Organizational Culture: An Indispensable Factor in Innovation

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Summary

Product innovation has become a key factor not only to success and prosperity but also to the survival of any manufacturing organization in the world. Therefore, understanding what drives successful innovation is of paramount importance. This paper reviews the role of organizational culture in determining the innovation activities of an organization. In this context, seven organizational factors, including organizational culture itself, and organizational structure, innovation strategy, R&D expenditure, competencies of the staff, technology, and innovation related external links are reviewed and analyzed. The study found that organizational culture is the domain where other organizational phenomena influence the innovation process. Based on these findings an innovation model was developed to show the central role of the organizational culture and its importance when planning innovation strategies and policies.

Introduction

In the world economy, innovation is seen to play a central role, but the complex process of innovation has been insufficiently understood. At a national level, there is a substantial body of evidence that innovation is the dominant factor in national economic growth and international trade (e.g. see Khandwalla, 1985; Hogsetius, 2003). At the firm level, innovation is seen as the determinant of business success (Freel, 2000). Therefore today, it has become a fundamental element of many firm strategies and government policies to increase competitiveness through innovation at firm level and at regional and national levels respectively (North, Smallbone, and Vickers, 2001). Nevertheless, not all organizations are innovators. In fact, evidence supports that the majority of organizations in most countries, both developed and underdeveloped, are non-innovators (see Freel, 2000; De Silva, et al. 2003).

The propensity of an organization to innovate depends on the environmental opportunities it faces. In order to innovate, a firm must figure out what these opportunities are, set up a relevant strategy, and have the capabilities to transform these opportunities into a real innovation; and do so faster than its competitors. Firms differ in their ability to recognize and exploit environmental opportunities depending on their organizational (sometimes referred to as internal or firm specific factors) characteristics. There are seven organizational factors widely discussed in contemporary

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studies, which are seen as crucially important to innovation. They include organizational structure, innovation strategy, research and development (R&D), employee competencies, technology, innovation related external collaborations, and most of all, the organizational culture. Yet, despite important contributions attributed to culture in the organizational processes, rigorous investigation of the cultural variables is lacking. This study argues that organizational culture is the domain most central to innovation, since it guides or restricts the other organizational factors towards innovation. Therefore, the objective of this study is to investigate the role of organizational culture in determining an organization’s innovation capabilities.

Organizational Factors Affecting Innovation

Organizational Structure: The ability to generate internal knowledge and to exploit external knowledge is a critical component of the innovative capabilities of the firm. Despite advanced practices adopted to enhance firm’s knowledge, many current implementations of these practices have shown limited success (Butler et al., 1998). In addressing this issue, much of the academic literature has been concerned with the loose and tight control systems of the organizational structure. Tight control systems have been designed to reinforce stability and maintain the status quo. However, As Nadler and Show (1995: 12-13) pointed out, the cycle of doing 'more of the same' tends to result in locked-in behavior patterns that eventually sacrifice organizational performance. Hence, although controls may ensure conformity by enforcing task definition, measurement and control, they may also inhibit creativity and innovation.

Organizations in dynamically changing environments need to behave experimentally. Accordingly, organizational structure needs to encourage experimentation rather than formalization, so that 'current' knowledge is generated for easy re-arrangement and adaptation with changing business environment (Malhotra, 2001). By decentralization-delegating, or dispersing power, the organization provides added scope for the generation of imaginative solutions and, additionally, creates local project ownership. In contrast, centralization-concentrated power inhibits flexibility. In this way, vertically extended hierarchical structures support control whilst flatter structures enable discretion. On the whole, centralized and formalized organizations are thought to be more efficient but less innovative (Pelham and Wilson, 1996).

On a slightly different note, Damanpour (1996: 695) suggests that the cross-fertilization of ideas through the mixing of specialists within the firm is positively associated with innovation. To restate, the existence of team based working, especially in the form of cross-functional teams, is likely to improve the innovative capability of the firm. The foregoing would seem to indicate the primacy of empowerment, discretion, and team work (loose control) in enhancing innovation over centralized and formal (tight) control systems.

