Competitiveness of SMEs through Different Strategies

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Abstract: *Government can play important role in encouraging SMEs to innovate and implement the strategies required to meet the challenges of globalization through proper regulation, incentives, and institutional learning. The most important goal for high tech SMEs like technology developers or lead technology users which is 15% of the total SME population, are to promote the development of the private venture capital industry and associated services and adjust the management and objectives of public R&D granting programmes. Vast majority of SMEs who are technology followers, novel technology and innovation policies should address their needs related to non financial innovation like consulting services, recruitment of university graduates, awareness of new ideas and technologies, and incentives and institutional frameworks.*
Keywords: *Innovative strategy, information technology strategy, niche strategy, network strategy & cluster strategy.*

I. Introduction

The SMEs contribution with innovation led growth and job creation has developed in last few years. The SMEs especially young firms contribute largely to the innovation system by introducing new products and adapting existing products to the needs of customers. There is a discussion whether some market and systematic failures affects small firms and why the governments have increased the priority related to policies towards SMEs. These policies must consider the challenges and opportunities that new technologies and globalization raise for small firms. There must also be the balance between measures showing general problems related to size or newness and targeted responses that are adapted to the varying needs of different types of SMEs.

II. Research Method

The research design will be descriptive in nature. The method of data collection is mainly based on secondary data. The method of data collection is mainly based on secondary data through literature review. However, an effort is made to collect primary data by taking information from competent persons off and on.

III. Competitiveness strategies

If there is sustained competitiveness then SMEs can create and use new knowledge on global markets. There are certain strategies which SMEs have pursued on their own like:

1. Innovation Strategy: The most important source of competitiveness for SMEs is to serve as agent of change which means the engines for new idea generation and innovative activity. There are many conventional theories of innovation that SMEs would pursue innovation as a strategy for competitiveness. The most accepted model of the knowledge production function which is formalized by Zvi Griliches (1979) assumes that firms exist exogenously and that firms engage in the pursuit of new economic knowledge as an input into the process of generating innovative activity. But knowledge as input is different than the more traditional inputs of labour, capital, and land because the value of knowledge is essentially uncertain and its potential value is asymmetric across economic agents. Investing in the new knowledge is a difficult activity that most of the SMEs cannot justify. The most important source of new knowledge is research and development. Other factors included are high degree of human capital, a skilled labour force, and the strong presence of scientist and engineers.
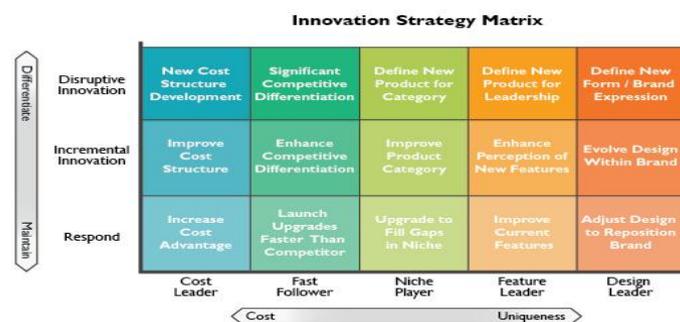

Figure 1. Innovation Strategy Matrix

Innovative strategy matrix is shown above with disruptive innovation, incremental and responds with the cost leader, fast followers, niche player, feature leader and design leader. Knowledge production function model is supported by the empirical evidences. The empirical link between the knowledge inputs and innovative outputs becomes stronger as a unit of observation becomes increasingly aggregated. E.g. if the unit of observation in countries is high, the relationship between R&D investments and patenting is very strong. Many of the innovative countries like USA, Japan and Germany tend to undertake high investments in R&D. in developing countries, patenting activity and R&D investment is very low. The link between R&D and innovative output measured in terms of either patents or new product innovations is also strong when the unit of observation is industry. The most innovative industry like computers, instruments, and pharmaceuticals are also most R&D intensive (Audretsch, 1995). The breakdown of the knowledge production functions at firm level raises a question regarding acquiring of knowledge inputs without or little R&D.

2. Information technology Strategy

A number of new technologies like internet and microprocessor help to lessen economies of scale and the gains are traditionally associated with large scale production. The best example is numerically controlled machine tools (NC) in the machine industries. These machine tools have contributed to a reduction in minimum efficient scale (MES) or the level of output required to reach scale economies. New web based information technologies are enabling SMEs to get global marketing capabilities at very low costs. SMEs are using electronic commerce and internet based access to products like financial and accounting management software systems that enhance organizational and management capabilities.

