', a true socially responsible drive.

Before we conclude, we would love to add a few words from Stephen R. Hick's research paper on 'Ayn Rand and contemporary business ethics' – *"The heart of Ayn Rand's strategy is to make fundamental the role of reason in human life. Reason makes possible science and production, long□term planning, and living by principle. It is these that make individuals flourish, and it is these, that eliminate the idea that there are fundamental conflicts of interests among individuals. Business is then one application. In business the moral individual is the producer: the individual who is an end in himself, independent in thought and action. Moral social relations are voluntary interactions to mutual benefit by productive individuals. Businesses and consumers, employers and employees are responsible ends in themselves who trade to mutual advantage. Neither is fundamentally in conflict with another and neither is to be sacrificed to the other. Given these broad non-conflicting principles differences over details are sorted out by negotiations. Governments enforce the non-conflicting principles and protect the negotiated contracts. Only a moral defense of self□interest, combined with an understanding of free market economics and classical liberal politics, will advance the free*

*society and business, its economic engine. Some libertarians and conservatives have done well in promoting the economics and politics. But we need someone like Ayn Rand for the ethics and value consciousness to drive the world of tomorrow.*

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Widening and Focusing of Management as a Process, through Polychotomy Reconciliation

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Complexity in business and its environment is characterized by pervasive dichotomies, necessitating an equally complex and dichotomous 'managerial process'—a process that helps continually 'reconcile' the managerial dichotomies, rather than only make 'tradeoff choices' between them (Mair, 1996).

The 'human process', as a *collective process* in organizations, and by its very nature possessing capacities to sense, grasp and constructively engage with dichotomies, is the most potent source of such a managerial process. Indeed, the process can be versatile enough to help an organization actively engage also with the concerns of various stakeholders other than those of the owners and employees, such as issues of 'environment', 'regional development', 'affirmative actions towards integrating marginalized sections of society', 'cross-cultural issues in the context of globalization', etc.

Challenges to dualities reconciliation typically arise from (i) largeness and simultaneity in the numbers of dichotomies that need to be faced in complex contexts, and (ii) mutual interdependence for reconciliations amongst the dichotomies. But these interdependencies themselves can also be utilized (together as *polychotomies*), to contribute to their overall reconciliation. This paper provides guidelines and models in the pursuit of such reconciliations (and the consequent managerial and strategic excellence), with support from case studies.

## 1. Introduction:

Complex problems to be resolved are like finding way through a maze. In terms of the final solution, which may need to be equally

complex, there may be one or a number of possible alternative ways through the maze. However, in the beginning, the question really faced may not be one of finding the best of such *alternatives,* as even determining just one possible alternative may be a big achievement in itself. Consider the problem of finding the right location for a plant. When through right strategizing one such alternative solution is found, typically even that single alternative may not remain available for long, as managers look for more alternatives.

The crucial issue then is about *strategizing for the way* by which even a good single workable solution (alternative) can be found, often necessarily only through an iterative, *evolutionary* process that squarely deals with the complexity faced.

Complexity in business and its environment is typically also characterized by pervasive 'dichotomies' (Mair, 1996), which are also over multiple dimensions of the problems faced.

Such situations call for a managerial or strategizing process that helps in the development of solutions through continual 'reconciliation' of these dichotomies, rather than through mere tradeoff choices between them.

**2. 'Dichotomy thinking' vs. 'Trade-off thinking'**

Pascale (1990), in exploring the managerial processes in excellent, world class companies, identified the phenomenon of 'contending opposites' as being squarely faced with and addressed by their managers. Mair (1996), in analyzing the excellence of performance in Honda Motors, highlighted the role of the approach of reconciliation of 'dichotomies' in the managerial processes at the company.

A dichotomy can be seen, in its essence, as a pair *opposing* processes, both of which are, at the same time, also beneficial in terms of how they can contribute to a firm's overall growth as envisioned by the firm's overall business strategy. The manager, faced with a dichotomy, essentially feels the need to seek and accomplish both the polar opposites of the dichotomy, and so is faced with a 'dilemma' over *how* to do so. In pursuing *both* (often carefully kept separate, in order to retain their unique though opposing qualities) through a process of mutual reconciliation, the manager may need to pursue improvements in each of them together, either

1) Simultaneously but separately, in mutual coordination (as, for example, with 'centralization' and 'decentralization' in strategy processes). This pursuit can be incremental and cyclical, or through one grand integrative solution, or,

2) Non-simultaneously but in *sequence,* cyclically, even if the two processes happen to be physically close together (as, for example, with 'intuitive thinking' and 'logical thinking').

The dichotomy view is a more liberating (but at the same time also a more demanding) view for a manager to take, as compared to one of making a choice by 'trade-offs' amongst 'alternatives'.

A common tendency is to think too prematurely in terms of 'alternatives' to be chosen from, instead of first facing and gaining clarity, on an ongoing basis, on the literally hundreds of dilemmas that truly characterize every business process, and thus the problems faced. This may result in an unnecessary rejection of one beneficial process in order to take advantage of the other. We can indeed hope to get true insight into the real problems we face when we squarely and constructively address to these dilemmas and take advantage of all potentially beneficial (though opposing) processes, so much so that much of the very problems we think we face may begin to fade in the light of such understanding. We may realize that our real work lay not in making choices out of multiple alternatives, but in actually creating the single solution (or alternative) that meet our needs in the most balanced ways.

Alternatives arise at the level of solution development. But as way to better understand problems, the dichotomies characterizing the various dimensions of the problem need to be first understood. Thinking of alternatives too early happens when we jump start the problem stage to look at solution side too early. The stage of for selection amongst alternatives for solutions must come later.

It will be possible to attain deep insights into any business situation faced, through exploring and expanding awareness of all dichotomies characterizing the different dimensions of the situation, especially when considered together.

**3. Dichotomies in Business Situations**

Business situations can be viewed in terms of its multiple dimensions, each characterized by certain dichotomies inherent within the dimension in the situation faced. For example, considering only the operations processes of a business, four important, basic dimensions can be identified.

a. Value creation processes,

b. Product scope definition process, and

c. Process of definition of source of competitiveness

d. Process of capacity expansion toward corporate growth in what product or service the business offers in the market. Understanding the dichotomous, opposing processes faced *within* each of the four dimensions and the dilemmas they cause, as the managers work at making improvements in these dimensions can help them to look for specific ways to reconcile them through cyclical processes, thus leading to continual development of the operations over each of the dimensions.

For example, considering only the first dimension, the value creation process, customer criteria such as quality, cost, delivery, service, etc., create corresponding demands on both the company's *'critical capabilities'* and *'core competencies'* as processes. However, the two processes are opposing because the two are oriented in opposing ways. The critical capabilities are the skills developed in an organization oriented to the right use of the resources (to meet the various challenges faced by the organization's value-adding activities). The core competencies, on the other hand, are the skills developed in an organization oriented to responding to the market/ customer needs (for products, services, etc.). The dichotomy may be expressed as:

'Development, over the very long term, of *'critical capabilities'* that the organization has been able to organize, using specific resources marshaled out of its available resources'

Vs.

'Development, over relatively less long term, of *'core competencies'* the organization has chosen to position itself on, toward matching with the market/customers needs, and the opportunities they present' The dilemma arising from this dichotomy and needing managerial attention, on an ongoing basis, is that while 'available resources mix' strongly determine the development of *'critical capabilities'*, the 'market/ customers needs mix' determine the development of *'core competencies'*. And in spite of this difference, the two need to be made mutually complementary.

All the four dimensions of operations are all interrelated—within themselves and also with all the other dimensions of the business. For example, how well the well the first three are determined, combined and managed together will together impact the fourth dimension, namely, the capacity expansion toward corporate growth'. High performance on the first two dimensions could mean less of the requirements of the 'design' or 'effective' capacity in the firm's plants.

This can happen because of higher productivities through combined effects of

higher *efficiency, flexibilities for range and change-over,* and *volume flexibilities,* realized through improvements in the value-creation process. This also results in less of requirements for *investments* in the fixed plant capacities. High performance on the third dimension could mean more market demand. Thus high performance on these three dimensions can contribute both to high productivity of the capacities invested in, and to high scope for more capacity expansion, as a result of the higher market demands generated. These can, in turn, lead to high corporate growth, and more specifically to capacity growth.

But 'capacity expansion' dimension, vis-à-vis the other three dimensions, can have a reverse of the above kind of interrelationship as well. For example, scopes for high capacity growth, and hence employing 'bold, proactive capacity expansion strategies' can lead to pursuing fuller use of benefits possible from 'economies of scale' (in the 'value-creation process' dimension), 'economies of scope' (in the 'product scope definition' dimension), and to 'responsiveness in customer service'—through dedicated capacities for different target market segments and market areas—thus resulting in improved customer service (in the 'definition of the source of competitiveness' dimension). Thus all these four main dimensions can combine synergistically together, to contribute to the firm's operations strategy.

Effective pursuit of high performance in operations, corporate growth, and hence capacity growth through pursuit of improvements in the four operations strategy dimensions needs to be based on recognition of a basic characteristic of all strategy processes. Every strategy process is necessarily characterized by one or more dichotomies in its functioning, and making effective progress in the operations strategy dimension will crucially depend upon how well its mutually opposite dichotomous poles are reconciled to generate mutual reinforcement, and hence positive contribution to the firm's growth as envisioned by the firm's overall business strategy, and hence scope for capacity expansion.

**4. Dichotomies in Managerial Processes**

In managing any business for excellence, the long term goal essentially needs to be about pursuing conversion of an existing business process into the idealized one that is also a Nature's *flow* process, and which addresses to multiple dimensions of problems faced and contribute to multiple objectives, all based on understanding the total situation. Viewed from this perspective, a dichotomy in any business dimension may be seen as arising essentially from how a manager may

(1) Take the important, long term, 'process' view of the dimension, and

(2) View his urgent, short term objectives in the light of (i) the immediate fulfillment of short term (customer) needs committed to be addressed, and (ii) the various changes he needs to pursue, as 'projects', in order to improve existing process toward making it closer to the idealized flow process. Thus, the manager's view of his role may be captured, in its essential nature, in terms of a dichotomy of attaining in every business dimension:

(1) A 'core' strategy process of basic, relaxed, long term-oriented, idealized 'flow process' orientation in his process of overall managing, ensuring a *continuity* in the 'process' being managed, and

(2) A 'stretch' strategy process of focused, excited, short term-oriented, (i) immediate series of 'tasks' of fulfillment of immediate (customer) needs, or (ii) series of short range 'projects' orientation in his process of solving problems or exploiting opportunities, that would bring about a *change* in the 'process' being managed.

In this dichotomy view taken of the management or strategy process of every business dimension, projects exist, ultimately, to serve flow processes in that dimension, and

'project management' serve as way, finally, to do 'process management' better. In this view, 'harmony' and 'flow' are seen as preconditions for effective management of change, even more than the other way round. Accordingly, management of any process (ranging from 'continuous flow processes' to 'projects') can be seen broadly as *first* recognizing, emphasizing and even evangelizing for the 'process' that is already there, and *second* as involving management processes at the levels of managing a 'flow process' that essentially manages continuity, and managing 'projects' through managing change in the process. Thus, the more vigorously projects are conceived well and managed vigorously, the more the idealized flow will be realized. When dichotomies in the strategy process of each business dimension are expressed in terms of the possible opposing strategy processes within any one dimension, the manager will feel challenged to the extreme, thus stimulating his own unconventional and creative thinking processes. The dichotomies (and the dilemmas they represent) serve as suspended questions to be responded to continually on an ongoing basis, and not just once or occasionally (like in making choice decisions amongst alternatives).

## 5. Dichotomies in Human Processes

The 'human process', as a *collective process* in organizations, by its very nature possesses capacities to sense, grasp and constructively engage with dichotomies. This capability of the human process is the most potent source of a managerial process that can effectively help realize reconciliation of the *'long term orientation vis-à-vis the short term-orientation' nature of the dichotomies,* in each of the business process dimensions.

Effective long term-oriented, ongoing dichotomy reconciliation of the business processes by the human process in an organization is essentially a reflection of facing and dealing with the dichotomy of 'attending to the important (long term)' vis-à-vis 'attending to the urgent (short term)'. This needs to happen through the human process making deft movements between the two dichotomous poles of the business process. However, the human process being essentially 'human' must also deal with its own capacities for dealing with ambiguities while facing dichotomies, and so, in pursuing such reconciliation, must itself also manage a dichotomy within the human process itself:

'Tolerance of ambiguity and dilemmas with long term orientation with multiple objectives, and being relaxed while living with all the various dichotomies, leading to continual organic changes' Vis-à-vis 'Working directly at reconciling specific dilemmas with short term orientation with focused objectives, to realize temporary closures and reliefs, leading to occasional radical changes'

## 6. Strategy Emergence through Dichotomy Reconciliations over Multiple Dimensions

The more complex a business situation, the larger the number of dichotomies, over the multiple dimensions of the business and its environment, that need to be faced and reconciled, and also high level of mutual interdependence for reconciliations amongst the dichotomies, As managers in an organization begin to look for ways to reconcile the dichotomies faced in each of the basic dimensions in operations on an ongoing basis, they may find the right ideas and ways to do so through taking advantage of the interrelationships and interdependencies *between* the dimensions. In addition, they may also find that they can also take similar advantage of the interrelationships and interdependencies with the many other dimensions of the business. This is because when a manager seeks to reconcile the dichotomy in one dimension and makes some progress in this respect, the dichotomies in the other dimensions become capable of serving as bridges by which the movement between the opposing processes can happen. And, as managers in the firm act opportunistically,

continually, to maximize exploitation of even limited available opportunities, moment to moment, in any dimension, it can lead to more such opportunities in the other dimensions as well. All these suggest to a strategy process whereby, managers in the organization continually pursue, each moment, whatever improvements are possible, that are aimed at reconciliation of the different dichotomies they face in the basic four—as well as the other—dimensions, while also continually meeting the constraints faced within each dimension.

Figure – 1 depicts such a process integration of several 'Contending Opposites'. Such a strategy process, which essentially involves a *cyclical* and *evolutionary way* to maximize *simultaneous* exploitation of all opportunities for improvements, would be akin to what Mintzberg and Waters (1985) term the 'emergent' strategy. As Mintzberg and Waters suggest, strategic management can be seen as essentially involving two dichotomous processes, whereby, in response to the *'deliberate strategies'* that managers intend and envision for pursuit for their businesses, there can be an evolutionary development of *'emergent strategies'* that actually develop and work *by evolution,* and get accepted by managers in the real situations faced. Operations strategies, which develop in this way can be extremely responsive to the various ongoing changes happening in the business environment, and can develop at different levels of a business, as a result of co-evolution in the 'operations processes' and the 'human processes' in the organization and engaged in managing them. Also, such strategies develop with the simultaneous development of the operations and the human processes as well. Figure 1. Schematic Depiction of the Multi-level Cyclical, Synergistic Process, Combining different Dichotomies in the Business Processes:

## 7. Conclusion

'Strategy emergence' (as against 'strategic decision making') as a phenomenon is receiving increasing recognition and attention. Recognition of 'Strategy emergence' is essentially recognition of the *reality* that decision making of strategic nature and their implementation cannot be separated in time. Strategic decision making and implementation indeed need to be intertwined, iterative, happening together and evolutionary over time, based on the learning process that arises from the implementation, and over time. 'Strategy emergence' (complementing deliberate strategies) can be shaped through the process of 'managing dichotomy reconciliations'. This approach emphasizes less the act of strategic decision making, and more the process of managing the context for the right process of strategy emergence. This paper has explored how the 'capacity expansion strategy' of a business may develop in an evolutionary process that consciously takes advantage of the phenomenon of strategy emergence as a process, in conjunction with facilitating 'human' processes (which capitalize upon the 'potentials' and unique 'human' capacities that exist organization-wide to exploit existing knowledge, as well as to explore and learn new knowledge, adapt, and change).

Indeed, the process can be versatile enough to help an organization actively engage also with the concerns of various stakeholders other than those of the owners and employees, such as issues of 'environment', 'regional development', 'affirmative actions towards integrating marginalized sections of society', 'cross-cultural issues in the context of globalization', etc.

The delineation of the dichotomies and the corresponding dilemmas a manager faces in the four main dimensions of operations strategy serves as a conceptual model to guide managers in pursuing capacity strategy as part of operations strategy in a highly effective way.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Land Acquisition Saga and the Way Ahead

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The present study aims to understand the various land acquisition processes taking place over the past decade with special references to special economic zones (SEZs) in the country. The new age growth engines and their "public purpose" image which has under been the scanner and drawn the interest of many; policy makers, academicians, NGOs, activists and researchers; forms the crux of the study. The study gives a bird's eye view of the issues involved in the land acquisition process and probable solutions in lieu case studies presenting the path ahead. Land acquisition for special economic zones is the main focus of the study.

The second part of the study gives a mix of few case studies and revealing the inclusive development component for the land owners and other stake holders. Issues raised by the land owners; paving the way ahead for a more inclusive development strategy.

**Land acquisition and Development**

Land acquisition process is an integral part of developmental activity in an economy. The government or state was the only agency to take up the task of welfare and development of the state. Development activities like building roads, railways, bridges were carried out by the government; the procedure of land acquisition was followed as per the land acquisition act of 1894. Industrialization came as a part of the development process it was also given the status of 'public purpose'. The aim of providing this status was; the state providing infrastructural and other facilities to the masses of the country as a whole.

**Trade as means of development**

Export is an important part of any economy for its growth and development, also a tool for earning additional income for the country. Each country has adopted its own strategy

of growth, in India the new growth engines are known as Special economic zones. The idea of zones tends towards being a response of the globalization and liberalization policy of India starting from 1990s. The present special economic zones existed in the form of export processing zones, from post independence period in India. The first ever zone was established in Spain in the 13th century, followed by Ireland and Puerto Rico in the 1950s and 1960s (Ramachandran .H and Biswas, 2007, p.52). India was one of the progressive states in the Asia to have set up the first Export processing zone in the continent.

Development was the important agenda of most countries which attained independence post the Second World War. The newly emerged countries were focusing on development of various sectors like infrastructure, telecommunication, railways, Sea ports, dams and industries (Nayak.A.,2008). Post independence India began with development of 'Key industries' (Sundaram.K and Dutt, 2005) and also established seven export processing zones in the country. The export promotion zones or the new engines which would boost growth were set up in various parts of the world. The zones were known by different names, free trade zones, wear housing zones, export processing zones, Technological zones were established in China and the first special economic zone became operational in 1970s at Shenzhen. Unlike India, China had formed five large zones for purpose of export promotion.

**Genesis of zones in India**

The early attempts to establish Special Economic Zones were started by the East Asian countries of Hong Kong, Singapore, Malaysia, Indonesia and China in the late 1970s. In fact China created five large special economic zones and Shenzhen was the most celebrated one (Tantry.M, 2007). In the Indian case, the idea of promising a new tool for

growth had began even before independence; the notion of the first export processing zone was mooted in 1945 to be set up in Karachi. Attaining freedom was the priority hence the idea was postponed until 1964-65 the first EPZ was established in Kandla, state of Gujarat (Gayatri .R., 1990). The development process of the economy came to the forefront and hence a shift in the trade policy was observed. As a part of the change in policies the initial industrial estates came into being from 1955 onwards and later followed by free trade zones (Tantry.M2007). The transition from being a closed economy and gradually moving from import substitution to the current trend of export promotion was one of the most important benchmark in Indian trade. Export promotion also would help in earning additional income for the country which was the rationale behind promoting and implementing this strategy. The union minister for commerce visits the illustrious SEZ of China; Shenzhen in 2000 and followed by a policy in April 2000, the subsequent Act 2005 and Rules 2006.

**Timeline of transformation in the Zones**

The special economic zones are special enclaves within the domestic tariff area of an economy. The initial forms of these were the industrial estates and free trade zones set up in the country. The cluster of industrial estates came together to be known as export processing zone, which housed industrial units producing various commodities and came to be known as multi product zone. The export promotion came into full force during the 1970s. The exports showed an upward trend in the early 1970s and 1980s but again began to fall. Further, many bottle necks in the form of procedures had to be followed by the developers, followed by customs duties. During this period the quantitative restrictions were relaxed in India. Exports had not reached the expected level hence the new package called SEZ was formed (Gayatri .R 1990 and EXIM script 2000). In the special economic zones a separate region delineated for the purpose and was given the status of public utility services, reference to the

industrial disputes Act, 1947. According to the sub section of the Act an industrial unit which said to be a public utility service has the following provisions. The labour is not permitted to carry out dharnas, unionization and the like (Industrial Disputes Act, 1947). Further a single window clearance was to be adopted in order to reduce the procedural difficulties in the zone. The above measures were adopted to minimize the bottlenecks faced by the developers in these enclaves. The new growth machines are also one for ways for the economy to endure in the new globalized era. The process in India began from the early 1990s when the economy was opened to foreign trade and the multi national companies began to form a substantial part of the trade in the economy.

**Land acquisition for SEZ**

A large body of literature addresses various issues pertaining to land acquisition considering social aspects such as welfare measures for the Project Affected People (PAP). Further, the environmental issues are highly debated and challenging the policy itself with reference to rehabilitation package, the revenue loss to the government. Moreover, the role of the government is important in the implementation of any development policy. In the case of special economic zones the major role of the state government is mainly concerned with acquiring land for the companies. The state acquires the land and gives it in the hands of the private parties, unlike the special economic zones in China the 'land' is maintained by the state (the country). Secondly, the land acquisition is based on the Land Acquisition Act of 1894 (LAA), though certain states also have their own Act in order to acquire land or companies. Looking further into some aspects of land acquisition, one notices some violations with respect to the size or the area of land, according to the provision for SEZ a large sized zone must not be more 5000 hectares (Kumar .A, 2007,p.11) but, conglomerates like reliance have acquired 100,000 acres of land ( Srivastav,2008. p. 19). The rate of expansion of special economic zones is very high in the country, which brings up the issue of infrastructural capacity and the demographic changes. Do all regions comprise of proper power supply to meet the growing demand for power, are transportation facilities sufficient to face the upcoming challenges are some of the questions that arise. A clear response to this query is yet to be found. Moving on to the second important issue of demographic changes, firstly the agricultural and tribal lands are being acquired for setting up of special economic zones in the country. For, example in the case Orissa the lands were forcibly acquired by the company without even providing alternative livelihood (Mahana. R, 2008). The land is a major source of livelihood for generations among the local or the tribal people and that is being taken away without even providing proper compensation. In the past development projects have affected people living in the particular region, but in case of special economic zones unprecedented killings for land have taken place and resistance shown across the country.

Another important fact is the real estate boom in the country; in fact a body of literature suggests that the special economic zones in the country are a part of the real estate development of government. To probe further into this issue one could go back to the Special Economic Zone Act, itself. The sub section four of the special economic zone Act deals with the area specification in a zone, known as processing area and the non processing area of a zone. Before moving on to the real estate details one must understand what a processing area in a zone is: the physical area where the actual production activities take place. The processing area is said to be 30 per cent of the area in the zone and remaining is for other activities in the zone. The other activities include storage of materials, housing for employees, parks, recreational clubs and the like, but the developer of the zone has the right to give that space for rent or lease to any other individuals or industry. The other party may be an individual or companies interested

in setting up of shopping complex, golf course, sports club and similar activities are invited. The land therefore is being sub let to many interested units other than the developer. Further, the developer does not have the right to sell the land acquired for a special economic zone, and the question regarding the ownership of land once the developer has withdrawn from the SEZ scheme is not clear.

