

A REVIEW ON IT ADOPTION FACTORS BY MEDIUM ENTERPRISES IN THE AUTO ANCILLARY INDUSTRY

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Abstract: The purpose of the present detailed review paper is to understand the significant factors that support or constrain the adoption of IT. The Indian Auto Ancillary industry has undergone a drastic change and sophistication as a result of the foreign automobile manufacturers' entry in the post economic liberalization era. Despite the potential advantages and benefits, the adoption of Information technology (IT) in the medium enterprises is too low in India. An in-depth empirical research should be done to comprehend the significant effects of variables such as company's policy, age of the company, the academic qualifications of the owner(s), reluctance to change, and governmental support initiatives on the IT adoption among the medium enterprises of the auto ancillary industry.

Keywords: Information technology, supporting and constraining factors, medium enterprises, auto ancillaries.

INTRODUCTION

In the light of Competitive business world, India is undergoing a sea change. Through the Indian Government's indirect tax reform, Goods and Services Tax (GST), there will be no checks on the state borders, hassle free customs operations and a positive growth of the Indian economy in the coming quarters of the financial year (FY) 2017 ((Economic Times, 2017, July 3). As a result, the adoption of IT services such as Intranet, Extranet, enterprise resource planning (ERP), supply chain management (SCM), GST technology, customer relationship management (CRM) and e-Commerce have become the key imperatives to be considered or enforced by medium enterprises of auto ancillary industry.

PURPOSE

The Key objective of the current review paper is to comprehend the imperative factors that are supporting or constraining the adoption of IT among the medium enterprises of the auto ancillary industry.

DESIGN/METHODOLOGY/APPROACH

The present research study includes a detailed review of the articles of conceptual and empirical form on information technology adoption in the medium enterprises of the auto ancillary industry. The data were collected from online databases such

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as Google Scholar, SAGE, Emerald Management, EBSCO Host – Business Source Complete, ProQuest, and Elsevier (Scopus). The keywords used for the review of the literature were information technology, supporting and constraining factors, medium enterprises, and auto ancillaries. The reference list from the articles is also used for literature review and around twenty-five key research articles were read for the overall literature concept along with the medium enterprises definition in the current study.

DEFINITION: MEDIUM ENTERPRISES

The Government of India has enacted the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 in terms of which the definition of medium enterprises engaged in the manufacture or production, processing or preservation of goods is as under:

Medium Enterprise is where the investment in plant and machinery is more than five crore rupees but does not exceed ten crore rupees. (*Development Commissioner (MSME) Ministry of Micro, Small & Medium Enterprises*)

REVIEW OF LITERATURE

Lucchetti and Sterlacchini (2001) in their study on the adoption of information and communication technology (ICT) among small and medium sized enterprises (SMEs) states that the adoption depends primarily on the range of ICTs and secondly on the company's policy. The range of technologies include internet and e-mail access, which are of basic use and Website's Quality, local area network (LANs), and Electronic Data Interchange (EDI), which are of advanced stage usage.

Dixon, Thompson, and McAllister (2002) study reports that the IT adoption is less likely in small to medium sized enterprises when the cost of initial set-up is high, lack of IT skills and lack of staff to implement ICT. The research study also emphasizes that the SMEs are heterogeneous in nature, and that significant research has not been done in the field of ICT impact on SMEs. It also provides insight into the relationship between SMEs and ICT through the key factor, property and infrastructure.

The lack of knowledge and level of IT background of the business manager on usage of IT results in low adoption. The research study reveals that IT courses should be provided with essence of management, applications, systems development, and technology (Bassellier, Benbasat & Reich, 2003). Chan and Reich (1998) study provides the key finding that companies emphasize on software-training which is too narrow in nature and do not capture the conceptual ideas such as IT and project management.

Riemenschneider, Harrison, and Mykytyn (2003) explained the key parameters such as considerations in the social sphere, merits & demerits and the criticalities

that the executives in the small and medium enterprises face in the adoption of web presence, a form of IT. It also states that digital connectivity with vendors and customers through the internet is the triggering factor in adopting web-based technology.

One of the factors influencing IT adoption is technological complexity, which the employees are unable to comprehend. The research also suggests that firm's size also considered being a compelling factor not only in the hotels or travel agencies but also in the small and medium enterprises of automobile sector in Thailand. (Brown & Kaewkitipong, 2009)

Robert and Lejla (2005) on a research model related to adoption of e-commerce assessed in their research that in the regional parts of Australia and Sweden, the barriers of adoption of electronic commerce in small businesses can be grouped into two factors such as "too difficult" and "unsuitable" to the business. The development of research model is based on the above measures.

In a Research paper titled "Information Systems' Practices", a survey was conducted on approximately 210 small and medium enterprises and the results of the study state that SMEs in the current competitive and dynamic business environment, comprehend the importance of information systems in their business operations on a daily basis. But small and medium enterprises do not enforce their knowledge of information systems to practice and reap the benefits and advantages of operating their businesses effectively to attain better top-lines and bottom lines. It also states that the small and medium enterprises do not possess the required quantum of resources related to information systems in relation to their business operations (Milind & Rajat, 2006).