1 Defined as those affecting the firm’s innovation process but which are manageable.
2 Organizational Structure is the formal framework by which job tasks are divided, grouped, and coordinated. It involves decisions about six key elements; work specialization, departmentalization, chain of command, span of control, centralization and decentralization, and formalization (Robbins and Coulter, 1999: 300).
3 A hybrid grouping of individuals who are experts in various specialties (or functions) and who work together.
Innovation Strategy: Finding a suitable strategy that best allocates limited resources and that goes well with a changing global environment is crucial for innovation. Innovation strategies can be defined as “the ways by which a firm’s resources and advantages are managed in order to overcome competition or to exploit opportunities” (Luck and Prell, 1968: 2). A firm’s innovation strategy signals whether the firm takes either a proactive stance or a reactive stance towards innovation. As Miller and Friesen (1982: 5) pointed out firms which “innovate boldly and regularly while taking considerable risks in their product-market strategies (proactive firms) are those which will be most successful”. As Rothwell (1992: 231) comments, high innovatory performance is thought to be characterized by “a venturesome, offensive innovation program . . . and . . . a proactive search for new product ideas.” Therefore, it can be argued that organizations, which adopt proactive strategies, will be the most successful in innovation.

R&D Expenditure: To propose a relationship between R&D expenditure and innovation may be considered somewhat trite. The extent of R&D intensity (proportion of turnover spent on R&D) has been used to proxy the formality or sophistication of a firm’s approach to innovation (Wood, 1997). In this vein, a recent study noted that innovators were 4.5 times more likely to be involved in continuous R&D than non-innovators (ESCR CBR, 1998). In addition, there is evidence to support the view that R&D acts as the “engine of innovation”, both as “... a direct source of product and process innovations, and to develop and maintain the broader capabilities to exploit and assimilate externally available information” (Karlsson and Olsson, 1998: 33). That is, expenditure on R&D improves the firm’s absorptive capacity and accelerates organizational learning, subsequently improving the probability of innovation (Cohen and Levinthal, 1990).

Employee Competencies: One of the primary concerns when addressing barriers to innovate relates to the scarcity of internal competencies—both the managerial and technical (see Bosworth and Jacob, 1989). In a recent study, Wood (1997) reported a positive correlation between innovation output and the proportion of technically skilled staff. Furthermore, Oakey (1991) noted a lack of marketing expertise and endeavor as the primary barrier to the post development success of new products. High and broad levels of competency are likely to increase the subsequent probability of successful innovation. In particular, the employment of graduates is often viewed as fundamental in allowing firms to achieve process improvements and keep pace with advancing technology (Scott, et al., 1996: 86). This is not to suggest that the employment of graduates will act as some form of skills or competency panacea. Rather, while raising competency levels and introducing new skills, the employment may, more realistically, signal an attitude or willingness to innovation and growth.

Technology: Convenience and quality at a fair price—these are the keys to success in any firm operating in the present market. Advanced, high-capacity technology gives a firm an opportunity to keep unit costs down. When modern technology is used uniform quality products can be produced under technically sound conditions, at the lowest possible cost, and with minimum dependence upon the skill of workers and supervisors. On the contrary, labor-intensive operations require more supervisors and management time that could have been used for more productive in-
novation activities.

Furthermore, as discussed earlier, the ability to exploit external knowledge (absorptive capacity) is a critical component of the innovative capabilities of the firm. As von Hippel (1988) and many others argue, the ability to evaluate and utilize outside knowledge is largely a function of the level of prior related knowledge (for instance available technology). Therefore, they say that the greater the technological advancement of the firm, the greater the absorptive capacity, and as a result the greater the amounts of external information.

In addition, Information Technology (IT) also plays a vital role in innovation. It is assumed that any organization can function only if it can take in, move around, and appropriately process information. Information is the lifeblood, and information channels are the circulatory system of the organization (Schein, 1985). If the organization is capable of innovation, what must be true is it has an advanced information management system. The IT system will enhance the flow of information within the firm as well as between the firm and external institutions, increasing the chances for innovation.

**Innovation Related Collaboration:** Many of the contemporary studies have focused on the role of more conscious and deliberate collaboration between firms and external institutes (research institutes, universities, suppliers, retailers, competitors, etc.) for successful innovation (Oughton and Whittam, 1997). Indeed, a belief in the value of inter-firm, and firm-institution co-operation, has partly manifested in policy-makers’ observed preference for science parks and incubators. The benefits of such inter-organizational linkages are presumed to be greatest in the field of innovation (Rothwell, 1992).

Here it is suggested that acknowledged internal resource constraints could be alleviated by accessing resources outside of the firm. Thus, the firm supplements, or complements, its internal resource base by actively engaging in joint product or process development activities with customers, suppliers, competitors or third party institutions. Moreover, the active pursuance and creation of external linkages was an important component of the strategies employed by the most successful firms. As Adams (1982: 76) concluded, to successfully innovate, “the indispensable and compelling need is for firms to seek external advice and information to fill the void in management expertise and resources”.

