

Creativity and Innovation for Competitive Excellence in Organizations

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Introduction

The purpose of this paper is to develop a model linking creativity and Innovation to organizational competitive excellence. Drawing upon existing theoretical and empirical evidence the paper develops and presents a conceptual model of the relationship between creativity, innovation and competitive excellence. The paper also presents a case study to support the conceptual model and proposes research propositions based on the relationships suggested by the model.

The term creativity and innovation are often used interchangeably (Man, 2001); however, there is a clear distinction between creativity and innovation, the former being the generation of ideas and the latter its implementation. In this era of globalization and competition, creativity and innovation are considered to be key factors for survival, success and excellence of organizations (Peter Cook, 1998). While creativity is generally of three types, viz. individual creativity, group/team creativity and organizational creativity, this study focuses only on organizational creativity. Likewise, innovation is also classified as incremental innovation and radical innovation. Organizational climate, organizational culture, leadership style, resource and skill, and structure and systems are five factors that affect organizational creativity (Andriopaulose, 2001). Innovation friendly strategy, structure, top management style, middle management support and effective modes of managing innovation are five factors that affect organizational innovation (Khandwalla & Mehta 2004). Knowledge and learning play critical roles in quality creation and value innovation. While single loop and double loop learning are useful for incremental innovation, triple loop learning is important for radical innovation (Wang & Ahmed, 2002). It is postulated that organizational creativity will enhance creative excellence and organizational innovation will enhance innovational excellence. And creativity and innovation together will enhance competitive excellence of the organization.

The case study presented at the end, of a small and medium enterprise (SME) in Kerala which bagged the Rajeev Gandhi National Quality Award in 1999 tries to identify the determinants of creativity and innovation that lead to organizational excellence. In-depth interview of the managing director, general administrator and six other senior managers helped the authors to test the suitability of the model to be used for future research using quantitative method.

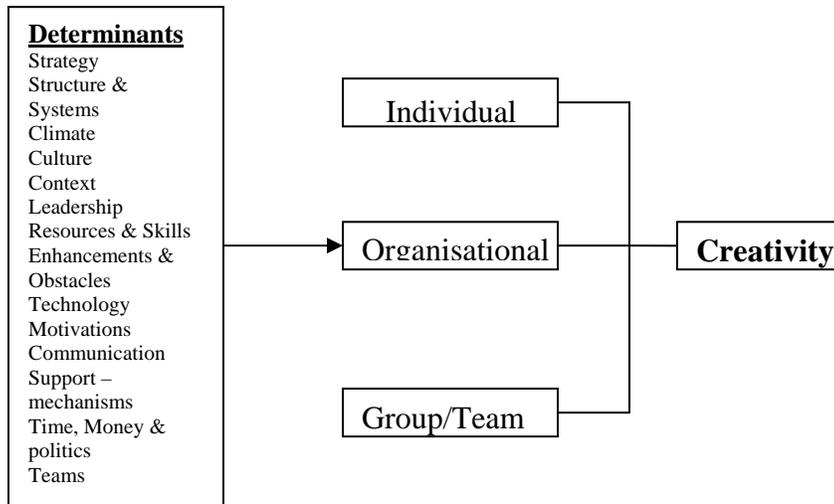
Literature Survey

Definitions of creativity, innovation and excellence

Cook (1998) considered creativity as an element of competitive advantage for organizations. The most profitable new products will be those that meet the customer needs more effectively than the competitor's products, and are therefore preferred by more customers (Mc Adam and McClelland, 2000). Innovation and creativity benefit companies beyond direct sales growth or efficiency improvements. A company that establishes an effective creativity and innovation process is also likely to realize social benefits that arise from team working and employee motivation (Cook, 1998). Majaro (1988) looks at innovation as a process where ideas are generated and transformed for implementation to business products and services. Creativity is seen as the front end of the innovation process. Innovation typically occurs through four stages, viz. idea generation, screening, feasibility and implementation. Amabile (1983, 1997, 1998) defines creativity as the process involved in developing an idea for a new product. Gurteen (1998) defines creativity as generation of ideas whereas innovation is putting these ideas in to actions by

