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Strategic Innovation in Management of Small and Medium–Sized Manufacturing Companies in Rwanda

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Preface

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Abstract

This paper has two objectives: first, to create awareness about the necessity of incorporating strategic innovations in the daily management of SMEs, and two, to understand that this necessity for innovation holds opportunities, if innovations and trends are recognized before competitors so that they can be acted upon rather than reacted to. This paper starts by defining the concept of strategic innovation and discusses some tactics used by SMEs for the successful implementation of strategic innovations, that is, how they cultivate a style of organizational behavior that is comfortable with new ideas, changes, risks and even failures. A purposeful technique is used to select SMEs for interviews; data was collected using self-administered interview guides. The data collected through the interview guides was qualitative and was analyzed thematically using a content analysis which covered how strategic innovations were being implemented through transmission of SMEs' vision and strategic targets to employees; tolerance of risks, mistakes and failures; degree of decision making by operational staff; and attention to the future through transparency and truth. Creating an innovative culture a SME should make clear it's vision to all its employees; it should have minimum acceptance of risks, mistakes and failures and more importantly it should learn from those mistakes and failures; it should empower people to take quick decisions and reward any initiative at doing a new thing; and it should always create room for curiosity among employees to know about new things outside their daily work and thus prepare them for innovations.

Keywords: Strategic innovation, management, culture, change, risk and failure.

JEL Classification Codes: O21, O30, O31, M10, M14

1. Introduction

Today many small companies are confronted with the challenges of globalization, especially in industries in which foreign, low-cost producers have entered the market and are threatening the survival of existing companies. In addition, new government regulations can change a profitable SME business into a nightmare in just a few weeks or months. Changing market conditions thus force smaller firms to adapt or reinvent their businesses through new innovations. At the same time, small firms face several constraints in differentiating their products and changing their business models. SMEs have to turn to new management directions to ensure their success, thus strategic innovations are a logical way for many SMEs to undertake.

SMEs in Rwanda are well-established businesses that are individually or jointly owned. They have set administrative processes and employ between 50-100 people and account for 0.22 per cent of businesses in Rwanda contributing 5 per cent of the total private sector employment in the country. The broad goals of the Rwanda Industrial Policy as it is stipulated in Rwanda Vision 2020 and the Economic Development and Poverty Reduction Strategy (EDPRS) is to create and build transformational industrial growth that will make Rwanda regionally and internationally competitive.

Innovations are a necessity and also an opportunity for SMEs in Rwanda to succeed in the market. Much has been written about strategic innovations in large private and public companies but very little has been written about strategic innovations in SMEs. Of particular concern for SMEs are their needs to innovate to defend their existing competitive position as well as to seek new competitive advantages. Porter, (2004) says that firms can achieve a competitive advantage by creating a competitive strategy that is consistent with trends in the firm's industry and appropriate to the firm's resources and capabilities; these can be achieved through innovations.

Strategic innovations are the creation of growth strategies, new technology, new services, new ways of doing things or business models that change the game and generate significant new value for consumers, customers and a SME. Innovation is the spark that makes good companies great. It's not just invention but also a style of corporate behavior comfortable with new ideas and risks. Companies that know how to innovate do not necessarily throw money into R&D. Instead they cultivate a new style of corporate behavior that is comfortable with new ideas, changes, risks and even failures, according to *Fortune* magazine (3 March 1997).

Firms can use innovations strategically in order to achieve competitive advantages (Hitt et al., 1998; Ireland and Hitt, 1999), compete effectively in local and global markets (Subramaniam and Venkatraman, 1999), adapt their strategies to changing market and customer demands, create value and growth (Amit and Zott, 2001) and achieve superior performance (Grimm and Smith, 1997; Lee et al., 2000; Roberts, 1999). Therefore, a strategic innovation represents an important component of a firm's strategy and is a major contributing factor to its competitive advantage (Porter, 2004). Consequently, strategic innovation has become a central topic in the strategic management field. A systematic study of this issue should therefore be beneficial for both academic researchers and practitioners which is why our paper assesses strategic innovations in the daily management of SMEs so to come out with techniques and factors driving these innovations.