SMEs also reduce the high cost associated with it. Such product allows SMEs to create virtual warehouse where they develop links between manufacturers and final customers. Organizational structures of SMEs are also modified with the advantage of internet based financial and accounting systems. Whinson and Zhang (1999) say that 'In the physical world, scale economy and standardization play a major role. The digital world allows individual product customization. The customers will directly interact with the intermediary which provides the appearance of having huge inventory with wide range of products'. It is an important strategy made by SMEs to create competitiveness in global markets through digital technology to develop core competencies and collaborate with other SMEs to make innovative content with unique taste of each consumer.
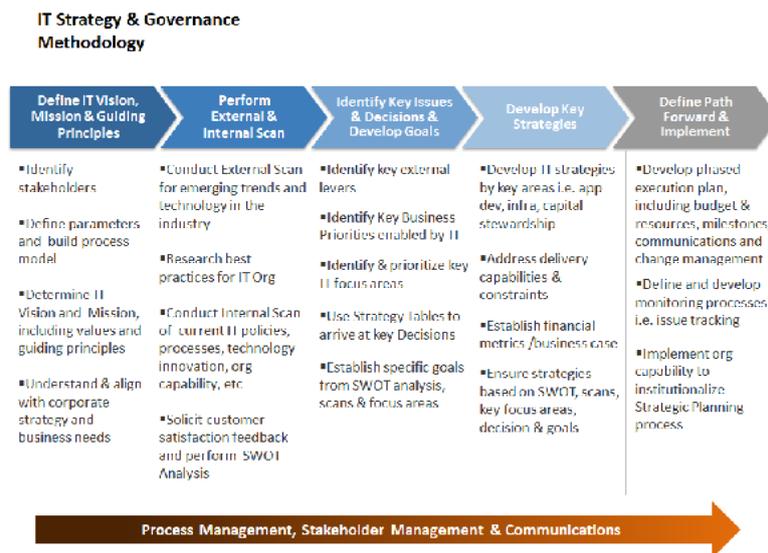

Figure 2. IT Strategy & Governance Methodology

IT strategy and governance methodology is defined with five steps as defining IT version, mission and guiding principles, perform and external and internal , identify key issues & decisions and develop goals, develop key strategy and define path forward and implement.
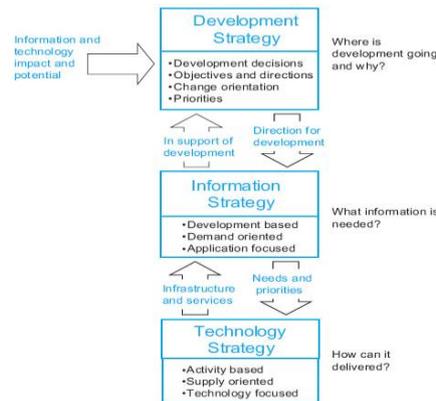
Figure 3. Information & Technology impact and potential

The above diagram shows about the development strategy, information strategy and technology strategy.

3. Niche Strategy

Small and medium sized firms choose to pursue specialized markets or innovative niches. These SMEs exists in the home country and in foreign markets. Many of the SME companies like Krones, Korber/Hauni, Weinig, Webasto, and Terta Werke arer not known in the public but the global share of these companies far more than of the giant companies in Germany. The Mittelstand companies have between 70 – 90% of global market shares in specialized products. Mittelstand companies have a major strategic instrument deployed as a combination of product specialization with geographical diversification. These types of the firms are focusing on the market niche, that require technical expertise and company resources are used to market leadership in the niche.

Diversification is considered as abhorrence to focusing upon the core product. But due to the specialization and small size, Mittelstand companies are at disadvantage in terms of economies of scale. The second strategy is to have a global presence. Product market specialization is focused across broad geographical market, so that globalization of marketing and sales creates sufficient range to recover R&D expenses and maintain costs at a reasonable level. The key to the success of the German Mittelstand has been their strong commitment to global expansion. They invest in abroad in plant, equipment, and technology, and they invest in people. Although high initial investment in terms of short terms of short term returns, the SMEs consider it important to undertake such global investments because of the demonstration effect. They wanted to show potential customers and business partners that they are committed to the local economy.