**Land acquisition for SEZ: theory and practice**

In spite of regulations in the land acquisition procedures for SEZ gross variation in the process have been found, it turned in to a war zone for unwilling farmers. Farmers were not willing to part with their fertile multi crop land in west Bengal, Orrisa, Maharashtra, Karnataka and states like Gujarat, Tamilnadu and Andhra Pradesh followed on similar lines. Land acquisition Act 1894 is being used as weapon to acquire land from land owners, some states follow their own land acquisition Act which adopted from the colonial Act. Infact in Tamilnadu the land acquisition for industrial purposes is being used to acquire land; the Act rests the entire power of acquiring land in the lands of the district collector.

Before moving into further details of the issues arising due to land acquisition a brief glance into the events that stirred up protests against land acquisition for SEZs may be taken into account. The land acquisition act is the colonial Act that is being followed to acquire land in India and the government has the right acquire land for development purposes under this act. The government carried out several development activities under the clause of 'public purposes'; hence it meant that land can be acquired for building roads, dams, ports. The same clause is being carried forward to acquire land for special economic zones being a developmental activity for public purpose. The powers are unequally divided and the land owners seem to loose their livelihoods for a 'throw away' price in some cases (Majumdar and Mitra, 2007). The acquisition of fertile land against the choice of those depending on the land led to the first blood shed in opposition to SEZ at Nandigram in West Bengal, 2007 January. Reports from media and studies suggest that eleven people were killed, women raped and several injured, a similar pattern was followed in Singur (Mahana. R.K, 2008). The Nandigram incident has changed the role of the government in acquiring land for special economic zones; the government has stopped acquiring and providing government land for the purpose of setting up zones. The government land also now has to be acquired by the developer through proper procedure or with the help state industrial corporations. In fact private developers in states like Gujarat, Maharashtra, Karnataka and Andhra Pradesh prefer direct negotiation with the owners and the stake holders of the land. The three parties namely the developer, land owners and the village officials in presence of the collector of the concerned region sign an agreement on the issues concerning the land to be acquired. This direct negotiation process reduces the hassles of court cases and protests to a large extent.

Initially the government had major role in helping to acquire government but post Nandigram the government has almost stopped acquiring land for SEZs in India. The state industrial corporations continue to play a major role in joint venture with the developer in order to get clearance from various government departments. When the SEZ Act was introduced there was no limit or cap for acquiring land, in late 2006 a cap of 5000 hectares for a large multi product zone and minimum of 25 hectares for a small zone was introduced. Violations have been found to this rule as well since conglomerated like Reliance has acquired more than 10,000 hectares in one region (Srivastava and Krishanan.G, 2007). Moreover a sub clause in the SEZ Act states that if a large project requires more land it can acquire on receiving permission and also the adjacent land to the zone can be acquired for expansion purposes irrespective of the land use pattern in the region. The change in land

use classification is another factor contributing to the access to land for the developer. This brings to the question of legal loopholes in the land acquisition process.

The process of accruing land has some leakages to the advantage of the developer; the SEZ or industry, government must inform the concerned village and land owners about their respective project. The notification may be done through posters, announcement in two local news papers and one English newspaper and also announcement in a common place of the village like panchayat office, religious place ; prayer house. A period of 30 days is allotted for receiving any objection to the concerned project and incase no objection the project would move forward. In the case of any objection a meeting with the district collector will be held and further legal procedures may be adopted to solve the issue. In many cases violation of the procedure has been noticed and land has been acquired without the knowledge of the concerned farmers and land owners. The appropriate cost benefit evaluation of the project has not taken place in some cases, especially environmental damage not been taken into consideration for example in the tier project at Thervoy kandigai village in Tamilnadu, the petrochemical project at Mangalore destroying the eco system completely and depriving the fauna of their habitat in that region.

Land acquisition for special economic zones has created a stir that is unprecedented compared with other development projects. The special economic zones have attracted attention of various groups like political, religious, social activists, policy makers and academicians for various reasons. The common interest of groups is the land acquisition saga and the tax sops given to the zones. Further, some states have provided more incentives to the zones in the state Act. In the three states having bulk of the zones namely Andhra Pradesh, Tamilnadu and Maharashtra have made acquiring land easier and further relaxed the labour laws to the advantage of the developer. The SEZ policy is considered to be one that would help improve the current balance of trade and earn more income for the economy.

On the contrary some of the land owners are contented with the compensation package offered and the training provided at the expenses of the developer. As a part of the rehabilitation process the developer in some cases has collaboration with polytechnics and industrial training units or provides training within their unit. The trained worker is observed within the zone the well known example is Nokia in Tamilnadu, Mangalore SEZ. The compensation package in were decided through direct negotiation based on the assets; wells, tanks, tress and cattle shed in the land. In certain cases the developer has paid the prevailing market price to the land owner and sufficient facilities in terms of infrastructure development for that village have been done. Mahindra city at chennai, Mangalore SEZ and Reliance at Jamnagar are few examples where the developer has shown interest in developing the particular region. The school, railway line, improved access to the urban areas and other towns in the state. This leads to the other question whether current growth rate of zones will lead to heavy urban agglomeration and more urban centers. In fact it is noticed that SEZs are one of the contributor's urbanization, it is quite clear in the case of Andhra Pradesh and Tamilnadu (Grasset and Landy, Rmanathan).

**Probable models of land acquisition**

Land acquisition question is the biggest the economy right now but it invites new and innovative methods to tackle the issue. The emerging models which are being proposed by some corporations are the land bank method and direct negotiation method. In both cases the corporate ensures the security of the land owner in terms of compensation that one would receive. Firstly, the state agency or the corporate undertakes a rigorous evaluation process of not only the land per se but of the crops, plantations, built structures and

cattle located on the proposed site. Detailed evaluation process gives a detailed listing in order to ensure that most / maximum amount of loss is covered under the rehabilitation package. The comprehensive package ensures alternative sites or places where the displaced persons can rejuvenate their livelihoods and also undertake training of the youth in order to attain employment.

The saga may not have a single solution but a comprehensive package along with strong rehabilitation measures could a probable model; in some cases alternate sites could pave the way for an 'even' process.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Economics of Carbon Emission

**B. M. Jani**
*Grow More Group of Institutions*

Environmental Economics and management of natural resources in general and carbon emission in particular draws attention of industrialists, administrators, regulators of emissions, and economic planners all over the world. Clean Development Mechanism (CDM) has to play important role for sustainable markets and management of sustainable environment. Bhopal has suffered a lot due to gas leakage Institutional players like UN, UNDP, UNIDO, WTO, OECD and countries like USA and UK seriously made efforts to CDM as per Kyoto protocol.

The present paper deals with industrial and air pollution in general and carbon emission in particular for sustainable economic development. For this, the first part of the paper highlights issues in carbon emission and carbon trading as a part of CDM, the second part of the paper expresses carbon trading areas, economic institutions and instruments, whereas, the third part of the paper offers policy options for carbon emission as apart of CDM.

The present paper is divided into three parts: the first one highlights Economics of Air pollution in general and carbon emission in particular, the second one expresses carbon market and carbon pricing, whereas, the third one offers policy options for Carbon emission trading market in India.

Economists have attempted to make application of game theory for disaster management and economic management of natural resources like Green House Gas (GHG) effect scenario. This Green house phenomenon is truly the result of a "global common" because no one owns the atmosphere; no one has sufficient incentives to take account of the change to the global atmosphere caused by his or her emission of carbon. As such, carbon emitted has the same effect no matter where on earth it happens. The expected change in global average temperature for a doubling of CO2 is 1.5 to 4.5 degree centigrade. Very recently, Global warming Conference in Montreal (2005) highlighted that level of Carbon emission is the highest since the last

6,50,000 years. Presently, carbon dioxide level on earth is 380 ppm. This has happened largely due to burning of coal, gases, and petroleum products. It has adversely affected sustainable air pollution on earth by carbon and other poisonous gases resulted in depletion of ozone on the earth. The entire exercise will affect the developing and the developed nations.

Kyoto protocol carbon trading allows corporate to sell or to offset their excess carbon emissions by investing in CO2 usually in other countries to ensure clean energy and environment Cash in by selling carbon to after. India aims at project for carbon trading. Cost of reducing technology says investment in a project worth of Rs. 1 crore, there will be setting up of Rs. 500 crore in carbon emission projects. Kyoto protocol requires a cut in green house gas emission by 5.2 % below 1990 levels by 2008-12 but US and Australia never rectified the protocol because of its excluded major developing Nations such China and India. The following are GHGs, which form gas emission on earth.

| | |
|---|---|
| C02 | Carbon dioxide |
| CH4 | Methane |
| N2O | Nitrous oxide |
| HFCs | Hydro fluoro carbon |
| PFCs | Per-fluorocarbon |
| SF6 | Sulphur hexflueride |

The present paper is divided into three parts: the first one highlights Economics of Air pollution in general and carbon emission in particular, the second one expresses carbon market and carbon pricing, whereas, the third one offers policy options for Carbon emission trading market in India.

## I

## Economics of Carbon Emission:

The contribution of air pollution and vehicle pollution for "green house effect" is noteworthy. Economic aspects of GHG draw attention of economists all over the World. Global Warming increased largely due to such effect carbon dioxide is the major green house gas and mostly originates from the burning of fossil fuels. Unfortunately, ozone is the lower atmosphere acts as green house gas. Earth summit in Rio in 1993 150 states signed UN framework convention on climate change with ultimate objective to stabilize green house gases concentration at an acceptable level within reasonable time frame. Principally signing states agreed to deal with scientific changes with suitable technology use by cost-effective measures to deal with climate change. Each count will have to prepare suitable national inventory for green house gases and comparable methodology for emission.

Economics of Green House Gases (GHG) studies costing and pricing of GHG, transaction last for CER, return to energy rate in %, cost reducing technology of overall costing reduction of a product in a market, with sustainable environment for human life. As such, economics deals with scare economics resources for sustainable growth of human life etc. Environmental Economics have very active from global level to national level for CO2 emission reduction for generating of resources with global CER market. Table No.1 provides details about in the world output, population and CO2 emission levels.

**Table No.1**

| Share of major countries in world, output, population and CO2 Emission | | | |
|---|---|---|---|
| Country | Share of World Population % | Share of World Income % | Share of World CO2 emission % |
| China | 21.01 | 3.22 | 14.85 |
| India | 16.62 | 1.46 | 14.85 |
| Japan | 2.14 | 14.17 | 5.15 |
| USA | 4.58 | 27.44 | 23.40 |
| South Korea | 0.08 | 1.28 | 1.80 |
| Mexico | 1.63 | 1.32 | 1.54 |

Economies with higher per capita income too exhibited higher CO2 emission. It can be observed from the table that the share of USA

is lowest in population, whereas, highest both in share of world income and CO2 emission. China is leading both in population rise and carbon emission, which occupies 21.01% and 14.85% share respectively. In the case of India, share of world population found to be 16.62% and the share of income was 3.22% and carbon emission share was 4.40%. This ha happened largely due to heterogeneity of technologies, uneven spread of technology and cost of technology for CO2 emission reduction. One can draw from the table that the combined influence of growing economic activities, increasing world population, changing structure of economic activities, increasing CO2 intensities of fuel efficiency. It is interesting to note here that USA and Australia have not singed Kyoto protocol as they found that carbon emission exercise involves huge expenditure. Carbon emission trading started both in the developing and the developed countries.

Environmental economists, management consultants are busy to measure cost-benefit/loss analysis, economic implication on world economy in general and Indian economy in particular. Carbon markets can be lost effective way for State/National green house emission goal. The lots of sequester soil carbon and reducing agriculture CH4 and N2O emissions are likely low relative to the lots of emission reductions from fissile fuel combustion. Carbon market needs baseline information like measurement, monitoring and verification process as buyers of green house gases reduction need documents.

Use of Game Theory of life and death along with competition development has drawn attention of economists and planners as development process and environmental economists has paid more attention after announcement of the Nobel prize in Economics. Robert Aumann and Schelling won the prize, largely due to contribution in game theory in economic science. As such developing countries are not getting better into environmental problems as even developed countries like the US not ready in sacrificing real gains from rapid development or ready to pay for environmental protection now. Here, rule of game and transaction cost theory will come in the way for sustainable carbon emission.

Climate change is equated with "global warming" but much more than warming is involved. The rising concern of carbon dioxide and other green house gases is leading to more extreme, storms, higher intensity hurricanes, rising ocean levels, melting glaciers and ice sheets, droughts, floods, and other climate change. Even chemistry of land ocean is changing as ocean as become more acidic, which has threatened coral reefs development and other products in ocean largely due to increasing level of carbon dioxide. Here, there is vital scope for application of game theory in Microeconomics so as to know rule of game for sustainable environmental pollution. Cost-Benefit Analysis through economic impact assessment of a project for carbon emission appear a suitable exercise to know positive and negative externalities of environmental pollution in general and Green House gases pollution in particular. Producer enjoys position externalities, whereas, people and affected parties in society facing negative externalities. As such, industries are not ready to internalize such negative externalities in production process and hence Clean Production Development Mechanism through CER appears necessary.

Technological Economics in economic theories come in the way for cost reducing technology. Renewable energy sources are clean that do not emit carbon dioxide, such as wind power and geothermal power but not sufficient to our national need. Similarly, solar power is expensive looking to expensive technology and economics of scale. Nuclear power is cheap and could be plentiful but poses challenges for danger increased proliferation nuclear weapons materials. This means, improved technologies can offer a way. For this, technologist and economists will have to

work together for cost reducing technology for carbon emission and suited to fuel-efficient consumption.

Economics of air pollution in general and clean development mechanism (CDM) through certified Emission Reduction (CER) at reasonable price. It is necessary to measure level of stock of carbon & flows of carbon, institutions will have to play a role game they and transaction cost theory of economics can be used for carbon credit market. Carbon offset Inter-governmental Panel on Climate Change (IPCC) a credible body with objective processes with general resource on global climate changes. It has been estimated that concentration of Green House gases in the earth is atmosphere on the cost of stabilizing different levels. If CO2 concentrate is to be stabilizing 450 ppm by 2050 that would cost about 4% of total GDP. The World has enough resources and technologies to achieve adequate level of GHG for ensuring satisfactory level of economic progress. Both people and the governments will have to make choice for sustainable human growth with sustainable GHG emission. This may enable a regime of equal per capita entitlements to the global atmosphere.

The developed national have not made CDM efforts to reduce emission at their own cost to restructure their economy and have posed carbon trading under CER on offered price. Carbon Credit is a tradable instrument among gases polluters. Carbon credit means factories may develop instruments/technology, which may reduce carbon dioxide and other gases level disposed by them. Whatever the level such hazardous gases reduces in that proportion carbon credit units can be earn by the factories by selling them in "Carbon Emission Receipts" in open market to the other units which are disposed high level of such emission. For this, factories, which are disposing one tonne less carbon dioxide, is receiving one unit of Certified Emission Reduction (CER). Very recently, an Indian Company SRI Limited has signed agreements with Shell Trading International for 50 million CER. This transaction has to be completed before 1st April 2007. Due industrialization, urbanization in India, then is a big carbon credit market has developed and having vital scope for carbon trading activities with global level countries. There is no pricing of CER (6 Euro per tonne or 10 US $ per tonne) but there will be vast market for CER. It is estimated that Latin American Country have US $ 3-5 billion out of which Brazil only occupies 10% of the total share. As per Kyoto protocol the developing countries like India will have to bring level of Green House Gases at 1990 up to 2012.

The entire exercise is known as Clean Development Mechanism – CDM. The industrialized countries will have to source about 2 to 2.5 billion tones of CO2 emission reduction to meet their Kyoto protocol targets by 2012. It is estimated that India could potentially supply ¼th of this demand for carbon trading activities under the CDM.

## II

## Prospective CDM Market in India:

There are several challenges for development of CDM market in India. The sector is till remained uninformed about CDM. A lot of misconception about CDM among people on consulting business. There is also misinformation about setting market prices is setting on wrong expectations. Sometimes project developer-losing opportunities to commercialize the credit and realize benefits because of myth about current and future predicted prices of carbon credit selling. It is most necessary for industries to go in go right type of CDM consultant (experts and Buyers) of credit from international market for sustainable trading mechanism.

**Motivating Factors:**

CO2 emission market was rectified by Kyoto protocol in 2002, which encouraged many nations to join in climate change with CDM. The

government of India has passed new Electricity Bill which has become New Electricity Act 2003 allows to do energy saving through CDM. Moreover, it encourages energy efficiency at lower cost. There is growing awareness in people and considerable information literature is created by global level agencies and companies engaged in carbon emission and other GHG. World Trade Organization (WTO) has also asked all member countries for cleaner production and Eco-labeling for multilateral trade development.

**Retarding Factors:**

Information system has developed in India to discriminate GHG awareness and carbon awareness in carbon change process at national level. As such carbon awareness is not only properly distributed among government and industry at state level in India. Power tariff reforms in India encourage new renewable energy projects , which are moving very slow and can become issue for further CDM flow.

Keeping in mind above said issues, it is most necessary to have procurement of emission credit through project developers and corporates with emission reduction projects. There is a need for building partnership among industrial organizations, financial institutions, research institutions, and regulatory organizations, so as to manage CO2 emission. It is also necessary to have suitable policy and transaction advisory body for CO2 emission by professional consultants in India and abroad. According to US council on Foreign policy environmental size of CO2 trading market appears to be very vast. At present it is about 2.5 trillion to 3 trillion tonnes with price of 6 to 25 Euro price in the market. So far as Carbon trading is concerned there are two stages: primary stage, during 2005-2007 and phase second during 2008-2012 with price 10 to 35 Euros per tonne of carbon credit. The process requires developing the market through clean fuels utilization, cleaner technology, clean power and carbon finance availability. For this, proper institutional mechanism needs to be developed in Indian situation, both by the State and Central Government. Technologists in carbon viewed that there are two types of carbon trading markets (a) Government sponsored compliance markets (b) Markets by voluntary/offset programmes known as non-compliance markets, which is larger than former. The Government will have to decide whether to buy Kyoto Credits on government to government markets or to set caps under their national allocation plans that passed the burden of reducing emission onto industry. According to views of the experts, customers/ industry should bear the cost out of carbon trading mechanism at micro level or industry level. Economists have viewed that there is a need for supply side management and demand side management of CO2 Markets so as to manage price both in local and global markets.

Three important elements are missing, which would kick to start carbon market.

1. Regulatory CO2 emission reduction sources such as electrical producers,
2. Public acceptance of Carbon Markets, allowing emission sources to be offsets.
3. Carbon market and fair trading rules.
4. A list of approved consultants at state level.

**Carbon Price in Market**

Development of carbon market depends upon carbon valuation methodology, which differs from consultants to consultants based on technology growth for cost reducing carbon emission. Moreover, there are number of players and traders in the market who would increased the transaction in order to expand the market. Pricing mechanism of CDM credit depends upon demand for CERs. It has been expressed that voluntary and offset market for emission reduction has received the attention of industrialist on level of pricing. It is doubtful that price received by such markets will exceed the level of established in the Kyoto Protocol Market. Pricing of CDM credits will be highly sensitive after 2012 as predicted by the carbon emission consultants due to political appetite for GHG emission

reduction. There are several factors affecting pricing of CDM credit which include change in scientific consensus on climate change, economic growth, energy sensitivity, need for energy, price of fossil fuels, emission reduction allowance prices, political dynamism, etc. Apart from this prices, for CERs could be the price cap. Carbon emission markets will have to undergo several risks such as price risk, credit risk, policy risk, individual project risk, contract flexibility risk, legal risk, and tax risk. The market growth in India also depend upon suitable price mechanism or carbon credit sales on long term contract basis, best payment terms, transparent process, possible pre-financing and bankable contracts in the in capital deficit country like India. The comprehensive carbon credit market needs "win win" proposition for buyers and sellers by sharing risks and rewards on CERs for sustainable growth.

CERs trading market can develop on political will, political ability in a country like India. Potential sellers on emissions expect carbon finance availability, climate change law, carbon management agencies and renewable energy sources for development of the market. The market needs professional brokers for carbon trading as we find in the case of capital/ commodity markets. $CO_2$ emission is related with many services like information sources of potential carbon in different sectors, different group of industries or geographical areas, suitable strategy and trade related services.

**Case of power plants and $CO_2$ emission:**

CDM projects have started in India for earning of CER by the industries. India has developed 104 projects with proposed investment of Rs. 7600 crore which could secure additional revenue through the sales of 126 million CERs. The Green house gas benefit of each project is measured in CER expressed in tones of $CO_2$ emission avoided. The Government of India has set up CDM National Authority in 2003. This has spurred many projects in areas like renewable energy, power generation, and transport and wastes management sectors. There is CDM-Stakeholders Association known as Indian Carbon Market Group has also been formed for negotiation of Carbon trading activities.

As World's governments are meeting in Montreal from Nov.28 to December 2005to plot net steps including specific measures that the World could adopt if Bush administration in the US abandoned its willful neglect of climate change issue in general green house gases in particular. 11th meeting to discuss UN treaty's implication of Montreal in Canada have World gets onto discuss a safe and sustainable long-term climate path beyond 2012. US have refused to sign Kyoto protocol and hence carbon-trading business by some of the global companies have to come forward for CRE trading for sustainable management of environmental pollution. World economy depends upon fossil fuels, and developing countries will never need to use more, not less of them as their economies grow.

The National strategy study on CDM estimates that GHG emission mitigation in key sectors till 2012 is about Rs. 417 million CERs. Power sector alone can earn sufficient carbon credit by superior power plant technology. Renewable energy takes mitigation of 154 million CER, upto 2012. In the sector the increase penetration of public trust and improve in efficiency of vehicles, hold a mitigation of 41 million CER (Economic Times, 1st December, 2005).

Energy experts in India observed that renewable energy displaces emissions from fossil fire generation and overall $CO_2$ emission from the mix of generating plan in developing grids is necessary and it would about 0.7 t $CO_2$e q /mwh. This means, 1 mw of renewable energy will generate about 7,000 mwh /yr. It can be concluded that 1 mw displaces 4900 t $CO_2$e q/per annum, can avoid Methane emission from decompositions.

Kyoto protocol emission reduction or limitation target (i.e. industrialized countries

and those in transition to market economy) will have to more their targets by carrying out proper to grow Green House Gases (GHG) emission in another country. During the first Kyoto protocol committee per 2008 to 12, crediting is to be accumulated for reduction of emissions reductions compared to a "baseline". These credits are called emission Reduction Units (ERUs), and they can be used by an investing company to set against its our emission target, or sold to allow another company to met its own target. The different GHGs have different potentials to impact climate change, so one ERU is awarded for emission reductions in any of the green house gases equivalent in impact to one to more of carbon dioxide emissions (1 t ($O_2$e). For example, Methane ($CH_4$) has a global warming potential of 21. This means that one tonne of Methane has the same climate chase impact as 21 tonnes of $CO_2$ and one can put equation like this:

$$1 \text{ t } CH_4 = 21 \text{ t } CO_2e.$$

It can be observed that law fill gas projects involving methane emission reduction can be particularly attractive because they can generate large amounts of EURs. This will also being source of income can encourage industrialists to go in for carbon emission.

