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DEVELOPING STRATEGIC FLEXIBILITY FOR MOVING TOWARDS BUSINESS EXCELLENCE – ANALYZING THE ROLE OF HUMAN RESOURCE FLEXIBILITY IN SELECT INDIAN COMPANIES

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ABSTRACT

The purpose of this research paper is to develop a framework for understanding the importance of flexibility in organizations and how it helps in moving towards business excellence. An attempt has been made to look at flexibility as a core component of all processes, be it operational, leadership, strategy planning and implementation or any other process. The American business performance framework for excellence, Malcolm Baldridge National Quality Award (MBNQA), has been used to understand the relevance of flexibility in each of the processes. The paper also looks at the flexibility issues in the Human resource function in select Indian organizations, which have adopted different business excellence model, by analyzing the primary data from five Indian companies. The concept of flexibility and its relationship with MBNQA framework can be taken as a starting point for carrying out conclusive research in future on developing strategic flexibility in future for achieving competitiveness.

Keywords: Operational Flexibility, Strategic Flexibility, Humans Resource Flexibility, Business Excellence Models

Introduction

Globalization, deregulation of markets, changing customer requirements are some of the major challenges organizations face today. Competition in the marketplace shapes organizational capabilities, which in turn influences internal processes, people, procedures, and structures to develop strategies for continuous improvement. Organizations which develop flexible processes, capacities and decision making are able to adjust and survive the turbulent marketplace.

Since 1950's various models for business excellence have been formulated for awarding Excellence in various parts of the world. The three most popular Business Excellence Models, for implementation of Total Quality Management (TQM) strategy or philosophy in an organization are:

1. The Malcolm Baldrige National Quality Award (1987) the American Model for Business Excellence
2. European Excellence Model for Quality Management (EEQM, 1992).
3. The Deming Prize, advocated by Union of Japanese Scientists and Engineers (JUSE, in 1951)

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The Malcolm Baldrige National Quality Award (MBNQA) for Excellence (2007)

The criteria for Malcolm Baldrige award (American) model of excellence consist of 7 categories to be addressed:

1. Leadership
2. Strategic Planning
3. Customer and Market Focus
4. Measurement, Analysis and Knowledge Management
5. Workforce Focus
6. Process Management
7. Business Results

The 1 – 6 criteria are enablers. It has 55% (550 points) weightage and the criteria 7-Results which comprises of financial and market outcomes, workforce-focused outcomes and process effectiveness outcomes has 45% (450 points) in a total score of 1000 points for evaluator. Any company, which gets 600 points or more, is eligible for the award. This is shown in Figure 1. (http://www.quality.nist.gov/)

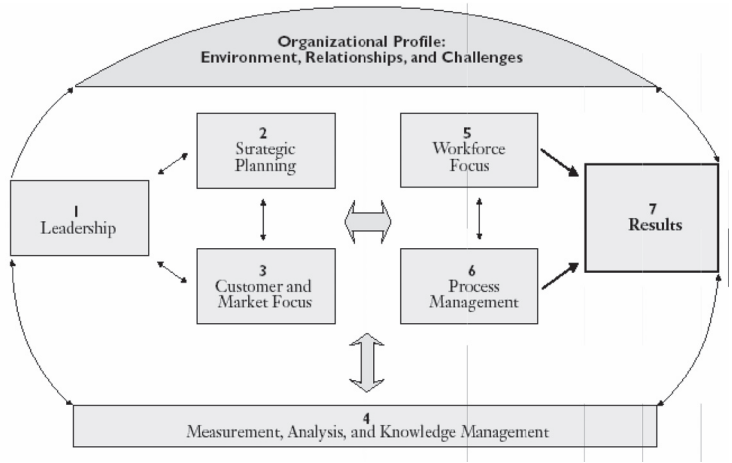

Figure 1: Baldrige Criteria for Performance Excellence Framework: A Systems Perspective (American Model - 2007) , http://www.quality.nist.gov

European Foundation for Quality (EFQM) Award Model for Business Excellence

In October 1991, the European Foundation for Quality Management (EFQM) in partnership with European Commission and the European organization for quality announced the creation of the Quality Award. The European Quality Award consists of two parts: the European Quality Prize, given to companies that demonstrate excellence in Quality Management Practice by meeting the award criteria and the European Quality Award, awarded to the most successful applicant. In 1992, four prizes and one award were granted for the first time.

The assessment is based on

1. Leadership

2. People management
3. Policy and strategy
4. Resources
5. Processes (as enablers) and
6. People satisfaction
7. Customer satisfaction
8. Impact on society
9. Business results

Both Enablers & Business Results criteria have 50% weightage and total points are 1000 points. Any company gets more than 600 points is eligible for award.

The Confederation of Indian Industry (CII) and Exim Bank in India have come together and have instituted CII-Exim Excellence award in India based exactly on the European Model for Excellence as explained above. Many Indian companies are applying this model as shown in fig. 1.2 for moving towards Business Excellence and making their companies competitive and world class. This was instituted in 1994 and is considered to be the most prestigious award in India for Business Excellence that an Indian company can receive. The award is being administered by CII with the technical support from the European Foundation for Quality Management, (EFQM), Brussels. The Award was established to promote the Awareness of business excellence as an increasingly important element in competitiveness. Not only does it recognize excellent businesses, the Award

