The Relationship between Risk and Innovation

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Introduction

Innovation cannot be without uncertainty and risk. Creating and offering something new is called innovation. Because innovation involves development of new product, service of modification to existing one so it cannot predicted whether it will be received with appreciation or not. Current essay is aimed at determining the sources of risk in innovation projects and risk management strategies. As diver opinions and theories exist about the nature of risk it is difficult to reach an agreement about a risk management strategy. Innovation projects themselves are risky so it is a big problem to proactively manage risks involved in these projects. Current essay explores the relationship between innovation and risk followed by presenting strategies for managing innovation.

Defining Innovation

Creating and offering something new is called innovation. Because innovation involves development of new product, service of modification to existing one so it cannot predicted whether it will be received with appreciation or not? For example a shoe company produces a shoe for women with innovative design in order to attract more consumers. Here there are two possibilities; the innovation may be a great success as majority of the women like this and it becomes part of new trend in fashion which everyone would like to follows; second possibility is that it may not attract customers and may be unable to recover its production cost so the innovation will cause financial loss to the shoe company.

According to Mokyr, (2002) innovation is the key source of economic growth as well as of new opportunities of employment because it offers a possibility to realize environmental benefits (Foxona et al., 2005). In the global business environment the key argument presented in the favor of innovation is that due to globalization business activities are being carried out in a cheap way by benefiting from low-wage salaries, innovation is the key to compete and survive. (Storey and Salaman, 2005)

Oxford Dictionary of Economics defined innovation as the “the economic application of a new idea”. Innovation in product involves either creating new product or making changes to existing one (Black, 1997). As described by Afuah (2003) innovation means employing new knowledge in order to provide customers with new product or service they require. In other words it can be referred to as invention + commercialization. Van de Ven (1986) also described innovation as a “new idea which may be a recombination of old ideas, a plan that challenges the present order, a formula, or an exclusive method which is perceived as new by the involved individuals” (p.34)

It is evident from previous research studies that innovation has become a critical factor for social, economic and business development. Some of these researchers (B ean & Radford, 2001; Storey, 2004a, 2004b; Tushman, 1977; Van de Ven, et al., 1999) are of the view that innovation is the key component for wealth creation. This has been also considered as key underlying theme to create value in production process (e.g. Womack & Jones, 2003a, 2003b; Womack, Jones & Roos, 1990). Drucker (1985) recommended that "innovation is the specific tool o f entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service” (p. 19).

Differences exist about the nature of organizational innovation, its development and implementation among researchers. For example Wolfe (1994) noted, "despite the broad interests and a vast amount o f literature, understanding o f innovative behavior in organizations remains relatively undeveloped” (p. 405).

Defining Risk

Risk is essential part of any innovation. The companies who speedily produce new and innovative products they take risk. The word risk has many meanings yet its definition is changing because it is interlinked with innovation as well as a rapidly globalizing world (Green and Serbein, 1983). Now companies are have to innovate in order survive within greater uncertainty. Thus the risks these companies are taking are intensifying (Taplin, 2005). Ansell and Wharton (1992) defined from the perspective of business innovation stating that it imply "a measurement of the chance of an outcome, the size of the outcome or a combination of both" (p.22). Similarly, Edwards and Bowen, (2005) defined risk as "the combination of the frequency or probability of occurrence and the consequence of a specified hazardous event" (p.34).

In innovation project risk can by any factor that affects its performance and if the resulting effect is significant and uncertain, risk arises (Chapman and Ward, 1997).

Risk management is the process using which managers try to understand the nature of uncertain future events and make plan to alleviate them (Taplin, 2005). Keeping in mind the notion that risk is the key feature of innovation, risk management needs to facilitate innovation it (Taplin, 2005). By adopting a methodical risk management approach an organization can improve its ability to manage risk at all stages of an innovation project. The key purpose of risk management approach is improving project performance through methodical identification, assessment and management of project-related risk (Chapman and Ward, 1997). A systematic risk management approach encourages a controlled, consistent and flexible decision making process inside the organization (Edwards and Bowen, 2005). Edwards and Bowen (2005) described risk management as a combination of following processes;

- To establish proper contexts

- To recognize the innovation project risk that will be faced by stakeholder organization
- To assess the recognized risk
- To develop appropriate responses to the identified risks
- To control and monitor the risks during project lifecycle
- To allow capturing of risk after completion of project

Chapman and Ward (1997) described that risk management processes can be explained in their relevance of different phases of a project. These processes are divided into many ways; some define tasks to be completed while others are related to outputs. The researcher presented that nine-phase RMP which is a detailed risk management approach. This structure is a depiction of a alternative approach for risk management. Other risk management processes have been described by Smith and Merritt (2002) which is a five step risk management plan.

- Identification of parameters by defining and focusing on each
- Analysis of probabilities and priorities
- Providing solution
- Supervising and learning

Because innovation is referred to something new so it always involves risk. Some researchers have tried to explore the impact of innovation on industry and found that continuous innovation lead to restructuring industrial processes by reinforcing the existing ones. [73]. Thus it is necessary for change and progress as well as to compete in the changing business environment. Here it is important to note that whether innovation is radical or incremental. In case it is radical it holds a radical impact and the risk involved is also significant. Incremental innovations only impact business firms while radical innovations impact industry.