The main objectives of this study are to assess strategic innovation practices in the management of SMEs and to create awareness about the necessity of innovations for SMEs.

2. Literature review

2.1 Strategy and strategic management

The words 'strategy' and 'strategic management' are typically associated with issues like the long-time direction of an organization, the scope of an organization's activities which give it an advantage over competition, strategic fit with the business environment and the organization's resources and competencies. Pearce et al., (2010), say that strategy managers come up with large-scale, future oriented plans for interacting with the competitive environment to achieve a company's objectives. A strategy is a company's game plan.

Defining strategy is not simple. It is a complex concept that involves many different processes and activities within an organization. To capture this complexity, Professor Henry Mintzberg of McGill University, Montreal, Canada, articulated what he labeled as 'the 5 Ps of strategy'. According to Mintzberg, understanding how strategy can be viewed as a plan, as a ploy, as a position, as a pattern and as a perspective is important. Each of these five ways of thinking about strategy is necessary for understanding what strategy is, but none of them alone is sufficient to master the concept (Mintzberg, 1987).

According to one classic view of strategy, a plan is the essence of a strategy. A strategic plan is a carefully crafted set of steps that a firm intends to follow to be successful. Virtually every organization creates a strategic plan to guide its future. A second way to view strategy is in terms of ploys. A strategic ploy is a specific move designed to outmaneuver or trick competitors. Ploys often involve using creativity to enhance success. Strategy as a pattern is a third way of viewing strategy. This view focuses on the extent to which a firm's actions are consistent over time.

Viewing strategy as a plan, a ploy and a pattern involves only the actions of a single firm. In contrast, the next P—strategy as a position—considers a firm and its competitors. Specifically, strategy as a position refers to a firm's place in the industry relative to its competitors.

The fifth and final P shifts the focus to inside the minds of the executives running a firm. Strategy as perspective refers to how executives interpret the competitive landscape around them. Because each person is unique, two different executives could look at the same event, such as a new competitor emerging, and attach different meanings to it. One might just see a new threat to his or her firm's sales; the other might view the newcomer as a potential ally.

According to Ansoff, (1965) strategic management constitutes a systematic approach to the management of changes, which comprises of positioning the organization through strategy and planning, real time strategic response through the management of problems and the systematic management of resistance during the implementation of a strategy. Johnson et al. (2008) define strategy as the direction and scope of an organization over the long term which achieves advantages in a changing environment through its configuration of resources and competencies with the aim of fulfilling stakeholder expectations. Hall, (1992) states that strategy means defining where you want to get and then providing a route map to show how you are going to get there. Mintzberg et al. (2003) define strategy as the creation of a unique and valuable position, involving a different set of activities.

Aosa (1992) maintains that strategy is creating a fit between external characteristics and internal conditions in an organization to solve a strategic problem. He explains a strategic problem as a mismatch between the internal characteristics of an organization and its external environment. Matching is achieved through developing core competencies and organizational strengths that correlate to the external environment well enough to overcome the threats posed and to exploit the available opportunities in the environment. Strategy therefore is a match between an organization's resources and skills, the environmental opportunities and risks that it faces and the purpose it wishes to accomplish (Schendel and Hofer, 1979).

The term strategic management underlines the importance of managers with regard to strategy. Strategies do not happen just by themselves. A strategy involves people, especially managers who decide and implement the strategy. Johnson et al., (2008) define strategy as the direction and scope of an organization over the long term, which achieves advantages in a changing environment through its configuration of resources and competencies with the aim of fulfilling stakeholder expectations. Strategic management is defined as a set of decisions that result in action, that in turn results in forming and implementing plans designed to achieve a company's objectives. Fred (2011) defined strategic management as the art and science of formulating, implementing and evaluating cross-functional decisions that will enable an organization to achieve its objectives. Strategic management, therefore, combines the activities of the various functional areas of a business to achieve organizational objectives (Pearce et al., 2010).

2.2 The strategic management process

Strategic planning is part of the strategic management process. Strategic management entails both strategic planning and implementation, and is the process of identifying and executing an organization's strategic plan, by matching the company's capabilities with the demands of its environment. The strategic management process is more than just a set of rules to follow. It is a philosophical approach to business. The upper management must think strategically first, then apply that thought to a process. The strategic management process is best implemented when everyone within the business understands the strategy. The five stages of the process are goal-setting, analysis, strategy formation, strategy implementation and strategy monitoring (Pearce et al., 2010).