The World Bank has observed that due to lack of air pollution, 7.5 million people die in India. This has happened largely due to lack of clean water, lack of height, hazardous and risky agri-industry solid waste. South-Asian Countries are facing ecological imbalance. It has been reported that most of the cities in India in general and six big cities of Gujarat are victim of sulpher dioxide ($SO_2$) pollution. Air pollution control authority experienced higher level of $SO_2$. In IM3 air $SO_2$ level should not exceed 60 Microgram. But in the case of most of cities the level is found to be more than 120 to 160, 300 microgram. As level would be of the geographical areas become gas chamber, which is hazardous to human life. Scientists have measured $SO_2$ pollution in Ahmedabad city 100 to 200 tonnes from which 11 tonnes from vehicles, 152 tonnes industrial power generation units, 12 tonnes by domestic $SO_2$ disposed in clear air. WHO gave minimum standards for $SO_2$ pollution that up to 10 minutes, it should not exceed 500 microgram for one hour it should not exceed more than 350 and for 24 hours annual average should not exceed between 150-200. If WH standard will not maintained in leading cities there would be migration of people from such air pollution areas. India in general and Gujarat in particular State pollution control Board has not taken any action against such pollution. This has requested into breathing problem, cancer, skin disease, disorderly fingers and toes of people, Heart attack, burning of eyes, blood circulation, etc. mentioned by Doctors and Medical authority in India. Golden corridor of Gujarat from Ahmedabad to Vapi geographical areas is facing the situations.

Long-range air pollution refers to the adverse effects of air pollution that create considerable distance from the source. One such adverse effect is acid rain caused by pollutants such as nitrogen oxides being wasted out from the atmosphere. Nations Economic Commission in Europe in 1979 adopted the conventions of long rang Trans boundary Air Pollution. These nitrogen oxides pollution needs to be reduced at least 30% by 2010 in big cities of India. Manmade gases created a tension for chloro fluorous carbons. UNEP asked to adopt Montreal protocol on substances that deplete the "Ozone Layer".

Technological Economics in economic theories come in the way for cost reducing technology. Renewable energy sources are clean that do not emit carbon dioxide, such as wind power and geothermal power but not sufficient to our national need. Similarly, solar power is expensive looking to expensive technology and economics of scale. Nuclear power is cheap and could be plentiful but poses challenges for danger increased proliferation nuclear weapons materials.

Economics of air pollution in general and clean development mechanism (CDM) through certified Emission Reduction (CER) at reasonable price. It is necessary to measure level of stock of carbon & flows of carbon, institutions will have to play a role game they and transaction cost theory of economics can be used for carbon credit market. Carbon off-set rate is known as carbon credit in term of CER units having price in global market. For this, price water house India Ltd. Has developed 130 projects in India for selling carbon credit in to carbon credit market developed at global level. India must develop vulnerable market for this. There is a need to few projects for using fossil fuel for burning.

**III**

**Economic Action Plan for Carbon Emission:**

Basic principle realizes using same principle of profit maximization, which motivates, business of carbon or green house gas emission, environmental protection and reorganization synergy between business and environment.

1. The Government of India and State Government need to appoint separate authority for sustainable green house gas management in leading industrial cities and affected geographical areas. As such pollution control boards have totally failed in India to manage air pollution in general and carbon emissions in particular.

2. It is necessary to maintain emission standard laid down in India as we find at global level. For this, strict expectation of standard is necessary to be made by regulatory authority in air pollution.

3. Institutional and framework can integrate new technology into specific culture. Economic rationale for adoption of a proper technology for carbon emission must gain the adopters. This may enable capacity building for sustainable industrial development.

4. There is a vital scope to introduce carbon emission tax on industrial units those who are not ready to go in for carbon reduction exercise. Carbon credit exercise and tradable units must participate in global carbon credit market through CDM process.

5. Gasoline tax can request in cost saving for industrial units in India. There is a need for educative programmes for fossil fuels and carbon emission to rural and urban people

6. LPG needs to be used in cooking and vehicles as WHO has suggested for the developing countries where fossil fuel is used. This exercise enables carbon emission for sustainable growth.

7. There is growing need to reduce abatement per unit cost of carbon emission. This calls for development of new technology/ industrial process at plant level so as to manage air pollution as per global norms for air pollution emission.

8. The developing countries of Asia, Africa and Latin America will have to make change in their outlook. Demand oriented approach need to be developed in peoples industry and local self-government to manage air pollution in general carbon emission in particular.

9. India's external finance need for environmental. Investment is estimated about US $ 20 billion in 2001 along 70 billion accelerated progresses scan. In view of expert of Asian Development Bank like K.F. Jalal, Asian country needs 1 to 7% of their GDP. ADB funds Finance 300 to 600 % per year from urban Environmental Improvements. A fraction of the trillion dollar markets is comes to India. Global trends, threats and challenges to manage envi. Need technology WTO to force newer countries anti-pollution laws.

10. Sustainable energy investment by using renewable energy resources will eco-friendly

green electricity and under the CDM process emission trading appear necessary in terms of selling of carbon credit.

11. There is a vital scope for Green House Gases emission and development of certificate market is also necessary so as to cope with climate change policy assessment and development of new CDM project.

12. India will have to execute Kyoto protocol and it is equally necessary to have international environmental agreements among the countries wishing emission reduction for sustainable growth.

13. In the case of Municipal solid waste, a landfill site of solid waste management and bio-methanation sector growth under the CDM project requires Master Plan of India to be framed by CDM project developers. This means CDM interaction potentials are there in various sectors like dairy, distillery, food processing and Municipal waste also.

14. There is a vital scope for the development of institutional capacity to enable small scale projects in India and suitable policy need to be framed by the states and central governments in India.

15. Coal mining sector needs to develop CDM projects in coalmines Methane, coal bed methane and abandoned mine methane. The process is concerned with quality and quantity of coalmines. By reducing GHG gases levels in various geographical areas, the company or an unit can obtain additional carbon finance. IT power company offsets carbon dioxide emission by investing in carbon emission. It has clients like industry, governments, institutional donors, public/private sector.

**Conclusion:**

Indian Industries have entered carbon emission market practices, which need market expertise and suitable policy, as carbon credit sellers should not be chased in the global market. The price of one tonne sales of carbon credit is in industries of E4 about US $ 26.7 per tonne of Co2, whereas, Indian sellers are getting advertise price by the World Bank, which pays about US $ 5 per one tonne of sale of carbon credit. UK based carbon credit traders that buy CERs from India for sales, say there is risk operating in developing countries. CER sold in deals, where prices are not revealed. Non-transparency makes for an unfair market in the interest of the rich buyers. Global level price discrimination needs to be removed. As such climate change is an agenda in general and carbon emission in particular need proper market education. This is so as the developed nations who are cannot cleaning their production as per protocol has come forward to buy carbon credit from the developing countries. Have they invented suitable technology? Have they used such technology?

However, National action plan (2003) to operational CDM in India holds that DCCDM is not benefit the industries, the farmers and project promoters buy will achieve objectives of sustainable development, reducing pollution and promoting protection of environmental pollutions. If the developed countries are not going to take responsibility of greenhouse gases India is one of the largest contributor of CDM projects actively well ahead of China as Government of India has established national CDM Authority with registration of project developers and 150 project activities already logged from India. India needs to share policy market industries with partnership in finance and technology from abroad as commercially viable options for low carbon energy sources are still limited in India.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Climate Change and Technology Transfer

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## Introduction

Climate change will be one of the defining forces shaping prospects for human development during the 21st century. Though its impact on ecology, rainfall, temperature and weather system, global warming will directly affect all countries. Nobody will be immune to its consequences. However, some countries and people are more vulnerable than others. In the long term, the whole of humanity faces risks but more immediately, the risks and vulnerabilities are skewed towards the world's poorest people. [Human Development Report 2007/2008]. Most of the developing countries are inhabited by poor people, who use biomass fuels for their survival. Climate change in already multiplying vulnerabilities in developing countries by heightening livelihood risks and further weakening adaptive capacities.

The dual challenge of meeting development goals, including through industrialization, while at the same time controlling emissions and reducing carbon dependence will require new, rapidly scaleable and powerful technologies in the next 10-20 years – technologies that transform not only the way that energy is produced, distributed and used but also the approaches to helping vulnerable countries adapt to an unavoidable increase in global temperatures. In important areas of technology development, government support has extended beyond the research development (R&D) phase to include to commercialization, for example, through government procurement and such measures as loan guarantees for construction of buildings and investment in equipment. These fall under the broad rubric of industrial policies. Moreover, technological progress in not independent of investment in both physical and human capital, [World Economic and Social Survey, 2009].

Technology flows through several well known channels, the most important being trade, foreign direct investment (FDI) and cross-border technology licencing. Specific and technical knowledge also flows internationally through research publications, research collaboration and the movement of skilled personnel. Acceleration of the flows of climate friendly technology raises many of the same issues and challenges facing any other sort of technology. What differentiates those technologies for many but not all others in the urgency and the scale of the transfers likely to be needed to meet the climate change. But there is also an underlying ethical challenge posed by climate friendly technologies give that the countries most responsible for climate change, or at least their corporations, are set to profit through the transfer of technologies to countries that bear little or no responsibility for the problem.

Implementation of the appropriate measures for facilitating the transfer of clean technologies and building the local capacity to use them effectively in developing countries will require much greater collaboration among countries. Such collaboration could help bring technologies more quickly to their commercialization stage and encourage further breakthrough in cutting edge low-emission technologies. However, in many developing countries where the key challenge is diffusing existing low-emissions technologies, international support in needed for research, development and deployment (RD&D), the removal of trade barriers, access to affordable financing, and effective capacity building. Any concerted international effort to promote access to low-emission technologies should not, moreover, suppress the ability of the developing countries themselves to produce such technologies and to become competitive on international markets [World Economic and Social Survey 2009].

This paper is divided into two sections. In section I, various areas of technology transfer which need effective action are discussed. Issues related to intellectual property rights, FDI in cleaner technologies and clean development mechanism is discussed. In Section II, Innovative mechanisms to promote technology development and transfer are discussed.

## SECTION - I

### Technology transfer for climate change: a global public policy challenge

The United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, gave a new urgency to the transfer of Environmentally Sound Technologies (ESTs) for climate change mitigation. Developments subsequent to the adoption of the United Nations Framework Convention on Climate Change related to technology transfer have included the adoption of the Buenos Aires Plan of Action by the Conference of the Parties to the United Nations Framework Convention on Climate Change at its fourth session, held at Buenos Aires from 2 to 14 November 1998. The Conference of the Parties requested that developed countries "take all practicable steps to promote, facilitate and finance" the transfer of environmentally sound technologies to developing countries and their access thereto. In particular, the Plan of Action envision an "enabling environment …to stimulate private sector investment" in the transfer of environmentally sound technologies.

In order to operationalize the relevant provisions of the Framework Convention on technology, the intergovernmental process, through the Conference of the Parties to the United Nations Framework Convention on Climate Change at its seventh session, held at Marrakech, Morocco, from 29 October to 10 November 2001, agreed on a technology transfer framework, comprising the following set of key themes and areas for meaningful and effective actions: [World Economic & Social Survey 2009]:

- Technology needs and needs assessment: a set of country-driven activities that identify and determine the mitigation and adaptation technology priorities, particularly of developing countries.

- Technology Information: this component defines the means, including hardware, software and networking, to facilitate the flow of information between different stakeholders to enhance the development and transfer of environmentally sound technologies.
- Enabling environments: this component focuses on government actions, inter alia, fair trade policies, removal of technical, legal and administrative barriers to technology transfer, sound economic policy, regulatory frameworks and transparency, all of which are essential to creating an enabling environment conducive to public and private sector technology transfer.
- Capacity – Building: a process that seeks to build, develop, strengthen, enhance and improve existing scientific and technical skills, capabilities and institutions, particularly in developing countries, to enable them to access, adapt, manage and develop environmentally sound technologies.
- Mechanisms for technology transfer: facilitators of the support of financial, institutional and methodological activities: (a) to enhance the coordination of the full range of stakeholders in different countries and regions; (b) to engage them in cooperative efforts through technology cooperation and partnerships (public/public, private/public and private/private); and (c) to facilitate the development of projects and programmes to support such ends.

**Intellectual Property Rights**

The obligation to respect intellectual property rights raises the cost of accessing technology. Whether this will constitute an important barrier to technology transfer will depend, inter alia, on whether the particular technology that is patented has cost-effective substitutes or alternatives, and on the degree of competition in the industry, which can effect the price of and t he terms for licensing.

Given that stronger protection of intellectual property rights raises the costs of obtaining technologies, it has generally been accepted that low-income developing countries should be exempt from strong intellectual property rights-related obligation and that the strength of those obligations should only rise with levels of development (Hoekman, Maskus and Saggi, 2004). However, given that the current regime is unduly biased towards the owners rather than towards the users of technology, a more graduated approach is likely to be supportive of large-scale technology transfer only if it accompanied by complementary measure with respect to financing, RD & D and technical cooperation, which has not been the case in recent years.

The potential trade-off between intellectual property right protection and technology development and transfer is a very important issue in the context of climate change. The distribution of patent ownership of climate-related technologies is very heavily skewed in favour of advanced economies. However, to date, Barton (2007) finds mixed evidence of the importance of intellectual property rights in technology transfer. Based on the examination of three sectors (photovoltaics (PV), wind and biofuels), he concludes that, rather than basic technologies, what are usually patented are specific improvements or features.

In the photovoltaics sector, the developing nations are facing a loose oligopoly with many entrants. Thus, developing countries like India and China, for example, have been able to enter and compete in the industry. In respect of biofuel technologies, intellectual property rights do not appear to be barring developing countries from accessing the current-generation technologies, as shown by the developments in many countries, including Brazil, Malaysia, South Africa and Thailand.

The most significant barriers and distortions are likely to be associated with the market power of a small number of producers located in advanced economies.

**Technology Transfer Through Investments**

Many description of foreign direct investment (FDI) emphasize that it is the

exploitation of firm-specific advantages, including intellectual property and leading technologies, that allows large corporations so undertake risky and costly activities outside their immediate domestic and regional locations. Hosting such firms has been seen as one way for developing countries to close the technological gap between them and more advanced countries. In recent years, the policies devised by developing countries to attract those firms have undergone a shift from providing the firm with a protected local market to liberalizing country rules on FDI and trade, including through the creation of export processing zones. The expectation was that this would help break out only the technological constraint but also the foreign-exchange constraint on growth. The results have often been disappointing, particularly in cases where FDI has been a substitute for local domestic capacity-building efforts (United Nations, 2006).

While technology may be physically transferred from the home to the host country through FDI, the question remains what sort of linkages the transfer creates with the rest of the host economy.

Those spillovers can occur in a number of ways: through the movement of skilled personnel between a multinational subsidiary or joint venture and other firms, through technology imitation by competitors, and through technology sharing with suppliers, customers or business partners.

**CDM and Technology Transfer**

The market-driven Clean Development Mechanism (CDM) was established under the Kyoto Protocol to the United Nations Framework Convention on Climate Change to help developed countries meet their emission target, by encouraging firms in the private sector to contribute to emission reduction efforts and through investments in developing countries. Although they do not necessarily entail FDI, many of these projects involve transnational corporations from the advanced countries. It was expected that such private sector transfer would assist in the transfer of environmentally sound technologies to developing countries.

A few studies have tried to determine to what extent technology transfer is actually occurring through the Clean Development Mechanism process. Most recently, the United Nations Framework Convention on Climate Change Registration and Issuance Unit CDM/SDM (Seres and Haites, 2008) issued its own report on the Clean Development Mechanism and technology transfer. Based on documentation for 3,296 registered and proposed CDM projects, it found that roughly 36 per cent of the projects, which accounted for 59 per cent of the estimated annual emission reductions, claimed to involve technology transfer, indicating that projects claiming technology transfer claim. It also found that about 30 per cent of unilateral projects, 40 per cent of projects with foreign participants and 30 per cent of small-scale projects claimed technology transfer, as compared with 36 per cent of all projects. The study found that the technology transferred originated mainly from Japan, Germany, the United States of America, France, and the United Kingdom of Great Britain and Northern Ireland, which accounted for over 70 per cent.

So far, the operation of the Clean Development Mechanism has been on much too limited a scale and has been too heavily concentrated in a few developing countries to allow it to initiate and sustain the kind of big push towards cleaner technologies.

## SECTION - II

## International policies and measures to build capacity in developing countries

Technology absorption requires investment in both physical and human capital. The faster the pace of capital formation, the greater the likelihood of such absorption. Technology needs will differ from region to region. Moreover, the global nature and urgency of the climate challenge imply that the rapid dissemination to appropriate technological options will require international collaboration.

This is particularly true in the area of RD&D, where developing countries lag significantly and risk falling further behind as new technologies emerge. Important examples of technologies that will be critical to a new development pathway include carbon capture and sequestration (CCS), low-emissions biofuels, and breakthroughs in renewable energy sources such as solar panels. Moreover, developing countries also need access to best practices with respect to adaptation technologies, in the areas of agriculture, disaster management and urban planning.

**Table-I Innovative Mechanisms to promote technology development and transfer**

| Mechanism | Rationale | Issues to consider |
|---|---|---|
| Publicly supported centres for technology development and transfer | Green revolution model of technology diffusion: make technologies available to developing countries without intellectual property right protection. | Suitable for mitigation or only for adaptation technologies. |
| Technology funding mechanism to enable participation of developing countries in international R&D project. | Resultant intellectual property rights could be shared; patent buyouts could make privately owned technologies available to developing countries. | Is there sufficient incentive for participation by developed-country private sector technology leaders? |
| Patent pools to streamline licensing of inventions needed to exploit a given technology | Developing-country licensees will not have to deal with multiple patent-holders | What are the incentives to patent-holders? Would government regulation be needed? |
| Global R&D alliance for research on key adaptation technologies | Model of research on neglected tropical diseases | Is such an approach suited to mitigation technologies? |
| Global clean technology venture capital fund | Fund located with a multilateral financing institution which will also have the rights to intellectual property | Will new technology ventures be viable commercially if they do not own intellectual property? |
| Eco-Patent commons for environmentally sustainable technologies | Approach initiated by the private sector to make certain environmentally sound technologies are available royalty-free on a "give one, take one" model | Voluntary, private incentives appear weak. What about those companies without a patent to contribute? |
| Blue Skies proposal of European Patent Office: differentiated patent system with climate change technologies based on a licensing of right | Complex new technologies based on cumulative innovation processes need to be treated differently from, for example, pharmaceuticals | Appears to address concerns similar to those addressed by the patent pools proposal: more specifics needed on implications for technology access |
| More favourable tax treatment in developed countries for private sector R&D performed in developing countries | More proactive, technology-push approach by developed –country Governments | May face domestic political constraints |
| Technology prizes | Reward innovation without awarding intellectual property rights to innovators | Requires a well-specified research objective |

*Source: United Nations, Department of Economic and Social Affairs (2008)*

Table-I presents various innovative mechanisms to promote technology development and transfer. Three closely related initiatives could plant the seeds of greater international collaboration in developing the skills and technologies needed to tackle climate change:

**A multilateral technology fund**

To support an international programmes on the diffusion of climate technology and to strengthen and coordinate regional and national RD&D efforts in developing countries.

A comprehensive programme would need to focus on the full range of technological challenges at the basic science, applied RD&D, demonstration, deployment and commercialization stages of developing cleaner technologies, However, coordinated funding for the development, demonstration and deployment of critical technologies such as carbon capture and sequestration and the next generation of biofuels, in up in the agenda.

Such a fund could act as a focal point for the coordination of ongoing research in climate technologies at the international and national levels and among public, private and non-profit organization, while ensuring open access to all available research in line with the urgency of the challenge. [World Economic and Social Survey 2009].

**Human Skills Transfer Programme**

A scaled-up human capacity development effort could complement the fund and would consist of a temporary (perhaps only a virtual) movement of skilled unemployed/ underemployed workers from developed countries (engineers, technicians, primary education teachers, experts in sustainable agriculture, and qualified blue-and white-collar works) into developing countries to provide workforce and vocational "train the trainers"- type training. An innovative means of accomplishing this would be "reverse outsourcing".

**A Public Technology Tool**

The results of fully funded public research on climate technologies should not be the basis of private patents. It should be made available at low or no cost to all countries. A technical secretariat would be needed to monitor, collect and disseminate such research, to act as a clearing house for existing publicly funded technologies and to actively promote access to those technologies, particularly for developing countries. Such a body could work alongside the Global Technology Fund to ensure the widest dissemination of future research sponsored by the Fund.

**Conclusion**

A rapid pace of investment will not be sufficient to meet the climate challenges unless it is accompanied by a technological transformation, with increased capacity to producer, operate and deploy climate-friendly technologies. However, for many developing countries, the cost of accessing those technologies could prove prohibitive. Although developed countries have committed themselves to leading the change towards cleaner technologies and ensuring the developing countries are not left behind, neither commitment has been fulfilled. Innovative transfer of both technologies and know-how will be required to meet climate change objective in the context of both mitigation and adaptation. [World Economic and Social Survey 2009].

Anticipating those obstacles and devising ways around them constitute an urgent task of the international community. This would require consensus, since it might entail the amendment of World Trade Organization rules and special climate waivers based on the urgency of the rapidly evolving climate situation. It will also require careful attention to the implication of World Trade Organization principles of non-discrimination

and United Nations Framework Convention on Climate Change principles, especially that of common and differentiated responsibilities and capabilities.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Towards BoP's Mobile Miracle

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India's enviable growth rate averaging 8% since 2000 has not been inclusive, nor evenly shared. This paper reports on the impact of introducing and employing modern wireless technologies to microfinance and other BoP (bottom of the economic pyramid) markets to achieve broader and more far reaching financial inclusion. When software and mobile applications are created and developed to accomplish inclusive growth goals, mobile technologies can steer in the next generation of better financially inclusive services. Given the current massive uptake of mobile phones India's BoP could be on the cusp of a 'mobile miracle'. The authour argues that appropriate technological interventions that understand the financial needs and economic realities of the BoP represent huge business potential. The paper discusses already existing BoP-focused mobile technologies to demonstrate how closer engagement between technology communities and BoP market research can build new useful applications. The focus is on applications that respond to recurrent complaints of doing business with the poor-such as high transaction costs, management of data, rural reach, and remote tracking.

Financial Inclusion (FI) is essential for generating and sustaining equitable growth. Financial access provides the bottom of the pyramid (BoP) (Prahalad, 2004) with opportunities to build savings, make investments, and avail credit. Vitally, access to financial services also helps the poor insure themselves against income shocks such as illness, death in the family, or employment loss.

Low-income households in informal or subsistence economies like in rural India hold savings in the form of cash, jewellery, or livestock, which earn little return and are subject to theft or loss. The possibility of spending, saving, and transferring with e-money or m-money allows for a far less risky life. M-money, or mobile money, allows the opportunity to plan and save in the medium and long terms. The current state of India's BoP is immediate spending, which leads to zero possibility of scaling up economic activities, nor protecting oneself for

later sickness, crop failure etc. Unfortunately sometimes budgeting is impossible as is often the case when it comes to organizing money to pay for education and school fees.