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sifting, refining and implementing. Hence he believed that creativity required divergent thinking process, while innovation a convergent thinking one. Although the fundamental research on creativity dates back to 1960, by the 90s scholars had started appreciating its value in competitive advantage. The concept of organizational excellence as a topic of academic research and debate originated with Peters and Waterman (1982) in their book “In search of excellence”. European Foundation for Quality Models (EFQM) guidelines (1999) defines excellence as outstanding practice in managing the organization and achieving results, all based on a set of eight fundamental concepts, viz, result orientation, customer focus, leadership and constancy of purpose, management by process and facts, people development and involvement, continuous learning, innovation and improvement, partnership development and public responsibility.



Model of Organizational creativity based on the literature

Enhancing Creativity: - Andreopoulos and Lowe (2000) mention ‘perpetual challenging’ as a method to enhance organizational creativity. The process of perpetual challenging in creative organizations occurs through *adventuring*, *overt confronting*, *port folioing* and *opportunising*. Through three processes of adventuring, namely, introspecting, scenario making and experimenting, individuals are encouraged to explore uncertainty so that they can generate innovative solutions. Incremental risk taking and mistake making are part of experimenting. Overt confronting (conceptual confronting and contextual confronting) refers to the deliberate set of work related debates used among employees so that their creative thinking is fully utilized. In port folioing, i.e. simultaneous port folioing, sequential port folioing, conceptual port folioing and contextual port folioing, creative employees are encouraged to get involved in a diverse range of projects or teams related to projects. Opportunising refers to the process through which creative employees identify and get involved in projects which are considered as commercially or creatively interesting. Creative organizations need to be skilled at creating, acquiring and transferring knowledge and modifying behaviors by using these methods to reflect new knowledge and insights.

Obstacles to Creativity: - Jalan and Kleiner (1995) claim that there are obstacles to the full development of the creative potential of both organizational and individuals and there are methods to overcome these obstacles. Recent popular developments for developing creativity are brain skill management program, use of fisher association lists, game playing in small groups and establishing a reward for creativity. It is equally important to implement proposed solutions to determine its effectiveness for solving organizational problems. Edwards (1989) proposes the

team evaluation and management system model (TEAMS) to measure the contributions of organization members. Leaders and managers should set it as a goal for themselves to allow the creative urge to occur in their organizations to prosper. Mortiner (1995) suggests that in order to achieve competitive advantage, a product innovation matrix should be developed to help marketing and technology staff to think in terms of innovation for the customer. Risks need to be managed from the beginning by identifying them, assessing their likelihood and possible impact and preparing an overall action plan to deal with them. Projects which exceed budgets cost and time scales, projects that are overrun the budget by more than 100%, and project which had been major failure need to be dealt with. Sometimes unsuitable projects need to be discouraged so that further damage is minimized.

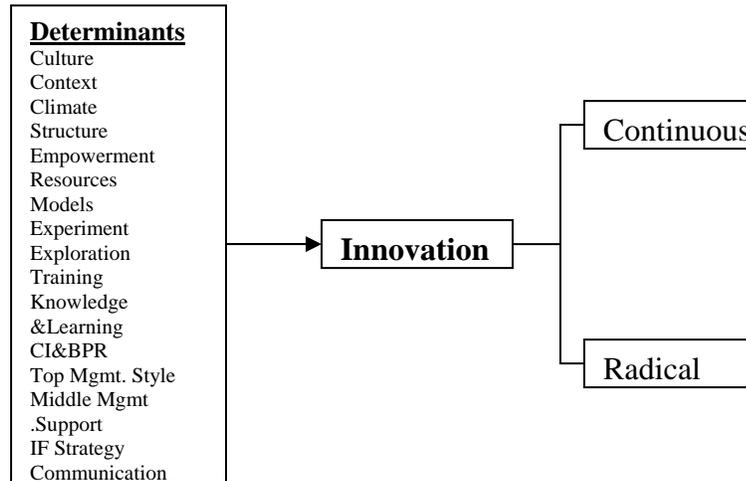
Determinants of Creativity: - Five factors, namely organizational climate, leadership style, organizational culture, resources and skills, and structure and systems of an organization affect organizational creativity (Andreopoulos, 2001). While Amabile (1997) has demonstrated the relationship between individual creativity and organizational innovation, Woodman, Sawyer & Griffin (1993) have demonstrated the relationship between individual, team and organizational aspects of creativity.