Goal-setting

The purpose of goal-setting is to clarify the vision for your business. This stage consists of identifying three key facets. First, defining both short- and long-term objectives. Second, identifying the process of how to accomplish your objectives. Finally, customizing the process for your staff. Give each person a task with which he can succeed. During this process you need to keep in mind that your goals need to be detailed, realistic and match the values of your vision. Typically, the final step in this stage is to write a mission statement that communicates your goals to both your shareholders and your staff members.

Analysis

Analysis is a key stage because the information gained at this stage will shape the next two stages. In this stage, gather as much information and data relevant to accomplishing your vision. The focus of the analysis should be on understanding the needs of the business as a sustainable entity, its strategic direction and identifying initiatives that will help your business grow. Examine any external or internal issues that can affect your goals and objectives. Make sure to identify both the strengths and weaknesses of your organization as well as any threats and opportunities that may arise along the path.

Strategy formulation

The first step in forming a strategy is to review the information gleaned after completing the analysis. Determine what resources the business currently has that can help reach the defined goals and objectives. Identify any areas in which the business must seek external resources. The issues facing the company should be prioritized by their importance to your success. Once prioritized, begin formulating a strategy. Because business and economic situations are fluid, it is critical at this stage to develop alternative approaches that target each step of the plan.

Strategy implementation

Successful strategy implementation is critical for the success of a business venture. This is the action stage of the strategic management process. If the overall strategy does not work with the business' current structure, a new structure should be installed at the beginning of this stage. Everyone within the organization must be made clear of their responsibilities and duties, and how these fit in with the overall goal. Additionally, any resources or funding for the venture must be secured at this point. Once the funding is in place and the employees are ready, execute the plan.

Evaluation and control

Strategy evaluation and control actions include performance measurements, a consistent review of internal and external issues and taking corrective actions when necessary. Any successful evaluation of the strategy begins with defining the parameters to be measured. These parameters should mirror the goals set in Stage 1. Determine your progress by measuring the actual results versus the plan. Monitoring internal and external issues will also enable you to react to any substantial change in your business environment. If you determine that the strategy is not moving the company towards its goal, take corrective actions. If those actions are not successful, then repeat the strategic management process. Because internal and external issues are constantly evolving, any data gained at this stage should be retained to help with any future strategies.

2.3 Innovation and strategic innovation

SMEs today act under big pressure from the business environment and pressure from customers who expect to get more and more quality products or services. In order to face these challenges, SMEs are made to continuously search for new ways of offering new products/services and enhancing existing ones. In one word, they should continuously introduce innovations. But, what in fact do innovations mean?

An innovation is a new idea, which may be a recombination of old ideas, a scheme that challenges the present order, a formula, or a unique approach which is perceived as new by the individuals involved (Rogers, 1982; Zaltman et al., 1973). As long as the idea is perceived as new by the people involved, it is an 'innovation', even though it may appear to others to be an 'imitation' of something that exists elsewhere.

Joseph Schumpeter defines innovation as an activity which leads to a new producing function, a new product (Mc Daniel, 2002). Lionnet (2003) defines innovation as a process by which a novel idea is brought to the stage where it eventually produces money. It is a dynamic technical, economic and social process involving an interaction of people coming from different horizons, with different perspectives and different motivations. Pearce et al. (2010) define innovation as a grand strategy that seeks to reap the premium margins associated with the creation and customer acceptance of a new product or service.

It can also be defined as the application of new ideas to products, processes or other aspects of the activities of a firm that lead to increased 'value'. This value is defined in a broad way to include higher value added for the firm and also benefits to consumers or other firms. Two important definitions are:

- Product innovation: the introduction of a new product, or a significant qualitative change in an existing product.
- Process innovation: the introduction of a new process for making or delivering goods and services. Some authors have emphasized a third category of innovation, that of organizational change within a firm, but we see this as being naturally included within the second category, as a type of process innovation. Product innovations may be tangible manufactured goods, intangible services, or a combination of the two.