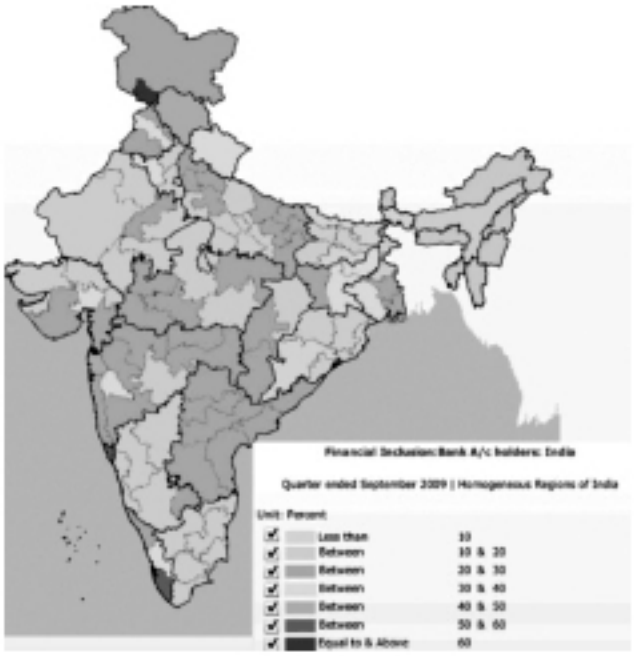
Only 5.2% of India's 600,000 villages have a bank branch, thus the BoP have practically no access to basic financial or insurance services. There is clearly a gap in the market in offering financial services to the bottom of the economic pyramid (BoP); this potentially viable business proposition simultaneously moves its customers out of poverty: a veritable win-win scenario. Branchless micro bank accounts allow for such budgeting and medium term saving. Across the developing world there have been encouraging viable business cases of rural mobile banking conducted via mobile phones, especially M-PESA, GCash in the Philippines, and Pakistan's easy paisa.

India's is the world's fastest growing telecommunications industry[i]. India has around 700 million mobile phone connections[ii]. With such a vast distribution of mobile telephones in India and only 5% of Indian villages having bank branches, mobile and branchless banking offer enormous and exciting prospects for India's BoP. The current low level of access to the formal settlement and financial systems is a clear case of market failure. The market potential is colossal, and could be India's BoP's 'mobile miracle'.

Despite progress in India's financial sector the past generation; the statistics on financial exclusion in India remain disheartening:

Financial Inclusion rated by Bank account holders in India Map (Source: Aadhaar)

- Out of the 600,000 villages only about 30,000 or just 5.2% of rural Indian villages have a commercial bank branch.
- 1 bank branch typically for 16,000 people means FI is far from realization.
- Overall in India 30 % have bank accounts. Ratio is much lower in the north-east of the country. A significant portion of accounts are dormant. Very few conduct any banking transactions and fewer receive credit.
- Life insurance cover is as low as 10%.
- Non-life insurance is abysmally low 0.6%.
- Per capita spend on life and non-life insurance is only Rs 2,000 and Rs300, respectively, compared with global average of at least Rs18,000 and Rs13,000[iii].
- People having debit cards comprise only 13% and credit cards a marginal 2%.




*Financial Inclusion rated by Bank account holders in India Map (Source: Aadhaar)*

The Indian Government's 11th Plan targets inclusive growth - "a growth process which yields broad-based benefits and ensures equality of opportunity for all". This noble goal will remain elusive unless there is easy, convenient, and low-cost access to financial products and services. One simple and already widely distributed method for channeling financial services to the BoP is through "the single most transformative tool for development" (Sachs, 2009) – the mobile phone. Whilst today financial and banking services is out of reach for many, especially in remote rural and slum communities; more

than half of India's people own a mobile phone, with almost all Indians having indirect access to someone else's mobile phone. Mobile network operators and software developers can tap this unmet market by offering a range of financial and banking services via mobile handsets.

Innovations in ICT infrastructure and mobile applications have dramatically altered the business environment in other developing countries, with Kenyan Safaricom's M-PESA being a shining example; as well as encouraging cases in South Africa, Rwanda, Mongolia, and the Philippines. Mobile payments in these five countries have proved to be both an economic driver and an effective mechanism for social empowerment. CGAP's case studies in Kenya and XacBank in Mongolia show that m-banking can help MFI customers save time and money, experience greater security, and manage their cash flows with more flexibility.

More financial services available through mobile applications can allow a larger pool of MFI agents and bank agents to operate in more communities with simple handheld devices. Balance enquiry, loan repayment reminders etc. can be transmitted directly to the microfinance customer via SMS messaging and thus do not even require an agent to be physically present at all. Mobile systems allow for quicker customer verification, and also offer closer alliance between the MFI and its clients. Bringing personal banking and loan information closer to the borrowers themselves provides familiarity with and understanding of the financial products and services which makes great inroads to delivering individual financial literacy.

Equally, the MFI back office being able to check customer status quickly, easily, and in a non-intrusive way allows for better data management and smoother work flow. Overall for a MFI, digitization of data makes for better working operations in better information management; backed-up data in case of loss; improved remote monitoring of loans across a large geographic area and in real time with GPRS and USSD technologies. Mobile functionality has supported innovators to dramatically shift business landscapes elsewhere in the developing world; now is the time for India's mobile software engineers to usher in India's mobile miracle.

Probably mobile technologies' greatest contribution to MFIs is its ability to lower transaction costs. Throughout microcredit's history there has been a persistent quest to bring the cost of each transaction and each customer down. The administration and on-the-field costs for each microcredit client are huge, which explains the necessity to loan micro amounts at proportionately high interest rates. Appropriate creation, development, and customization of informatics and wireless solutions that take heed of microfinance realities could allow interest rates to be lowered.

MFI agents equipped with phones bearing microfinance and other FI applications can mean an MFI can have greater presence in more villages and outposts without agents having to return to the MFI main office as frequently. Application based microfinance transactions and branchless banking services can be performed within applications and sent back immediately in real time back to the main office via GPRS or USSD connectivity platforms. For areas with sporadic, unreliable, or piecemeal connectivity (which can often be the case in remote areas) applications can also be conducted in a dual offline and online mode, meaning the MFI agent or branchless banking agent can conduct the transactions within the mobile-based application offline, and then as soon as the agent has connectivity again they can upload the transaction and repayment information back to the head office.

New business models, partnerships, and shared vision innovation is enabling the hitherto financially excluded to leapfrog forward in critical areas such as credit, savings, bill payments, insurance, and even

health. Together with software development communities financially inclusive actors and policy advisors are fostering effective channels inclusive economic growth.

Software developers need to be mindful of the BoP's needs and the realities of its structures and institutions, e.g. Self-Help Group (SHG) model and MFIs are dominant amongst India's BoP. Such models that rely on community-based relationships and uncollateralized lending face intrinsic difficulties in scalability and cost structures, which often lead to high operating costs that results in high interest rates. That is why employing contemporary wireless technologies and developing mobile applications that integrate commercial banks and work with their core banking system (CBS) proves to be a tenable model. Creating a back-end system that either integrates with a partner bank's CBS; but even that has severe limits since it would only include small cohorts of people within easy reach of a bank branch or branch agent. Better yet is to customize one's own stand-alone system that mimics a CBS for the most viable commercial model. MFIs can scale up and be more proficient with such informatics, CBS, and back-end support with the help of technology partners to improve and scale up branchless banking whilst utilizing modern wireless technologies better to achieve greater scale at lower operating costs.

Technologies cannot replace all manpower, and admittedly microcredit methodology relies heavily on human interaction. But technologies can certainly support and improve manpower operations. New software is often supported by networks of people, or MFI agents. For next generation ICT applications and capacity to be scaled requires dialogue and shared vision between microcredit and software communities. The ambitious *Aadhaar* project is exemplar of such strategizing together. The *Aadhaar* project with the Unique Identification Authority of India (UIDAI) has already issued its first set of unique biometric identity cards to 6 million people in Mysore and Tumkur. By 2014 UIDAI will be the world's largest biometric database with over 600 million records.

Another case of use of financially inclusive biometric mobile technologies was Zero Mass Foundation, a Section 25 Company, with A Little World and Thinkways Software Technologies who together implemented FI activities with more than 20 leading banks in India creating *SBI-Tiny* and the *Kissan Credit Card Scheme* to name just two of the many initiatives. This FI project was a mobile rural banking solution as an end-to-end technology driven platform for branchless banking. This plug and play software development allowed access for banks to rollout their services and, hence increase their outreach to more rural areas and to the hitherto financially excluded.

The platforms born out of this alliance between Section 25 actors and FI focused software developers utilized new generation NFC (Near Field Communication) mobile phones with large storage capacities to provide a secure and self sufficient rural banking service. The platforms used a biometric based customer ID card for customer enrollments. A local bank agent positioned in the village acting as a bank teller is responsible for all transactions and enrollments. Existing mobile communications networks were used for all transaction uploads, downloads and application updates. Rural branchless banking platforms act as a bank to provide customers in rural areas with the following services:

- Enrolment of customers for no-frills savings accounts
- Cash withdrawal; cash deposit; payment of utility bills; payment of loan installments; disbursal of small loans etc.

*Aadhaar, SBI-Tiny* and the *Kissan Credit Card Scheme* have all, through a shared strategy and commitment to use technology for FI, brought credit; banking; insurance; and other such services reach the un-banked rural population. Such coalitions that conceptualize projects

together by employing contemporary wireless technologies for FI goals are superb cases of ICT4D (information and communication technologies for development) in action. *Aadhaar, SBI-Tiny, Kissan Credit Card Scheme* and others like it would have been otherwise unfeasible for the institutions alone to provide credit and savings directly to those people previously financially excluded.

Apart from wireless, mobile, software and hardware technological advances there have been other supporting favorable regulatory changes in Indian banking. New banking laws promoting FI teamed with the recent surge in technology adoption by India's urban cooperative banks (UCBs) could represent the first steps in India's microfinance sector embarking on its 'mobile miracle'. Urban banks and urban cooperative banks (UCBs) implementing modern technologies and their customers accessing more automated and faster electronic modes of bank has made good inroads in the inclusive growth process. With only 5.2% of India's 600,000 villages having a bricks and mortar bank branch, harnessing the power of modern wireless technologies is becoming a prime objective of public policy and a lucrative business opportunity.

The mobile phone represents a ubiquitous, low-cost and secure platform - and in a country where less than 20% of the population has an active bank account, the RBI was one of the first to recognise an opportunity to leverage the mobile platform. The RBI introduced m-banking guidelines in as early as October 2008. Technologies such as mobile software applications, custom-based banking devices, identity authorising hardware, and remote connectivity need to be tailored to FI goals.

Technology-led FI efforts to date have been driven through two distinct channels: smart cards and mobile phones. The latter has a huge penetration in India, some 700 million cell phones are registered in India[iv]. Smart cards, affordable biometrics technologies, and other ID systems such as India's mobile money ID (MMID) system work well with the far and wide reach of mobile telephony for deep and wide FI. But regulators, telecom operators, and private technology firms must strike the right balance between protecting customers and allowing innovation in branchless banking to flourish-such a balance is now delivering results in India.

Providing banking applications at an affordable cost to vast numbers of low-income households can be done through a variety of wireless technologies. NFC (near field communication) technology is being utilised to provide ATM-like facilities in rural areas with biometrics for authentication. Biometrics represent the optimum security feature to avoid any possible malpractices, along with systems that process sensitive personalized data via encryption.

By 2014 UIDAI's *Aadhaar* project will be the world's largest biometric database with over 600 million records. Smart cards (bearing biometric data) bring financial services to remote villages; *Aadhaar's* use of wireless communication show the massive inroads that have been achieved to surpass FI's rural penetration hurdle. Its success is in large measure due to the ability to uniquely identify the customer as biometrics safely does.

The Indian telecommunications industry is the world's fastest growing telecommunications industry[v]. As of September 30th 2010 India had 687.71 million mobile phone connections[vi] and each month around 7 million more new subscribed to a cell phone. With such a vast distribution of mobile telephones in India and only 5% of Indian villages having bank branches, mobile and branchless banking offer enormous and exciting prospects for Indian FI.

High transaction costs, especially for MFIs, and also in insurance and mutual fund products discourage FI. Often the best solutions to reduce each transaction cost are technical, such as mobile FI applications and databases managed by effective software.

Technology-led rural FI is helping determine completely new business models. Business models that may have a high upfront fixed cost but where variable costs are near-zero with ability to rapidly scale to millions of transactions are the most attractive. The real everyday scenario is that transactions conducted by India's masses are many in number but at small values, therefore transactions of financial services via mobile telephones appears to be optimum medium upon which to conduct them. Customer authentication by biometrics is paperless, ultra secure, they are conducted upon small handheld custom-made devices whose wireless communications means they penetrate even the most remote of villages. Aggressive expansion with technology-led operating models can serve hilly regions like Uttarakhand with villages of less than 50 people. The current technology tract demonstrates that achieving the mobile miracle of universal financial access across India in the next 10 -15 years is feasible.

Multi-faceted systems that use a single point window to perform balance checks, account transactions, utility payments etc. via a mobile phone offer a fine cost-effective solution. Creating hardware devices and software that performs many essential actions on simple 2G phones means one single agent can serve a village with a wider range of financial and insurance necessities.

Mobile-based FI is a healthy and viable business proposition. The current low level of access to the formal settlement and financial systems is a clear case of market failure. The size of the potential client base to whom can be provided basic insurance and essential financial services is enormous, less than 20% of India's 1.2 billion population have bank accounts, and less than 10% have insurance. Therefore FI's market potential is colossal.

"There is no evidence that small accounts in villages are loss-making. Banks were simply [previously] unwilling to go into rural India"[vii]. Recently banking the unbanked has proved to be a win-win opportunity. The key is to know your customer (KYC). The seminal study of *'Portfolios of the Poor: How the World's Poor Live on $2 a Day'* provides superb insight to the sophistication with which poor people think about their finances.

The rural poor are able to, and expect to, pay a sensible fee for conveniences such as a current or savings account. By understanding and segmenting the BoP division in a sustainable and profitable manner underbanked customers move out of poverty whilst the telecom operators, software developers, and banks earn healthy returns. Vijay Babu, CEO of Vortex, indentified that the main challenge for delivering credit and savings to poorer segments of society is decreasing the cost per transaction[viii].

Once microfinance and rural banking operations reach scale the fixed costs decrease and the transaction fee can be reduced. Installing an ATM is expensive, and any ATM that doesn't do 400 transactions in a day is losing money, so an ATM in every Indian village isn't a realistic picture. The most attractive FI model with the best economic returns appears to be the business correspondent (BC) model that fully utilizes mobile and wireless technologies, such as mobile portable devices with NFC technologies.

24% of the total paid workforce are in the low-income category earning an average annual income of Rs 21,000, with rural earners getting only Rs 18,000[ix]. High transaction costs discourage inclusion therefore a focus on reduced each transaction cost is paramount, often the best solutions here are technical and databases managed by effective software.

A thorny issue relates to the choice of a model for mobile banking. Across the world there are two distinct models:

1) the 'bank-led' model and
2) the 'mobile operator-led' model.

The Reserve Bank of India (RBI) has a clear preference for the bank-led model for financial inclusion to be more than just a remittance facility; with customers getting minimum services like deposit insurance, access to affordable credit and the payment system which only banks can offer. Also given the growing concerns about money laundering and financing of terrorism, a bank-led model that is regulated appears safer and more sustainable. Mobile telephony has an imperative role in the value chain; combined with secure technologies like biometrics on supporting NFC devices cybercriminality and m-criminality is almost eliminated. Collaboration and shared vision between mobile service providers and banks can result in providing a whole gamut of FI value added services.

Nevertheless the bank-led model is not perfect, bearing stark demand and supply issues. Geographical barriers to remote hinterlands, low awareness of financial services, illiteracy, and miniscule incomes hamper healthy demand; but the former can be repaired with good use of wireless communication technologies and the latter three with good awareness raising campaigns and sound BoP business models. Constraints on the supply side are branch timings, distance, and documentation hassles but all of these can be easily rectified by ICTs already developed for mobile banking and branchless banking. In view of that a new model of branchless banking appears to be the optimum path for realizing a fully inclusive Indian society and financial system. Such a model should include no-frills accounts, BC model, using NGOs and MFIs as intermediaries, and providing as many financial and insurance services as possible via branchless banking as this reflects the reality of 95% of India's 600,000 villages.

The most vital component of a robust financial system is its ability to satisfy customers' requirements. "Customers play the most important role in evolving the banking policies. All the initiatives are worked out to meet their needs". Accordingly with 70% of the Indian population is rural, with only 5% of villages having a bank branch, the vast majority of rural Indians, 1 in 9 people on Earth, remain unbanked or underbanked it makes clear business logic to promote and build branchless banking, employing new generation technologies to offer banking services to the BoP.

Lack of financial literacy means it takes people a while to understand the concept of a bank account, and financial awareness is a hurdle in furthering FI. The situation should be viewed not as an obligation to be met but an opportunity that is to be weaved into their business strategies. Pranab Mukherjee feels a pro-active approach will see the banking network expanding in an all-inclusive manner like the telecom sector did.

The BoP, as a vulnerable societal group with small savings, need insurance. India's deep penetration of low-cost mobile telephony is well suited to ushering in a comprehensive microinsurance safeguard for many. Current mobile-health programs are well-suited for India's rural population, but the penetration is still miniscule with less than 10% of the entire Indian population covered by any kind of insurance. Today's first generation mobile-health services are being experimented on price with provision at a nominal cost such as around Rs 50-70 (USD $1) to ensure maximum outreach. Accessing quality healthcare from a certified doctor for only Rs 50 is immensely appealing to the hitherto uninsured. Since nearly 700 million Indians having mobile phones, an astute business model can bring a deep penetration of affordable healthcare on people's mobile phones.

BASIX Founder, Vijay Mahajan contends that microfinance's infrastructure will remain the model for providing services to the poor and microfinance has been the only sector that consistently demands that the customer pays for services and products. Despite recent media sensationalist criticisms, microfinance has demonstrated many successes, and

some scalability, all with little regulation. In the immediate future, it is likely to face tighter regulation, and higher demands to demonstrate good governance and transparency. "The challenge is to preserve the baby of its past effectiveness, while we throw out the bathwater of its flaws," similarly other FI products need to develop practices for responsible, transparent, and fair systems to its many new clients.

Branchless banking should learn from microfinances' success, failures, and scalability. Of course caution must be executed in local institutions warehousing risk, e.g. a local NGO/MFI offering savings, credit, or insurance on its own without links to formal aggregators is compromising the safety of the customers' savings/insurance, not to mention its own existence. So looking at the lessons learned in the last generation of microfinance can help enormously in architecting a solid and effective range of financially inclusive products and services.

**Conclusion**

While contemporary advances in technology can help microfinance reach scale, efficiency, and lower its long-time hurdle of high transaction costs, technology alone cannot provide a sustainable competitive advantage. Software development and mobile application advances need to be supplemented by a well-designed user experience and the application's value proposition. Thus the author advocates for a continued alliance between the microfinance research community, everyday experiences of MFIs, the needs of micro credit clients, and the software development industry. The paper closes upon the author recommending carefully executed longitudinal or cross-sectional impact studies in order to yield conclusions much more measured than MFIs' anecdotes. In this technological advanced landscape for microfinance and FI to benefit more measured institutional studies are required to reflect and distinguish the causal effects upon microfinance, microcredit lenders, and FI achievement.

For mobile applications to appropriately benefit the BoP achieved, priorities need to be set. Imperative in that agenda for FI are active calls for:

- increasing overall consciousness of the need for FI;
- increasing wireless and broadband connectivity in the rural areas to support rural banking;
- spreading financial literacy programs;
- greater experimentation for financial inclusion through business correspondents, self-help groups, etc.
- greater collaboration between the key stakeholders in the banking system[x].

To which the author adds that:

- FI should be broad-based, not only access credit, but also opportunity to use various financial services and products through one banking access point, e.g. via one sole agent.
- FI goals should be streamlined and closely aligned to how technology companies develop their software, products and services.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Culture of Sharing and Hybrid Economy in a Digital World: The Role of Copyright

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The phenomenal growth in network and digital technologies in the past two decades has dramatically changed the way information is produced and distributed. This has opened up a floodgate of opportunities for the new generation to collaborate and share resources in an unprecedented manner. Digital technology enabled newer business models arrived on the scene, giving rise to a 'hybrid economy' which is a mix of two economies: commercial and sharing. Some such familiar models are Wikipedia, You Tube and Girl Talk. These models promoted and used amateur creativity in ways that were unimaginable a few decades ago and freed up information and resources, resulting in a thriving 'hybrid'. This change is manifesting itself in various forms such as open source software, distributed computing, open access publishing, free sampling and file-sharing, to mention a few.

But, this has led to a constant conflict between democratically chosen copyright laws and technology-driven network laws, on the premise that technology enables illegal use. Under the guise of copyright protection, laws are invoked to stifle a thriving culture of sharing and collaboration enabled by digital technologies. In the interest of powerful labels and copyright owners, we waste valuable resources to brand our young generation 'criminals', even for the legitimate use of technology.

This conflict has led to protracted legal battle between copyright holders and inventors of technology, as highlighted in cases involving Sony-Betamax, Napster and Grokster. Of late, the copyright issues surrounding the Google Books Project impart it a new dimension. In this backdrop, this paper attempts to analyze some of the underlying issues

in the interaction between digital technology and copyright laws in a hybrid economy and discuss the necessary transformation that the

copyright laws may have to undergo in the future to promote this hybrid culture.

## 1. Introduction

The way the new technology revolutionized the production, dissemination and storage of digital information including copyrighted works is proving to be a double-edged sword (Peters, 2006). On one hand, it can provide for new and exciting ways for authors to provide copies of their works in convenient, inexpensive ways to a much larger audience than in the past. On the other, these technologies make it easier for pirates and those who want to compete illicitly with the author to make and distribute infringing copies of the work.

In countries like the U.S., Australia and France the recording industry responded by engaging in protracted legal battle with illegal users of copyrighted content. The music industry has also been trying to mobilize opinion against the threat of piracy, forcing internet service providers (ISPs) to provide information on violators and pleading with the government to ensure strict implementation of copyright protection.

But, in the process of engaging the violators legally, the industry ended up, at least in some cases, suing innocent users who wanted to share content online without any commercial intent. People were sued for sharing videos that were shot within the confines of their homes. The argument in one case being so trivial that playing a copyrighted song (fairly undiscernibly) in the background of a thirty-seconds home-made video is violation of copyright and such a video should not be shared. Still more disturbing is the fact that the video was actually shot by the amused mother of an eighteen-months old boy, capturing him flexing his body to the tunes of the 'copyrighted' song (McDonald, 2007). But, this possibility to use internet as a medium to distribute and sell digital content has opened new avenues for content industry and resulted in the development of new business models. In fact, there has been a growth in digital music sales globally amidst the threat of piracy (Holton, 2009).

Some important questions arise here: Why should we ban creativity revived by digital technologies under the guise of protecting copyright? Is the relevance of copyright changing in the digital era? Where do we need to draw the line between infringement and content sharing? The paper attempts to highlight some of the issues pertinent to the above questions and the possible ways to address them.