Leadership and creativity: - As per Peter Cook (1998), a fundamental challenge leaders face in the 21st century is how to profit from individual potential and then leverage it so that it produces organizational innovation and excellence. Creative organizations should attract, develop and retain creative talents if they want to remain competitive. Leadership styles conducive to creativity are participative leadership, leader's vision for creativity and ability to develop effective groups. Cook proposes that leaders must effectively communicate a vision conducive to creativity through any available formal or informal channel of communication and constantly encourage employees. Leaders should also be in a position to balance employee's freedom and responsibility (Amabile, 1998). Individuals with strong leadership will consider themselves to have more potential for innovation than individuals with weak leadership potential and individuals with strong potential for innovation and creativity will be more likely to practice them when they perceive strong support from work place than weak support (DiLiello and Houghton, 2006). Their model suggests encouraging self-leadership among organizational members while building organizational environment to support innovation and creativity.

Climate, Context, and Culture for Creativity: - Organisational climate could be determined by measuring the level of participation, freedom of expression, performance standards, interaction with small barriers, large number of stimuli, freedom to experiment and building on earlier ideas. Creativity is a key element to competitive advantage. When the context is right, creativity techniques can play their role in raising the level and type of creativity within organization (Peter Cook, 1998). The corporate research foundation lists six key drivers for future success, namely structural flexibility, innovative power, international orientation, human resources, growth markets and quality of management. Creativity is 80% context and 20% techniques (Peter Cook, 1998). Creative strategy can be explained by a three legged stool analogy taking creative strategy on the top, and culture, leadership and values, structure and systems and skills and resources being the three legs of the stool. Organisational culture should be developed to encourage open flow of communication, risk taking, self initiated activity and teamwork. Moreover, management should trust and respect its employees.

Determinants of Structure for creativity: - The structure and systems required for creativity include long term employment of employees, a flat structure, fair supportive evaluation of employees and rewarding of creative performance (Amabile, 1979, 1983, 1990).

Time, Money and Politics: - Amabile (1998) also argues that two main resources that affect creativity are time and money. She stresses explicitly the importance of the quantity of time and money that should be given to employees, since they can either support or constrain creativity. She suggests that there is a ‘threshold of sufficiency’ and within this threshold resources can affect creativity positively and beyond it negatively. Infighting, politicking and gossip are particularly damaging to creativity because it can distract workers from work and force them to protect their employment.



Model of innovation based on the literature

Determinants of Culture influencing creativity & Innovation: - Martins and Terblanche (2003) identifies strategy, structure, support mechanisms, behavior that encourages motivation and open communication as some determinants of organizational culture which influence creativity and innovation. Values, norms and beliefs play a role in creativity and innovation and can either support or inhibit creativity and innovation depending on how they influence individual and group behavior. Organizational culture fills the gap between what is formally announced and what actually takes place (Martins, 2000). According to Martins (1987,1997) the dimensions of the culture encompasses mission and vision, external environment, means to achieve objectives, image of the organization, management processes, employee needs and objectives, interpersonal relationship and leadership. Further explanations about the determinants of culture, in the paper, helps one to prepare an instrument to measure the determinants of culture supporting and inhibiting creativity and innovation in an organization. Factors that are derived for various determinants and their items are given below:

Strategy	Vision, mission and purposefulness
Structure	Flexibility, freedom, autonomy, empowerment, decision making, cooperative team and group interaction
Support mechanisms	Reward and recognition, availability of resources (line information, technology and creative people)
Behavior that encourages innovation	Mistake handling, idea generation, continuous learning culture, risk taking, competitiveness and support for change and conflict handling
Communication	Open communication.

