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IMPACT OF INFORMATION TECHNOLOGY ON SMALL AND MEDIUM ENTERPRISES: WITH SPECIAL REFERENCES TO PUNE CITY

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RESEARCH ARTICLE

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ABSTRACT

In India, the manufacturing and trading functions are largely dominated by small and medium enterprises (SMEs). The SMEs are playing a vital role for the growth of Indian economy. In liberalization era, SMEs are facing cut throat competition at local, national and international level. To keep their position intact and sustained in a long run, SMEs have adopted Information Technology (IT) and E-Commerce tools in their business. The present study highlights the various business activities in which IT and E-Commerce tools are being used by SMEs and shows the opinions of SME owners about the impact of IT on the business. There are certain barriers in the implementation of IT system, which are also highlighted in this study.

Key Words: Information Technology, (IT), E-Commerce, Small and Medium Enterprises.

1. INTRODUCTION

Small and medium Enterprises (SMEs) are the fountainhead of innovation in manufacturing and service sector. SMEs are newly exposed to greater opportunities than ever for expansion and diversification across the sectors. The adoption of IT and E-Commerce tools and their wide usage has made a tremendous change in administration and management of SMEs. The increasing trend of IT and E-Commerce usage around the world influences the business process of SMEs. IT and E-Commerce are affecting every aspect of business in Indian SMEs.

In an increasingly competitive and liberalized world SMEs are required to compete more effectively to boost their manufacturing activities and economic activities to contribute towards increasing business. IT and E-Commerce tools can help SMEs to increase their competitiveness globally. Utilization of IT and E-Commerce tools by SMEs is largely a market driven process and eventually it is expected that competition in IT and E-Commerce will lead to greater affordability and allow SMEs to engage more in IT and E-Commerce.

2. Significance of the study

This study is useful to understand the various business functions of SMEs in which IT and E-Commerce tools are being used by entrepreneurs. The study is also significant to highlight the influencing factors (organizational, environmental, technical and knowledge factors) that lead to implement IT system in the organization. The study is helpful to understand the opinions of entrepreneurs regarding the impact and contribution of IT and E-Commerce in overall business performance. It is also important to understand the various obstacles in the implementation of IT and computer based system in the organization.

3. Review of Literature

K. Hansaria, (2013), has highlighted that, while large scale enterprises were among the first to implement IT system and lead the way in adopting more advanced web technologies to increase revenue and decrease cost. Author has found that, the Indian Small and Medium scale enterprises too have used the internet which has led to reduction of costs, increased profits and productivity and faster growth.

B. B. Mishra, (2007), has elaborated the significance of IT and e-commerce in SMEs. Through the study author has observed that, IT and e-commerce is emerging as a new way of helping SMEs to compete in the global market and thereby contributing to their economic success. In the opinion of author, IT and E-Commerce can help SMEs in Orissa state. Author has discussed on the prospect of future development and growth of SMEs with an empirical analysis of the factors which influence the adoption of computer based technology in the SMEs.

Rahul Raj, (2013), has stated that many SMEs have embraced computer based technology and taken up, e-commerce and information technology application. Author has also highlighted the major barriers in the application of IT and computer based technology in the SMEs. Author has opined that, with the help of IT and e-commerce SMEs in growth phase, should expand their customer base, enter in raw product market and nationalize their business.

N. Kshetri and R. R. Dholkia, (2014), have highlighted the importance of internal and external organizational factors that can influence the usage of computer based technology among SMEs. According to the authors, internal factors are firm size, self-efficiency, past experience with technology etc.

M. M. Roshi, (2011) has examined the factors determining the level of adoption of IT and e-commerce and determining the performance of SMEs in Malaysia. The result of the study shows positive relationship between adoption of IT, e-commerce and financial performance of SMEs. The main aim of the study is to find out the factors affecting the utilization of IT and E-Commerce, and adoption of more sophisticated IT solutions in Malaysian SMEs.