## 2. Copyright in a Digital Economy

There are conflicting opinions on the standoff between copyright laws and the digital revolution. The last decade has seen a deep struggle between democratic governance and network governance with the adaptation of intellectual property to the internet context. Some see this struggle as a fundamental battle over the control of rulemaking for the new information society. Reidenberg (2007) says the design and enforcement of intellectual property rights are at the heart of a power struggle between democratically chosen legal rules and technologist-defined network rules. The technological attacks on intellectual property are a movement against democratically chosen rules.

While making his argument, Reidenberg maintains that the intellectual property rights have an important public function in democracy in that they mark political, economic and social boundaries. But, wisely defining these limits is our choice.

### 2.1 Copyright vs. Technology

There are significant court rulings on the use of digital technologies in the US as a result of the "copyright war" undertaken by recording companies and copyright holders against the threat of piracy. Three significant legal battles against technology on account of infringing uses are the cases involving Betamax, Napster and Grokster.

**Table-1 : Technology vs. copyright: Significant rulings**

| Case/ Defendant/ Plaintiff | Allegation | Verdict | Outcome |
|---|---|---|---|
| Sony Corporation of U S vs. Universal city studios Inc. | Sony's Betamax video recorder results in contributory copyright infringement | Favoured Sony: Betamax has substantial non-infringing uses, Time-shifting amounts to fair use | It provided a shelter for further technological innovation like PCs, CD burners, TiVo, iPod, Web browsers etc. |
| Napster, Inc. vs. A&M records Inc. | Napster's P2P file-sharing platform is liable for contributory infringement as it abets online music piracy | Favoured A&M: Napster violated at least two of the copyright holder's exclusive rights: reproduction and distribution. Space-shifting argument rejected as files are shared with many. Sampling is not fair use as complete copies are used | It paved way for prolonged legal battle over the use of file-sharing technologies. Napster forfeited USD 20 million for settlement with record companies |
| Grokster Inc. vs. MGM studios Inc. | Grokster's P2P file-sharing client abets illegal downloading and thus infringe on copyright | Favoured MGM: unauthorized copying of copyrighted material is illegal. Supplying technology with the intent to encourage infringement is violation. Non-infringing uses should be primary. | Grokster was shut down on the cloud along with StreamCast and Sharman. But, P2p file-sharing continued unabatedly |

*Source: Compiled from relevant sources*

Betamax case was a pioneering one in liberating technology from the shackles of copyright. The judgment favouring Sony Corporation was that if there are substantial non-infringing uses of a technology, say its Betamax VCR, then its developers can not be held responsible for a few infringing uses. It was a landmark verdict by the US Supreme Court as far as technological inventions are concerned. The verdict provided shelter for a series of technological innovations such as personal computers, CD burners, TiVo DVD recorders, Apple's iPod and Web browsers that followed. Indeed many of these technologies were challenged by the recording and movie industries unsuccessfully, thanks largely to Betamax. The court did not see any foul-play in the use of VCR by individuals for time-shifting of favourite TV shows, and held it as 'fair use'. The rationale: inventors of gun should not be held responsible for its illegal uses. Of course, the VCR had few commercially infringing uses.

In the second of the publicized cases, court ruled against Napster for using its P2P file-sharing services for reasons of abetting piracy. The court accused Napster of encouraging file-sharing by making complete digital copies of songs. So, it clearly violates at least two of the copyright holder's rights: reproduction and distribution. It is interesting to note that this argument would have held good even a century ago when copyright laws were

aimed at regulating printing, reprinting, publishing and vending, but not copying. It is to be recollected that the term 'copy' was incorporated into the US copyright law only in the early part of the 20th century. Thus the concern about Napster was not copying, but unauthorized reproduction and distribution of copyrighted music files in a large scale.

But the irony is that illegal file sharing on the network continued unabatedly even after Napster was shut down on the web (IFPI, 2009). All these point to the fact that peer-to-peer file sharing programs are here to stay. Any sort of ban or efforts to shut them out of the network would not bring the desired results. Can we ban the entire network for getting rid of file-sharing technology?

The Grokster case came as a sequel to the Napster case and was referred to as a reexamination of Betamax case. Napster had a central server. But, Grokster was not directly involved in file-sharing as they assigned certain user computers as the music hub for the company. After two verdicts by lower courts in favour of Grokster, the U.S. Supreme Court ruled that Grokster's P2P file-sharing client had more infringing uses than legal uses. With the Supreme Court changing direction with Grokster, the worry of electronic firms is that copyright holders will try to outlaw any new product or service that could be used to commit piracy. In short, many feared that the ruling against Grokster could stifle technology innovation.

Interestingly, Computer and Internet technology companies such as Intel and trade associations that include firms like Yahoo and Microsoft, had supported Grokster as they sensed a larger economic opportunity with P2P. The court ruling was based on the premise that a few non-infringing uses of a technology can be forgone, if it also results in substantial infringing uses. But, how long can we afford to sacrifice the technological advancement at the altar of copyright laws? We need to devise an alternative mechanism that can fully harness the opportunities offered by technological advancements.

**2.2 P2P file sharing and creativity**

The non-infringing uses of P2P file sharing services are hard to ignore. Piracy is only an undesirable byproduct of the technology. It opens up opportunities that do a world of good for a young generation of amateurs. Suppose an artist wanted to publish something on his or her website and assume it became a hit. Downloading of the work by hundreds of thousands of fans from the artists' website can force the artist into bankruptcy. But if peer-to-peer technology is used, the cost can be shifted to the recipient. Thus, this infrastructure becomes essential to a certain kind of creativity in the future.

Napster was a success not just because it was P2P, but because it provided a better database that offered more choices for music lovers. Peit and Waelbroeck (2005) claims that the music industry might, in fact, gain from free downloading, mainly because people were able to experiment with new genres and new artists through free downloads which prompted them to buy albums by new artists. The immense promotional power of Napster came to light with the success of the not so popular English rock band Radiohead's album 'Kid A'. As the album was available on Napster for free-download by millions worldwide, it captured the number one spot in Billboard 200 sales chart. Another success story was that of the little known band 'Dispatch' who could tour to cities they had never played and sell out concerts thanks to the spread of their music in Napster. Musicians like Chuck D came out publicly saying that Napster and successive internet file-sharing networks had helped get their music heard and spread the word; and might have had a positive impact on their sales in the long run. The argument is made not to hurt the sentiments of the majority who fear piracy, but to drive home the idea that these technologies on the 'cloud' has immense potential that many of us fail to take note of.

### 2.3 Copyright and free culture

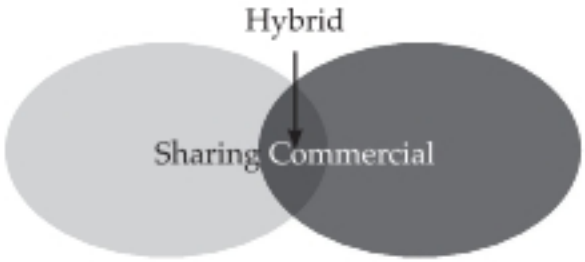
As a democratic society we have a tradition of free culture as in 'free' speech, 'free' markets, 'free' trade, 'free' enterprise, 'free' will and 'free' elections (Lessig, 2004). A free culture is meant to support and protect innovators and creators and the intellectual property rights are meant to offer this protection directly to them. It also does it indirectly by limiting the reach of those rights to guarantee that the follow-on innovators and creators remain as free as possible from the control of the past.

The opposite of free culture is a permission culture, a culture in which creators get to create only with the permission of the powerful creators from the past. But, the greatest expression of democracy and federalism is the diffusion of power through local control and thereby encouraging individual participation. We need to align our copyright laws along the lines of this free culture so that cultural expansion through creativity at its best is passed on to the coming generations.

## 3. Hybrid Economy in a Digital World

There are two basic types of economies that commonly exist, commercial and sharing. The central theme of commercial economy is money with which most of our traditional business models are identified. The sharing economy is based on relationship that can not be monetized. It is built upon exchange where non-price based relations play the roles. The hybrid is either a commercial entity that aims to leverage value from a sharing economy, or it is a sharing economy that builds a commercial entity to better support its sharing objectives (Lessig, 2008).

Figure 1 Types of economies in a digital world




*Source: Adapted from Lesig, 2008*

Here are discussed three internet based models, one each from the three economic models described above.

### 3.1 Wikipedia – The sharing one

The unique example of an internet sharing economy in the digital world is Wikipedia. Its success is a case of how open collaboration has fostered innovation on the web (Zittrain, 2008). Nobody owns Wikipedia. It forgoes about $100 million a year on advertising revenues in order to buy credibility. It permits anyone to copy Wikipedia for whatever purpose including selling copies.

Why do thousands of volunteers do it? The key is motivation: people are just doing for themselves what they want to do anyway. Other reasons could be pure intellectual stimulation, improving ones own skills and anti-rival nature (Weber, 2004) of sharing i.e. the more you share them; the more likely someone will be motivated to improve them.

### 3.2 Girl Talk - The commercial one

Gregg Gillis is an avant-guard musician who creates remixes and produces excellent performances. He runs a one man (one machine) band named Girl Talk that specializes in mash-ups and digital sampling. He uses at least a dozen elements from different songs to create a new song. Girl Talk has already released four albums composed almost entirely of unauthorized samples taken from other artists' songs with minor original materials by Gillis. It is the case of a purely economic model that draws heavily on works by other artists. Gillis contends that sampling amounts to 'fair use' under the US copyright law and the interesting thing is that nobody sued Girl Talk so far.

### 3.3 Red Hat Linux - The hybrid one

Red Hat Linux was a popular Linux based operating system which was first released in 1994. It is a for-profit entity which was born leveraging great value out of the free work of the free-software movement. Red Hat commits to supporting each version of

Red Hat for 7 years after its release. But there was no campaign by the founders of key free software to stop these emerging hybrids as the source code remained free and the work was not turned proprietary. In fact, experts suggest this as the only way to ensure that the free-software movement is supported (Lessig, 2008).

itself where both commercial and illegal p2p networks exist parallely. Around the sharing economies some companies build business. For example, people are not thinking that they are donating videos to YouTube. They are rather thinking that they are getting a free service from YouTube.

Thus, web based entities, assisted by digital

**Table 2 Examples of business models in the digital economy**

| Entity | Economic Model | Activity |
|---|---|---|
| Wikipedia | Sharing | Free encyclopedia that any one can edit |
| Girl Talk | Commercial | Sell albums containing Mashups and digital samples |
| Red Hat Linux | Hybrid | Provide support-services for Linux based OS with freely available source code |
| Amazon.com | Hybrid | Distribution of books, CDs and other consumer goods |
| Project Gutenberg | Sharing | Digital library where volunteers add works that can be freely downloaded |
| SETI @home | Sharing | Distributed grid computing project with more than five million volunteers |
| Flickr | Hybrid | Photo-sharing |
| You Tube | Hybrid | Video-sharing |
| Yahoo! Answers | Hybrid | Millions of volunteers spend time answering other people's questions. |
| Second Life | Hybrid | 3D virtual world where users can socialize, connect and create using free voice and text chat |

*Source: Compiled from relevant sources*

Red Hat succeeded in maintaining the loyalty of the community because of how it behaved. The benefit it provided the users was in terms of access (source code) which no other software company could provide. Thousands of volunteers continued to contribute as at one point more than 50% core kernel development team worked for Red Hat. Both

Red Hat and VA Linux systems gave stock options to Linus Torvalds, the man who initiated Linux development.

Work successfully licensed in a commercial economy is also available freely in a sharing economy. Proof is in the record industry

technologies, leverage economic benefits out of the sharing economy. But, here too our copyright laws have a larger role to play on two counts; one, by ensuring that free culture is promoted and two, by right holders' works are not exploited for pure commercial purposes. What happened in the case of Google Books Library Project gives enough clues of where we are heading to, currently.

### 3.4 Google Book Library Project and copyright issues

Google, a commercial company, identifies its mission as 'organize the world's information'. Through its ambitious book

project, Google has already scanned and digitized about ten million books from libraries all over the world. From the perspective of copyright law, the scanned books can be classified into three groups (Refer to Table 3).

**Table 3 Three types of books in Google Books Project**

| Type of books | % of total books scanned |
|---|---|
| In-copyright and in-print | 9 |
| In-copy right but out-of-print | 75 |
| Out-of-copyright | 16 |
| | 100 |

*Source: Lessig, 2008*

There has been growing opposition to Google Books Library Project especially with regard to 'orphan' books (out of print and in copyright books whose authors/copyright holders are unknown). In a class action lawsuit against Google by authors and publishers, the company reached an out-of-court settlement by which it agreed to pay $125 million to set up a book rights registry (BRR) to compensate the copyright holders. In return, Google can go ahead with digitizing and "sharing" the books' content. Proceeds from the sale of all books by Google including orphan books minus operating costs will be held at BRR. But, the settlement has been challenged by critics that include Amazon, Yahoo and Microsoft.

### 3.4.1 Criticism

The major criticism is against the out-of-court settlement of the case which is believed to provide Google with an exclusive blanket license to copy and sell 'orphan books'. Google, being a commercial company, can misuse this license to have a virtual monopoly over these books and charge unreasonable prices in the future (IME Blog, 2009).

Companies like Amazon, Microsoft and Yahoo fear that the settlement will virtually shut them out of the book market in the future. Interestingly, Yahoo and Microsoft had given Amicus Curiae briefs in support of P2P client in the Grokster case where they sensed an opportunity with the spread of technology on the web. But, they oppose the project because of a perceived threat to their commercial interests.

Our copyright laws are to blame when it comes to orphan works. For decades our copyright laws have remained inefficient in clearing who owns what. The question of orphan books would not have arisen had the copyright system kept proper records of copyrighted works by clearing copyrighted titles periodically.

### 3.4.2 Benefits of Google project

In the middle of the copyright issues that loom large over the future of the project lie forgotten some significant positive outcomes that are expected from the project. One, digitization enables millions of users to access information about these books online. Information is a public good and so should be freely accessible for the common good. Google says the project is fairly consistent with its mission of organizing the world's information as books are an integral part of it. Google describes the

**Table 4 Litigation over Google Books library project**

| Case | Allegation | Verdict | Likely Outcomes |
|---|---|---|---|
| Google Books Library Project(Defend ant) vs. Open book alliance (Plaintiff) | Google is likely to enjoy monopoly rights over orphan books through the settlement it reached with authors and publishers | 'Sub judice' | A verdict in favour of Google will bestow it with monopoly rights over orphan books. A judgment against it will jeopardize the entire project |

project's vision as access, diversity in choice of retailers and availability of books in any formats. Democratization of resources is the key outcome. Access to information is a major concern for millions in the developing world. Also for the young generation who would want to have all the resources at the click of a button, the project assumes a lot of significance.

**Two,** most of the books that Google has digitized are out of print and so not freely available to the vast majority of the world's population. Google thus liberates huge volumes of information locked up in our libraries and makes them available for millions all over the world. Enthusiastic readers will get an opportunity to know about out of print books that have gone into oblivion for decades. The successful transfer of knowledge from one generation to the next is our responsibility (Smith, C. E, 2008). Tremendous volumes of data stored in physical formats were lost when ancient libraries like the one in Alexandria were destroyed.

**Three,** the digital format provides immense opportunities for authors by allowing constant visibility, even after a book goes out of print in a few years from its publishing. Copyright laws are meant to ensure that authors and publishers have the incentives to create and publish so that the cultural expansion is furthered. The prevention of unauthorized copying of printed materials was the key objective of the law. Digital technologies and internet take us beyond these limits and make copying and dissemination possible at zero marginal costs. In effect it was the inefficiency of the technology that prevented copying rather than the law (Lessig, 2008). The simple reason: in the analog format mass copying and distribution of works was not economically feasible.

Authors should not be denied of recognition for the reason that they wrote and published in the "wrong format". By selling the out-of-print books, Google is actually reviving a market that does not exist and in the process the authors also get benefited immensely (Skidelsky, 2009). Should we use the law to kill an opportunity extended by technological advancement? Irrespective of whether Google goes it alone or some other entity does it, the society stands to benefit immensely. In fact, copyright is no more the villain here, but a few commercial interests that need to be addressed.

## 4. Digital Economy, Creativity And Copyright Laws

The copyright law in its present form suits only a powerful few with commercial interests. We need to change the ways in which we use the copyright laws with the digital format. A large number of authors and creators may not like the copyright law to be strictly applied to their works. A teacher loves the video tape of her lecture to be seen by as many learners as possible. A researcher wants her paper to be read by as many experts as possible. The digital format offers plenty of these opportunities. The arguments related to the cases in this article can be considered in the light of five core changes to copyright laws suggested by Lawrence Lessig (2008).

### 4.1 Deregulate amateur remix

Our ability to create and recreate the culture around us has been democratized by the digital technologies. Amateur creativity flourished before the 20th century and there is every scope for it to return in the 21st century, if left unregulated. The remixed artist can be paid only if others profit from this creativity and there are plenty of models in the

copyright law to take care of it, an example being the existence of 'collecting societies' in the US. What has happened to the Mother of eighteen-month old Holden Lenz should not happen any more.

### 4.2 Deregulate the copy

The copyright law should give up it obsession with the copy and rather focus on uses that result in economic incentives. For example,

the public distribution of a creative work could be checked under the law, but not all forms of copying, as in the digital age every single use can result in a copy. Remember, our traditional copyright laws too did not

regulate copying. They regulated printing, reprinting, publishing and vending until the clause related to 'copy' was introduced in the early part of the 20th century.

### 4.3 Simplify the copyright laws to encourage fair use

Traditional copyright laws fail to draw a clear line of demarcation between illegal use and fair use of a digital copy on most occasions. This law is used to put every individual with a computer and internet connection under constant surveillance and thus we need more clarity in the regulation. We need a system that helps our young generation to be creative by remixing from their favourite bands without infringing the copyright laws. Those uses could be considered beyond the purview of copyright. The Girl Talk is a living testimony to the existence of such models.

### 4.4 Restore efficiency of the law by clearing titles

Probably, copyright laws are the most inefficient group of regulations that humans have ever seen. There are issues to be addressed such as the length of copyright protection and the question of orphan works. One suggestion is to renew the copyright on a work after an initial period of 10-15 years so that it will be known who owns what. The problem of orphan books in the Google project settlement would not really have existed, if only the copyright law had been efficient.

### 4.5 Decriminalize the new generation

The new generation with enormous opportunities provided by the digital technologies, internet and mobile communication should be allowed to be creative in their own way. The war on peer-to-peer file sharing proved to be a failure after a decade of 'copyright war'. We have to ensure that the artists get paid for their creative work without trying to stop sharing. Non-commercial file sharing can be authorized. Levying a tax on the P2P

platform and compensating the artists whose works are shared using a history of downloads could be considered. Authorizing a simple blanket licensing procedure (not to forget, Napster was denied this) whereby users could, for a low fee, buy the right to free file-sharing is another option.

## 5. Conclusion

We are already in the midst of an explosion of digital technologies. These technologies, for sure, will enable almost anyone to capture and share content. It is by capturing and sharing content that humans have learnt to communicate from the ancient past. But the fidelity and power of capturing and sharing through digital technology is different. A text version of this creativity is Wikipedia and much of YouTube is a video version. A new generation, creative and exuberant, is emerging in the horizon in a way that was beyond our imagination a few decades ago.

It is the extraordinary scope of this creativity that we try to curb when we stifle the use of digital technologies that help in promoting a culture of remix and sharing. Are we here to spell a doom on the new generation of enthusiasts by stifling them on the pretext of protecting a powerful few? The choice is obvious: walk with this young generation of enthusiasts to the glory of a new world order which is all the more creative and open rather than wasting our valuable resources on a futile war in the name of copyright.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# IBM- Innovating for the Future - A Case Study of Energy & Utilities Project

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Sustainability is the elusive goal for many organizations today as it concerns two most important aspects- growing economies and protecting the planet. We recognize that very few nations will be truly energy independent. Also all the energy supply options- coal, nuclear, natural gas, petroleum, have severe constraints. Thus it becomes essential to promote sustainable supply of energy and its effective utilization for the greatest benefit of the people. And as a step towards this endeavor IBM, through hardware, software and service offerings, provides a rich portfolio of solutions to help utilities companies adapt innovative business processes for power generation optimization, transmission and distribution operations, customer operation transformation and corporate support services. Utility transformation call for the companies to create new approaches; integrate existing applications and optimize business processes to drive pro-active network management, increased customer satisfaction, and improved business productivity. This case study explores all the innovative ways IBM opts to support energy and utilities' efficient and sustainable use, with main focus on customers' involvement in the business models. The current study can be further explored in near future with Indian perspective.

Utilities companies are those which provide the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal. Utility transformation refers to bringing in the change in routienized functioning and utilization of various utilities by way of innovatively deploying new approaches and technologies, strategically integrating them with operations, finance , customers and the markets.

## Introduction

The future of energy is uncertain. Globally, the energy resource availability is depleting

at faster rate than expected. Therefore, in near future a crisis situation is bound to arise. Apart from the shortages of energy resources, primarily coal, nuclear, natural gas, petroleum; the high rise in energy prices, increased environmental concerns and greater customer integration has set a stage for utility companies to offer better innovative services.

Sustainability is surviving the downturn. It has become increasingly important for the business strategy and management too. Thus companies need to develop new capabilities and characteristics in order to operate in diverse regions, environment: induce a culture internally and externally that rewards and encourages new long-term thinking, enhance the capabilities in areas of activity management, process design, financial modeling and developing external and internal stakeholders.

Thus, energy and utility companies need to focus on:

- Increased communication by using greater variety of media.
- Improvised understanding and control of energy use.
- Accurate and timely information on outage and service restoration

All this is possible only by adjusting market changes and developing the consumers for utilities. Utilities find their best innovation in their youngest and newest customers. The utility providers by ways of better understanding of their customers have come up with those capabilities that unlock the new source of revenue generation and cost savings, thus strengthen the business. Stated underneath are the areas where the utility providers have addressed the changes and developed the industry:

**Operations Level:**

1) Change management- Utilities company face a unique set of challenges today such as ageing infrastructure and work force; pressure of going green; mitigating rising costs; regulatory pressures; cultural differences among the stake holders and stock holders. Change management, which is the process of driving corporate strategy by addressing and managing the barriers to change across the organization, is tailored to fill in the gaps. A change ready organization is increasingly flexible and exhibits the features of and aligned organization with committed leaders, well developed and defined business processes with excellent communication across levels. Good change management minimizes change's adversities on daily productivity and reaches out and sustains goals. (Solution provider-IBM Initiative)

2) Smart Grid Development- Over a period of time the utility industries have been distributing power based on the classical model of distribution system. The future increased demand is predictable and it requires deployment of differently designed operating assets. Thus, Smart Grid- a system more reliable, safe and profitable in economic downturns has been developed that offers – transparency, conditionality and kinematics. It offers transparency on near real-time usage, operational conditions and pricing to the customers. Conditionality offers utilities to optimize asset utilization in over – and under- use situations. Such as mini premise smart grid and motion detectors in buildings. Kinematics offers change in position in near future. It looks up to the utilization of energy in charging the hybrid and electric automobiles which will be very common in near future. .( Solution provider-IBM & InStep Software Initiative)

3) Strategic System Consolidation- Convergence of IT and Operational infrastructure is challenging cultural change that confers benefits for utilities It offers asset management; improvised risk and compliance management; judicious system consolidation, visibility and control for improvised power generation and delivery

system. ( Solution provider-IBM Initiative)

4) Transformation via AMI - Advanced Metering Infrastructure (AMI) offers the broader strategic, environmental and regulatory benefits thus redefining the utility-customer relationship. It includes, Smart Meters, Smart Systems, Smart Processes and Smart Grid. These provide services based on Time-of-use, realtime meter reads, two-way messaging, effective fault identification and rapid restoration. .( Solution provider-IBM & Trilliant Initiative)

5) Smart Metering- A synonymous of AMI, processes and distributes metered data effectively across the utility up to the customer base, thus benefiting financially, operationally, environmentally and in service. ( Solution provider- Oracle, Click Software)

**Strategy and Finance:**

1) Integration of Policies and Incentives with technology- Building a smart infrastructure in interest of public requires participation of affected stakeholders in vision, policies and framework.