Continuous Innovation in SMEs: - Mc Adam, Stevenson & Armstrong (2000) are of the opinion that small and medium enterprises (SMEs) which had adopted a culture of continuous

improvement will build a culture of innovation beyond the culture of continuous improvement to achieve increased competitiveness. Continuous Improvement (CI) may be defined as an evolutionary incremental process which leads to a better way to compete and that adds value to the existing processes and encompasses the entire work force of the organization (Wilkinson et al (1998), Zairi (1994), Juran (1989) and Hill and Wilkinson (1995). Peters and Waterman (1982) see innovative companies as characterized by creative people developing new products and services under continuously changing environment. Brown (1994) defines a concept called Total Innovation Management (TIM) which concerns itself not only with product development but with implementing creativity across all aspects of an organization. Radical innovation refers to products and processes that result from advances in knowledge whereas incremental innovation refers to the continual process of improvement of techniques (Tidd, Bessent & Pavitt, 1998). For stronger competitive position, cost and quality, SMEs should become more innovative (Lefebvre and Lefebvre, 1993). Continuous improvement and innovation are actually integrated in an evolutionary process that can turn innovation into successful innovation and business excellence (Kaiji, 1996). Although CI can simplify or streamline a process, it never asks whether the path selected was the right one. Hence it is necessary to progress from CI to effective business innovation (Samaha, 1996). The model developed and tested by Mc Adam et al (2000) proves that businesses with a culture of CI could more readily adopt an innovation culture.

Determinants of climate for innovation: - As per Ahmed (1998) innovation is the engine of change and in today's competitive environment, resisting change is dangerous because change while it brings uncertainty and risks also creates opportunity. Culture is a primary determinant of innovation and the culture of innovation need to be matched against appropriate organizational context. The feel of the organisation reflects both its culture and climate. The climate of the organization is inferred by its members through the organizational practices, procedures and rewards systems deployed and is indicative of the way the business runs itself on daily and routine basis. Schneider, Gunnarson & Niles-Jolly (1996) determined dimensions of climate as the nature of the interpersonal relationship, nature of hierarchy, nature of work and focus of support and rewards. Closely adhered to the concept of climate is the culture, a reflection of climate but operates at a deeper level. Culture has implicit and explicit levels. By training, it is possible to change the explicit culture but rarely the implicit one. The strength of the culture depends on the match between the implicit and explicit aspects of culture. Another way of looking at the culture is in terms of cultural norms along two dimensions of intensity and crystallization (O'Reilly, 1989). It is only when there exists both intensity and crystallization (consensus) that strong culture exists. More over strong culture work at the implicit level. This is why it is very difficult to develop or change culture. Again an innovative culture can help senior management to implement innovation strategies and plans.

Individual factors such as personality traits, cognitive factors and motivational factors affect innovation while organizational factors such as structure (mechanistic or organic), cultural norms including challenge and belief in action, freedom and risk taking, dynamism and future orientation, external orientation, trusts and openness, debates, cross functional interaction and freedom, myths and stories, leadership commitment and involvement, awards and rewards, time and training, corporate identity and unity, and organizational autonomy and flexibility affect innovation. Corporate mission and philosophy statements, leadership, empowerment including action boundary, risk tolerance, structure involvement, accountability, action orientation rather than bureaucracy orientation also support innovation. Balanced autonomy, personalized recognition, integrated socio technical system and continuity of slack are required climate for innovation. Companies need to focus on culture and climate for innovation rather than only concentrating on new products and services.

