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CHALLENGES FOR SMALL AND MEDIUM ENTERPRISES IN INFORMATION TECHNOLOGY IN THE CITY OF BANGALORE, INDIA

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ABSTRACT

The paper analyzes the state of small and medium enterprises (SME) engaged in Information Technology industry in the city of Bangalore in India. It studies the past and present of this industrial segment and tries to predict the future prospects of this industry. The objective of this research is to analyze the performance of small and medium enterprises engaged in Information Technology industry and to evaluate available opportunities and challenges for them in India. The literature review describes the overall Indian economy and factors affecting its growth whether positively or negatively. For this purpose of research a qualitative research methodology has been chosen. The researcher has taken interviews with managers and entrepreneurs in order to understand and satisfy the aims and objectives of this research. The results from the interviews have been discussed and analyzed by dividing them into various themes based on the literature review. The study concludes by discussing the limitations and recommendations.

KEYWORDS

Small and Medium enterprises, Information Technology, Opportunities, Challenges, Qualitative Research.

INTRODUCTION

 Small and Medium Sized Enterprises (SME) play an important role in the economic development of a country. It is estimated that half to two-third of businesses all over the world are SMEs. They comprise a widely divergent spectrum of establishments, engaged in economic activities ranging from micro and rural enterprise to modern industrial units using sophisticated technologies. Such enterprises exist in the form of factories, workshops, trading and service organizations. Ownership patterns range from proprietorship and partnership to companies and co-operatives. Small and Medium Enterprises (SMEs) are today recognized as a priority in almost all countries. Several theories elaborate on connection between information technology, economic development and social change. Almost all agree on the importance of information and communication technology adoption in SME, while the importance of SME as engines to economic growth is well acknowledged worldwide.

Information technology had a great impact in all aspects of life and the global economy is currently undergoing fundamental transformation. Information technology has very real impact in most of industries and in all aspects of economy, while businesses and enterprises continue to undergo considerable changes. Usage of these technologies is revolutionizing the rules of business, resulting in structural transformation of enterprises. Modern businesses are not possible without help of information technology, which is having a significant impact on the operations of Small and Medium Sized Enterprises (SME) and it is claimed to be essential for the survival and growth of economies in general.

Bangalore, a city of nearly five million people, has some of India's most advanced engineering and electronic industries. Bangalore has a dense network of large and small firms using advanced technologies, and abundant skilled labor. The many small engineering and electronic firms depend mainly on large public and private sector factories for orders, but some of them market their own products. Increasingly, these small firms are using CNCs (computer numerically controlled machine tools) and CAD (computer-aided design). If they lack some of the necessary machines and skills, they put the work out to other small firms and consultancies. It is also seen that companies are moving towards a less hierarchical model, where smaller firms are no longer ancillaries making components and doing job work to the large firm's designs, but interdependent firms supplying markets which the large firms do not reach. The challenge here is can smaller firms work together to develop their own products, and compete successfully with large firms on national and foreign markets, creating faster economic growth and more employment than big firms alone could provide?

BACKGROUND AND PROBLEM STATEMENT

The purpose of this study is to analyze the past present and future of Indian SMEs concentrating on Information Technology. The researcher intends to study the performance of these SMEs and bring out available opportunities and challenges for them in India.

The researcher seeks to answer the following four research questions:

1. To identify, analyze and evaluate performance of SMEs engaged in IT industry in India from past to present.
2. To analyze opportunities available in this industry in India.
3. To analyze challenges in this industry in India
4. To study the future prospects of IT manufacturing SMEs.

REVIEW OF LITERATURE

According to Reserve Bank of India (2006), "Small and Medium Enterprises can be defined as investments ranging from Rs 2.5 million to Rs 10 million and manpower ranging from 25 persons to 400 persons. Enterprises with capital upto Rs 10 million are treated as small scale industries (SSIs) and those with capital over Rs 10 million and upto 100 million as medium enterprises."