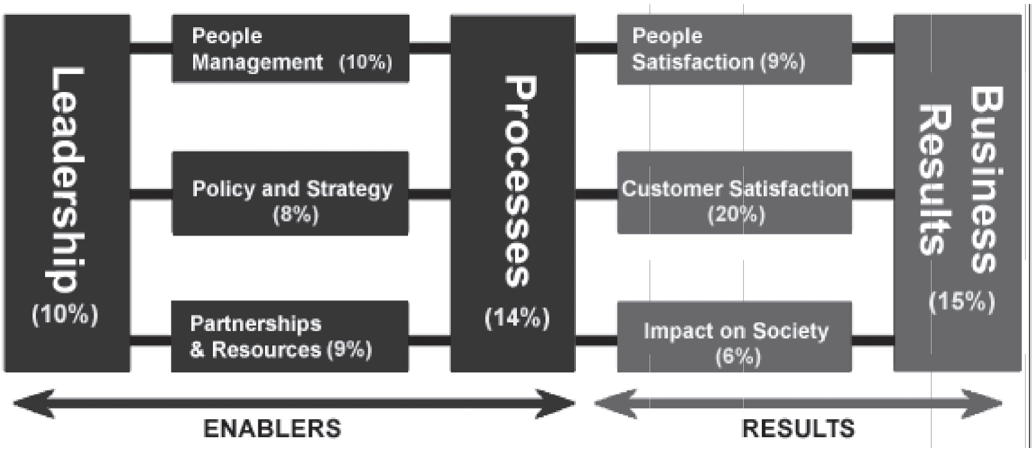

Figure 2: The European Model for Business Excellence (EFQM) Source: http://www.efqm.org

Deming Prize (The Japanese Model for Business Excellence)

The Deming Prize was instituted in 1951 by a formal resolution of the Union of Japanese Scientists and Engineers (JUSE) by the Board of Directors in grateful recognition of Dr. Deming's friendship and his achievements in the cause of industrial Quality Control, as proposed by late Mr. Konichi Koyangi, one of the founders of JUSE in Japan.

From 1984, the Deming Prize Committee revised the basic regulations and it was thrown open to Non –Japanese companies as well.

The broad categories for the Deming Application Prize are:

1. Policy
2. Organization and its Management
3. Education and Dissemination
4. Collection, Dissemination and use of Information on Quality
5. Analysis of Data
6. Standardization
7. Control
8. Quality assurance
9. Results
10. Planning for the future

We want to assess through secondary literature how flexibility issues hold relevance in the journey towards business excellence or performance excellence by looking at the MBNQA criteria's. The fact that different business excellence models have different criteria's or categories should not be understood just based on the terminologies used in the models but also on the spirit. More or less all the models talk about the same issues in different ways ultimately converging to the same objective of moving towards business excellence or performance excellence in an organisation.

In order to understand the relationship between flexibility and business excellence it's important to develop a theoretical understanding of these concepts. As part of our empirical research, we have looked at the human resource flexibility issues in detail and how it helps in moving towards business excellence by using the questionnaire designed by Dave Ulrich, for select Indian companies.

Understanding Flexibility

Flexibility is the organization's ability to meet an increasing variety of customer expectations without excessive costs, time, organizational disruptions, or performance losses (Zhang et. al., 2006). (Upton, 1994 & 1995) defines flexibility as increasing the range of products available, improving a firm's ability to respond quickly, and achieving good performance over this wide range of products.

It is very difficult to define the term flexibility in a single definition as it includes wide variety of tasks and resources. Many researchers view attaining flexibility at the expense of desirable characteristics like quality, precision, accuracy, efficiency etc. But the challenge for organizations is to attain flexibility without compromising on any desirable characteristics. Many world class organizations have shown this from time to time. Therefore, it's important to understand, how these organizations have developed flexibilities and used it for achieving business excellence.

There are different definitions and perspectives to flexibility. Flexibility could be viewed in terms of supply chain management or customer focus, developing capabilities and capacities, information flow and exchange, knowledge creation and learning, strategy formulation and implementation, human resource management, leadership process, developing metrics for results and improvement. These are some of the attributes of flexibility; there could be many more.

Flexibility is an important characteristic of all types of resources, not just materials or machine tools. These include traditional resources, such as people and machines as well as

less traditional resources, such as the organization's structure, information flows, culture and decision making processes. The flexibility of a resource, or the degree to which it may be used in multiple ways or as a substitute for other, less plentiful resources, is a crucial attribute of all resources (Raymond B., 1993).

Over the past 50 years, the scope of flexibility has evolved bringing in new aspects and perceptions. During the era, when production capacities and volumes were considered to be the primary source of competitive advantage, flexibility was looked at as manufacturing flexibility. (Sethi and Sethi, 1990) have looked at the various types of manufacturing flexibility in organizations (Table 1).

Manufacturing flexibility can exist at different levels of the organization (i.e. strategic, tactical, operational) and is comprised of many different types (e.g. machine, routing, product) each with various aspects (i.e. potential, actual and required flexibility) which can be measured in terms of its range (i.e. number of states that can be achieved), mobility (i.e. transition penalties, such as set-up cost and time, from moving from one state to another), and uniformity (i.e. the extent that performance criteria, such as quality, changes with states) (Upton, 1994).

(Sushil, 2001) discusses the concept of flexibility in technology management. He discusses various types of flexibility in context of technology management like the innovation flexibility, strategic flexibility, acquisition flexibility, and organizational flexibility does influence global competitiveness of the firm. It could help in the issue of global transfer of technology, technology adoption, technology leadership, partnering strategy and a borderless world.

(Paul, H. and Suresh, B., 2001) have studies some European multinational companies to determine the effect of integrated manufacturing strategy incorporating concepts like computer integrated manufacturing (CIM), Total Quality Control (TQC) and Just in Time (JIT) manufacturing on competitive performance. They have shown by empirical analysis all the three technologies are positively related both individually and interactively.

(Gupta, Singh and Sushil, 2001) have conducted a study in an engineering enterprise in India to establish relationship between process flexibility and productivity. Correlation between process flexibility and productivity total as well as partial measure has been established by them.

(Agarwal P. and Singh, 2001) have given a concept of quality grid that is useful in gaining insights into the problem areas of organization and help provide directions for applying corrections.

(Haleman and Janszen, 2004) have broadly divided flexibility into strategic and manufacturing, or operations. The flexibility with which the externally oriented strategy is modified and updated is termed as strategic flexibility and it makes organization reposition themselves in the market they intend to serve and gain new customers. (Dangayach and Deshmukh, 2001) have classified manufacturing flexibility into two broad types' i.e. structural flexibility and Infrastructure flexibility. Structural flexibility (such as related to capacity, facility and technology) deals with issues that set the process and technology for operations. Capacity is the production capacity of a company, facility is the system which facilitates the production and technology is the type of technology used. Infrastructure flexibility (such as related to human resources policies, quality policies, organizational culture, environmental issues etc.) provides the necessary support to the operations function.