**Organization Culture: An Indispensable Factor for Industrial Innovation**

One variable that could be strongly linked to the success of innovation is the presence of an innovation friendly organizational culture. Although there are a number of problems associated with conceptualizing organizational culture, most scholars agree on the following characteristics of the concept: 1. historically determined, 2. observed behaviors (the actions and practices of the members), 3. invisible attributes (norms, values, beliefs, and rules), 4. shared (taught to as well as sought by newcomers), and 5. difficult, but can be changed. In this study therefore, ‘organizational culture’ is defined as,

“The actions and social practices that are influenced by invisible attributes of values, norms, and beliefs which are shared by members of the organization”
This definition helps us to understand how organizational culture affects the organizational processes and functioning of a firm with respect to innovation. It represents a common perception held by the organization’s members and governs how its members should behave, i.e. how they solve problems and make decisions, how they implement decisions arrived at, how they organize work, supervise, reward, punish, and in general, deal with people. Since it constrains what people can and cannot do, organizational culture is relevant to all the members (i.e. both managers as well as employees). Thus, the link between organizational culture and members’ behavior is fairly straightforward. For instance, if the organizational culture supports the belief that the company’s best interests are served by maintaining the traditions and status quo, managers are unlikely to pursue strategies and programs that are expansionary and innovative.

Dimensions of an Innovative Organizational Culture

This section attempts to analyze the cultural dimensions of the organization that increase the likelihood of its ability to learn, adapt, and innovate. Several cultural dimensions, which are crucially important for innovation in organizations, were reviewed, critically analyzed, and presented under five headings.

1. External Environment Orientation

One way to look at the external environment is to look at its usefulness in the innovation process. Some organizations, according to system theory, assume external information as a valuable input, which can be transformed into innovation. Therefore, they continuously interact with their environment—customers, suppliers, competitors and various other related institutions (open system). Others tend to be more self-contained (closed system). An open system is intrinsically bound to three characteristics: 1. ability to scan (monitoring the environment), 2. ability to interpret (translation of observed events to understandable information), and then 3. ability to learn (gain knowledge about the relationships existing between the organization and the environment). It helps the organizations to identify market opportunities and threats as early as possible (Drucker 1985; Oldham and Cummings, 1996). It is this character that helps the organization to have effective innovation related collaborations with external institutions.

Another way the firms look at the environment is its degree of controllability and/or manageability. Some organizations believe that they have dominance over their external environment (e.g. competitors), while others believe in the reverse. The development of defeatist assumptions towards the external environment can be explained using natural selection—or ecological theory of organizations. This in fact, is a deviation from system theory. Whereas the system theory approach suggests that organizations change through internal transformation and adaptation, the ecological approach says that it is more a process of the “survival of the fittest”; there is a process of organizational selection and replacement (Carroll, 1988: 1-2 cited in Luthans, 2002: 108). Here the environment is assumed to be totally dominating. At least in the short or medium term, management is seen to have little impact on an organization’s survival. The carrying capacity of the environment is limited. Therefore, in a competitive arena some organizations will succeed while others will fail. Such a view can lead the organizations to believe that they are dominated
by the external environment. This assumption is fatalistic and such firms are passive in the face of environmental turbulence (Schein, 1985). Organizations with such negative assumptions continuously depend on external institutions to provide support. Otherwise they will fail in a competitive arena. With regard to external environmental orientation, two hypotheses can be developed as follows:

**H 1:** "The extent of innovation is greater when the organization adopts an open system approach."

**H 2:** "The extent of innovation is greater when the organization assumes that it can dominate its environment."

### 2. Outcome Orientation:

Depending on the cultural assumptions held, organizations also differ in their approach to achieving outcomes (e.g. product, service, processes, etc.). With regard to the method of achieving innovation outcome, some firms tend to be reactive, while others tend to be proactive. This distinction is made clear in Senge’s learning organization theory. Peter Senge (1990) defined a learning organization as "a dynamic system that is in a state of continuous adaptation and improvement." He makes an important distinction between adaptive and generative learning. Simply, adaptive learning refers to adapting to environmental changes. Thus, an adaptive learning organization would be associated with employees reacting to environmental changes with routine standard responses that often result in only short-run solutions (reactive organizations). Generative learning, on the other hand, involves creativity and innovation, going beyond just adapting to change to being proactive; being ahead of and anticipating change (Recardo et al. 1996). With its emphasis on continuous experimentation and feedback, it would directly affect the organizational strategy, and the way managers and employees go about defining and solving problems.