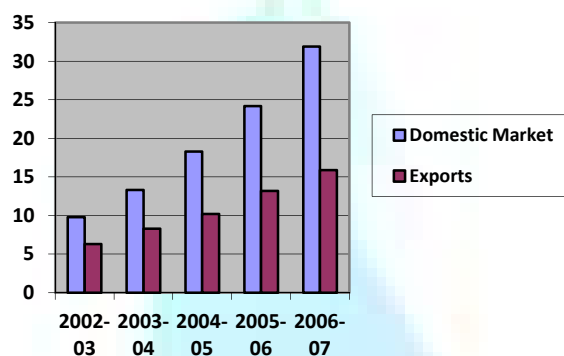
Various other definitions have also been proposed by the central government from time to time to enhance the competitiveness and sustainability. According to a recent revision of the SME act to Micro, Small and Medium Enterprises (MSME) Development Act 2006 firms will now be categorized as micro small and medium units. Those enterprises that are engaged in production will be called micro if the investment in plant and machinery does not exceed 2.5 million rupees. Small enterprises will henceforth be the units with investment in plant and machinery in the range of 2.5 million rupees to 50 million rupees and medium enterprises with an investment of at least 50 million but not exceeding 100 million rupees.

According to Venkataramanaiah and Parashar (2007) Indian SMEs were supposed to be hit hardest by the opening of the economy in 1990 because they were not expected to withstand the onslaught of the big Multinationals. However, according to Business World 2005, SMEs are outperforming the big corporation by huge margins.

INFORMATION TECHNOLOGY INDUSTRY IN INDIA

The IT/ITES industry is by far the biggest and the most prominent service industry in India. It currently accounts for almost 7% of India's GDP. There are more than 100 major foreign companies and a larger and a more diverse group of Indian companies ranging from large organizations with global operations to small companies focusing on exports or the domestic markets. The industry has recorded a phenomenal growth in terms of revenues and employment generation over the past 5 years as shown in the figure below. The domestic and export revenues increased from USD 15 Billion in 2002-03 to USD 50 Billion in 2006-07. Interestingly over the years the domestic market (top bar) is providing more revenues than the exports. (bottom bar).

FIGURE 1: IT/ITES SECTOR REVENUE 2002-2007 IN USD



Source: NASSCOM

Software and IT enabled services have emerged as a niche sector for India. The Information technology industry in India has gained a brand identity as a knowledge economy due to its IT and ITES sector. The IT-ITES industry has two major components: IT Services and business process outsourcing (BPO). The growth in the service sector in India has been led by the IT-ITES sector, contributing substantially to increase in GDP, employment, and exports. The sector has increased its contribution to India's GDP from 6.1% in 2009-10 to 6.4% in 2010-11. According to NASSCOM, the IT-BPO sector in India aggregated revenues of US\$88.1 billion in FY2011. The top seven cities that account for about 90% of this sectors exports are Bangalore, Chennai, Hyderabad, Mumbai, Pune, Delhi, Kolkata, Coimbatore and Kochi. Export dominate the IT-ITES industry, and constitute about 77% of the total industry revenue. Though the IT-ITES sector is export driven, the domestic market is also significant with a robust revenue growth.

SIZE OF THE INDUSTRY: PHYSICAL SPACE

It is estimated that the IT/ITES sector employ about 2.3 million people directly and 6.5 million people indirectly. In terms of class A space i.e. premier commercial space the industry has registered Compound Annual Growth Rate (CAGR) of 52% over past 6 years. IT/ITES space grew from 35 million square feet in 2001 to 85 million square feet by end of 2007.

INDUSTRY CONCENTRATION

It is largely concentrated in a few cities of India such as Bangalore, Hyderabad, Chennai, Pune, Kolkata and National Capital Region (NCR) that comprises of New Delhi, Gurgaon, and Noida. Maximum number of software companies are in Bangalore now Bengaluru (1700) followed by NCR (1400), Hyderabad (1060). Chennai, Pune, Mumbai and Kolkata follow next.