Innovation is the process of developing and improving products, processes and markets with the aim of aggregating value. This definition is based on a distinction made by Schumpeter between an invention, an idea, and an innovation as the generation of value out of an idea (Cooke, 2001; Marins 2008). However, high technology SMEs also engage actively in radical innovations. These include spin-off firms and R&D partners of multinationals. SMEs are crucial for introducing radical new technologies if the technology gap is large (Nelson, 1994).

Incremental innovation entails that existing knowledge is combined or slightly adjusted to a local context. Most firms, especially SMEs, innovate incrementally. Even if a firm copies an existing technology, the technology has to be adjusted to the context-specific routines of the firm which spurs new innovation processes. In increasingly demand-driven markets, incremental innovations enable firms to enter market niches at relatively low costs (Asheim et al., 2009; Fagerberg et al., 2012).

Strategic innovations take the road less travelled. They challenge an organization to look beyond its established business boundaries and mental models and to participate in an open-minded, creative exploration of the realm of possibilities. Strategic innovation often involves changing or innovating business models – the template on how the firm is going to make money - to make a company more competitive. Strategic innovation requires changing or bringing new value propositions, services and production processes. The key notion behind the concept of innovation systems is that innovation is an interactive process (Lundvall, 2007).

Strategy involves answers to three basic questions that define a business:

1) Who are our customers?

2) What value do we provide?

3) How do we deliver that value?

As such, strategic innovation involves one or more of the following:

- Dramatic redefinition of the customer base, that is, how do we dramatically expand the size of the market?
- Dramatic reinvention of the concept of customer value, that is, how do we dramatically change the value that customers receive?
- Dramatic redesign of the end-to-end value chain architecture, that is, how do we dramatically improve the efficiency of the end-to-end value chain from suppliers to customers?

In a world that is changing rapidly and in unpredictable ways, strategic innovation becomes vital for adapting to change.

2.4 The dimensions of strategic innovation

The strategic innovation framework entwines together seven dimensions to produce a portfolio of outcomes that drive growth. These dimensions are:

A **Managed Innovation Process** lies at the creative core of the approach. By facilitating an interplay between external perspectives and an organization's internal capabilities/practices – and by looking beyond the obvious – it is possible to inspire the corporate imagination to explore a diverse array of new possibilities.

The process is designed and managed to create a Strategic Alignment –enthusiastic internal support among key stakeholders is required to galvanize an organization around shared visions, goals and actions. Industry Foresight provides a ‘top-down’ perspective that seeks to understand the complex forces driving change, including emerging and converging trends, new technologies, competitive dynamics, potential dislocations and alternative scenarios. Customer Insight provides a ‘bottom-up’ perspective, a deep understanding of both the articulated (explicitly stated) and unarticulated (latent or unrecognized) needs of existing and potential customers (Ireland and Hitt, 1999).

Core Technologies and Competencies is a set of internal capabilities, organizational competencies and assets that could potentially be leveraged to deliver value to customers, including technologies, intellectual property, brand equity and strategic relationships. A company’s Organizational Readiness may drive or inhibit its ability to act upon and implement new ideas and strategies, and to successfully manage the operational, political, cultural and financial demands that will follow. Lastly, success will be enabled or limited by an organization’s capacity for effective Disciplined Implementation.

An organization moves beyond an ad-hoc approach to innovation when it begins to develop and institutionalize a cultural mindset and a set of processes that support repeatable, Sustainable Innovation. This then becomes a foundation for an on-going competitive advantage (Davila et al., 2006).

2.5 A study of innovations in SMEs

To date, little has been said about strategic innovations in SMEs, encouraging innovations in small and medium sized enterprises and stimulating innate innovative qualities. Literature on innovations in SMEs is dominated by studies endeavoring to predict success by identifying the determinants of innovation, including those studies that try to identify critical success factors for innovative strategies in SMEs (Bowen and Ricketts, 1992; Dodgson and Rothwell, 1991; Riedle, 1989), and those that specify successful technology and innovation practices in SMEs (Berry, 1996; Boag and Rinholm, 1989; Bracker et al., 1988; Oakey and Cooper, 1991).

Is innovation a human condition?