Amitrajit. S. (2009), has explored the factors that influence the decision and method of adoption and implementation of IT and E-Commerce in SMEs. Author has found that there are some factors which hinder the implementation of IT. These factors are lack of fund, lack of expert employees, higher cost of maintenance etc.

4. Objectives of the study

- I. To highlight the major business functions in which IT tools are utilized by SME unit owners.
- II. To study the factors that influence SME unit owners to adopt IT and e-commerce in the organization.
- III. To understand the opinions of SME unit owners about the impact of IT and e-commerce on the performance of the organization.
- IV. To highlight the barriers in the adoption of computer based system and IT.

5. Materials and methods

Research methodology

A descriptive research study has been designed to fulfill the objectives. For the purpose of collecting primary data related to implementation of IT / e-commerce and computer based system and its impacts on the organization, a small questionnaire has been developed for the owners of small and medium enterprises. Therefore, a questionnaire was used as a main survey instrument. The main purpose of questionnaire was to get responses specific to objectives of the study. Apart from this, observation method has also been used. For the purpose of collecting primary data, three MIDC (Maharashtra Industrial Development Corporation) areas located around Pune city were selected viz. Chakan MIDC, Talegaon Dabhade MIDC and Jejuri MIDC.

A] Selection of sample

In total, 125 owners of small and medium enterprise were selected by using convenient sampling method. The following table shows the details of the selected sample.

| Sr. No. | MIDC Areas | Number of SME owners |
|---------|------------------|----------------------|
| 1 | Chakan | 45 |
| 2 | Talegaon Dabhade | 43 |
| 3 | Jejuri | 37 |
| | Total | 125 |

The collected primary data has been analyzed by using simple percentage method.

6. Period of study

The present study highlights the impacts of IT / E-Commerce and computer based technology on the performance of the small and medium enterprises during the last decade (i.e. 2005 to 2015).

7. Limitation of the study

The results of the study are bound to be affected because of the following limitations.

The present study is limited to the selected small and medium enterprises situated in Chakan, Talegaon Dabhade and Jejuri MIDC areas around the Pune city. Thus, the results of the study cannot be generalized to the other areas situated in other districts of Maharashtra.

8. Result and discussion

The collected primary data has been presented in a table form, which is presented below.

Table.1: Major business activities in which IT and e-commerce tools are utilizing (Multiple response)

| Sr. | Major business activities | Frequency | Percentage |
|-----|-------------------------------|-----------|------------|
| No. | | | |
| 1 | Sales promotion and marketing | 118 | 94.4% |
| 2 | Manufacturing process | 76 | 60.8% |
| 3 | Financial matters | 120 | 96.0% |
| 4 | Business planning | 93 | 74.4% |

From the above table it is revealed that, majority of SMEs unit owners (96.0%) are using IT and e-commerce tools mostly in financial matters. 94.4% unit owners are using it for sales promotion and marketing purpose. 74.4% unit owners are using it in business planning. Usage of IT and e-commerce in manufacturing process is around 60.8% of unit owners. The various IT and e-commerce tools adopted by SME unit owners mainly on the basis of their perceived benefits in improving sales promotion activity and marketing functions, with a view to increase their organizational efficiency, competitiveness and for accurate business planning management etc. only 60.8% of unit owners are using IT and e-commerce tools in the manufacturing process. It is observed that, the implementation of IT and e-commerce is still low in manufacturing process compared with other activities in SMEs.

Table. 2, Major influencing factors that lead to adoption IT and e-commerce tools in the organization (Multiple response)

| Sr. No. | Influencing factors | Frequency | Percentages | |
|---------|---|-----------|-------------|--|
| 1 | Adoption of IT and e-commerce by | 77 | 61.6% | |
| | competitors | | | |
| 2 | Continuous access by customers through | 93 | 74.4% | |
| | online | | | |
| 3 | Market competition | 120 | 96.0 | |
| 4 | Decision making ability | 89 | 71.2% | |
| 5 | Adequate and many resources of | 108 | 86.4% | |
| | information available through Information | | | |
| | Technology | | | |