Management of Risk in innovation project

Keizer et al. (1991) tried to develop a genuine method for diagnosing and controlling risk in innovation projects and named it the Risk Diagnosing Methodology (RDM). This method facilitates a firm in comprehensively and systematically identifying the technical, managerial and business risks that may be faced by an innovation project. In addition to that the method assist firms in formulating and implementing proper risk management strategies. The method suggests nine steps to be followed which include; "initial briefing, kick-off meeting, individual interviewing of participants, processing the interviews (design of a risk questionnaire), answering the risk questionnaire, constructing the risk profile, preparing a risk management session, risk management session, drawing up and execution of a risk management plan" (Keizer et al., 2001).

Relationship between innovation and Risk

Different categories of innovation have been offered by literature according to its type, degree, competence, impact, and ownership (Narvekar and Jain, 2006). Both manufacturing and service sector adopt innovation. Though a difference exists in these two sectors yet the general concept and process of innovation that are applied are same. The characteristics of services are different from manufacturing for example services are not tangible, consumable and diverse (Johne and Storey, 1997; Song et al., 1999). Tidd et al. (2005) states that innovation is not mere establishing new markets; using it new ways can be used to serve older and established markets. According to him innovation can be classified into four groups (Product, Process, Position and Paradigm) each of which occurs along an axis that goes through incremental and radical change. An incremental innovation in a product means presenting an improved product, which holds at least one extra feature compared with its predecessor or it is more efficient with same features. Comparatively, a radical innovation is required on the opening of a new markets and the innovator tries to fulfill a hidden demand (Ferguson and Ferguson, 1994).

Shepherd (1999, p. 623) says, “Common wisdom from the strategy literature suggests that . . . pioneers have higher returns if they are successful,. . . but bear a higher risk of failure.” General marketing literature has also reached same conclusion. Award winning writers Lambkin and Day (1989, p. 15) and Golder and Tellis (1993) predicted lifetime survival rate for pioneers is only 53%. Tellis and Golder (1996) shed light on the reasons behind failure of innovative products.

Where pioneers face more risks than other products or services they also get many advantages. The key benefit of innovation is that the first entrant with an innovative product or service enjoys monopoly before the entry of any competitor. This is the short term benefit and makes. Long term benefit is that when other competitors enter the market the pioneer has advantage of first-mover. The pioneer brand has more loyal customers; they save on switching costs and have broad product lines that anticipate competition.

Innovative products or services in a market always face a great level of uncertainty. This uncertainty arises due to the complexity in predicting sales for an innovative product. It is the uncertainty that Hamel and Prahalad (1994) described entering with innovation in market is similar to “an archer shooting at a target shrouded by a veil of fog” (, p. 238), because innovators are not fully aware of consumers needs and wants so a greater level of failure risk in involved.

How can risk be managed?

In order to manage risk involved in innovation the organization can adopt flexibility and effectiveness. Organizations adopt innovation to maintain competition and to attract new customers. The firms that are innovative are aware of the fact that besides paying attention to retain existing customers it acquiring new customers using innovation is also important. For this purpose firms are required to remain accustomed to the changing business environment. These are the reasons due to which business scholars have suggested firms to create a quality-oriented culture for the development of a culture based on innovation (S. B. Sitkin,1994; D. I. Prajogo and A. S. Sohal, 2006). In addition to that role of manager in risk management for innovative products is important. It depends on how they establish an appropriate balance between soft and hard factors, internal and external factors and implement appropriate strategies in the downstream or upstream activities.

For management of risk in innovation products or projects most of the management experts (Christensen & Raynor, 2003; Christiansen, 2000a; King & Anderson, 2002; McDermott & Sexton, 2004; Papageorge, 2004) have suggested to strategically manage innovation. It has also been pointed out by these experts that it is the responsibility of leadership in an organization to manage resources and use them for the promotion of innovation. (Christensen & R aynor, 2003; McDermott & Sexton, 2004) Yet, other management scholars have stated that innovation is not very clear and linear and predictable process (Christiansen, 2000a; Rummler & Brache, 1990). King and Anderson (2002) recognized that it is wrong to imply that in case a firm follows recommended procedures the innovation will bring positive results. Different approaches of risk management are required for different types of innovations. In order to manage innovation the least steps firms can take are strategic planning, appropriate structural adaptations, modifications to processes and awareness of culture (Papageorge, 2004; Ram sey, 2005).

It has been suggested by some researchers that innovation process is more cyclical than linear. (Terziovski, 2004) According to Singh and Smith (2004) innovation is a synergistic process and there are multiple factors that affect each other in this process in a cyclical way. Similarly Van de V en and Poole (2005) noted that it is difficult to manage innovation because the processes involves in a permanent state of flux and most of them are moving towards unexpected directions. There are many variables that are directing change and innovation and usually these are too fine to understand and too vibrant and prevailing to control. It is therefore necessary for the managers to think and strategically to develop innovation (Van den V en & Poole, 2005).

Another risk management approach is proactive thinking at management level. Massini, and Greve (2005) suggested that organizational leaders must have the capability to employ structures and processes that support innovation in an organization.

McCabe (2002) using a case study approached explored that through innovative management approaches managers can manage risk.

Cooper (1999) presented a stage-gate approach the management of innovation processes. This approach facilitates the firms in managing, directing and controlling their innovation efforts. Yet, this approach has been criticized for focusing only on process factors and leaving other organizational factors.

Another significant approach is Pentathlon framework (Goffin and Pfeiffer, 1999; Oke and Goffin, 2001) that is used to manage innovation by addressing many soft organizational and process issues. It has been suggested by Goffin and Pfeiffer (1999) that companies need to show good performance in five areas in order to be successful in managing innovation. These five areas include; innovation strategy, human resource management, market, products, processes and services. Another framework for innovation management was presented by Narvekar and Jain (2006) which suggests adopting an interactive innovation process which has three stages: ideation, incubation and demonstration

Conclusion

References

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