SMALL AND MEDIUM ENTERPRISES IN INFORMATION TECHNOLOGY

In India Small and Medium Enterprises are organized in clusters. The importance of small and medium enterprises in any economy cannot be overlooked as they form a major chunk in the economic activity of nations. They play a key role in the industrialization of a developing country like India. They have unique advantages due to their size; they have comparatively a high labor-capital ratio, they need a shorter gestation period, they focus on relatively smaller markets, they need lower investments, they ensure a more equitable distribution of national income, they facilitate an effective mobilization of resources of capital and skills which might otherwise remain unutilized and they stimulate the growth of industrial entrepreneurship.

According to a UNIDO report, support for SMEs is generally based on 3 assumptions. First is that it sustains a broad and diversified private sector and creates employment and thus benefits the country as a whole, second a strong SME sector will not emerge without support from the state but they suffer disadvantage in the markets because of their size, third the programs aimed at smallest enterprises have been justified more in terms of their welfare impact than their economic efficiency.

Industry clusters are groups of competing, collaborating and interdependent businesses working in a common industry and concentrated in a geographic region. Clusters improve competitiveness, which results in improved productivity by improved access to specialized suppliers, skills and information. Innovation is given more importance as the need for improvement in the process of production is highlighted and once established, clusters will grow as new firms and new suppliers will enter the system which will have the cascading effect towards a strong and competitive cluster.

CHALLENGES CHARACTERISING THE SMEs

1. They are unable to capture market opportunities which require large production facilities and thus cannot achieve economies of scale, homogenous standards and regular supply.
2. Experiencing difficulties in purchase of inputs such as raw materials, machinery and equipments, finance, consulting services, new technology, highly skilled labor etc.
3. Small size hinders the internationalization of functions such as market research, market intelligence, supply chain, technology innovation, training and division of labor that impedes productivity.
4. Emphasis to preserve narrow profit margins makes the SMEs myopic about the innovative improvements to their product and processes and to capture new markets.

5. Unable to compete with big players in terms of product quality, range of products, marketing abilities and cost.
6. Absence of a wide range of financing and other services that is available to raise money and sustain the business.
7. Absence of infrastructure, quality of labor, business acumen and limited options/opportunities to widen the business.
8. Poor IT and knowledge infrastructure

To overcome all these difficulties, Indian SMEs deserve all the policy support the Government can offer.

What they need is not protection but institutional support to fund modernization and technology up gradation, infrastructure support and adequate working capital finance. Also they must have professional inputs and knowledge about various happenings in their own industries in and around the country. This brings in the concept of SME networks and clusters that stimulate innovative and competitive SMEs.

As far as SME clusters are concerned every SME should know that the other SME in the same cluster is also vying for the same customer, also going to use the same support structures and also suffers the same shortcomings.

There are always some comparative advantages for the SMEs in the cluster, as the cluster participants can either be allied industries or suppliers or any other stakeholder or even rivals. Extending the theory of comparative advantage of David Ricardo to SME clusters, even though all SMEs inside the cluster are having the common facilities and problems, each unit is unique with its own characteristic features that determine its productivity. This could be in terms of organizational culture, leadership, quality of work life, labor quality, internal environment and processes, adaptation to change and new technology among others.

Factors like economic slowdown especially in the US and ever-increasing internal costs have impacted the margins of small and medium IT players.

INFORMATION TECHNOLOGY SME CHARACTERISTICS

1. Thriving on single contract or client
2. More in numbers through contribution to the IT industry's revenue bases is very low.
3. Focus on outsourcing led growth.
4. Missing entrepreneurial mindset.
5. Desire to go global but lack the vision or/and adequate exposure.
6. Go alone approach
7. Mostly followers of the successful models set forth by the likes of Infosys, Wipro etc.