Table 1: Types of Manufacturing Flexibility, Sethi & Sethi (1990)

Type	Definition
Machine	The various types of operations that the machine can perform without requiring a prohibitive effort in switching from one operation to another
Material handling	The ability to move different part types efficiently for proper positioning and processing through the manufacturing facility in serves
Operation	The ability to produce a part using alternative operations or sequence of operations
Process	The set of part types that the system can produce without major setups
Product	The ease with which new parts can be added or substituted for existing parts
Routing	The ability to produce a part by alternate routes through the system
Volume	The ability of the manufacturing system to be operated profitability at different levels of overall output
Expansion	The ease with which the manufacturing system capacity and capability can be increased when needed
Program	The ability of the system to run virtually untended for a long enough period
Production	The universe of part types that the manufacturing system can produce without adding major capital equipment
Market	The ease with which the manufacturing system can adapt to a changing market environment

Table I.
Types of manufacturing flexibility

Source: Sethi and Sethi (1990)

(Slack, 2005) has developed a framework to integrate the various aspects and types of flexibility. His model presents a flexibility hierarchy which can be used to clarify the contribution and role of flexibility in overall manufacturing strategy. According to his framework, flexibility should be considered at four levels, manufacturing resources, manufacturing tasks, manufacturing performance and organizational performance. This framework is shown in Figure 3.

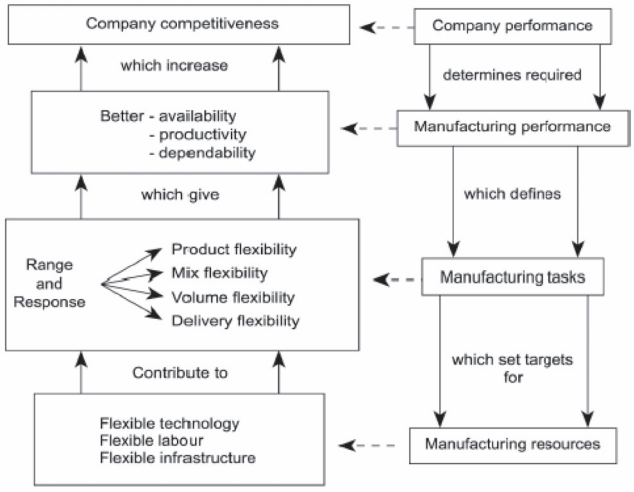

Figure 3: The flexibility hierarchy, Slack Nigel (2005)

(Gerwin, 2005) has made an attempt to link flexibility requirements with manufacturing process design. Each aspect of flexibility is associated with design constraints on the nature of the workforce and equipment. This is shown in Table 2, as the nature of equipment characteristic varies, the critical workforce characteristic also varies depending upon the type of flexibility. Hence we can see that flexibility issues go beyond equipments to include human resource skill flexibility.

Table 2: Manufacturing Process Design for Flexibility , Gerwin Donald (2005)

Flexibility type	Workforce characteristics	Equipment characteristics
Mix	Varied skills in working with different products	Low degree of specialization
Changeover	Ability to learn new operating skills	Little hard automation
Modification	Ability to quickly modify operating procedures	Few refixturing problems
Rerouting	Group structure	Redundancy
Volume	Varied skills external to the line	High, adjustable capacity limits
Material	Varied skills in maintenance and defect detection and correction; group structure; group strcture	Adjustment and correction mechanisms
Sequencing	Varied operational skills within the line; foreman controls line balancing	Fast set-ups

But with increasing competition, customer driven markets, new dimensions to flexibility have evolved. Low cost and high quality products, improved responsiveness to customers have emerged as the main strategic imperatives, which has expanded the dimensions of flexibility. Moving beyond manufacturing to overall flexibility requires further defining flexibility to dimensions that can be evaluated across the firm. (Vokurka et. al., 2007)

Another classification of flexibility can be resource oriented and process oriented. Resources can be grouped into five classes, physical resources, personnel resources, informational resources, structural resources and procedural resources. These classes are not mutually exclusive, but over-lap in a variety of ways as there are interactions and interdependence among them (Raymond B., 1993).

Physical resources are the tools, machines, energy sources and raw materials under our control. Physical resource flexibility could be attained using standard tools and techniques like lead-time reduction, parts standardization, group technology (GT), cellular manufacturing, JIT production methods, FMS, CAD/CAM, SPC, CIM and robotics. (Raymond B., 1993).

Human resource or workforce flexibility represents a unique opportunity for organizations to achieve excellence. Clearly, a more flexible workforce, like more flexible equipment, can yield reductions in inventory, avoid excess capacity and offset random occurrences. Here, human abilities to learn, feel and adapt play a significant role, making people the most flexible of all tangible resources. (Raymond B., 1993).

Information resources contains two subsets: those resources related to the collection, storage and dissemination of information and those concerning the models and tools utilized in analysis and summation of information and the support of decision making. Flexibility of informational (or data) refers to the ease with which it can be communicated or shared with stakeholders. The evolution of informational resources and information systems over the recent decade has been profound. Among the information-handling developments are database management systems, communication networks, hardware, software, end-user operated tools and an array of data collection devices.

It is important to acknowledge that the structure of an organization will not, in most cases, be represented completely by any visible model (e.g. the organization chart). In terms of organizational design or structure, hierarchical designs are rapidly giving way to matrix-style, team-based organizations.

Process flexibility efforts are directed towards simplifying company policies and procedures.

In one company, product design changes require number of approvals before a change can be made. At another company, all hiring decisions must be cleared through the head of the organistion. These types of policies increase the burden on internal resources, limiting structural and procedural flexibility. Wherever possible, decision-making authority should be moved toward the bottom of the organization and people should be empowered for decision making and recognized for their contribution. Employees should be given training and authority to make decisions on their own.