The human drive to better ourselves is nothing new. There is something very seductive about the idea of making ourselves stronger, fitter, more beautiful, more alert or more intelligent. Innovation is not a rare quality innate to a lucky few people, it is a way of thinking and behaving that comes naturally. It is the task of an organization to foster the right climate to unleash its employees’ innovative tendencies. Innovation is first to understand yourself; understand who you are and who you are not. A company has to create a favorable environment for innovation by creating an innovative culture.

Why is strategic innovation needed in SMEs?

In many industries, it has become increasingly risky not to innovate. Both consumer and industrial markets have come to expect periodic changes and improvements in the products offered. As a result, some firms find it profitable to make innovations their grand strategy. They seek to reap the initially high profits associated with customer acceptance of a new or greatly improved product. Then, rather than face stiffening competition as the basis of profitability shifts from innovation to production or marketing competencies, they search for other or novel ideas (Pearce et al., 2008).

2.6 Innovation management of SMEs

Small firms are dominant in most countries and in the perspective of economic changes and firms' struggle to establish sustainable competitive advantages, successful innovation management in small firms is of significant interest for managers of SMEs, policymakers and researchers. According to Biolos, (1996) innovation champions can rely on three fundamental competencies: they show that new products are connected to the core competencies of a firm and at the same time related to market reality; these firms show flexibility and are able to react to the changing demands of potential clients and markets; these firms can not only create but also develop and commercialize innovative outputs.

Davila et al. (2006) relate successful innovation management to 'design principles': strong leadership, innovation strategy and innovation portfolio. Innovation has to be integrated in the business model and is connected with the vision and mentality of a firm. This is in line with Smith et al.'s (2008) findings: the innovation principal has to be fully integrated in the culture of an organization. Factors that influence the ability to manage innovation are leadership style, resources, structure of the organization, culture, technology, knowledge management, strategy, employees and innovation process.

2.7 Vision and strategy

The link between vision, strategy and innovation is important for effective innovation management. Strategy determines the configuration of resources, products, processes and systems that firms adopt to deal with the uncertainties existing in their environment. This requires firms to take decisions about what businesses and functions they should be performing and in what markets. Successful innovation requires a clear articulation of a common vision and a firm expression of the strategic direction. This is a critical step in institutionalizing innovation. Without a strategy for innovation, interest and attention become dispersed.

The most innovative SMEs seek to be 'the best of the best'. Their employees have clarity of purpose and find it challenging to look for totally new ways of doing things in order to achieve their goals. For these SMEs, innovation is more than benchmarking. They do not try to succeed simply by matching others. Instead, they create a vision and a target which if achieved will create products that outperform and provide a distinct market position. An innovation strategy is critical in directing organizational attention. In general, organizations that adopt an offensive strategy of trying to create the future (as opposed to protecting the past) are more innovative. The success of companies who broke the rules of their industry through innovations with or without technology and went on to become dominant players has been well-documented (Hamel, 1998; Kim & Mauborgne, 1999; Markides, 1998). These companies were able to stimulate demand, expand existing markets and create new ones through an accessible and competitive market price. The ability of innovation capability to integrate newstream and mainstream is therefore ever more important. Newstream enables the creation of new products and services while the focus on lowering costs and improving quality reinforces the need for strong mainstream capabilities.

3. Methods

A purposeful technique was used to select SMEs for interviews and data was collected using self-administered interview guides. The data collected through the interview guides was qualitative and was analyzed thematically using a content analysis.

Interviews were conducted in seven SMEs in Rwanda where 40 staff member were selected and interviewed including senior managers and operational staff. The interview was administrated to respond to questions about strategic innovations in the daily management of the organization.

4. Empirical results

4.1 Techniques of incorporating strategic innovations in daily management of SMEs

Transmission of vision and strategic intent: Employees are more effectively empowered if they are given a clear vision of the future and where the company is trying to go. The need for innovation is then apparent to them, and they know how to direct their efforts. For about 65 per cent of the 40 people interviewed the vision of their companies was not clear. From this point creating an innovative culture in a SME is quite impossible until the vision and mission of the company is clear to all staff members. Thus, transmitting a SME's vision is the first step to innovation.