Another key determinant of this approach is organizational vision (Johannessen et al., 1997). Kanter and his colleagues (1992) postulate that the ‘vision is an attempt to articulate what a desired future for a company would be’. If a realistic and challenging vision exists and if it is shared by all the employees, they can identify the gap between the organization’s desired future (outcome) and actual performance. This was referred to as ‘creative tension’ by Senge. It catalyzes the organization to be proactive and innovative. The purpose of the vision is thus to take advantage of the creative tension between actuality and potentiality by creating foresight, both of the members of the organization and the targeted customers, in order to generate the necessary change in the organization.

A greater emphasis on a proactive approach and vision, however, involves greater risks, since both involve future actions that contain uncertainty. In such proactive and visionary firms, a positive attitude must be placed upon risk. It helps them to allocate their limited recourses in high-return investments such as R&D, acquiring advanced technology and coming up with radical innovations. Hence to be innovative, organizations should promote risk-taking and let members try things out even if the final result may be a failure (Tushman and Nadler, 1986).

Furthermore, while some organizations use a more pragmatic approach to achieve their desired outcomes, others depend on a more normative approach. In a pragmatic approach, employees are encouraged to take risks and experiment without fear. Employees are encouraged to ex-
experiment, supported by an underlying assumption that the truth is not yet visible. This also involves the assumption that the only way to know the truth is to be pragmatic—either search for scientific verification or adopt a trial and error method (Scott and Bruce, 1994; Schein, 1985). The normative approach on the other hand relies on traditions, maintaining the status quo, and depends on seniors to decide the course of action. Innovations usually pop up when the system tends to continually question and challenge the status quo. Schein (1985) stresses that to increase the innovative capacity, generally, a positive value must be placed on novelty, on breaking traditions, on trying new things even if they are risky. Towards innovation, employees are encouraged to consider alternative routes and continuously engage in experimentation and feedback to identify opportunities. The emphasis is to getting results rather than adhering to procedures. Another hypothesis was postulated this time with regard to outcome orientation;

H 3: "The extent of innovation is greater when the organization adopts a proactive and pragmatic approach to achieve its outcomes"

3. Time Orientation:

The way an organization perceives time is crucial in determining how it deals with environmental changes and innovation. The assumptions towards time vary across organizations, as do the consequences of the different time orientations. There are two aspects of time orientation (Schein, 1985; Luthans, 2002). The first aspect is; past, present and future orientation of the organizations.

In some organizations members are oriented towards the past. If a culture is predominantly oriented towards the past, the future is seen as a repetition of past experiences. The attitude towards innovation will be reactive, focusing on dangers and the threat of change. They are more pessimists and traditionalists. Respect for ancestors/seniors, status quo, and collective historical experiences are characteristic of past-oriented organizations. Some organizations tend to focus on the present. They believe that the future is uncertain. A predominantly present-oriented culture will not attach much value to its common past experiences, nor to future prospects. Day-by-day experiences tend to direct the employee’s life. Thus their attitude towards innovation will be more passive/apathetic. They follow more adaptive strategies.

There are still other organizations that are futuristic in their orientation. In a future-oriented culture most employee activities are directed toward future prospects. They presume that the future can be created and that they have a desirable future. Generally, the past is not considered to be vitally significant to a future state of affairs. Visioning planning, research and development constitute major activities in future-oriented organizations. They are more proactive, optimistic and modern, thus will be more creative and innovative. Innovative thinking and processes are accepted first among future-oriented organizations. As visibility is improved and the utility is discovered, the present-oriented join ranks. Finally, when the change or product is an almost natural part of everyday life, past-oriented reacts.

The second aspect of time is short, medium and long term orientation. The time frame in which an organization should respond to environmental changes is important. It is clear that too short a time orientation will always make innovation difficult because one can always show that short-run costs are too high to justify continuation of the experimentation and the trial and error
involved in innovations. However, for imitation this is not valid and in fact, it should be a fast response to the actions of the competitors. On the other hand, if the time units are too long, some innovation efforts that are failures will be allowed to continue for too long, the organization will lose money, and the whole innovation process will be undermined, because people will remember how they were hurt by past innovations. Furthermore, in light of the environmental turbulence, a too long time orientation may not be effective for innovation. The ability of the organization to develop a sense of an optimal length of time for an innovation thus becomes a very important determinant of its innovation capacity. Schein (1985) stresses that; to be innovative an organization should be oriented toward the near future. The time orientation will be subjectively defined in organizations depending on their culture. The fifth hypothesis can be developed depending on firms’ time orientation as follows;

H4: “The extent of innovation is greater when the organization focuses on medium-term future.”