Startups	Manpower strength: Very less	Acts as a sub-vendor to another sub-vendor. No direct interaction with the end client	Very small capital. Do not even qualify for most of VC funds	Mostly resellers
Strugglers	Manpower strength: Medium	Acts as a sub-vendor to the main vendor. But no direct interaction with the end client.	Moderate capital qualifies for some VC funds. Yet most of the VC's ignore them	Service provider/Reseller
Survivors	Manpower strength: Medium to high	May have direct access/dealing with the end user. Multiple client base	Beneficiary of most VC funds and policies implemented for SMEs	Customized service provider/Integrator/Reseller/Product companies, Global presence/Operations

EMERGENCE OF IT SMEs

The first generation of Indian IT entrepreneurs were individuals who had worked for MNCs in India or abroad at some point of time in their career, and who were not only subjected to international exposure but also to the cultivation of entrepreneurship, leading many to start their own enterprises. The trend was further intensified as IT veterans preferred to establish their own set ups based on their management expertise, experience, and knowledge of cutting-edge technology — mostly in the small-scale industry (SSI) or SME category. Booming domestic and export markets, growing opportunities, and the lure of being able to stay close to family are some of the major factors that contributed to this trend, which ultimately resulted in the establishment of SMEs in the IT sector since 2000. Financial incentives put in place in 1999 — such as a 10-year income tax benefit for small units in the IT sector — enabled many Indian IT SMEs to survive the initial battles against bigger players.

There is huge opportunity for IT SMEs in the form of domestic customers and SMEs from other industries. The Indian domestic market has been growing steadily over the last 2 years, which offers tremendous opportunities to Indian IT SME companies to explore, as Indian companies are increasingly adopting IT to gain efficiencies in view of globalization. Indian domestic IT services and software products market size was estimated at US\$ 7.2 billion in 2007. Hence, Indian players have a choice — to source their IT requirements either from large MNCs or from local vendors, the latter of which a majority can be categorized as IT SME.

SOFTWARE TECHNOLOGY PARKS OF INDIA, STPI

The STPI is an autonomous society set up by the Department of Communication and Information Technology, Government of India in 1991 with the main objective of promoting software exports from the country. The main services rendered by STPI for the software-exporting community include statutory services, data communications services, and incubation facilities. Currently, there are 47 centers of STPI across the country. STPI has also played a developmental role in the promotion of software exports with a special focus on SMEs and start-ups. IT-ITeS exports from STPs have grown at CAGR of 37.8 per cent during FY03 to FY07.

On-site development was the only mode of software exports, which was very expensive, and adopted mainly by big players. However, the scenario has changed with the introduction of high-speed data communication (HSDC) facilities by the STPI. The setting up of HSDC facilities enhanced off-shore development of software, and was indirectly responsible for the entry of many SMEs into this sector. Today, more than 80 per cent STPI members units are SMEs.

The software technology park (STP) scheme is a 100-per-cent export-oriented scheme for the development and export of computer software, combining the concepts of totally export-oriented units (EOUs) and export processing zones (EPZs). It has been quite successful and exports from STP units have grown manifold over the years. Today, exports from STPI-registered units account for more than 95 per cent of total software exports from the country.

Apart from providing statutory and fiscal support, STPI centres conduct seminars in technology as well as on policy matters. They are also involved in conducting interactions with the industry, especially for SMEs, through various industry associations; participation in road shows in domestic and foreign markets; and arranging interactions between venture capitalists and potential SMEs. The SME segment relies heavily on the STPI ecosystem that has gradually nurtured SMEs from inception to becoming independent, successful units.

OPPORTUNITIES FOR IT SME

In view of globalization trends, a booming economy and the emergence of India as an IT outsourcing hub, the IT industry seems to be the fastest growing sector in the country over the last couple of years, and SMEs play a significant role in driving the Indian IT industry to new heights by sustaining the current growth. The SME segment would target niche verticals such as transportation, education, utilities, and e-Governance, while in terms of the technology segment; SMEs can target embedded systems, GIS, and web services. In addition, there is tremendous potential in the products and component segment. IT associations need to foster more partnerships and alliances, and encourage cooperative relationships between big and small players. Associations should try to build a healthy business environmental framework that can meet market demands and help India retain its competitive edge. To sum up, Indian software SMEs have the

potential to compete in the global arena and to play a significant role in promoting both regional and national economic development. However, in order to enhance their business opportunities, SMEs will need to enhance their technological and organizational capabilities to develop global competitiveness. There is much scope for public policy to support these small firms' efforts to build competitiveness, in terms of developing technical and marketing skills, and fostering technological and innovation capabilities.