2) Collaboration of old and new technologies- Collaboration is critical for making effective future of the nation. Reliable and effective network to ensure the delivery of flawless essential services requirement in order to leverage the existing assets and minimize capital and operational costs. (Solution Providers- IBM, Alcatel-Lucent, Areva T&D and PowerSense)

**Technology level:**

1) Next-gen technology based IUN- Intelligent Utility Network (IUN) offers actionable business insight by transforming raw data. The tremendous amount of data generated by additional sensing from Smart grids provide the utility business managers to generate information and knowledge and thus a new approach of analytics. (Solution provider-BM Initiative)

2) Technology demonstration Center- that supports and appeals to customer at visual level.( Solution provider-BM Initiative)

3) Virtual generator- represents the form of green energy where by using forms of dynamic voltage and capacitance that are controlled through sensors, analytics, simulation, geospatial information, business process logic and other IT techniques provides constant power supply. (Solution provider-BM Initiative)

4) Use of non-conventional energy resource like, wind, nuclear power.

**Customer& Market level:**

1) Customers taking over energy usage control:- The new technology, independence and empowerment has led the customers to take on broader and more active role across industries. They are more vocal and decisive about what they will/will not buy. They are thus becoming designers, producers, marketers and distributors. IBM took an initiative to study the consumer choice based on other service industry's customer analysis. The following table explains this:

| | Television Consumer | **Electricity Consumer** |
|---|---|---|
| **Passive** | • Passive receipt of content<br>• Limited source of content generation<br>• Media company exclusively controls content<br>• Provider –customer relation ship is one-to-many | • Passive receipt of power<br>• Limited source of power generation<br>• Utility company exclusively controls power<br>• Provider –customer relationship is one-to-many |

| | | |
|---|---|---|
| **Active** | • Consumer interest drives new, more content choices<br>• More interest in & leverage of information on quality content(TRP)<br>• No control on content but strong influence on choices<br>• Introduction of Time-Shifting technologies offer more selection | • Consumer interest drives new,more power supply choices<br>• More interest in & leverage of information on quality content (Quality Standard)<br>• No control on generation but strong influence on choices<br>• Introduction of residential time use and green power option offer |

**Source: IBM Institute of Business Value, 2006 Analysis*

Thus, this study showed that although the two industries are different but there is strong possibility that consumer involvement in the energy business could be on similar lines. They have become more accustomed to choice, selectivity, multiple pricing in all areas of services and products. There is personalization in even the old institutions such as education, food & medicines. They will thus be more benefited in their adaptation with energy industry at participatory level. They can manage energy usage more actively. With increased competition, value and environmental awareness, they can control their energy purchases as well. They can have real-time information access that can impact conservation actions. Those utility providers which share responsibility with their residential and commercial customers in meeting their specific energy goals, enjoys competitive advantage.

2) Leverage customer –experience by management techniques- In past , the utility companies have had limited customer interactions due to various external ( governmental) and internal factors. But with changes in consumer behavior, higher expectations in services have arisen. In future the participatory generation would require sophisticated home-grid relationship. Customer demand drives technology change and vice-versa. Thus with increased interactions between customers and utility companies, customer experience capabilities can be developed in parallel with energy information management. Thus customer will experience highly detailed , timely, accurate information, bidirectional communication and interaction with utility, rapid analysis in friendly manner, keeping a check on the consumption pattern, cost and environment friendliness. The customer goal achievement approach will produce a positive relationship between the customer and utility, drive value and become truly consumer focused.

3) Defining customer requirements and fill the gaps- The primary challenge for utility companies is to define customer requirements with a view of 10 years into future. This requires development of Customer Value Transformation Road Map. This approach includes, study of customer requirements (such as tech savvy, low income, small or large business), billing system, Service, information and control etc.); Gap assessment, Business case support and Transformation road map. The road map will establish the timing and sequence of all initiatives to close the gaps.

4) Use Business intelligence Solutions for real-time insight- Business intelligence need to handle data in a way that mirrors the way

people work. Utilities need to collect wide data from disparate sources and present in the way that offers right to information to all the people concerned in ready to use manner and actionable business intelligence. Business intelligence improves strategic decision making and operational efficiency. BI solutions seamlessly integrate infrastructure without much changes, connects multiple data, analyse and report capabilities flexibly, present information in customized scorecards and wikis for better decision making.

5) Enhanced and efficient portfolio of Services- The study of consumer behavior has showed various services as areas of concern for the customer such as- Billing, Online banking, Distribution, Call center, Walk –Ins etc. thus emphasis on customer interaction optimization should be there.

6) Cutting- edge communication- Communication not only with respect to collections, marketing campaigns , outage – restorations may offer streamlines customer contact but also result in immediate ROI as this technology facilitates quicker, less expensive collection and reliability.

Thus it is realized that the service industry such as Utility Industry in energy sector can also reap more benefits if become more customer oriented and integrate well all the existing infrastructure with new innovations in all the spheres such as market, strategy, finance and operations. Innovations may not be only in tangible aspects but the innovations may be in the approaches as well.

**Future Scope of the Study with special reference to India**

India, one of the fastest developing economies, offers ample avenue for innovations in many areas in-particular, infrastructure. Energy sector is going to be long-lasting and most important sector. There is lot of scope for improvement as the size (population-wise) of nation, demand is high. Besides, the government is also not able to manage all the production and distribution with changing times. The delivery system is inefficient, laced with corruption as a result there are high costs which are borne by the tax paying customers. Thus, there is a need of change management. This involves:

1. Public-Private Partnership- for better technical, innovative, commercial and managerial skills. This improves on overall government performance. It offers more scope for local and national entrepreneurial ventures, thus resulting in economic development.

2. Better Utilizations of energy resources- As the availability of conventional source of energy is fast depleting, there is an enhanced need for opting non-conventional sources of energy such as solar energy.

3. Integrating Customer- The customer centric (here citizen) approach will make people more responsible towards conservation and consumption. The transparent system will lead to enlightened and dutiful citizen.

4. Policy Transformations- Government must reform policies and processes to offer high standard of services with value for money by supporting socially and financially justifiable projects.

**Conclusion**

This paper highlights that innovations are exceedingly being incorporated into the utility sector of service industry. All the spheres are being given major consideration as there are drastic changes aligned in near future in climate, technology and customer markets. The grid developed by IBM clearly shows that major innovations and changes in are customer driven. Thus for sustained growth in future these companies are seeking operational transformation with increased customer involvement. New innovations in interaction with customer, information

sharing, communication, technologies such as smart grid, AMI etc have helped to improve the quality of service with controlled costs thus sustaining growth. It is realized that customers should be plugged in at every stage of decision making if sustenance is sought.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Indian Cities, Global Economy and Society: Choice and Survival[1]

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The rise of a city was a product of what Alvin Toffler calls "Second Wave"[2]. The Industrial Revolution swept England and Europe in the late eighteenth and the early nineteenth century. This led to the growth of factories and decline of agriculture. A consequence of this was the migration of people from the countryside to the areas where these factories wee located. Better wages seemed the natural attraction. Workers settled around the factory site leading to the formation of townships. These townships eventually led to the formation of cities and later mega cities. These cities brought with them the problems of pollution, lack of shelter, congestion, crime etc. In the developing countries, fed on the prescription of rapid industrialization for rapid growth, there were massive urbanization efforts without having the necessary infrastructure in place to meet the growing migrant population. Further the geographical boundaries of theses expanded outwards to accommodate the peripheral regions. Further the natural growth in the urban population too contributed to its growth.

Meanwhile, the revolution in information technology and communication was changing the way we perceive things happening across the globe. Instant images capturing the happenings from remotest corners in the world are flashed on television screen across the globe in seconds. Modern Telecommunications has seen to it that anytime, anywhere, anyone can be contacted. Capital, if available in convertible currencies, can be moved across continents in a matter of minutes. People are no longer ignorant of the things happenings around them. No one can afford to still think in terms of one country alone if he wants a share of the huge cake of global markets. Cities thus could be hardly be isolated from these happenings

This forms the backdrop for our study. The first section of our study will focus on the trends in urbanization. The second section focuses on the structure of the cities and their interlinkages with the emerging trends in globalization. The third and final section focuses on the urban reforms and the future directions.

**Trends in Urbanization**

At the beginning of the twentieth century, 150 million people lived in urban settlements, representing less than ten per cent of the world's population. By the end of the century, the world's urban population had increased twenty fold to nearly 3,000 million, i.e. almost half the world's population. Asia accounted for the lion's share (47.5 per cent) of the world's population in 'million' cities and had 143 of such 'million' cities. Asia also has 13 of the world's 23 mega-cities of at least 8 million inhabitants[3]. The data suggests the diffusion of urban settlements far beyond what once was the domain of European diffusion. The city from an eighteenth century convenience had come a long way in being a monolith of the twentieth and the first decade of the twenty first century.

Three major trends dominate the discussion on urban landscape. First, contrary to most predictions, there is a slow down in the population growth rates for many cities not only in developed world but also in the developing countries. The largest cities in these countries grew far more slowly in the 1980s than during the previous two decades. Second, the mega cities harbored less than five per cent of the world's population in 1990. This indicates the large cities do not dominate the global demographic landscape to the extent predicted. Forecasts that cities such as Calcutta and Mexico City would grow to gigantic conglomerations of 30 to 40 million inhabitants now seem a distant reality[4].

Third, the belief that larger cities may mean mismanagement and misgovernance leading to chaos and instability does not seem to be the case. The links between urban change and economic, social, political and cultural change are not yet clear. Some large and rapidly growing cities have been well-managed and serviced, while some of the worst physical conditions have beset small towns.

Yet, the progressive urbanization of the globe is certain. It estimated that nearly half the world's population will be in urban areas within the next decade or two (Refer Exhibits I and II). As urbanization gathers momentum, it is unlikely that cities will remain isolated from the effects of globalization[5]. The world cities which are major players in national economies will become more visible and in all probability will drive the forces of globalization in their respective countries.

**Exhibit I**

**Urban Population as a percentage of total population**

| Countries | Years | |
|---|---|---|
| | 1980 | 2002 |
| China | 20 | 38 |
| India | 23 | 28 |
| Srilanka | 22 | 23 |
| Nepal | 07 | 13 |
| Pakistan | 28 | 34 |
| Bangladesh | 15 | 26 |

*Source: World Development Indicators 2004.*

These interdependent and interlocking relationships have led to the creation of sub regional economic entities. Called growth triangles or corridors, some neighboring territories involving several countries have sought creative economic co-operative development. Examples include Southern China, with the participation of Hong Kong, Guandong, Fujian and Taiwan, and SIJORI, including Singapore, Johor (Malaysia) and Riau Island (Indonesia).

While globalization has brought new opportunities and wealth to some cities, it

has marginalized others. Cities often seem to generate chaos instead of opportunities. Discussion on cities tends to lead on environmental degradation, poverty, dirt, traffic congestion and proliferation of slums rather than on the economic wealth the city generates. Urban unemployment continues to remain high. Support in terms of infrastructure and delivery of public services has been unable to keep up pace with the rate of urbanization. This has created serious problems with rapid deteriorating situation in the cities as far as quality of life is concerned. Though 90% of the urban population in India has access to safe drinking water only 63% have access to potable water within their premises[6]. Less than two thirds of population has access to basic sanitation facilities. Only about 60% of the solid waste generated in India is being collected everyday[7]. Environmental problems, especially air, water and noise pollution have engulfed many cities of the developing world. Large proportions (30 to 40 per cent) of urban populations, particularly in metropolitan cities, are below the poverty line leading to proliferation of slums[8]. This in turn leads to educational deprivation and deteriorating health of these sections of urban inhabitants. This leads to increase in social conflicts, homelessness, crime, disease affecting many cities. These result in growing competition for jobs due to freer movement of people. By and large the development in urban areas has been haphazard and unplanned.

City governments do not have adequate expertise in dealing with rapid deteriorating situation arising from the lack of public services. Neither do they have authority to determine and collect adequate levels of service charges. The legal and administrative systems concerning urban planning, governance, and management seem out of place. The logical extension of this process was to empower the local governments with greater powers and responsibilities. However central and state legislations continue to act as a hindrance rather than as a facilitator of urban development.

It is ironical to note that while cities symbolize economic growth and prosperity, the bodies managing the cities are starved of funds. It is thus interesting to see how Indian cities are able to tackle globalization that is pervading through the system. This is the focus of our study.

**Demographic Structure**

The 2001 Census reports India's urban population as 285.35 million (27.8 per cent of the total population)[9]. Of more than 5000 urban agglomerations and other towns identified in the 2001 Census, 35 urban agglomerations were metropolitan cities having a population of one million and above. The rate of urban poulation growth in the country continues to be high compared to

**Exhibit II: Percentage of population residing in Urban areas**

| World/Region | 1980 | | 1985 | | 1990 | | 2000 | | 2010 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | in billion | % | in billion | % | in billion | % | in billion | % | in billion |
| World | 39.4 | 1.752 | 41.2 | 1.997 | 43.1 | 2.282 | 47.6 | 2.962 | 52.8 | 3.779 |
| More developed Region | 70.2 | .797 | 71.5 | .838 | 72.7 | .880 | 75.8 | 968 | 79.1 | 1.060 |
| Less Developed Region | 28.8 | .954 | 31.5 | 1.159 | 34.3 | 1.401 | 40.3 | 1.993 | 46.8 | 2.717 |
| Africa | 27.3 | .130 | 29.6 | .164 | 32.0 | .205 | 37.6 | .322 | 44.2 | .493 |
| Asia | 26.2 | .678 | 28.6 | .813 | 31.2 | .974 | 37.1 | 1.369 | 43.8 | 1.845 |
| Latin America | 65.0 | .233 | 68.4 | .273 | 71.5 | .315 | 76.6 | .400 | 80.4 | .482 |

*Source: World Urbanization Prospects- The 1992 Revision ,United Nations. New Work, 1993*

developed countries, and the large cities in the country are becoming larger due to accretion of population to these cities. While the total population growth rate in the country was expected to decline significantly in the coming decades, urban population would continue to grow at about 3 per cent per year. Estimates indicate that the urban population would reach about 550 million by 2021 which would take the level of urbanization to more than 40% (Refer Exhibit III). Presently, there are three mega-cities, with population in excess of ten million, in the country, but by the year 2021, will have six mega-cities (Calcutta, Mumbai, Delhi, Chennai, Bangalore and Hyderabad). This would make India have the greatest concentration of mega-cities in the Asian region. The country's current urban population is almost equal to the combined urban population of United States, UK and France.

The lack of employment opportunities in rural areas has seen a migration of rural families towards the cities. Besides, the cities themselves have witnessed massive spurt in their native population. Added to these is the continuous incorporation of surrounding suburbs or the peri-urban areas as they are called into city corporation area (Refer Exhibit IV for components of urban growth).

The trend can be captured as essentially the city being a magnet of attraction, a symbol of dreams, wealth and aspirations see a rapid growth. Urbanization in India seemed to have followed the patterns observed in the West. The growth of urban population has dipped from 36% in 1981-91 to around 31% during 1991-2001[10]. The number of million plus cities has risen to 35 from 22 during the decade 1991-2001. However their growth rate has seen a fall. Another interesting feature of India's urban economic structure is the absence of domination by one single city in relation to other cities. The economic structure is fairly distributed spatially. However cities have acquired specialties in a particular field or so. Cities by and large have retained their domination in their region or state. Besides, growth in urban population has also been witnessed among the transportation corridors and is not restricted to the jurisdiction of the cities (Refer Exhibit V).

**Exhibit III**
**Indicators of urbanization in India**

| Census Year | No. of UA/ Towns | Urban Population in Million | % Urban Population | Number of Towns / UA per 10 lakh Rural Population | Decennial Growth Rate of Population (%) |
|---|---|---|---|---|---|
| 1901 | 1827 | 25.85 | 10.84 | 8.6 | – |
| 1911 | 1815 | 25.94 | 10.29 | 8.0 | 0.35 |
| 1921 | 1949 | 28.08 | 11.18 | 8.7 | 8.27 |
| 1931 | 2072 | 33.45 | 11.19 | 8.14 | 19.12 |
| 1941 | 2250 | 44.15 | 13.86 | 8.2 | 31.97 |
| 1951 | 2843 | 62.44 | 17.29 | 9.5 | 41.42 |
| 1961 | 2365 | 78.93 | 17.97 | 6.6 | 26.41 |
| 1971 | 2590 | 109.11 | 19.91 | 5.9 | 38.23 |
| 1981 | 3387 | 159.46 | 23.34 | 6.4 | 46.14 |
| 1991 | 3768 | 217.17 | 25.72 | 6.0 | 36.10 |
| 2000* | – | 286.20 | 28.54 | – | 31.50 |

*Source: R.S. Bhagat, "urbanization in India: demographic reappraisal", Department of Geography, Maharishi Dayanand University, Rohtak*

**Exhibit IV**
**India: Components of Urban Growth 1971-1991**

| Per cent Share | 1971-81 | 1981-91 |
|---|---|---|
| Natural Increase | 41.7 (45.1) | 59.9 (58.7) |
| Net Migration + Changes in Municipal Boundaries | 39.4 (36.1) | 22.6 (23.7) |
| Reclassification | 18.8 (18.8) | 17.4 (17.5) |

*Source: Census of India 2001*

**Exhibit V**
**Growth in Urban Corridors**

| States | Corridor | 1991 | | 2021(projected) | |
|---|---|---|---|---|---|
| | | population | %age to total urban population | population | %age to total urban population |
| Maharastra | Mumbai-Thane 9 (to Ahmedabad) | 1,33,28,698 | 43.64 | 2,42,29,682 | 42.39 |
| | Mumbai, Nasik, Dhule, Amravathi, Nagpur (excluding Mumbai) | 62,21,778 | 20.05 | 1,19,47,723 | 20.90 |
| | Mumbai, Pune (Excluding Mumbai) | 26,08,817 | 8.54 | 62,48,869 | 10.93 |
| | Costal Corridor (Mumbai, Raigud, Ratnagiri) | 1,12,095 | 0.37 | 1,49,581 | 0.26 |
| **Total** | | **22,171,388** | **72.6** | **42,575,855** | **74.48** |
| Karnataka | Bangalore-Belgaum | 66,88,598 | 48.08 | 1,56,55,905 | 57.58 |
| | Mysore, Bangalore, Kolar (Excluding Bangalore) | 15,16,417 | 10.90 | 34,01,154 | 12.51 |
| | Costal Corridor (Mangalore,Udupi, Karwar) | 8,15,740 | 5.86 | 16,09,415 | 5.92 |
| **Total** | | **90,20,755** | **64.84** | **20,666,474** | **76.01** |
| Tamil Nadu | Chennai, Krishnagiri, Hosur | 65,35,548 | 36.35 | 1,33,36,374 | 43.38 |
| | Costal Corridor-I (Chennai, Cuddalore, Tanjavur, Karaikudi (excluding Chennai) | 15,49,789 | 8.12 | 22,09,819 | 7.19 |
| | Costal Corridor-II (Tutticorn, Nagarcoil) | 7,00,316 | 3.67 | 10,40,823 | 3.39 |
| **Total** | | **91,85,653** | **48.14** | **16,587,016** | **53.96** |

*Source: Census of India 1991*

Increasing urbanization necessitates the provision of basic amenities to its citizens. This is placing a huge burden on the city managers leading to gaps in provision of infrastructure services. Though poverty rate has declined over the last 50 years and quality of urban life improved in terms of availability of water and sanitation, power and electricity, transportation, telecommunication and like, concerns still exist. It is obvious to state that improving the quality of life of urban inhabitants as well as to facilitate economic growth requires huge investment of funds.

**Economic Structure of the City**

Traditionally cities have been associated with manufacturing activities. However the modern economic structure of the cities is no longer confined to manufacturing activities. The cities on the other hand are becoming knowledge bases. Bangalore's transition from public sector dominated city (PSUs like BHEL, HAL, BEL, HMT, ITI had their base there) to the IT and Biotech capital of the country (It is the home to Infosys, Wipro, Biocon among other IT giants) is an instance of such activity. Mumbai had witnessed the transformation earlier from textile city to the financial services hub of the country. Movement of people both within the borders and cross border is attributed to the intention to find work in a wide range of sectors connected to the global economy.

Support exists in the form of statistics regarding the employment by the manufacturing sector. Private sector employment in urban areas is growing at less than 2% a year. The employment in the primary sector has declined by nearly 25% over the last ten years. The highest increase in employment has been in services sector where the employment generation is nearly 75% during the late 1990s. An instance could be given of the retail sector where the growth rate is now nearly 180%. Communications aided largely by telecom boom grew by 13% during the 1990s. Nearly one in six persons in Mumbai work in financial services and real estate sector. Construction industry is another sector that witnessed sharp increase in employment in the urban sector (Exhibit VI).

**Exhibit VI**
**Structure of Urban Employment**

| Sector | % share in urban employment | | % change 1990-98 |
|---|---|---|---|
| | 1990 | 1998 | |
| Mining and quarrying | 0.56 | 0.40 | 4.8 |
| Manufacturing | 30.16 | 25.43 | 22.5 |
| Elecgtricity, Gas & Water | 0.82 | 0.74 | 30.8 |
| Construction | 0.61 | 0.82 | 97.9 |
| Wholesale Trade | 3.06 | 3.18 | 51.4 |
| Retail Trade | 12.81 | 24.90 | 182.4 |
| Restaurant and Hotels | 4.23 | 4.28 | 47.1 |
| Transport | 2.51 | 2.95 | 70.5 |
| Storage & Warehousing | 1.05 | 0.47 | 64.8 |
| Communications | 1.36 | 1.55 | 65.3 |
| Financial, Insurance & Real Estate | 6.30 | 5.51 | 27.3 |
| Community Social and Personal Services | 36.38 | 29.75 | 18.8 |
| Others | 0.17 | 0.01 | 56.8 |
| **Total** | **100.00** | **100.00** | **45.29** |

*Source: Statistics, Ministry of Labour, Government of India*

Moreover, urban per capita is expected to increase from Rs. 26,000/- currently to Rs. 36,000 in another five years[11]. There has been unevenness in the labor markets. Very little has been documented on the impact of globalization on the rural hinterlands that often serve major link in the supply chain of the urban economy. The urban rural linkages often act two way, supply raw materials and food to the city in return for employment and factor payments for the villages.