4. Nature of Employees

There are important differences in cultural assumptions of organizations in how they see their employees; their nature, in terms of pattern of thinking, and behavior. Organizations make implicit assumptions about their employees, both in terms of whether they are ultimately good, neutral, or bad, and in terms of how malleable or fixed they are. In the 1960s, Douglas McGregor in his theories X and Y described two very different attitudes toward the workforce. McGregor felt that companies follow either one or the other approach (cited in Robbins and Coulter, 1999).

In Theory X, management assumes that employees are rigid, inherently lazy, and will avoid work if they can. Because of this workers need to be closely supervised and a comprehensive systems of controls should be developed. A hierarchical structure is needed with a narrow span of control at each level. According to this theory, employees will show little ambition without an enticing incentive program and will avoid responsibility whenever they can. The result of this line of thought is that Theory X managers naturally adopt a tight control system based on the threat of punishment.

Theory Y is its opposite. Here management assumes employees are ambitious, self-motivated, anxious to accept greater responsibility, and exercise self-control and self-direction. It is believed that employees enjoy their mental and physical work activities. It is also believed that employees have the desire to be imaginative and creative in their jobs if they are given the chance. There is an opportunity for greater productivity by giving employees the freedom to do their best. A Theory Y manager, therefore, believes that, given the right conditions, most employees will want to do well at work and that there is a pool of unused creativity in the workforce. They believe that the satisfaction of doing a good job is a strong motivation in and of itself. A Theory Y manager will try to remove the barriers that prevent workers from fully actualizing their potential. Managers feel that employees are “perfectible” in the sense that one’s personality and contribution is not fixed. If one knows one can grow and improve, this knowledge acts as a powerful stimulant to personal development and innovation (Schein, 1985).

Although the extremes are not realistic, these theories are important in understanding the individual behavior mostly falling into one side of the continuum. If the organization is cynical
about its employees, it will not encourage innovation, or worse, will mistrust innovators as having ulterior motives (Schein, 1985). Furthermore, if the organization is committed to external controls like authority, rules, systems, and procedures, members will find it harder to take risks, which are necessary if innovation is to succeed (Tushman and Nadler, 1986; Scott and Bruce, 1994). On the other hand, if the organization holds optimistic assumptions about its employees, it will more likely trust them, decentralize, listen to new ideas (adopt a loose control system) and encourage innovation. With regard to assumptions on employee nature, a sixth hypothesis can be developed as follows;

**H 5:** “The extent of innovation is greater when the organization assumes that employees are good and are capable of development.”

### 5. Nature of Human Relationships

The final cultural dimension analyzed in this study is the assumptions on human relationships. The ideas and knowledge needed to create new products or to add value to existing ones reside in the minds of, and between, individuals. Hence, as Schein (1985) noted, participative decision making is more likely to identify the relevant areas in which innovation is needed, to bring to the surface good ideas, to stimulate creativity, and to produce a state of affairs where everyone understands the idea so that it will be properly implemented. Therefore complementary relationships (i.e. relationship characterized with mutual trust, respect and dependence based on a common supportive attitude) among employees become paramount.

As Johannessen and his colleagues (1997) point out, what all organizations have in common is the need to communicate, and to get information to the right place at the right time to initiate innovation. Frequent communication within and among units and departments (subsystems) of the organization helps to breakdown barriers to innovation. To be effective, this communication process should be genuine to share accurate and honest information. It should also happen both ways, horizontal as well as vertical. Vertical communication should be in either direction, top-down and bottom-up. Such an effective communication system will facilitate technological changes and innovations in the organization. In order to generate and exploit the knowledge of the employee, to have a shared vision, and to make participative decisions, members must communicate frequently on complementary grounds. This can only be achieved effectively by having collegial relationships rather than authoritative relationships.

Another aspect of human relationships is having ideals of individualism or groupism (i.e. willingness to work in isolation as an individuals or as a group). There is a considerable debate on the role of group work/teams in innovation. Pessimists point to the limitations associated with group work. Some of the often-cited limitations include excessive time consumption in making decisions, minority domination, groupthink (i.e. social pressures to conform), and ambiguous responsibility (Robbins and Coulter, 1999: 462). Furthermore, if teamwork is considered, it will be fruitful only if members possess complementary relationships among each other. Homogeneous groups or teams without much diversity of knowledge will also fail. Schein (1985) argued that if innovative people are in top management, innovations will be implemented faster when an individualistic and authoritarian relationship style is adopted.