The Mittelstand companies promote a strategy where they insist on the same high standards in the host market as they do in the home market particularly in servicing their production the creation of strong and reliable service networks. Mittelstand companies have been able to overcome the inherent size of disadvantage with the strategy of expansion of production in foreign markets. But the SMEs of Germany have not been able to overcome the risk inherent in a high degree of specialization and their vulnerability to market changes. German Mittelstand companies pursue strategy that is not blindly committed to the technologically frontier. Their focus is rather on the technology interface and customer needs. E.g. the German Mittelstand companies are very good at customer training. As the complexity of the product increases, the customer requires more information regarding operating and maintaining products which is provided by Mittelstand.
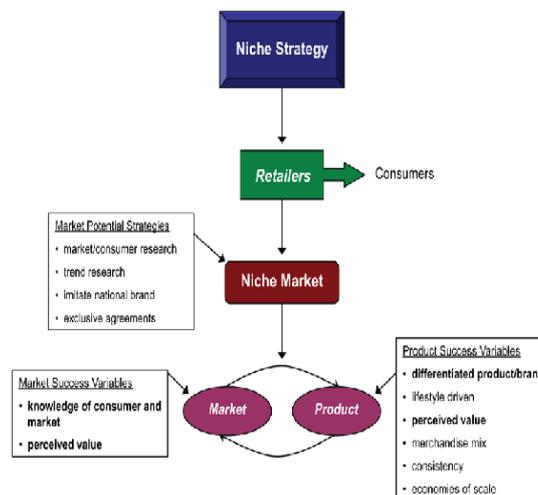

Figure 4. Niche Strategy

The above diagram shows the market success variables and product success variable.

4.   Network & Flexible Production Strategies

The fourth strategy for SMEs to remain competitive in global market is to actively participate in networks and cooperate with other firms. Saxenian (1994) says that it is the culture of interdependence and exchange among individuals in Silicon Valley that has contributed to superior innovative performance compared to Boston's Route 128 where firms are isolated from each other. He emphasized the role of individuals in facilitating the transmission of knowledge across agents, firms and industries. He states that it is not only the concentration of skilled labour, suppliers and information that distinguish the region but the universities, business organizations and many specialized consulting ,marketing research, public relations and venture capital firms provide technical, financial, networking services. In the trade forums, industry conferences, seminars, relationships are easily formed and maintained, technical and market information is exchanged, business contacts are established and new enterprises are formed. The economic structures within a geographical unit of observation might shape economic performance. There are two issues related to this as the degree of diversity versus specialization in the region, and the degree of monopoly versus local competition.

The Marshall Arrow Romer Model suggests that a concentration of firms in a particular industry in a geographic region facilitates knowledge spread over across firms. This model formalizes the insight that promotes knowledge spread over among firms and facilitates innovative activity. The individuals in the population are identical and engaged in identical types of activities, the cost of communication and transactions are minimized. There is higher probability that knowledge will spread across individuals in the population.
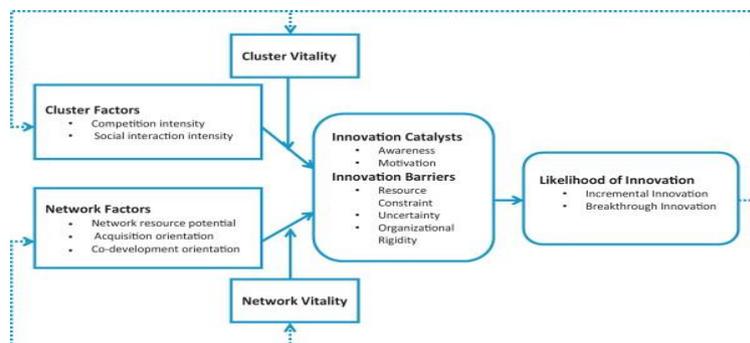

Figure 5. Network Strategy

The above diagram is the network strategy with cluster vitality, network vitality, cluster factors, network factors, innovative catalysts, innovative barriers and likelihood of innovation. There is also a discussion about the effect of competition on innovative activity. This model predicts that local monopoly should be superior to local competition because it maximizes the ability of firms to appropriate economic value acquiring from their investments in new knowledge and thus the incentive to innovate. Jacob (1969) and Porter (1990) states that competition is more favourable to the generation of knowledge externalities than is local monopoly.