Cities by their very nature become sites of international transactions thus occupying a strategic point in the economic and social structure of the country. The ability of these cities to mop up capital, access to raw materials, proximity to sources of information and government policy making determine their success or failure. The case with Indian cities is no different. With the annual Foreign Direct Investment (FDI) ranging around $2-2.25 billion[12] over the last decade, nearly 60% of it has been cornered by only six metropolitan cities (Refer Exhibit VII). This spatial unevenness while attracting criticism from scholars places challenges before these cities.

**Exhibit VII**
**Share of Seven Metropolitan Cities in FDI**
**(Jan 1994-March 2002)**

| City | Amount | % in Total FDI |
|---|---|---|
| Delhi | 324,360 | 12.22 |
| Mumbai | 256,514 | 9.67 |
| Bangalore | 163,750 | 6.17 |
| Chennai | 118,580 | 4.47 |
| Hyderabad | 37,961 | 1.43 |
| Kolkata | 30,739 | 1.16 |
| Ahmedabad | 21,679 | 0.82 |

*Source: Ministry of Commerce, Government of India*

**Social Structure**

The urban landscape in India presents a picture of complexities. Globalization is characterized by rapid urban population growth. There is a boom not only in the metropolitan cities but also in the smaller towns. The transition from a national to transnational economy creates infrastructure problems. Asymmetries exist in access to infrastructure, assets and resources not only between cities but also within the city. This is best demonstrated through various aspects of urban poverty like access to drinking water, shelter, electricity etc.Pollution and degradation of resources further underscores the impact the globalization is likely to have on the urban society in country like India where more than 200 cities have populations exceeding 100,000. This results in an intense pressure on civic amenities and cited as an important factor in the growth of slums in urban India. The World Bank statistics report that more than half of Mumbai's population now lives in its slums. While almost 54% of the metro's inhabitants live in shanties, another 25-30% lives in chawls and on footpaths, with just 10-15% living in apartment buildings, bungalows or high-rises[13]. Further inequalities between the English educated middle and upper class that benefit from the knowledge and service economy in contrast to the vernacular educated lower classes besides the agrarian landless and small farmers, sc, and unskilled people are getting accentuated. This also creates an impact on the languages as being witnessed in Karnataka and Tamil Nadu. While many of these inequalities are not so visible, they certainly have highly effective and long lasting impact on the social structure in India.

**Geographic Structure**

Organization and allocation of space in cities face constraints in the form of the existing built environment. The development and the flexibility with which the cities can deal with the changes in the built environment determine its success or failure in the competitive environment of the global economy. Dismantling of barriers to international movement of capital, strengthened through the liberalization of financial markets, greater factor movement in the labour markets and

developments in information technology have made investment in real estate development property a viable option.

Cities in India are in the midst of restructuring space, in terms of both use and form. Residential areas in the heart of the city are now making way for commercial spaces. This phenomenon is visible across the length and breadth of India. Shopping malls and offices of the big multinational corporations are becoming the order of the day. In Bangalore, nearly 92,000 sq. metres of work space and 200,000 sq. metres of living space have been added between 1994-2001. To overcome the pressures of the city; planners are developing satellite townships surrounding the cities. The development of Navi Mumbai was the first such instance. Development of Noida and Gurgaon near Delhi is another example. Bangalore too has followed suit with seven townships being established during the last decade and another seven more planned in the coming decade. This mushrooming of the real estate market caused the land prices of commercial space in Mumbai's heartland to touch a high of Rs.32,500/ sq. feet. Between 1992 and 1995, land prices of commercial space registered an increase of 360 per cent, and over 100 per cent in residential space. Absence of appropriate reform in policies that govern land markets in India reflect the concerns that affect the scarcity of value of the land market in the economy. The high price of the land is driving maximum possible construction in the smallest possible land often violating the building norms. Occupation of inbuilt land with low intensity development has resulted cities spilling over their boundaries. This has resulted in a sort of a metropolitan sprawl.

**Political structure**

In India, the local governments derive their authority from higher legislative bodies. They do not have any legislative power. But they do command significant decision making power. The 74th Amendment passed in 1992, gave the local bodies statutory status eliminating the threat of supercession, that hung over their heads for decades. They now were to become the governments of the local population. The State governments were required to comply with this Act by passing conformity legislation before the deadline of January 1, 1994 which they did. The new Act provided for regularity in elections besides provision for reservations for weaker sections of the society and the state governments were required to comply with this Act. Within a decade of passing of this Amendment, nearly 75,000 representatives have been elected. While the Legislatures of the States are given exclusive power, under Article 246 (3), to legislative items in the State List of the Seventh Schedule and power to legislate on items, with some restrictions, in the Concurrent List of the said schedule, no such provision exists for the local bodies. Legislation in the matter of local self-government falls in the exclusive jurisdiction of the unit States though Article 40 enjoins all levels of the Government to do their bit in organizing urban local bodies and empowering them with such powers so as to enable them to function as units of self-government. The organizational structure for the city government too, for long, has relied more on appointed officials than persons elected by the people exercising the powers.

Many urban local bodies do not have the institutional capability to develop commercially viable infrastructure projects, mobilise resources for the projects and implement them. Involvement of the people in developmental activities has been minimal. The financial health of most urban local bodies is extremely weak forcing most of the urban bodies o depend on the central and the state government for grants (See Exhibit VIII for sources of funds for Urban local bodies). Authority to set rates and user charges to recover costs is absent. The administration and collection of taxes, fees and user charges is highly inefficient. Legal frameworks relating to urban infrastructure development and land market act as hindrances than facilitators for urban reforms. Reforms when carried often

are half hearted and lack teeth. Many ULBs do not have the legal support to encourage public private partnerships. However to say that city managers are oblivious to reforms would not be correct.

**Exhibit VIII**
**Major Sources of Income for Municipal Bodies in India**

| Sources | Major Components |
|---|---|
| **Internal/own Sources** | |
| Tax Revenue | Property taxes; tax on vehicles, trade and professions; theater tax/show tax; tax on advertisements etc. |
| Non-Tax Revenue | Rents from municipal assets; income from municipal undertakings; user charges; fee and fines; etc. |
| **External Sources** | |
| Grants-in-aid | Central and State government grants for general or specific purposes example: JNURM; grants in lieu of taxes |
| Shared Taxes | Entertainment tax; motor vehicle tax; land revenue; stamp duties; profession tax; etc. |

*Sources: Government of India reports*

**Cities and Reforms**

Many local bodies in fact have carried out reforms to keep pace with changing times. There is an increasing trend to commercialize certain activities of the corporation. Debate is on the applicability of user charges on various services. The focus at least now seems to be on recovering the costs incurred on providing the service if not making a surplus. But this could put the role of corporation as provider of services with its functioning as a city government. There is also the aspect of the kind of pricing to be employed. Concerns also exist about the exploitation of natural resources. Creation of public private partnerships in provision of basic urban services is expected to facilitate the inflow of private finance for projects requiring huge capital investments, but more importantly bring in competition between the service providers. This is expected to improve the efficiency, accessibility and quality of services delivered. But there are concerns about the possibility of exclusion of certain underprivileged classes getting excluded from the process.

A few examples below would illustrate it[14].

1. Improvements in property tax assessment and administration (examples – Ahmedabad, Bangalore, Patna, Mirzapur, Hyderabad)
2. Urban infrastructure projects development with private sector participation (examples -Tirupur, Alandur, Ahmedabad, Vijayawada, Bangalore, Hyderabad)
3. Rationalisation of user-charges to recover at least the cost of operations and management of services (examples -Vishakhapatnam, Ahmedabad, Bangalore)
4. Maintenance of public utilities handed over to private parties ( examples: Bangalore, Mumbai, Hubli-Dharwad)
5. Changes in municipal accounting and financial reporting systems from single-entry cash based to double-entry accrual based systems (examples - All urban local bodies in the state of Tamil Nadu, Hyderabad, some cities in the state of Maharashtra, Ludhiana, Jaipur, Bangalore, Tumkur)
6. Improved solid waste management practices (examples – Vijayawada, Chennai, Surat, Nagpur, Ahmedabad)
7. Private sector involvement in public health activities (examples include Guwhati, Bangalore, Aurangabad, Hubli-Dharwad, Kochi)
8. Urban poverty alleviation (slum rehabilitation in Mumbai and Bangalore)
9. e-Governance and IT applications (examples – a number of cities in the state of Andhra Pradesh, Indore, Ahmedabad, Mirzapur, some cities in the state of Maharashtra)

**Urbanization-Globalization Interface-Future Outlook**

Globalization has brought about new opportunities and created wealth for some cities. Cities now compete for foreign capital. Financial incentives often are used as attraction for foreign investors by the local governments. Besides they are promised and provided with a well-functioning infrastructure and urban services, communications systems, efficient transport, sufficient housing and access to educational and recreational facilities.

However, it has, at the same time, severely marginalized others. The marginalized city remains outside the flow of cyber-activity due to inadequate information infrastructure, or an inability to connect itself into the new global economy.

The review analyzed the influence and interactions globalization has on the urbanization of countries like India. Several questions naturally arise from the discussion above. While answers may not be clear at this stage it is worth an attempt to solve at least few of them

1. Cities suffer from inadequate maintenance of urban infrastructure. This is to a good extent the result of lack of access to funds for the city governments.

2. The inflow of migrants into the city has accentuated the pressures on the infrastructure. Besides, it has also been a source of social conflicts within the city.

3. City governments suffer from several handicaps and are unable to cope up with the rising demands of the city.

4. Private sector is playing an increasing role in the management of the city

5. From a preliminary assessment, it is evident that globalization has not created employment opportunities as predicted. Moreover, the jobs created are located in few sectors like IT, BPO, retail, banking etc.

6. There is very little data to measure deeply the impact of FDI on the performance of the city. The control over the decision to allow FDI is in the hands of the central government and local governments have no say in it.

7. While there is some evidence to show that there is an impact of globalization on the local geography, we believe it is premature to arrive at any conclusions.

8. Pressure groups bargaining for more leading to skewed allocation of resources. Many industrial houses exert pressure on the administration for allocation of scarce funds to projects which benefit them rather than larger good of the society

9. Persons in power and real-estate sharks in nexus with industries have devised ways of skimming the market flouting the guidelines and norms of urban planning. As many corrupt politicians and dishonest bureaucrats claim their share of the globalization driven growth pie through the unholy real-estate deals

While there has been some influence of globalization on the cities, there is a paucity of research to examine the linkages in the Indian context. However, globalization is here to stay and cities have no options but to adapt to the conditions. An instance supports this. A local body hosted on its website a photograph of Pizza Hut opening up an outlet in the city. The city manager when asked replied that irrespective of the position one adopts on globalization, it cannot escape the reality. Hence it is better to adapt and leverage it for the benefit of the city[15]. While evidence of this is still not conclusive, the directions seem ominous.

**End Notes**

1 This is an updated version of the paper 'Indian Cities in the Emerging Global Order: Exploring the Influences and Globalization' presented at 5th AIB International Conference, XIM-Bhuhaneswar, January 29-31, 2007

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3 UN Statistics

4 World Development Indicators 2002

5 Globalization is a multifaceted process of drawing countries, cities and people ever closer together through increasing flows of goods, services, capital, technology and ideas

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14 Examples Compiled from Various Sources

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Institution Building: Way of the Theory J

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Is there an Indian theory of Institution Building? This paper attempts to answer this question. Institution Building is not a new phenomenon in India. Institutions are built around ideas. Around a thousand years back, Shankara established four 'maths' in four regions of India. They were built around four 'mahavakyas' with roots in four Vedas. Even today these institutions are vibrant institutions. Now new institutions are being built in response to new challenges. Theory J (Sharma, 2008) stands for 'Join-in' process wherein several people come together ( join-in) to create a great institution. This Indian Theory of Institution Building with its roots in KTG Yantra (Sharma, 2007) considers institution building as a spiritual process in addition to a managerial and leadership process.

## The Idea of Theory J

In my search for an Indian Theory of Institution Building, the idea of Theory J struck me during one of my visits to Jagannath temple at Puri which is an institution in itself. The metaphor of rathyatra (juggernaut) led to the idea of Theory J in terms of the concept of Join-in. People join the yatra without any formal invitation from anybody. This led to the conceptualization of Join-in processes in terms of Theory J. I first presented this idea in the context of institution building at the First International Conference on 'Igniting the Genius Within' held at Indian School of Business (ISB) Hyderabad in Oct 2008. As I further reflected on my personal involvements and experiences in institution building, the conceptualization of Theory J unfolded in concrete terms. This paper presents this conceptualization and presents 'A Theory of Institution Building' in terms of Theory J. As this theory has been developed on the basis of Indian experiences in institution building, it can be referred to as 'Indian Theory of Institution Building'. This theory though Indian in origin also has a universal message and application.

## Institution Building as a Spiritual Process: Defining Theory J

Institution building has been considered as a 'Managerial Process' as well as a 'Leadership Process' (Mathai Ravi, Pareek Udai & Rao T. V., 1977). This is reinforced by Prof. Udai Pareek (1982) in his book, 'Beyond Management' wherein he considers Institution Building as a Leadership Process. During recent years idea of Transformational Leadership has also entered the Institution Building literature and institution builders are considered as Transformational Leaders. Ananta Giri (2002) in his book, 'Conversations and Transformation', suggests that 'quality of consciousness' of the leader is critical to the well-being of institutions.

Extending these ideas further, Theory J points to the idea of Institution Building as a 'Spiritual Process' wherein Managerial Processes and Leadership Processes are combined with Spiritual touch through Joining of Heart and Spirit (JHS). Drawing upon Indian concepts and ideas, Subhash Sharma (2007) in his book, 'New Mantras in Corporate Corridors' (p. 280), suggested KTG Yantra ( a Yantra – geometrical diagram, of three triangles) to combine the managerial, leadership and spiritual processes in organization context. This Yantra is based on Theory K of Management, Theory T of Leadership and Theory G (Guna) of Spirituality. Sharma (2007) has defined these 'theories' in terms of following equations:

I. **Theory K: K = X a * Y b * Z c**
   X, Y , Z refer to Theory X, Theory Y and Theory Z of Management and a, b c represent the intensities with which X, Y and Z styles are used.

II. **Theory T: T = T1 a * T2 b * T3 c**
   T1, T2, T3 refer to Transactional, Transformational and Transcendental approaches to Leadership and a, b, c refer to intensities with which these styles are used.

III. **Theory G (Guna): G = (Tamas) a * (Rajas) b * (Sattava) c**
   a, b, c represent the intensities with which Tamas, Rajas and Sattava approaches are used.
   Tamas, Rajas and Sattava refer to 'levels of consciousness'. Theory G suggests that in institution building , managerial and leadership processes should operate from 'higher level of consciousness' .i.e. from Rajas and Sattava levels of consciousness.

Fig 1 presents the KTG Yantra (represented by three triangles) with roots in Theory K (Management), Theory T (leadership and Theory G (Spirituality).

**Figure 1: KTG Yantra for Integrating Theory K, Theory T and Theory G**

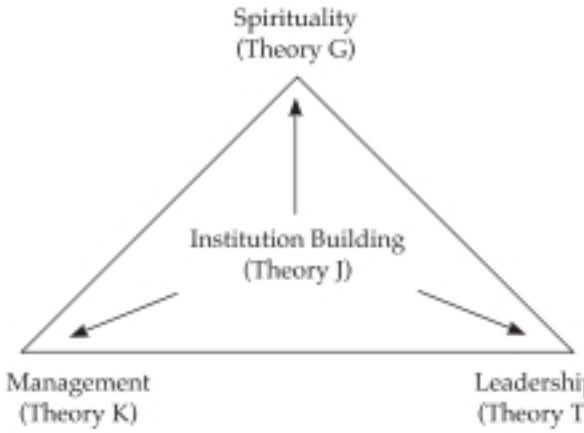

*(Source: New Mantras in Corporate Corridors, Subhash Sharma, New Age International Publishers, New Delhi, 2007, p. 280)*

Theory J stands for creating conditions for Joining-in, wherein people Join-in to create institutions of significance and importance to the society. These conditions are created by combining Management, Leadership and Spirituality (MLS) in the context of organizations. Extending the idea of KTG Yantra, we can define the Theory J in the form of the following equation:

$$J = K * T * G$$

In this formulation, Theory J is essentially rooted in KTG Yantra. In fact, the triad of K TG can also be represented by the brain metaphor wherein Management, Leadership and Spirituality are represented by left brain, right brain and central connecting line/area. Fig. 2 presents this idea in a diagrammatic form.

**Figure 2: Theory J as a Combination of Theory K, Theory T and Theory G**




The above discussion can also be represented in terms of a four step model of Management, Leadership, Spirituality and Institution Building. In this framework, Institution Building is indicated at the fourth step as it involves all the earlier steps/ processes viz. Management, Leadership and Spirituality.

Above discussion also leads us to an Institution Building Grid. This Grid views institution building in terms of four quadrant view based on Authoritarian-Democratic axis and Material-Spiritual axis. This gird is presented in Fig. 3.

**Figure 3: Institution Building Grid – Four Styles of Institution Building**


Quadrant I institution building style is Democratic-Spiritual in its approach. Quadrant II is Authoritarian-Spiritual approach. Many spiritual movements are based on this style. Quadrant III is Authoritarian-Material (istic) approach with overemphasis on the tangible and short term measures of performance. Quadrant IV is Democratic – Material (istic) approach. There are well known successful examples from each quadrant. However, question we need to ask relates to sustainability as well as ideological. In today's knowledge economy, authoritarian style is less preferred even though it may deliver short term results.

**Decision making from Higher levels of Consciousness: Essence of Theory J**

Essence of Theory J lies in the idea of decision making and problem solving from higher levels of consciousness. Institution building process involves following three elements:

I. Visioning and envisioning
II. Decision making
III. Problem solving

Institution builder has to involve himself/ herself in all the three processes viz. visioning and envisioning, decision making and problem solving. Spirituality implies decision making and problem solving from higher levels of consciousness. This leads to better handling of 'dialectical tensions' within the institution and thereby to creation of synergy within organization leading to better conditions for Join-in processes within organizations.

**Institution Building as An 'Art work': CH³ Approach to Institution Building**

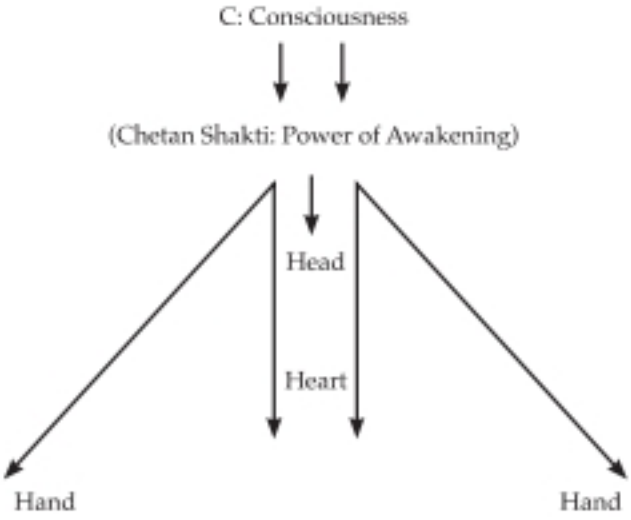
Sharma (2010) suggested the CH³ model for integrating Management, Leadership and Spirituality. CH³ model has following elements:

1. C : Consciousness
2. H: Head
3. H: Heart
4. H: Hands

Consciousness (C) finds its expression in the form of awakening through 'chetan shakti'. This energy flows through Head, Heart and Hands of the institution. Quite often, vision and mission of the organization represent this

energy. Fig. 4 presents this model of institution building. It may be indicated that when this model is applied to learning context, it can also serve as a learning model.

**Figure 4: CH³ Model of Institution Building**




In a metaphorical sense, Head represents Management, Heart represents Leadership and Consciousness represents Spirituality and Hands represent Action. When Actions are based on Head, Heart and Consciousness, there is Perfection-in-action (Yoga). Thus, CH³ represents the Yoga way of Institution Building. It is interesting that the word 'Udyog' (Industry) includes the word, Yog (Yoga). It may be indicated that in organization contexts, Consciousness (C), Head (H) and Heart (H) find their expressions in varying ways in visioning and envisioning, decision making and problem solving processes.

Thus, CH³ can be considered as Yoga model of Institution building. Further, Theory J suggested in this paper can also be represented by CH³ formula of Institution building. It may also be indicated that CH³ broadly corresponds to BMHS (Body, Mind, Heart and Soul) model of human beings and institutions. In organizations context, Consciousness represents the 'Corporate Soul' that finds its expression through Mind, Heart and Body (Structure) of the Organization. It may be indicated that CH³ model can also be linked with KTG Yantra and thereby with MLS (Management, Leadership and Spirituality) in organization contexts.

CH³ formula suggests that for the institution builder, institution building is an ART work, wherein institution builder combines ART (Actualization, Realization and Transcendence) in building the institution by combining Management, Leadership and Spirituality that broadly correspond to Actualization, Realization and Transcendence. Thus, he/she ends up creating a great piece of art through Self-Actualization, Self-Realization and Self-Transcendence.

**My Experiences and Experiments with Theory J**

The above suggested ideas and conceptualizations have been derived on the basis of my personal involvement and experiences in following 'Creations from Shunya', that have now become well known for their contributions:

I. Indian Institute of Plantation Management, Bangalore

II. Women's Institute for Studies in Development Oriented Management (WISDOM) at Banasthali University, Banasthali

III. Indus Business Academy (IBA), Bangalore and Greater Noida

Thus, the concepts presented also have an 'empirical foundation' in above institution building experiments. It may be indicated that my book, 'Management in New Age: Western Windows Eastern Doors' (1996) provided some foundational concepts for these institutions. Further, KTG Yantra was used as a 'compass' for development of these institutions. This Yantra in combination with the idea of JHS (Joining Heart and Spirit) helped in integrating the Management, Leadership and Spirituality in institution building contexts. Sharma (2010) provides a discussion on these innovations in management education in India. Brief case studies on conceptual foundations of these institutions are presented below

**Case Study- I: Indian Institute of Plantation Management – BEST Professional Managers**

Set up in 1993, at the initiative of the Ministry of Commerce, Government, Indian Institute of Plantation Management at Bangalore is a sectoral school of management for plantation and agri-business management. It was conceptualized around the idea of 'BEST' Professional Managers for Plantation and Agri-business sectors. This idea is rooted in the 'BEST concept of Management', wherein BEST implies, Behavioral (B), Economic (E), Strategic (S) and Technical (T) dimensions of management (Sharma, 1996). When managers achieve a proper alignment between these four factors, they become the 'BEST Managers'. In a technology driven society, managers not only need to know about managing relationships (B factor), managing costs & financial resources (E factor) and managing markets (S factor) but also managing technology (T factor).

My involvement as Consultant to Ministry of Commerce to prepare Project Report for setting up this institute, started while I was at the Institute of Rural Management, Ananda (IRMA). On acceptance of the project report by the stakeholders, I was involved as Founder-Director in implementation of the project report. Thus, a consulting idea became a physical reality and was implemented by the Consultant. This happens rarely as Consultants at best become advisors rather than implementers.