Model of innovation:-As international competition intensifies and life cycle of the product shortens, the pressure to innovate heightens. But organizations suffer from an inability to sustain innovation over the long term. Innovation process itself is constantly evolving (Ahmed, 1998). Rothwell (1992) suggests five models of industrial innovation, indicative of evolutionary stages in the innovation process called technology push model(1960-70), market pull model (1970-80), cross functional coupled model (1985), integrated (parallel processing) model (1990) and integrated system learning (ISL) model (sustainable innovation model). While these models represent the hard side of innovation, one cannot avoid the soft side of innovation like culture, leadership, support etc. Thus it is in the balance between the soft and hard side factors that innovation success appears to be founded (Cooper and Klieuschlud, 1987). Overall innovation index can be calculated averaging the score for percentage sales from new products (in last five years) and percentage success/failure rate. The first depicts the innovation success in terms of market effectiveness while the second is a measure of organizational effectiveness. Based on this, a company could be classified as highly innovative, fairly successful innovators and poor innovators. High innovators and fairly successful innovators are able to contribute to the company's effectiveness, achieve customer satisfaction, create competitiveness and lead the corporate to excellence. They could do product innovation, process innovation, organizational innovation or service innovation. The success of these companies are based on culture of innovation and developing structures and human resource pool necessary to support and nourish a climate of creativity and innovation. In conclusion, as competitive pressures increase the need to continuously adapt, develop and innovate has become a basic building block for organizational excellence. It again emphasizes the hard and soft side of innovation as structures and processes and a good blend of which will lead to organizational excellence.

Denton (1999) is of the opinion that innovation has always been at the centerpiece of competitiveness. Experimentation, exploration and a drive to maximize resources is as essential for companies as it is for nations. True innovation often occurs in sudden dynamic shifts. It is this sudden competitive changing innovation that open up and close out vast areas of commerce. Any sudden innovation will be followed by continuous improvement and vice versa.

Training for creativity and innovation:- Keeping up with the means of improving performance is becoming an essential part of every training program. It is interesting to study the implications of training program on creativity and innovation. Peters (1997) reiterates that the world of business is in a permanent state of flux where constant innovation strategy is the key to survival of the organization. Competitive and successful companies are those that create new knowledge and discriminate it widely throughout the organization (Nonaka and Takeuchi, 1995). Senge (1994) argues that for creating a learning organization, individual and groups should be encouraged to learn five disciplines, namely personal mastery, mental models of personal learning and growth, shared vision for organization, commitment to learning and system thinking. The process of stimulating creativity and innovation is fundamentally based on building the intellectual capital within the organization that will yield the competencies and capabilities for improved performance. In this respect the notion of a learning organization and training itself has a major role in making a company innovative (Roffe, 1999).

Knowledge and learning: - Innovation and creativity are often used interchangeably (Man, 2001) but creativity is knowledge based and innovation is value added work. Innovation is not just creativity but also about implementation (Tong, 2000). Innovation is a social phenomenon. It occurs when people think about new ideas, accept these and work together to realize these ideas. Technological growth is evident when brain or knowledge based work increases, stress and strain eliminated, quality of work life is enhanced and tangible savings are evident (Man, 2001). An innovation mindset is important. A right brain mind set produces enquiries. What and why questions triggers are used to challenge current paradigms and this forms the basis to look at the

accepted logic and seek changes. These changes become innovative when the solutions are win-win for the customers, organization and team members.

Wang and Ahmed (2002) examine the role of knowledge and learning in the quality and innovation process. For creating quality and value innovation there are three levels of organizational learning called single loop, double loop and triple loop learning. For incremental innovation single loop and double loop learning is enough whereas for radical innovation triple loop learning is advised. The triple loop learning and radical innovation are needed for sustaining competitive advantage. The role of tacit knowledge (Lay, 2000) and the interaction between the tacit knowledge and explicit knowledge is critical in the triple loop learning (Nonaka and Takeuchi, 1995). Organisational creativity is closely linked with productivity and competitive success in business organization (Evans, 1991). The five S characteristics of creative quality and value innovation are satisfying, surprising, superposing, surpassing and stimulating.