(Bucki and Pesqueeux, 2000) view flexibility as the ability to learn. To learn means to enrich the basis of operative knowledge. Knowledge itself may be grouped in three classes: Explicit knowledge, i.e. immediately available; a manager has the explicit knowledge related to establishing accounting documents; a worker has the explicit knowledge related to performing tasks he is responsible for. Implicit knowledge that may be obtained through a deductive or inductive reflection starting from explicit knowledge; the accounting department is able to deduce the position of cash and liquidities of its firm, starting from the explicit knowledge of the firm's condition and the knowledge that characterizes the profession of accountancy. Starting from elementary operations managed by a flexible workshop, it is possible to deduce the method of production of a given part. Inaccessible knowledge - impossible to deduce from acquired knowledge.

(Chanopas et. al, 2006) have tried to look at the issue of information technology infrastructure flexibility. IT infrastructure must be flexible enough to handle changes. They have identified nine core components were found to be a new framework to describe the characteristics of IT infrastructure flexibility which aim to enable a rapid response to necessary changes from either opportunities or threats (Table 3). Since flexibility is important in every field of management, and businesses are increasingly dependent on IT, flexibility in IT infrastructure has become a major concern of management teams. The challenge of the investment decision is to choose an IT infrastructure that is able to support both present and future applications. Flexible IT systems help develop cost-effective new products and services. Growth and competitiveness depends on the flexibility of IT infrastructure because it allows organizations to develop new initiatives quickly.

Table 3: Components and definitions of IT infrastructure Flexibility, Chanopas et. al. (2006)

Components	Definition
IT personnel competency	The degree to which IT personnel possess relevant skills and experience to effectively perform IT activities
Scalability	The degree to which hardware/software can be scaled and upgraded on existing infrastructure
Continuity	The degree to which hardware/software/data/IT personnel can seamlessly serve the users in an organization without disruption
Compatibility	The degree to which hardware/software can share any type of information both inside and outside the organization
Connectivity	The degree to which hardware/software can connect to others both inside and outside the organization
Rapidity	The degree to which hardware/software can deliver information whenever it is needed
Modularity	The degree to which hardware/software/data can be separated and recombined to support new system development
Facility	The degree to which hardware/software can be used with ease
Modernity	The degree to which hardware/software are based on well-known products and technological trends

We have tried to indicate the importance and relevance of flexibility in organizational processes, structures, culture, technology and strategy formulation and implementation. Therefore, it is important to understand how flexibility acts as an enabler in organization for developing core competencies and capacities for moving towards business or performance excellence. In the next part of the paper, we look at the various perceptions and insights of the researchers on the issues of business excellence.

Understanding Business or Performance Excellence

Much has been written about Total Quality Management (TQM) practices and many benefits that these practices bring to the organization that successfully adopts them. Many organizations have tried to implement these practices but have not achieved any competitive advantage while many organizations have implemented TQM with great success worldwide achieving competitive advantage.

Some observers have agreed that the problem lies with the failure to fully implement all the key TQM practices (Hickman & Wageman, 1995) or with absence of complementary assets, which must be combined with TQM to achieve competitive advantage. *(Carmen, etal. 1996; Waldman & Gopalakrishnan, 1996).*

The situation one works "research is not providing the corrective function for TQM that could and should" (Hackman & Wageman, 1995). For instance, a reason given for the lack of conclusive evidence in the literature lies in the treatment of TQM as a "discrete phenomenon" (Westphal, Gulati, Shortell, 1997). In fact Hackman & Wageman found that only four percent of the 99 articles published between 1989 – 1993 on TQM "assessed the degree to which TQM interventions actually were in place" (1995). Given the complexity and pervasiveness of implementing TQM in an organization (Westphal, etal., 1997), it is important to assess the degree to which TQM practices have been implemented when evaluating TQM's relationship with competitive advantage. It has been argued that for an organization to realize the value of TQM implementation, it must have an internal organizational structure that is capable of fully supporting the implementation. (Waldman & Gopalakrishnan, 1996). According to Shea, Howell, (1998), preferred structure organizations that implement TQM, balances the need for control of activities with the flexibility needed to respond & adopt quality to changing market place.

Recent literature has begun to describe and evaluate TQM as a potential source of competitive advantage (Powell, 1995). The implementation of TQM is accomplished through a set of practices that supports the TQM philosophy (Dean & Bowen, 1994). (Douglas & Judge Jr., 2001), has identified seven key or common practices that combine to support the TQM philosophy. These are: Top management, Team Involvement, Adoption of Quality Philosophy, Emphasis on TQM-oriented Training, Focus on Customer, Continuous improvement of Processes, Management by Fact and use of TQM methods/tools for Improvement.

Despite its popularity and widespread implementation, there is considerable confusion about TQM (Reeves and Bednar, 1994) concluded that part of the contradictions in the current literature could be attributed to the absence of global definition of quality. However, there are some underlying principles that unite the various models of TQM. (Dean & Bowen, 1994) suggests that there are three distinctive principles that underpin the various TQM models. First is Customer Focus, the second is Continuous Improvement and the third is Teamwork amongst employees.

Other distinctive features of TQM like visionary leadership, process management, individual and organizational learning, internal and external cooperation, employee empowerment and

fulfillment (Anderson, etal., 1994) are all related to the above principles. (Ojha, 2000) has done empirical studies on the above factors for Canadian Hospital to corroborate the work of Anderson, etal. In 1994, (HO, Samuel Kin, 1999) has provided a perspective on Business Excellence in his TQMEX Model where he has tested this model in Hong Kong, Japan, and UK. The importance of 5S, QCC, BPR, ISO 9000 and TPM have been highlighted for TQM and Business Excellence.

(Kanji, 1998, and Kanji & Wallace, 2000), has developed a structure model for the measurement of the Business Excellence where 14 interrelated latest variables are introduced based on the Japanese, American and European Business Models for Excellence. A typical example of Business Excellence Index (BEI) for group of companies is given. Higher the BEI, the company is eligible for the quality (excellence) award.