RESEARCH METHODOLOGY

Considering the research topic and aim of the investigation a Qualitative approach has been undertaken. One of the main causes for adopting qualitative research is to answer the research question in depth and to gather the information from managers with the help of interviews. The main tool used for data collection was interviews.

DATA ANALYSES

The data gathered by the researcher while conducting the interviews of owners and managers of various Information Technology SMEs in India. Due to confidentiality issues the names of the respondents are not being disclosed and will be referred to as respondents. The researcher has conducted a 45 minute open ended semi structured interview to get inside perspective of the practical issues and the solutions relating to this industry.

Most of the respondents agreed with the fact that the scope and future prospects of the industry is very bright and through proper planning the SMEs can become more successful. Everybody agreed to the fact that the Government is drafting policies to promote the growth of SMEs but also added that it is not sufficient. When probed there was a unanimous feeling of want of a more conducive environment and policies from the Government.

There was a feeling of shortage of capital and majority of the respondents expressed that it is difficult for them to secure loans from financial institutions at competitive interest rates.

Most of the respondents agreed that they did not spend much on marketing and marketing expenses as such for their organization was minimal. On the issue of clusters and informal agreements, every single SME overwhelmingly supported it. One SME went to the extent of quoting that the SMEs can't exist without being present in clusters. Due to small requirements of raw materials, cheap transportation, the units were pound to club or pool their resources and achieve the economies of scale.

FINDINGS

- The researcher has found that although the Indian SME was expected to be doomed after the 1990 economic reforms, it is performing well and there are good future prospects of the industry.
- The performance of SMEs can be increased to a large extent by providing good regulatory environment and more government support.
- SMEs benefit to large extent from clusters and reap benefits from each other's support.
- The study shows that the external factors such as inter-firm co-operation and institutional support can play a key role in helping SMEs to build up the internal capabilities to compete in regional and global markets.
- Cost, quality and delivery time are the main pressures on the IT sector component.

RECOMMENDATIONS

- In order to improve their competitiveness SMEs need to invest more in R&D activities.
- React to the needs of their customers, but also act as "industry leaders" encouraging "best practices"
- Provide marketing information and encourage marketing research.

INTERVIEWS BY MANAGERS

The researcher has organized the data in 3 themes

- A. Winning Differentiators for SME
- B. Role of NASSCOM in IT SME
- C. Bright Outlook for Indian IT SMEs

A. WINNING DIFFERENTIATORS FOR SME

In order to help SMEs make more revenues and to create a brand identity for them, there are a few suggestions which the researcher has summed up through interviews with managers working in IT SMEs. The researcher has termed these as Winning Differentiators.

1. IT deployment

SMEs in India must invest in smart IT technologies. Simple inexpensive technologies have added to the success of small and medium IT Businesses. The mistake most IT SMEs do is ignoring IT deployment. The researcher would strongly recommend that every IT SME must also look at a phased scalable strategy. The downturn had a devastating impact on SMEs worldwide, and it has lowered the IT spending, but IT SME's must invest in next generation technologies like the Cloud, advanced CRM technologies and so on.

2. PR Management Tips

IT SMEs in India must carefully manage their media stakeholders; they must map and manage them well. It is important to have a public relations plan. This can be press releases for a company product or a service, building thought leadership, IT Channel communications, just to name a few. Often this phase can seem daunting, but these activities will help the enterprise by enhancing their development step-by-step.

It is necessary that they classify the media stakeholder category and develop a communication strategy. Short term and long term goals need to be prepared. PR goals must be aligned with the Marketing goals. Most IT SMEs in India do standalone PR activities, forgetting to align them with the company's marketing goals.