CI, BPR and innovation:- As per Zang and Cao (2002) for achieving competitive advantage both continuous innovation and radical innovation are important. While continuous innovation becomes possible by continuous improvement, for radical innovation business process reengineering becomes necessary. In order to succeed in BPR the organization must change the structure from hierarchical to flat, management goal to change from functional to global, and individual work needs change to team work. There are contradicting variations between BPR and CI in terms of change, effects, involvement, investment, orientation and focus. BPR can be done by functional improvement, process redesign or by business rethinking. Normally a BPR initiative is always followed by CI process and vice versa.

Determinants of Innovation:- In order to survive and prosper in the immense pressure of globalization, organizations in the third world need to redesign themselves for corporate creativity, i.e. for high rate of sustained and successful innovation (Khandwalla and Mehta, 2004). For this, the organization needs innovation friendly business strategy, organizational structure, top management style, middle management practices and effective modes of managing innovation.

Effectiveness and Performance: - Numerous studies have produced evidence which highlights the importance of organizational performance and effectiveness. Deshpande, Farley & Webster (1993) divided culture in to market culture, adhocracy culture, clan culture and hierarchical culture and they further opined that market culture and adhocracy culture help innovativeness and high performance. Dennison and Mishra (1995) identify four cultural traits and values that are associated with effectiveness as involvement, consistency, adaptability and sense of mission or long term vision.

Organisational Excellence: - During the last 20 years, both definition and sustainability of excellence have undergone repeated changes (Hermel and Pujol, 2003). According to Hillman (1994), assessment of excellence is the process of evaluating an organization against a model for continuous improvement in order to highlight what has been achieved and what needs improving. Self assessment= Model + Measurement + Management.

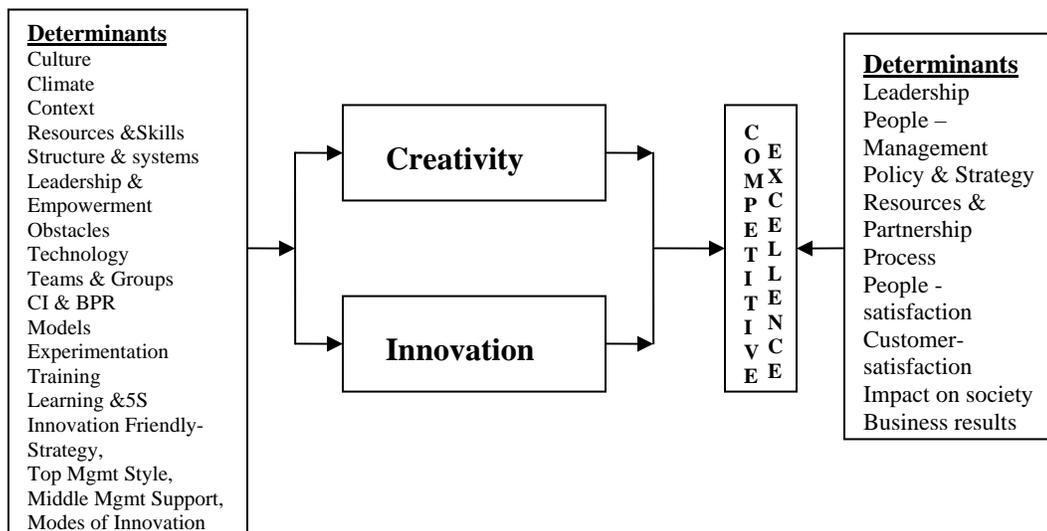
There are five enablers and four result criterion and percentages of importance attached with each criterion in EFQM model. The model proposed and tested by Khandwalla and Mehta (2004) for competitiveness emphasized the need for choosing innovation friendly business strategies, organizational structure, top management style, middle management practices and effective models of managing innovations.