Gregory H. Watson, 2001, the President of American Society of Quality emphasizes the 4 Es for Excellence for any organization. They are:

1. Effectiveness – doing the right thing
2. Efficiency – doing the right things right
3. Economy – doing the right thing right and inexpensively
4. Environment - doing the right thing right, inexpensively and sustainably.

(Dahlgaard, Jens J. and Dahlgaard Su Mi Park, 1999), have through a case study of an international electronics company, have looked at developing a culture for innovation and creativity and learning for business excellence by applying the European Model for Excellence (EFQM).

Westland, Anders H., in Sweden & Austria has done research on measuring environmental impact in the EFQM system. (Kanji & Moura, 2001) have worked on measuring leadership process for Business Excellence. (Russell, Steve, 1999) has done research on looking at an Excellence Model from “outside in” i.e., starting with business results and asking questions: what results are you seeking and what do you need to do to achieve these?

(Eskildsen Jacob K., Dahlgaard Jens J., and Norgaard Andrews, 1999) have done work on relationship between business excellence, learning and creativity. (Levin, Daniel Z., 2000) has done studies on organization learning and the transfer of knowledge for Quality improvement in an Automobile industry in USA. (Davenport, Harris, etal., 2001), has shown how organizations can build analytical capability for Excellence. (Kanji and Wang, 1999) has looked into Business Excellence Model for Supply Chain and how Supply Chain Excellence leads to Business Excellence. (Kraatz, Mathew S. and Zajac, Edward J., 2001) have examined how Organizational Resources affect change and performance in Turbulent Environments. Results indicate that organizations processing grater stocks of historically valuable resources were much less likely to engage in adaptive strategic change. Four distinct perspectives regarding the likely effect of resources on strategic change are illustrated.

(Kaplan, Robert S. and Norton, David P., 1992) have come out with the concept of a balanced score card which can track the key elements of a company’s strategy from continuous improvement and partnership to teamwork and financial measures. The concept encourages organizations to link its performance measures into four perspectives.

1. Financial perspective (how to we look share holders?)
2. Customer perspective (how do customers see us?)
3. Internal business perspective (what must we excel at?)

4. Innovation and learning perspective (can we continue to improve and create value?)

(Kaplan, Robert S. and Norton, David P., 2000), have published a book "The Strategy Focused Organization" where they discuss on various companies mostly American and European, how they apply Balanced Score Card to thrive in Business Environment and excel in it.

(Ulrich, Dave, 1998), of University of Michigan, USA, has published a book "Delivering Results" – a New mandate for Human Resource Professionals, talks about the new challenges in HRM function for 21st century companies. (Neely, Andy, 1998 and 2001), has published a book "Measuring Business Performance". This work is a classic work which can inspire people to understand how to measure and improve their Business Performance. (Allen, Richard S. and Ralph, H. Kilman, 2001), in their paper "How well does your reward system support TQM", has emphasized on linking employee performance to the organization's strategic objectives. (Pfeiffer, Jaffrey, 1998), has researched in American companies and has come out with seven successful HR practice for excellent organizations.

(Sharma, Sunil, 1997), has looked at TQM implementation approach in selected companies in Indian Engineering Industries based on a well designed questionnaire. He has looked at electronics, light experience industry, heavy Engineering industry, textile industry, chemicals and automobile industry. 150 companies have been taken for analysis. (Jain, Arun Kumar 1998), as a principal researcher, for All India Management Association has published a book "Corporate Excellence". Twenty company Case Studies have been published with a view of looking at change management strategies in those companies for achieving corporate excellence. (Mehta, Janak, 1999), has given a general framework for TQM and Business Excellence in the Indian context. He has also looked into the role of Government and Economic Operators in India in this context. (Jain, Arun Kumar, 2000), has written a book on "Competitive Excellence – Critical Success Factors", based on country-wide across-industry research incorporating Strategy and Organization & Theory and Practice.

Through a preliminary primary research, among five Indian companies the concept of human resource flexibility is explored in the next section of the paper.

Research Design and Method for Primary Research on the issue of HR Flexibility

Selection of the Sample

The companies undertaken for study are Tata Steel, the first integrated Steel company in India as well as Asia, now an awarded company for Business Excellence the JRDQV Model for excellence based on the American model for Business Excellence (MBQNA) and the European model for Business Excellence based on EFQM, i.e. CIT-EXIM AWARD for Business Excellence, Maruti Udyog Ltd., the largest car-manufacturing company in India with the coloration of Suzuki Motor Corporation of Japan, again an awarded company for Business Excellence on the European Model for Business Excellence, which is called CII-EXIM AWARD in India; Infosys Technologies, one of the top software companies in India, again an awarded company (CII-EXIM AWARD) for Business Excellence, and a central company like Hero-Honda Motors Ltd, the largest 2-wheeler producing company in the world based in India, which is not applying any of the three popular models for Business Excellence or TQM implementation but is using world class manufacturing techniques for their competitive advantage as a central company for comparison purpose.

Data Collection Tools

A separate questionnaire designed for the HR practices based on the challenges for HRM in the 21st century excellent organization as suggested by (Dave Ulrich, 1998) is used for looking at TQM and HR Practice relationship. Through these questionnaires primary data is captured from the Different Companies from Head of TQM Implementation or the CEO of the company and Head of Human Resources in the companies under study.

The case methodology is adopted for the research design, where survey as an instrument and interview with the head of each organization under study.

Case study tactics as advocated by Robert K Yin in his work, "Case Study Research Design & Methods" (1994), with Single Case Design for a company i.e., single unit of analysis is undertaken for looking at the HR flexibility issues in select Indian organizations.

Findings of the Research

Primary exploratory research is carried out on these companies using the instrument designed by Dave Ulrich and Jill Conner on the four awarded companies and the control company taken for the research to see how Business Excellence Strategy or TQM Strategy Implementation has an impact on Human Resources function, using the instrument designed by Dave Ulrich and Jill Conner. The paper shows even through, exploratory in nature, that companies which are applying TQM strategy in a structured manner through any structured model or companies having the competitive advantage in their industry does definitely have an important role for Human Resources function or process in these companies. Human Resources functions role and practices plays a very important role for TQM strategy implementation for having a completive advantage with the help of this exploratory research.