We experimented with the BEST model as foundational concept of this institute .This model is also applicable to generic B schools as in a technology driven society, some exposure to technology dimension should be part of the curriculum. We also experimented with the 'Reach-out Model' of Management Education to deliver onsite management training at the grass root level. This ensured intensive interaction with plantation industry and it provided a testing ground for testing new ideas and concepts. Institute also undertook several research and consulting projects leading to development of its own intellectual capital. Strong 'Research and Consultancy' orientation, right from the beginning, led to 'intellectual self reliance'. In turn this provided a strong base for launching long duration programs in the year 2001. Institute is now well known for its contributions to Plantation Management and Agri-business Management.

**Case Study II: Women's Institute for Studies in Development Oriented Management (WISDOM) – Wisdom MBA and Wisdom Leaders**

Banasthasli University, Banasthali, Rajasthan, is a premier nationally and internationally known educational institution for women's education. In 1996 it established its management institute and named it WISDOM (Women's Institute for Studies in Development Oriented Management). It pioneered the concept of 'Wisdom MBA' and aims at developing 'Wisdom leaders' who 'aim high and act with wisdom'. Its foundational basis is rooted in Banasthali University's foundational concept of 'Panchmukhi Siksha' (Five dimensional education) and thereby 'Panchmukhi Vikas' (Five fold development) in terms of Physical, Practical, Intellectual, Aesthetic and Moral dimensions. This is essentially a model of 'holistic development' and 'holistic education'. Further, its MBA curriculum is based on 'wisdom equation' (W = R + I; Wisdom = Reason + Intuition). This equation implies integration of left brain and right brain approaches to decision making, problem solving and visioning & envisioning. WISDOM established the concept of 'Development Oriented Management'. This idea broadens the concept of management beyond the 'corporate management' as it includes development of 'Self' as an essential aspect of the concept of management. The idea of the development of self was the theme of my now well known song 'Light in my Heart' from my book, 'Creation from Shunya' (1993). This sing was adopted by first batch of WISDOM students as institutional song and

became well known as 'Wisdom song'. Thus, a song was integrated with the foundational principles of the institution.

I was member of the 'consultative committee' for preparation of project report for WISDOM. Other members included, Mr. R. N. Haldipur, Former Lt. Governor, Pondicherry, Prof. Udai Pareek, Prof. Diwakar Shastri, Prof. Aditya Shastri and Prof. Siddharth Shastri. Subsequently as a Founding Member I was involved in assisting the institution in implementation of the ideas suggested in the project report. Today WISDOM is recognized as a leading institution with considerable research contribution in 'Indian Management' based on the vision of 'Holistic Development'. It has a strong Ph.D. program to promote research in frontier areas of research in management, leadership and Indian wisdom tradition. Prof. Diwakar Shastri (2003) provides a discussion on this 'WISDOM Initiative' and the experience of building this institution.

**Case Study III: Indus Business Academy (IBA) - Creative, Enlightened, Organic (CEO) Leaders**

Knowledge economy needs a new breed of leaders. These leaders need to be Creative, Enlightened and Organic in their approach. In knowledge economy, competitive edge comes from creativity. Popularity of phrases such as lateral thinking, out of box thinking, connecting the dots, think beyond, mind pooling etc is indicative of the acceptance of the creative thinking in the corporate world. Further, knowledge economy managers need to be enlightened individuals and be socially sensitive. In addition they should be sensitive to the environment as well as to the stakeholders. Hence, they need to build organic (life giving) relationships with stakeholders.

In 2001, Indus Business Academy (IBA), formerly Indian Business Academy, was established in Bangalore on the basis of the above presented CEO model. In 2006, it established its another campus at Greater Noida. Concept of Creative, Enlightened, Organic leaders is reflected in its curriculum design as well as in its research approach. At IBA, 3D (Discussion, Dialogue, Discourse) model of learning was developed to provide right ambience for students to evolve as CEO leaders.

My involvement started as a member of the 'Brainstorming team' for setting up IBA and subsequently as a Founding Member and later as Dean and Director. My experience suggests that students get inspired by the idea of CEO as Creative, Enlightened, Organic leaders. For many this has become an ideal and it provides them a new hope. Students of IBA adopted my 'Step-by-Step' song of success, from my book 'Arrows of Time' (2001), as institutional song and it has become well known as 'IBA song'.

IBA is now a well known institution with strong national and international linkages with several universities and leading institutions in Management and related fields. To spread its ideas it has also launched its publication division viz. IBA Publications that publishes its Journal (IBA Journal of Management and Leadership) and it also publishes books written by its faculty.

In the above presented three innovations in institution building, my association has been from creation stage. Hence, I refer to them as experiences of 'Creation from Shunya'. In each case, institution was built around a theme song. For example, 'BEST Professional Manager' in case of Indian Institute of Plantation Management, Bangalore, 'Wisdom MBA' in case of WISDOM (Women's Institute for Studies in Development Oriented Management) at Banasthali University, Banasthali, Rajasthan, and 'Creative, Enlightened Organic (CEO) leader' in case of Indus Business Academy (IBA), Bangalore and Greater Noida. While the theme songs differed, in all these experiences, Theory J has been at the root of their creation. Once the conditions for Joining –in were created, many people Joined-in and the Juggernaut started rolling making

these institutions as innovations in institution building. Processes of Management ( through Theory K), Leadership (through Theory T) and Spirituality (through Theory G) were used to create facilitating conditions for Join-in approaches leading to flow of resources and people that ultimately led to these 'art works'. Concept of 'Omega circle' was developed to facilitate the implementation of Theory K, Theory T and Theory G and thereby KTG Yantra. Omega circle concept with roots in Syadvad philosophy of multiple perspectives facilitated resolutions of conflicts and 'dialectical tensions' by expanding Join-in spaces for the members of the institution. It also created learning spirit through the democratic approach of 3 D – Discussion, Dialogue and Discourse. 'Nested Omega circles' helped in creating non-hierarchical network like structures for managerial decision making and problem solving. In case of IBA, Omega circle and 3 D have also been given physical presence on the campus in the form of a physical structures known as Omega circle and 3 D Centre. These symbols suggest that institutions are 'energy fields' and the nucleus of this energy field is 'Consciousness' of the institution represented by its vision, mission and foundational concepts. Thus, the attempt has been to create 'spiritual synergy'. This is the essence of Theory J.

In my association with some other well known institutions such as B.K. School of Business Management, Gujarat University, Ahmedabad (from where I started my academic career as a founding faculty member), Institute of Rural Management, Anand, Gujarat ( as founding faculty member), National Institute of Cooperative Management, Gandhinagar, Gujarat, Calcutta Business School (CBS), Kolkatta, GITAM University, Visakhapatnam, VBS Purvanchal University, Jaunpur, Yoga and Management Division of SVYASA (Swami Vivekananda Yoga Anusandhana Sansthan) University, Bangalore, I found attempts to create new 'art works' through a varying touch of Theory J. My various involvements as discussed above as well as visits to above indicated places and interactions with other institution builders led me to the idea of GITAM-JHS experiences in institution building.

**Concluding Comments:**

**Grand Integration of Thought, Action and Motivation (GITAM) through JHS (Joining of Heart and Spirit)**

Gitam in Sanskrit stands for song. Like life is a song, institution building is also a process of writing a song from Shunya – 'Shunya-Gitam'. Like song writing, it is a spiritual process. Wonderful songs are written when Consciousness, Head, Heart and Hands (CH3) come together and find synchronization. Songs produce good vibrations through synergy creation. Similarly an institution becomes a 'Shunya Poem' (Sharma 2010) – 'Shunya-Gitam'. In such a Poem (Gitam), a Grand Integration of Thought, Action and Motivation (GITAM) happens through Joining of Heart and Spirit (JHS). Institution building is essentially such a GITAM experience. In this experience, Join-in process arising from Joining of Heart and Spirit (JHS) becomes a Joy (J) process leading to 'Jai Ho' with vibrations spreading from Local to Global ('Jhansi se jahan tak'). This is the essence of Theory J of institution building reflected through 'Light in My Heart' and a 'Step-by-Step' development through 'Churning by the Quantum Rope' to convert 'dialectical tensions' into 'Joy of Living' through 'Joining of Heart and Spirit' (JHS).

During the Eighth AIMS International Conference held at IIM Ahmedabad on Jan. 1-4, 2011, I had the opportunity to discuss the idea of Theory J with Professor T. V. Rao, a well known institution builder and globally known HRD Guru. In an e mail communication on Jan. 08, 2011, he observed, "I suppose it is exactly this Theory J we seem to have followed in building National HRD Network and Academy of HRD. Ravi Matthai (Founding Director, IIM Ahmedabad ), used to call Jwaja a Kho Kho type organization.

When you are tired of running touch someone else and he will continue the game!". This observation from Professor T. V. Rao is an indicator of the potentiality and acceptance of Theory J. Further empirical testing of this concept by researchers and practitioners will be helpful in general acceptance of this 'theory' as part of the received knowledge in the field of institution building.

In this paper I have attempted to answer the question, Is there an 'Indian Theory' of Institution Building? My search for the same coupled with my involvement in, now well known 'creations from shunya', led me to formulate Theory J, as an 'Indian Theory' of Institution Building wherein institution building is a spiritual process in addition to managerial and leadership process. This 'Theory' originates from Indian experience but has a universal application.

**Note:** This is a revised and extended version of the paper presented at the Eighth AIMS (Association of Indian Management Scholars) International Conference held at IIM Ahmedabad, Jan. 1-4, 2011.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

# Identity of Subhashism in Indian Business & Indian Management

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'Indian Management' has already traveled far and wide expanding its scientific horizons with the theories of eminent Indian managerial specialists among whom Prof. Subhash Sharma is distinct. Within the limitations of original thought on management the vision of this icon plus role model is not only matchless but also profoundly philosophic that the transformation of his theories in to practice has brought to light a particular frame which this paper identifies as "Subhashism." This paper traces the character of "Subhashism" in the light of Prof. Subhash Sharma's contribution in the form of an iconic role model to Indian Management.

The subject of this paper is conspicuous for the light it throws on the predominantly authentic contribution of a living iconic role model whose energy and zeal has been foundational for the development of a systematic approach towards the wider business scenario in India in recent decades. Prof. Subhash Sharma's theoretical contribution within the contextual limitations of Indian Management has been a point of departure where his own identity, noted in this study as "Subhashism" becomes explicit. The examination of some of his original theories will locate him in a separate level of existence where conditions are favorable for the rise of a fresh managerial context.

Prof. Subhash Sharma represents the sentiments of a humanitarian whose concerns are directed to the construction of an environment where all living beings are treated with equal consideration. His application of the term "demon" to those whose intentions are not genuine is an exemplary way of noting the force of those who do not fall in to the category of humanitarians: "The demon in the market is worshipped because it favors the privileged and destroys the weak."(1996:40). This particular "demon" does not abide by any set rules but "forces people to perpetuate

more violence."(op.cit.40). That Sharma is very strictly against this conceptualization of a highly market-based trade is clear when he introduces the theory of "Harm Minimization" as an alternative mode of delving deeper with humanitarian sentiments in to the social requirements of the consumer community at large. The embodiment of "Subhashism" is clear in his re-introduction of the age old traditional Gandhian concept of non–violence through his own identity as one whose objective is to "re-see" reality (1996: 10,187;2007:184,187).

In total contrast to Sharma's conceptualization of "Harm Minimization" is "Utility Maximization" which prevents the cultivation of morals and virtues (1996:41). As an alternative, Sharma introduces the validity of the need for the formation of a concept as the following: "need minimization" which apparently agrees with Gandhi's quotation : "there is enough for everybody's needs but not for everybody's greed."(op.cit.43)

Sharma further introduces a very useful tool for the minimization of harm to living beings in a community and that is vegetarianism which for him is ideal for the construction of a superior level of living that does not cause violence to any life. This agrees with Gandhi's theory of *ahimsa* and brings to light a peculiar identity which Sharma calls "ecotarianism" (op.cit.41;2007:217). Ecotarianism, is a unique mode of "re-seeing" reality. Its subsequent application to the thought process of the general managerial public whose motives are more commercial oriented is yet another exceptional contribution of this iconic role model, a stance resembling the Gandhian type of looking at the requirements of the majority.

Sharma's theory of "re-seeing" within the wider parameters of "Subhashism" bears allusions to his iconic vision the application of which to Indian business serves a wider purpose. His own words sum it up: "In the re-see approach a phenomenon is seen in a new perspective leading to new insights that can then be put to the rigors of scientific testing." ( 2001:76). After referring to several distinct individuals in history i.e. Watson, Kuhn, Kekule, Mendeleev, Ramanujan, Einstein whose tendency to "re-see" reality followed by the reference to the "nature of reality in the form of a totality perspective" which Sharma describes in terms of the four stages of consciousness i.e. *visva, taijas, prajana* and *turiya* (op.cit.77), he arrives at the conclusion that the ideal society which he notes within the limitations of the label "sacro-civic" is after all one that resembles the goodness of traditional Indian values. His own opinion of a "sacro-civic" society is akin to a *Ramrajya* which he summarizes as follows: "It may be indicated that in the expression *Ramrajya, Ram* is indicative of the sacred aspect and *rajya* represents the secular aspect of state /life. When combined together we get the concept of a sacro-civic society as a new idiom." (op. cit. 80)

Sharma's iconic role within management parameters reflects his originality more profoundly in his application of his "re-see" theory to the concept of sound management where he refers to colossal figures in the European and world's historical frame i.e. Marx's capital, unconsciousness of Freud, will of Nietzche; power of Foucault; morality and truth of Gandhi (2005:124). He draws inspiration from theorists like Toynbee, Toffler, Marx and role models of India e.g. Mahavir, Buddha, Shankara, Guru Nanak, Swami Vivekananda, Sri Aurobindo and Mahatma Gandhi for his conclusion that leadership is a topic that combines "re-seeing" and reality:

"Leadership is essentially concerned with articulation of vision for future and management is concerned with providing support systems for translating vision in to reality" (op.cit.136).

The next step in Sharma's representation of "Subhashism" is the formation of "corporate leaders" whose vision is an embodiment of all that he expects to see in a corporate figure,

symbiosis between religion, science, markets and State:

"Corporate leaders can play the new role of visionaries to strengthen this symbiotic relationship. Corporate thought leaders could also benefit from the pedagogy of the liberated as liberated individuals are in a better position to provide enlightened leadership to corporate and other institutions" (op.cit. 136).

Within Sharma's description of the ideal corporate leader is his original theory of Osmotic Meditation which he derives from traditional Indian meditation systems known as *yoga, dhyan* and *sadhana* (2009:100). These link to his introduction of exercises which he categorizes and which fall under the header "Subhashism":

Synergy in Negergy out
From *Shunya* to Sky
Inner Being (IB) and Anchor (A) connectivity
Extending sensory perception
Learning form nature: lessons in spiritual and human qualities
Connecting with the inner star and the light in one's heart
From Horse power to Swan power
Swans are flying, Bull is meditating: Bull meditation (op.cit.101-103)

The application of these eight exercises are invaluable for the projection of the SHARMAN circles of consciousness the first five of which are in my opinion the very essence of Prof. Sharma's own iconic role model: Scientist, Humanist, Artist, Rishi, Muni, (op.cit.104).

Most creative are Sharma's connections which range from the ideal corporate leader to the *rishi* who for him is more 'modern *rishi*' than an ordinary leader. This *rishi* concept is derived from age old Hindu religious traditions and from Europe particularly the ancient Greek (Sharma and Gamlath, 2005:130). He then moves to refer to the four stages of history which range from the ancient to the New Age ISM which he identifies as ISKCON, TM, BK, (op.cit.129). The final conclusion is that the ideal *rishi* transcends the qualities and characteristics of the "modern prince" whose access to power is a setback in terms of the managerial requirements of the masses:

"The modern *rishi* cautions the "modern prince" on misuse of science and rationality to dominate others. Indeed for meaningful progress modern civilization needs the sobering presence of the "modern *rishi"* to achieve the goal of an ideal and idealized society." (2001:82)

Sharma identifies such figures as Swami Vivekananda, Sri Aurobindo and Gandhi as "modern *rishis"* whose insight in to the ancient Indian philosophical thought, which to him is the "*rishi* route", provide us a basis for correction of the errors of modern corporate leaders. The culmination, in his own words, expresses an embrace of "*rishi* route' with combination of science and philosophy:

"Indeed, 'integral embrace' between the scientific route and the *rishi* route, metaphorically represented by the 'modern prince' and the 'modern *rishi*' could provide a new pathway for integrating pre modern, modern and the post modern thoughts, leading to the ideal of a sacro-civic society." (op.cit.82)

The iconic role model of the personality of Prof. Subhash Sharma shines out in his application of his original theories of "Subhashism" for the fulfillment of managerial endeavors. He has so far been extremely successful in the use of exercises termed ATM (Any Time Meditation) with MBA students at WISDOM Banasthali and IBA Bangalore and Greater Noida (2009:106). Its demonstration at Surat, Haridwar and Jaunpur has been the focus of many whose attention was driven to gain its full potential ( 2009: 106).The attempt has reduced stress and fatigue among students and its further application to the society at large will definitely engender more scope for a clearer and smoother environment causing the character of ideal of the "modern *rishi"* to shine. Sharma's commitment to form a fresh

environment for the "modern *rishi's"* existence is even more conspicuous in his engagement in writing verses which commenced as Quantum Hope (1999:58), Step by Step (2001:84), Light in My heart (1993:33;1999:132).The full text of each of these are available in his most ground breaking work, New Mantras in Corporate Corridors: From Ancient Roots to Global Routes(2007:474-476).

Prof. Sharma has been successful in introducing countless theories and concepts which have been successfully put in to practice. They reflect the superior potential of "Subhashism" of Prof. Subhash Sharma, his own dedication to business management in which he excels, all of which are pointers to his iconic role model.

**Acknowledgements**

To Prof. Subhash Sharma for being a source of inspiration since 2001 when I first met him at the International Conference on Tourism at the University of Pondicherry, Pondicherry, India. This paper is a token of gratitude for him and an appreciation of his original theories and practices that have been viewed as authentic and highly creative at IBA, Bangalore and Greater Noida and WISDOM, Banasthali.

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IBA JOURNAL OF MANAGEMENT & LEADERSHIP
Vol:3 ■ Issue:1 ■ January-June 2011

BOOK REVIEW

# American Veda-From Emerson and the Beatles to Yoga and Meditation –How Indian Spirituality Changed the West

**Philip Goldberg**

*Harmony Publishers, November 2010*

**Review by V.Suresh Chandra**
*Indus Business Academy, Bangalore*

In an enlightening and lucid way,American Veda by Philip Goldberg explains how the ancient wisdom of India has permeated American lives and benefited millions. The book is a detailed account of the intense impact of Indian spiritual thought on Western thought and lifestyles and how India's Sanatana Dharma has made deep ingression into American lives through books,gurus,yoga,meditation and music. It is no surprise that today words like Yoga,Guru,Mantra are extensively used even in business,management and politics.

In present day America,there are more than 15 million Americans practicing yoga and meditation.Many visit India to delve deeper into Indian spiritual thought ,chosing spiritual abodes like the Divine Life Society of Swami Sivananda at Rishikesh or the Art of Living Ashram at Bangalore or a Ramana Ashram in Tamilnadu.Having been exposed to Indian spiritual thought and the positive impact it generates towards holistic,tranquil living,their thirst to know more about attaining Indian spiritual thought and the path to inner peace is reflected in the increasing number of 'spiritual tourists' to our country. It is undoubtedly true that this attempt to spiritually recharge themselves has led them to greater achievements and success even when they stay with their normal lifestyle and careers.

Academic research being carried out in many American universities and colleges in the

areas of Indian philosophy and theology is another example of the spread of interest in Vedanta and Yoga

In a very insightful ,comprehensive manner, Philip Goldberg takes the reader through the history of growth of Indian spiritualism in the West. He offers the views that Indian spiritual thought is the only hope in our crises ridden society .Vedic studies ennoble the human spirit and liberate deeper Self and consciousness .Goldberg cites the cases of many Yoga luminaries who have successfully guided the adoption of Vedantic teachings into modern American lives and culture.

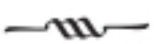
The cultural changes in American lives due to the influence of Indian thought are well researched and documented by Philip Goldberg.In the sixties,the United States opened the door to immigrants from Asia. This also brought in considerable cultural wisdom thro Gurus and Swamijis. Not every one was genuine and knowledgeable ,but they changed the way in which many Americans looked at their lives. The spiritual growth curve over the past fifty years has seen a few gullible ones falling prey to the greedy ,but the positive contributions have been substantial .Goldberg chronicles the American journey into Hindu traditions and philosophy with some interesting stories and analysis laced with humour. It does stray at times, with sensationalism and celebrity followers of Gurus grabbing attention ,but the incredible miracle of the spread of Indian spiritualism and thought is well explained. For those Americans who are curious to know about Indian philosophy, reading this book would certainly create the urge to directly access the sources and teachers imparting knowledge of Yoga, meditation and Indian thought.It would also enable any reader to understand how the Vedas so greatly influenced many Americans, why the teachers appealed to Americans, and the reasons its influence continues to grow.

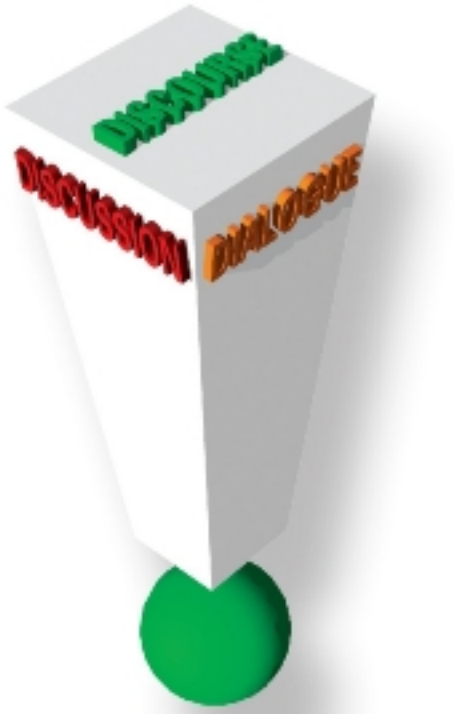
Goldberg encourages readers to research themselves and decide the relevance and truth of Indian spiritualism. Being a graduate of the sixties and a meditator himself, Goldberg is better placed to connect the events in the journey of Yoga into the West .

This book relates the history of Hindu-inspired religious movements in America ,like Transcendental Meditation, Siddha Yoga, and a host of others like Self-Realization Fellowship, Vedanta Society, ISKCON.The pervasive influence of a few diffused groups is also mentioned.

For those who are drawn into such movements, the book acts as a guide to the challenges and drawbacks they might face. The spread of Eastern philosophy in the West has at times been marred by superficial and commercial teachers, but a discerning reader genuinely interested in drinking deep into the nectar of Vedic thoughts will find in this book a valuable reference.

The documentation is well organized, providing for thought provoking reading. The basic message from the Vedas - Tat Tvam Asi (Thou Art That)- stands eternal as the unifying, common thread. In a way ,while this book could be the diary of Philip Goldberg's personal journey towards self realization readers would certainly understand the benefits of Vedantic philosophical treatises and its far reaching contribution to a saner society free from intolerance and religious extremism.



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