The Gap Analysis: - Existing literature is abundant in explaining creativity, innovation and excellence as separate constructs. It identifies the determinants of creativity and innovation. But

literature seldom sheds light on the relationship between the three. The definition for excellence according to EFQM mentions innovation but the instrument to measure excellence does not include measures of creativity or innovation. This model includes leadership, people management, policy and strategy, resources and partnership and process as the enablers and people satisfaction, customer satisfaction, impact on society and business results as the result criterion. Moreover, existing excellence measurement instrument needs to be validated using statistical methodology by academic experts before it can be used by third world industries, as these models are developed for developed countries.

The Model: - Any model to measure organizational competitive excellence will remain incomplete without including measures of creativity and innovation in this era of globalization and competition. The European Foundation for Quality Management Model (EFQM) developed in the early nineties and other models for excellence measurement are based on nine criterion including enablers and results (Martinsen and Dahlgaurd, 1999). But the model does not consider measures of creativity and innovation. Hence it is suggested to modify the models with measures of creativity and innovation for measuring competitive excellence. Performance indicators are also to be shifted toward considering creativity and innovation, qualitative and quantitative goals, learning and group process and individual and interpersonal levels (Molleman and Timerman, 2002). A case study done in a company which was selected for Rajeev Gandhi National Quality award for excellence reveals the need for including the measures of creativity and innovation to the award models to measure competitive excellence.

Proposed Model

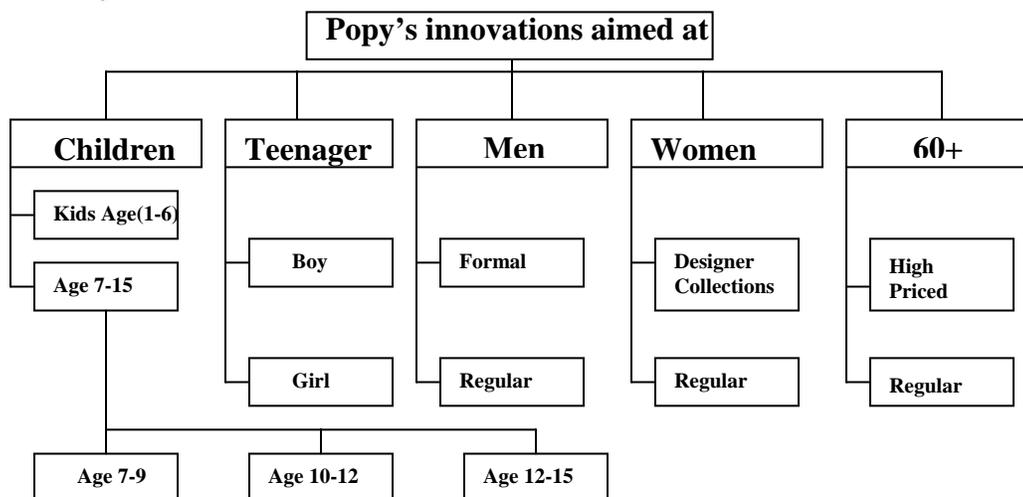


Case Study on Popy Umbrella Mart

Popy umbrella mart, an SME (Small and Medium Enterprise) located at Alleppey (known as Venice of the east) in Kerala is a national leader in umbrella and a success story for creativity and innovation. The mission of Popy is to continually improve its products and services to meet the customer’s needs. Its daily production varies from 9600 to 12000 umbrellas, which represents only half the demand expected in and outside Kerala. Popy removed its website from the internet on account of inability to meet the additional demand created through the internet from India and abroad.