It can be seen from Table 4 that the companies Tata Steel Limited (TS), Infosys Technologies (Infy), Sundaram Clayton Limited (SCL), Maruti Udyog Limited (MUL) and Hero Honda Limited (HHL) are scoring high on a likert scale of 1-5 (1=low; 5=high) on most of the parameters. But, the interesting inference that can be drawn is that Sundaram Clayton Limited, which is applying the philosophy of TQM strategy in a structured manner using the Deming Model, scores high on most of the dimensions as compared to other organization.

Table 4: Human Resource Role-Assessment Survey Data

HR Roles	TS	Infy	SCL	MUL	HHL
HR helps the organization…					
Accomplish business goals	4	4	4	3	4
Improve operating efficiency	3	3	4	3	2
Take care of employees' personal needs	4	4	5	4	4
Adapt to change	4	4	5	3	4
HR participates in...					
The process of defining business strategies	3	3	5	3	3
Delivering HR processes	5	4	5	3	3
Improving employee commitment	4	4	5	3	4
Shaping culture change for renewal and transformation	4	4	5	4	3
HR makes sure that…					
HR strategies are aligned with business strategy	5	4	5	3	4
HR processes are efficiently administered	5	4	5	3	3
HR policies and programs respond to the personal needs of employees	4	5	5	3	4
HR processes and programs increase the organization's ability to change	4	5	4	3	4
HR effectiveness is measured by its ability to . . .					

HR is seen as…					
A business partner	3	5	4	3	4
An administrative expert	4	4	4	4	4
A champion for employees	4	5	5	3	4
A change agent	3	5	5	3	3
HR spends time on…					
Strategic issues	4	4	5	3	3
Operational issues	4	3	4	4	4
Listening and responding to employees	5	4	5	4	5
Supporting new behaviors for keeping the firm competitive	3	4	5	4	4
HR is an active participant in…					
Business planning	3	4	4	3	4
Designing and delivering HR processes	5	5	4	3	4
Listening and responding to employees	5	4	5	4	5
Organization renewal, change, or transformation	4	5	5	3	4
HR works to…					
Align HR strategies and business strategy	5	5	5	3	4
Monitor administrative processes	3	4	5	4	4
Offer assistance to help employees meet family and personal needs	4	4	5	4	5
Reshape behavior for organizational change	4	4	5	3	3
HR develops processes and programs to…					
Link HR strategies to accomplish business strategy	4	4	5	3	4
Efficiently process documents and transactions	4	4	5	3	4
Take care of employee personal needs	4	4	5	3	4
Help the organization transform itself	3	4	5	3	4
HR credibility comes from…					
Helping to fulfill strategic goals	5	4	5	3	4
Increasing productivity	5	4	5	3	4
Helping employees meet their personal needs	4	4	5	3	4
Making change happen	4	4	5	3	4

As discussed earlier, organizational sustainability demands flexible resources, processes, structures and strategies. In the next part of the paper we try to establish the relevance of flexibility in organizations which are moving towards business or performance excellence.

Developing Strategic Flexibility for Business Excellence

Looking at the criteria's for business excellence, we can say that flexibility is a core component of an organization. To develop strategic flexibility, organizations need to develop flexibilities in managing their resources and processes, and this ability can be transformed as core competencies in the long run. These organizations are better equipped to adjustment to the requirements of the environment, which help them to achieve greater performance as compared to companies that do not implement quality management programs.

Each criteria in the MBNQA should be viewed both in terms of resource flexibility and process flexibility. Leadership is a process which requires flexible resources i.e., the ability of leaders to guide and sustain an organization will depend on the flexibility of the stakeholders. Be it flexible works teams, communication and engagement, empowerment, recognition etc., the process flexibility will determine the kind of resource flexibility an organization has.

A strategic plan is a reflection of and a tool for that shift in direction. It creates a synergy between new and old facilities that lets you deliver required quality across the organization. Hence, strategic planning requires managers, technology experts etc., who examine and evaluate existing facilities and processes, their condition, what it can and cannot do, and what

more facilities and services are needed to achieve business results. Hence strategic planning requires flexible resources that can promote flexibility in organizations to adapt to changing customer and market requirements.

Changing customer demands and the availability of products and services has made the customer more powerful and demanding. Hence organizations are feeling the pressure due to reducing margins, which have forced them to think of improving efficiencies, building core competence & ensuring the customer gets the best for his money. Outsourcing non-core activities, making use of information technology, develop market orientation; investments in customer profitability, retention, and loyalty are some of the initiatives towards customer and market focus. This results in customer communication, interaction, and knowledge transfer, which help organization to develop better products and services.

Workforce focus requires creating a culture and environment where employees can balance their responsibilities to work, family, education and other personal needs. Today, employees have more career opportunities than ever, which present a real challenge for HR managers who must handle their development. With companies expanding their base both locally and globally, the employees demand flexibility and control over where, when and how work is done in order to achieve business objectives and meet personal needs. Therefore, flexible work environment and teams, training, development, performance and compensation, empowerment, among other necessary functions require HR flexibility.

Process flexibility is a very important criteria which is desirable in all organizational processes be it manufacturing and supply chain, product design etc., as it ensures that errors in the design and conceptualization and other sources of variations, can be controlled by developing process which are flexible enough to take care of fluctuations. Process flexibility is vital to the successful development and timely delivery of quality products and services to customers. So whether is the procurement, manufacturing, packaging, delivery, customer support process; flexibility holds great relevance in adapting to ever-changing business requirements.

Desired business results can only be achieved if organizations develop flexibility in business processes, functions, structures, resources and capacities, culture and technology. Business results are an end, and the end can only be desirable if the means to the end is well directed. Hence developing flexibility through result-driven culture, management practices, policies procedures and guidelines, guidance and support, training & development, senior management commitment and sponsorship etc. will give desired business outcomes.