The above table indicates the responses of the SME unit owners regarding the major influencing factors in adopting IT and e-commerce. On the basis of collected primary data, majority of unit owners (96.0%) have adopted IT and e-commerce tools for coping with market competition. It means from their point of view market competition is the most important factor which induced them to adopt IT and e-commerce tools in the organization. Adequately of information and its resource available through IT is the most important influencing factor in adopting IT and e-commerce stated by 86.4% SME unit owners. In the opinion of 74.4% unit owners continuous access by customers through online, induced them to adopt IT and e-commerce tools. 71.2% unit owners have adopted IT with a view to improve their decision making ability; and adoption of IT and e-commerce by competitions induced to adopt IT and e-commerce is also one of the important influencing factors stated by 61.6% unit owners. It indicates that many environmental, organizational and knowledge related factors are influencing the adoption of IT tools in the organizations.

Table.3, Opinions of SME unit owners about the impacts due to adoption of IT and e-commerce on the business

| Sr. | Impacts | Frequency | Percentage |
|-----|--|-----------|------------|
| No. | | | |
| 1 | Saving of time | 08 | 6.4% |
| 2 | Reduction in cost | 12 | 9.6% |
| 3 | Positive impact on inventory control | 11 | 8.8% |
| 4 | Efficiency in decision making process | 09 | 7.2% |
| 5 | Overall improvement in the management and administrative functions | 03 | 2.4% |
| 6 | All the above impacts | 82 | 65.6% |
| | Total | 125 | 100% |

There is a saving of time due to adoption of IT and e-commerce, stated by 6.4% unit owners. 9.6% opined that, there is a reduction in cost; 8.8% and 7.2% unit owners opined that, there is a positive impact on the inventory control and efficiency has been achieved due to adoption of IT and e-commerce tools respectively. 2.4% unit owners have opined that, there is an overall improvement in the management and administrative functions, and majority of SME unit owners (65.6%) have opined that, all the above stated factors impacted due to adoption of IT and e-commerce in their organizations.

Sr. No. Nature of barriers Frequency Percentage 1 Lack of expertise knowledge 13 10.4% 2 Inadequate fund 67 53.6% 3 Limited available resources 04 3.2% 4 Lack of trained staff 14 11.2% 5 Problems in switching from old computer 09 7.2% technology to new technology

18

125

14.4%

100%

Table.4: Barriers in the adoption of IT and e-commerce in the organization

The above table indicates the responses of SME unit owners regarding the barriers being faced by them in adopting IT and e-commerce/computer based technology in their organizations. According to information provided by them unavailability of funds is a very big great barrier being faced by 53.6% unit owners. In the opinion of 11.2% unit owners, lack of trained staff is a barrier, 10.4% unit owners have stated that, lack of expertise knowledge is also a big barrier. Switching from old computer system to new one is very difficult and crucial task while implementing IT and e-commerce/computer based technology in the enterprises, opined by 7.2% SME unit owners. 14.4% unit owners are facing all the above problems in the implementation of computer based technology/IT and e-commerce. In this context it is observed that, many SME unit owners are taking steps towards the proper implementation of IT/e-commerce system in their organization, by hiring more IT skilled employees, and providing more funds for IT activities, etc., but several hurdles need to be overcome. Apart from this it is also observed that, there are certain common barriers which includes unsuitability for the type of business, unavailability of work infrastructure, cost factors like cost of IT and computer technology equipment, software and ongoing higher costs, reliability of e-commerce system etc.

9. Conclusion

6

All the above barriers

Total

It is concluded that financial matters and sales promotion and marketing activities are dominating business functions in which IT and e-commerce tools are being used mostly. While implementing the new IT and e-commerce tools, entrepreneurs are facing major barriers like unavailability of fund for updating the computer based technology. There are organizational, environmental and knowledge factors, which lead unit owners to adopt IT and e-commerce for the business purpose. It is observed that, IT and e-commerce are playing an important role in the growth and development of SMEs as it allows them to compete efficiently in today's global market.

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