Popy was the first company to be awarded the coveted ISO 9001 certification, for its excellence in the process of umbrella manufacturing. Popy bagged the prestigious “Rajeev Gandhi National Quality Award” in the year 1999 for its continuous innovation for bringing variety of products and its excellent process of umbrella manufacturing. Popy has exhibited exceptional brilliance in bringing quality products, product innovation, marketing of its products, meeting competition and understanding and dealing with culture of customers and employees in Kerala. The long years of experience of V.T.Skariah, the managing director, and modern management inputs from son Davis, an MBA holder, has helped Popy to build up a culture of innovation in their organization. They have diagnosed areas where improvement was necessary, identified parts manufacturers in India and abroad, understood the empowerment requirement of their employees for creativity and innovation, as well as understood the culture of employees and customers of Kerala. Regular interactions with kids and children along with inputs from cartoon films have enabled them to design innovative umbrellas for kids and children. Popy’s creative advertisements have enabled them to capture 50% market share of Indian market for umbrellas. Popy’s product specifications was selected by ISI as a benchmark for Indian umbrellas; as other umbrella manufacturers could not satisfy these specifications, competitors of Popy gradually disappeared from the market. Popy gave full freedom for its employees for nurturing their creativity and innovation. But at the same time each product is given a serial number and a register is maintained on who assembled the product and made the stitching etc. This appears to match Peters and Waterman’s suggestion of freedom with accountability.

Popy has its Research and Development department under the guidance of the managing director and general administrator. They collect information about latest cartoon films and cartoon story heroes from children who visit their showrooms. This resulted in an umbrella with cartoon pictures, which has been hugely popular among kids. Some other innovative ideas include the AC umbrella with ultra vibrant coating, water proof umbrella with WPWR coating, light house umbrella which lights up when opened, godfather umbrella which can double up as walking stick, gems umbrella made out of a single piece of cloth without any stitching, Teflon waterproof umbrella, torch umbrella which can be used as a torch light in the night, comic umbrella with cartoon pictures, five fold Nokia umbrella which look like a cellular phone etc. Umbrella manufacturing in Popy is highly labour intensive. Popy has gone for automation under the leadership of Davis but the product quality is yet to reach the level obtained by manual processing.



Popy’s outsourcing to family units satisfies the self-leadership and prestige need of the people of Kerala. The strategy is to provide raw materials and to get back the finished products from these family units. This year Popy has been declared the best liked product in Kerala after Milma (State

Milk Marketing). The presence of a competitor, John's Umbrella Mart, near Popy keeps them vigilant in terms of innovation and quality. Davis has been given full freedom by his father for experimenting and exploration. Davis introduced the use of computers in designing innovative umbrellas, as well as introduced automation in umbrella manufacturing. Popy is planning to start a factory in Chennai for umbrella manufacturing and intend to increase the number of family production units in Kerala to increase production to meet the demand.

Every consumer with a Popy umbrella in his hand is an advertiser. Popy converted umbrella selling in India to an industry of repute. Earlier, the umbrella industry was not considered for recognition and reward. Popy takes good care of its employees, through welfare programs for its employees, financial support at the time of employees' house construction, marriage of employees' daughters, children's education etc. Popy is also involved in a social welfare society for mentally retarded children. For Popy, the manner in which they accomplish their mission is as important as the mission itself. Popy considers its employees as its source of strength in providing corporate intelligence and determine their reputation and vitality. Commitment and teamwork are their core human values.

Conclusion

Based on the literature findings, as well as findings from the case, it is possible to prepare an instrument to measure creativity and innovation of an organization and to find out the relationship between creativity, innovation and competitive excellence. For measuring excellence it is proposed to use the instrument used by the various Quality Models. It is also suggested that the present instrument to measure excellence is no longer valid as a tool to measure competitive excellence as it does not contain measures of creativity and innovation, which are instrumental in making an organization competitive in this time of competition and globalization. The case reinforces the postulate that various determinants of creativity and innovation such as strategy, structure, culture, leadership, context, climate, technology etc help to bring out innovative and quality products in their journey towards excellence.

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