3. Social Media Management Techniques

In an era of increased interaction, every IT SME in India must invest time and resources in Social Media. Small and Medium Business owners should look beyond the brick and mortar and reach out to a bigger audience with the web. Establishing one's online presence is vital, whether it's by creating an interactive, regularly updated site or blog, or by building informative yet informal profiles on social networking sites like Face book or Twitter. Opening communication channels online will not only increase product awareness, it will also boost the SME's online presence.

IT SME should also promote their business online through attractive design and content on their website that would appeal to users and position their business and brand/product /services as a source of valuable knowledge.

1. Bartering Techniques

This is an excellent tool to promote an SME's business and get others to use their product and services. The idea is to trade your product for advertising space or for another company's product or service. This is especially helpful when two companies on limited budgets can exchange their services. This can range from running bartering channel schemes to loyalty schemes. All of these unique techniques need to be monitored for efficacy.

2. Identifying the right strategy

No single marketing effort works all the time for every business, so several marketing tactics need to be tried out and the approach needs to be varied. Marketing can be fun; a SME should take advantage of the thousands of opportunities available for communicating their value to customers. The selection of marketing activities cannot be done arbitrarily. The planning needs to be done carefully. Feedback must be obtained from customers.

B. ROLE OF NASSCOM IN IT SME

The role of Nasscom cannot be disregarded when it comes to growth in IT SME... Over the years, the industry association has emerged as a powerful platform for small and mid-sized companies, facilitating business and trade in software and services, and helping them in identifying newer opportunities. While one would say that NASSCOM became a consortium acting as an interface to the Indian software and BPO industry. NASSCOM has successfully created Brand India on a global platform.

One must look at the role of NASSCOM in building an eco-system for the product industry in India. The product development space in India is dominated by SMEs and startups. As per data, SMEs are expected to contribute \$700 billion to the GDP and even if 2-3 percent could be tapped by Indian product companies, it would still be a big number. Right now, the country has around 2,400 product firms, generating revenues to the tune of \$2 billion.

The reason why NASSCOM holds a special place in the SME segment is because it has time and again proved that changing times demand changing models of engagement – unlike several other industry bodies. NASSCOM's approach not only helped the association remain a lobbying platform alone, but has also enabled industry-government collaborations and propagated the use of IT to make the country more competitive – be it in software products or services.

C. BRIGHT OUTLOOK FOR INDIAN IT SMEs

The present times are worrisome for enterprises across the world especially due to the economic turbulence in the West. The most concerned are perhaps those IT firms whose business depends on outsourced work, mainly from the West.

In India, today there are a number of small and mid-sized firms that are engaged in such business and they are more commonly termed as BPOs, KPOs and LPOs. Given that such firms usually operate with limited funds and under tight margins, it is crucial for their smooth functioning to get regular projects from their clients. The recent developments in the global economic scenario have made them apprehend of a dip in business. However, if one takes a view of the Indian IT scenario today and going by its outlook for the coming years, it will be safe to say that domestic IT players, including SMEs, are likely to remain unscathed despite the present economic turmoil. In other words, it can be said that today the Indian IT sector is better prepared to combat such situations than they did when the world was hit by recession in 2008.

What primarily makes outsourcing based SMEs safe now is that they have grown smarter over these last 3 years. Most of them have realized the wisdom of diversifying business and extending business horizon to non-traditional markets. As a result, these IT players today have revenues flowing in from other channels and other countries, besides the major ones like the US, the UK and Australia. However, BPO firms continue to rely largely on these markets, especially the US. Forecasts predict the global BPO market is slated to grow in the coming years and the Indian BPO sector, along with those in China and Australia, is likely to play a key role in this. Therefore, SMEs in the BPO industry can as well put off their worries.

Also, with apex IT industry body NASSCOM projecting 16-18% growth of the Indian IT industry in the current financial year, SMEs in the sector have reasons to be upbeat. The expansion in the industry size also manifests that sectoral players as well as new entrepreneurs are confident of the growth in the Indian IT industry in the days to come.

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