5.   Cluster Strategy:

SMEs can enhance their competitiveness in global markets by participating in localized geographic clusters. In clustering strategy, firms take advantage of linkages with other companies afforded by geographic proximity to better access new ideas and knowledge. This strategy is important in young industries or industries where strategic knowledge is tacit. The importance of knowledge spillovers in encouraging innovation undisputed. Krugman (1991) says that these knowledge externalities are so important that there is no reason for geographic boundaries like city limits, state lines, or national boundaries to block the argument extent of spillover. It may be a contradiction to claim that geographical matters for innovative activity in a world of email, fax machines, and cyberspace where the cost of communication has reduced. But there is a distinction to be made between information and knowledge. Information, such as the price of gold on the New York Exchange or the value of Yen in London, can be easily codified and has a singular meaning and interpretation. Knowledge is vague, difficult to codify often recognized while the marginal cost of transmitting information across geographic space has been reduced due to telecommunication revolution.

Figure 6. Selective growth with a focus on profitability

The above diagram shows the different variables for the growth as the cluster strategy. Von Hipple (1994) says that high context and uncertain knowledge is transmitted in face to face interactions and through frequent repeated contacts. Geographical proximity matters in transmitting uncertain or sticky knowledge. Tacit knowledge is non rival in nature and knowledge developed for a application can have economic value in different applications. Glaeser et. al. says that intellectual breakthroughs must cross hallways and streets are more easily than oceans and continents. Economic literature shows that knowledge spillovers are geographically constrained.

6. Foreign Direct Investment Strategy:

Transnational economic activities of SMEs have been increasing over time. The total value of foreign direct investment activities by MSMEs have increased over time and their share of the total foreign direct investment. The effectiveness of the FDI strategy for enhancing SME competitiveness is done by three fundamental sets of factors. The first is that the companies must have an endowment of capabilities in foreign markets that are superior to those firms located in other countries. Such firms which can be called as ownership advantages are intangible assets like proprietary knowledge or a position of market leadership or human capital. The second factor is that the benefits accruing to the SME for exploring its firm specific ownership advantages must exceed those it would gain if it chooses to sell or license them to foreign firms. Benefits included are gaining a large share of the target market, risk diversification, or access to vital information about potential inputs or market opportunities. These benefits from the extending the enterprise's activities abroad must exceed the benefits expected from externalizing its property rights through other mechanisms such as licensing, management contracts, franchises, technical services agreements, turnkey projects, and sub contracts. The last third set of factors is those which make production abroad advantageous. There must be some factors input found outside of the home country that provide an advantage of production abroad otherwise it would simpler to export the product to foreign markets.
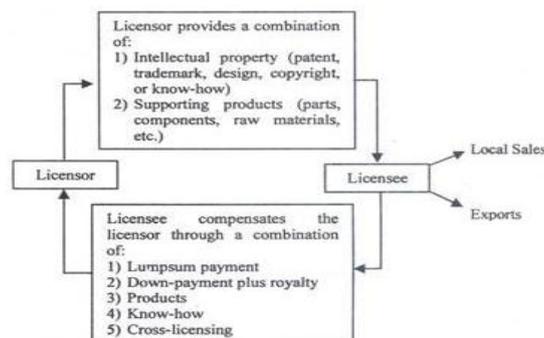

Figure 7. Licensing as a foreign market entry strategy

The above diagram states about the licensor and licensee requirements in the foreign market.

Figure 8. Two-dimensional plot of SMEs

Research Limitations:
1. Time factor is a main constraint.
2. Getting in-depth information about SME of different countries is constraint.
3. All strategies are not implementable in SME's of all different countries.
4. Conditions of SME's are different in all countries.

IV. Conclusion:

In most of the countries, technology programmes are organized by technology sector. They do not target different sub populations of companies; they have targeted special SME programmes. Only a few countries make a distinction between different kinds of SMEs. Technology developers are the subgroups of SMEs that have benefitted longest from public R&D support schemes. They are able to respond to government R&D programmes because their focus is on developing leading edge technologies. The emergence of private capital sources has reduced the public grants for this group. R&D granting institution's knowledge can be used in complement the expertise of venture capitalists. In some countries, public seed capital organizations are merging with the institutions that administered R&D grants. Government should encourage collaboration between R&D granting institutions and private or semi public seed capital industries.

The second group is the leading technology users which have benefitted the most from the recent SME friendly programmes introduced by many OECD countries. These firms perform some design and development work and have an absorptive capacity that recognizes and adopts new developments but they lack the size to be very active in R&D. Government should lower the barriers to public R&D programmes by requiring less administration and technology novelty.

The third group is the potentially innovative, traditional, non R&D intensive SMEs. They are not using technology as a source of innovation but as an enabling mechanism. R&D grants are of little use to these companies. Many of them need advice on non financial matters. The main objective for these companies is to close the knowledge gap between the vast amount of technical and engineering knowledge from their public research institutions, customers, suppliers and their own day to day business activities.

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