Desired business results for strategic flexibility towards achieving business or performance excellence can be achieved only if continuous improvement and innovation is built into each process. Therefore, measurement and analysis of data is needed to improve existing processes. As part of the improvement cycle, it is also important to share and disseminate the knowledge among the stakeholders. The value of an enterprise is determined by the way it creates, uses and reuses knowledge to add value to its processes and products, and improves customer relationship. The Knowledge Management system should enhance workflow management, reduce duplication of efforts, enable decision making and provide for a flexible framework integrating people, processes and technology for delivering business results.

Organizations have realized that competing in surviving in the turbulent marketplace requires them to make use of innovative technologies including information technology. As the complexity of IT increases, and as pressure is exerted on IT departments to align themselves to ever-changing business objectives, IT flexibility will become progressively more important as a strategic goal for organizations.

While strategic flexibility for moving towards business excellence is a broad concept, we see how flexibility holds relevance in the criteria's of moving towards business excellence. Though, we have taken MBNQA model for business excellence to discuss the issues of strategic flexibility, other business excellence models like the EFQM or Deming can be used to emphasize on the relevance of flexibility for achieving business or performance excellence.

Figure 4. integrates the concept of developing strategic flexibility and its relevance in moving towards business excellence. The environment variables or constraints are the drivers of innovation and change, which forces an organization to develop capacities to overcome these market forces. Flexibility at the core helps organizations to develop core competencies that determine the ability of the organization to deliver market and customer needs and bridge the ever-changing gap. Organizations that are successful in developing flexible resources and processes are able to continuously improve and innovate in a never ending learning cycle. Organizations develop strategic flexibility in the learning process, which help them in achieving business or performance excellence.

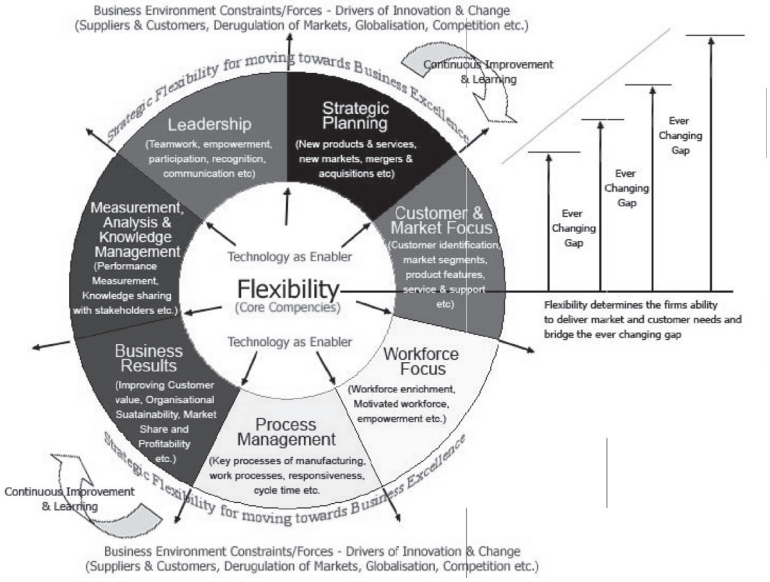

Figure 4: Developing Strategic Flexibility for Moving towards Business Excellence

Conclusion

The framework integrating the concept of flexibility and business or performance excellence for an organization looks at how environment variables or constraints drive an organization towards innovation and change. This forces an organization to develop capabilities and core competencies that determine the ability of the organization to deliver the ever-changing market and customer needs.

Organizations that are successful in developing flexible resources and processes are able to continuously improve and innovate in a never-ending learning cycle. Organizations develop strategic flexibility in the learning process, which help them in achieving business or performance excellence.

Through this exploratory research, it has been shown that companies which are applying

TQM strategy in a structured manner using any model for business or performance excellence, does definitely have an important role of Human Resources flexibility as their foundation for moving towards excellence for gaining completive advantage.

References

- Agarwal, Premvrat & Singh, T.P (2001), Quality Grid: A Systemic Approach for Evaluating and Correcting Business Direction, *Globalization, Flexibility and Competitiveness, A Technology Perspective*, Vikas Publishing House Pvt. Ltd., New Delhi, India
- Allen, Richard S. and Kilman, Ralph H. (2001), How well does your Reward System Support TQM? Linking employee performance to organization's strategic objectives, *Quality Progress*.
- Anderson, J.C., etal. (1994), A Theory of Quality Management Underlying the Deming Management Method", *Academy of Management Review*, 19(3), 472-509.
- Carmen, J. Shortell, etal. (1996), "Keys for Successful Implementation of Total Quality Management in Hospitals", *Health Care Management Review,* 21(1): 48-60.
- Chanopas A., Krairit D. & Khang B. D. (2006), Managing information technology infrastructure: a new flexibility framework, Management Research *News, 29 (10), 632-651*
- Bucki Janusz & Pesqueux Yvon (2000), Flexible workshop: about the concept of flexibility, *International Journal of Agile Management Systems*, 2/1, 62-70
- Dahlgaard, Jens J. & Dahlgaard, Su Mi Park (1999), "Interpreting Business Excellence and Innovation Management: Developing a Culture for Innovation, Creativity and Learning", *Total Quality Management*, 10(4&5), S465-S472.
- Dangayach, G S, Deshmukh, S G (2001), Manufacturing Strategy Perspective on Flexibility: A Case of Select Indian Companies, *Global Journal of Flexible Systems Management*, 2(2), 21-30
- Davenport, Thomas, etal. (2001), "Data to Knowledge to Results, Building an Analytic Capability", *California Management Review*, 43 (2)
- Dean, J., & Bowen, D. (1994), "Management Theory and Total Quality: Improving research and practice through theory Development", *Academy of Management Review*, 19, 392-418.
- Douglas, Thomas J., and Judge, William Q. (2001), "Total Quality Management Implementation and Competitive Advantage: The Role of Structural Control and Exploration, *Academy of Management Journal*, 44(3), 156-169.
- Eskildson, Jacob, Dahlgaard, Jens J. & Norgaard, Ander S. (1999), "The Impact of Creativity and Learning the Business Excellence", *Total Quality Management*, 10 (425), S523-S530.
- Gerwin Donald (2005), An agenda for research on the flexibility of manufacturing processes, International *Journal of Operations & Production Management*, 25 (12), 1171-1182
- Gupta, A. B., Singh, T.P & Sushil (2001), Process Flexibility and Productivity in Engineering Industry, *Globalization, Flexibility and Competitiveness , A Technology Perspective*, Vikas Publishing House Pvt. Ltd., New Delhi, India
- Hackman & Wageman (1995), Total Quality Management: Empirical, Conceptual and Practical Issues, *Administrative Science Quarterly*, 40, 309-342
- Haleman D. Murthy & Janszen H.A. Felix (2004), Flexibility in Operations and Business Innovation, *Global Journal of Flexible Systems Management*, 5 (2&3), pp 23-41
- HO, Samuel, K. M. (1999), From TQM to Business Excellence, *Production Planning & Control*, 10(1), 87-96.
- Jain, Arun Kumar (1998), *Corporate Excellence*, *All India Management Association*, Excel Books, New Delhi.
- Jain, Arun Kumar (2000), Competitive Excellence: An Action Framework Based on Countrywide Research *Integrating Organization Theory and Practice*, Vikas Publishing House, New Delhi
- Kanji, Gopal K. (1998), Measurement of Business Excellence, *Total Quality Management*, 9(7), 633-643
- Kanji, Gopal K., & Wong, Alfred (1999), Business Excellence Model for Supply Chain Management, *Total Quality Management*, 10 (5), 1147-1168.