Tolerance of risks, mistakes and failures: As mentioned earlier, taking risks, making mistakes and failing are not supported and are punished was the response of 72.5 per cent of the people interviewed. Yet, both innovation and organizational learning require trying new things, seeing what happens and learning from the experience. When those new ideas are punished for mistakes, two things may go wrong: (1) people stop experimenting, and (2) mistakes are covered up, so there is no organizational learning. SMEs should have minimum acceptance of risks, mistakes and failures and more importantly they should learn from those mistakes and failures. Thus, tolerance for risks, mistakes and failures towards innovation is the second important step for SME innovations.

Support for entrepreneurs: Intrapreneurship refers to employee initiatives in organizations to undertake something new, without being asked to do so. Hence, the intrapreneur focuses on innovations and creativity and transforms an idea into a profitable venture, while operating within the organizational environment. Entrepreneurs become hands-on leaders for specific innovations within an organization. They are essential ingredients in successful innovation processes and for this they have to be supported by rewarding their intrapreneur spirit, by empowering people to take quick decisions (decision making by doers) and not pushing most decisions up to a level way above the doers.

Seeking to know if there is any motivating staff policy about creating something new within a SME, 67.5 per cent of those interviewed revealed that there was no such policy within the organization. Thus, SMEs in their day-to-day management should have a policy of rewarding intrapreneurs to motivate innovative qualities. Once this factor is well implemented it can be a driver for an innovative culture. Thus, empowering people to take quick decisions and rewarding any initiative of doing a new thing is a third technique for SMEs.

Degree of decision making by doers: Some organizations push most decisions up to a level which is way above the doers. Such organizations are not good at implementing innovations. About 60 per cent of the people interviewed said that they did not have the responsibility of taking quick decisions rather they had to wait for some order from the hierarchy.

Focus on the future: What an organization becomes depends in part on how far ahead it looks. Innovation is more likely to occur when people are thinking well into the future. About 72.5 per cent of the people interviewed agreed that paying attention to the future of the company was a good sign for innovation. Focus on the future should be combined with other factors mentioned earlier to build a strong culture of innovation.

4.2 Building an innovative culture

About 90 per cent of the people interviewed in different SMEs did routine work and had no curiosity about knowing new things outside their daily work. For any organization that wants to innovate or wants to be prepared to innovate, this means that it has to have a few things in place. The first and perhaps the most important thing is having methods for fostering an open mind. This not only means having a sense of inquiry and curiosity about things, but also having the quickest way for removing that curiosity. SME managements have to prepare their staff for innovation by creating room for discussions about the future of the company and giving them the freedom of thought and for expressing their opinions about the future of the company.

The second thing that is important is an ability to create spaces where trust can happen, where risks can get taken. To take risks you have to have some level of trust within the organization, because if people get penalized for failure, particularly the kind of failure through which you learn, then they will not learn, in which case you are not going to get any innovations. As discussed earlier, about 72.5 per cent of the people interviewed said that even minor mistakes were punished, and that people who made mistakes were not encouraged to share these mistakes so that others could learn from them.

5. Summary and conclusion

Creating an innovative culture in SMEs is still a long road to travel. Yet, the environment is pushing SMEs to innovate as a sole means of survival in this global village. Our findings show that most SMEs' vision is not clear to many of their operational staff members as a consequence of which they do not know where they are going. SMEs are largely focusing on harvesting and protecting existing practices rather than paying attention to developing new ideas.

Risks, mistakes and failures in innovation are tolerance zero which discourages most employees to innovate. No curiosity about new things outside their daily work (90 per cent of the people we interviewed said this) is principally because of lack of corporate behavior that is comfortable with new ideas and risks. For innovations to become a core competency and a tangible cultural value there has to be a substantial degree of internal consistency between processes, metrics, reward structures and the top management's behavior and it is precisely this synchronicity that is lacking in most SMEs in Rwanda. It is in this context that we suggest that SMEs' managements have to create and incorporate an innovative culture by transmitting the SME's vision and encouraging staff members to try new things by accepting minimum risks, not punishing mistakes made in innovations and discussing widely any failure with the spirit of learning from it. Everyone can develop skills to creatively solve problems. We further suggest that SMEs should empower the entire workforce to connect points seen and unseen for success.

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