Nevertheless, many identify group work as a key to the innovation process (see Howell and
Higgins, 1990; Carrow Moffett, 1993). Some things cannot be accomplished if people work individually. Synergy is one of the commonly known advantages of group work. It is the enhanced result of two or more people working together. If innovative ideas are generated, organizations working as a group will also be far more effective in their acceptance of those ideas and implementing them.

Diversity is another aspect that is found in work groups, but not in individuals. An organization that is blessed with diversity would benefit from alternative options, suggestions, and routes to meet their goals. In an atmosphere of free and open communication, the different knowledge bases will be grinding against each other. More heterogeneous ways of understanding a phenomenon will create a pool of potential problem solving capabilities to be drawn upon (Johannessen, et al., 1997). As Saleh and Wang (1993) and Oldham and Cummings (1996) suggested a team-based structure (e.g. cross-functional teams, which include multi-skilled members from different functional departments of the organization), would be an important vehicle to achieve genuine communication and promote diversity. The knowledge of the members becomes the possession of the entire organization. Therefore, the exchange of knowledge by the members will generate more knowledge when the team acts as an integrated whole. Depending on the human relationships, two more hypotheses were postulated as follows;

H 6: “The extent of innovation is greater when the organization assumes ideals of groupism and possess collegial and participative relationships among members.”

Concluding Remarks

The model depicted in Figure 1 helps to clarify how innovation is generated within firms and what characteristics make firms more or less innovative. The organization forms a part of the environment, separated by a ‘permeable’ boundary from which it interacts continuously with the external environment. External environment conditions⁴ represent a large number of broad context variables that guide and restrict the nature and behavior of the organizations. They include conditions such as the education system, infrastructure, institutional set up, and socio-cultural factors.

As discussed in the foregoing analysis, it shows that there are seven organizational factors crucially important to the innovation process of a given firm. They include organizational culture, organizational structure, innovation strategy, R&D expenditure, competencies of the staff, technology, and innovation related external links. The study also identified organizational culture as the determining factor of other organizational variables. For instance, an organizational structure with a loose control system and cross-functional teams will never be established unless the organization has optimistic assumptions about human nature and complementary relationships among members who are willing to work as a group. Without having the vision and keenness to being ahead of change, proactive innovative strategies will never be employed. Sufficient investments in R&D and advanced technologies will never be made unless the organization has a pragmatic approach derived from positive assumptions on novelty, breaking traditions, experimentation and taking risks. Optimistic assumptions on pragmatism and human nature are necessary as-

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⁴ Defined as ‘conditions, which affect firm’s innovation process but those over which the organization have no direct control.’
pects driving organizations to recruit, train and empower technically competent staff. Finally, effective external collaborations will never be a reality unless the organization adopts an open system focus with an underlying assumption of its domination over some aspects of the environment.

The lines between the seven organization factors shown in Fig. 1 indicate interactions or bivariate relationships. That is to say, none of these relationships are causal relationships, but merely interactions. For instance R&D can enhance innovation. Similarly, profits gained through innovation can act as a stimulus for further R&D activities. This model points to areas where management strategy and policy implementation might be applied to enhance innovation, or to areas that need to be taken into account when strategic and policy initiatives are shaped.

As a final remark, it is not the purpose of this paper to present any definitive universally acceptable model of innovation. Some serious limitations may hang over the model. The point to be noted, however, is that innovation is a complex and diversified activity with many interacting components. The model shows the central role of organizational culture and its importance when planning innovation strategies and policies.

Reference


組織的文化：スリランカにおける製品革新の不可欠要因

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要約
世界中の多くの生産企業が成功・繁栄し、生き残るために、製品革新こそが重要な鍵を握っている。それゆえ、革新をうまく成功させるために一体何が影響しているのか、その要因の理解は、もっとも重要である。本論文は、組織の革新活動を決定するかに組織文化の役割を論究したものである。その文脈の中で、組織文化、組織構造、革新戦略、研究開発（R & D）経費、スタッフの競争性、技術革新に関わる外的関係といった七つの組織要因を概説し、分析を加えた。その結果、組織文化は他の組織現象が革新過程に影響を与える分野であることが分かった。この結果に基づき、革新戦術と政策を立案するさいに、組織文化の中心的な役割とその重要性を明らかにする革新モデルを開発した。