- Kanji, Gopal K. and Wallace, William (2000), Business Excellence through Customer Satisfaction, *Total Quality Management*, 11(7), S979-S978.
- Kanji, Gopal K., Moura, Patricia (2001), Measuring Leadership Excellence, *Total Quality Management*, 6, 701-718.
- Kaplan, Robert S. and Norton, David P (1992), The Balanced Score Card – Measures that Drive Performance, *Harvard Business Review*
- Kaplan, Robert S. & Norton, David P (2000), The Strategy Focused Organization – How Balance Score Card Companies Thrive in the New Business Environment, *Harvard Business School Press*, Boston, USA
- Kraatz, Mathew S., Zajac, Edward J. (2001), How Organizational Resources Affect Strategic Change and Performance in Turbulent Environments: Theory and Evidence, *Organization Science*, 12(5), 632-657.
- Levin, Daniel Z. (2000), Organizational Learning and the Transfer of Knowledge: An Investigation of Quality Improvement, Organization Science, 11(6), 630-647.
- Mehta, Janak (1999), Business Excellence through Quality – Indian Experience, *Total Quality Management*, 10 (4 & 5), S647-S652.
- Neely, Andy, 1998 (2001), Measuring Business Performance, *The Economist Books Asia*.
- Ojha, Abhoy K (2000)., Total Quality Management: How can we make the Implementation Effective, *Vikalpa,* 25
- Paul, H. and Suresh, B. (2001), Effect of Integrated Manufacturing Strategies on Manufacturing Performance: A Study of some European Multinational, *Globalization, Flexibility and Competitiveness , Technology Perspective*, Vikas Publishing House Pvt. Ltd., New Delhi, India
- Pfeiffer, Jeffrey (1998), A Seven Practices of Successful Organizations, *California Management Review*, 40 (2)
- Powell, T. (1995), Total Quality Management as competitive advantage: A review and empirical study, *Strategic Management Journal*,16, 15-37.
- Raymond B., (1993), Total flexibility management: a managerial approach for developing flexible resources, http://www.allbusiness.com/management/benchmarking-customer-analysis/403563-1.html
- Reeves, C. A., Bednar, D. A. (1994) Defining quality: Alternatives and implications. *Academy of Management Review*, 19, 419-445
- Russell, Steve (1999), Business Excellence: from outside in or inside out, *Total Quality Management*, 10, (425), S697-S703.
- Sethi, A., Sethi, S. (1990), Flexibility in manufacturing: a survey, *The International Journal of Flexible Manufacturing Systems*, 289-328.
- Sharma, Sunil (1997), TQM in Indian Engineering Industries, *Business Publications Inc.*, Mumbai
- Shea, C., & Howell, J. (1998), Organizational Antecedents to Successful Implementation of Total Quality Management*, Journal of Quality Management*, 3, 3-24.
- Sushil (2001), Flexibility in Technology Management: Global Imperatives, *Globalization, Flexibility and Competitiveness , A Technology Perspective*, Vikas Publishing House Pvt. Ltd., New Delhi, India
- Slack Nigel (2005), The Flexibility of Manufacturing Systems, *International Journal of Operations and Production Management*, 25 (12), 1190-1200
- Ulrich, Dave (1998), Delivering Results, A new Mandate for Human Resource Professionals, *Harvard Business review Book*
- Upton, D.M. (1994), The management of manufacturing flexibility*, California Management Review,* No.Winter, 72-89.
- Upton, D.M. (1995), What really makes factories flexible?, *Harvard Business Review*, 73 (4), 74-84.

  Vokurka J. R., Lummus R. R. & Krumwiede D. (2007), Improving Manufacturing Flexibility: The Enduring Value of JIT and TQM, *SAM Advanced Management journal*, 14-21
- Waldman, D, & Gopalakrishnan, M. (1996), Operation, Organizational, and Human Resources Factors Predictive of Customer Perceptions of Service Quality, *Journal of Quality Management*,1(1), 91-107.

- Watson, Gregory H. (2001), The Ease – and E's – in Excellence, *Quality Progress*
- Westphal, J., Gulati, R., & Shortell, S. (1997), Customization or Conformity?, An institutional and network perspective on the context and consequences of TQM adoption, *Administrative Science Quarterly*, 42, 366-394.
- Yin, Robert K. (1994), Case Study Research Design and Methods, *Applied Social Research Method Series*, 5, Sage Publications, London.
- Zhang Qingyu, Vonderembse M. A and Lim Jeen-Su (2006), Spanning flexibility: supply chain information dissemination drives strategy development and customer satisfaction, *Supply Chain Management: An International Journal*, 11(5), 390-399