Rajesh, Suresh, & Deshmukh (2007) on the generation of competitiveness as a result of the development of strategy related to auto components in India, assessed in their research that the lack of human capital with technical know-how, eliciting the required amount of funds from market, and a pro-growth environment are the prime barriers of the Indian auto component sector. The critical pressures considered and related to auto components are the delivery of goods in time, quality of the product, and cost. The imperative factors which are in correlation and related to the competitiveness are the development of competence, investment, quality and product cost.

The crucial factor, which would enable the small and medium enterprises to attain growth at the international level, is the technology and its effective usage. The research also states that infrastructure related elements have to be fully equipped by small and medium enterprises to use the resources at hand to its limit. It also studies how entrepreneurship can have its economic impact on small and medium enterprises' growth. (Patricia, & Rajshekhar, 2007)

Jitesh, Arun, & Deshmukh (2008) in their research study on the enabling factors for IT related to small and medium enterprises and manufacturing has established the relationship between the elements which in-turn lead to practical insights for practitioners. This research paper has divided the IT supporting factors into four dimensions such as linkage, driver, autonomous, and dependent for comprehending the impact of them on the IT implementation in the small and medium enterprises of India. It uses the interpretive structural modelling (ISM) as part of its Research Methodology.

The significant outcomes drawn from the research study on the adoption of information and communication technology, which is internet based offer and act as an effective and competitive tool. But security is considered to be a constraining factor for the information and communication technology adoption in small and medium enterprises. The research study also discloses the elements which impact the adoption of information and communication technology into compatibility, security, complexity, and advantage in relative terms. It also provides government officials who make the rules and regulations in general and small and medium enterprises in particular about the ICT adoption factors and its relative impact (Tan, Chong, Lin, & Eze, 2009).

Ahuja, Yang, & Shankar (2009) conducted their research on the benefits, enablers, and barriers of information and communication technology adoption in the small and medium enterprises. The results of this research study reveal that the barriers at the company level and its related supporting factors are crucial in the implementation of information and communication technology in SMEs. Further, the research study identifies and provides key elements at the strategic level which need to be taken into consideration by the top executives and managers of the companies for the effective and efficient adoption of information and communication technology at various levels of the organization.

Sunday, Yanqing, & Hsin (2014) in their research assessed and identified the dynamic and recursive aspects of information and communication technology adoption, the involved interactions, and different actors through various negotiations. The research study adopts the actor-network theory (ANT) and develops a framework for disclosing the various stages of information and communication technology adoption, which is dynamic in nature and its actors.

The current paper highlights the significance of information and communication technology adoption to attain competitiveness and increases the same. It also states that enterprises in the small and medium sector can gain access to multi-national markets through the usage, adoption and implementation of information and communication technologies. Further, it provides a range of business avenues and prospects for the proprietors, managers, and top management through the adoption of ICT (Ongori & Migiro, 2010).

Apulu and Latham (2011) in their research study assessed that reduction in time and cost as the key drivers and imperative factors for the adoption of information and communication technology in small and medium enterprises of Nigeria which forms the competitive advantages for them in the market space. It also discloses that information and communication technology adoption can lead to information storage, processing of information and for communicating the information to the partners of business and also to customers.

Kannabiran & Dharmalingam (2012) in their research study assessed that perception towards benefits and competitive pressures act as enablers for the adoption of IT in the auto ancillary sector of small and medium enterprises. Some of factors such as low financial capacity, size of the business operation being small and human capital related to IT are considered as the barriers for the adoption of IT in the auto ancillary sector of SMEs.

The significant findings drawn from this research study indicate that the company's approach or view towards customer relationship management (CRM) adoption is impacted by the innovativeness of the management. It also discloses that the company's decision to adopt and implement CRM technology is due to the key factors such as the company's size, the company's market share, involvement of the employees and the innovative approach of management (Nguyen & Waring, 2013). The adoption of enterprise resource planning (ERP) software is useful in sharing information throughout supply chain and in following vendor managed inventory practices in small and medium enterprises (Coelho and Laporte, 2015). One of the key factors for adopting cloud computing, an IT technology is competitive pressure (Safari et. al., 2015).

The investment in technology will assist SMEs in attain significant benefits. In addition, SMEs have to focus on the capabilities necessary for IT adoption (Pratono, 2016). The lack of government support and financial capacity form as the constraining factors for adopting enduring information technology (Hasan, 2016).

The competitive pressure, an environmental factor has significant influence on the CRM technology adoption (Ahani et. al., 2017). An entrepreneur's educational qualifications plays a critical role in terms of the innovativeness of the firm for adopting information technology (Martinez & Romero, 2017).

RESEARCH GAP

From a detailed research review it is found that not much research has been done on the auto ancillary industry in general and the medium enterprises in particular. The potential of IT is not fully captured by the medium enterprises of the auto ancillary industry. Research should focus on understanding the effects of the variables such as reluctance to change, age of the company, the academic

qualifications of the owner (s), governmental support initiatives and the company's policy.

DISCUSSION

After the review of the literature, key variables such as perceived advantages of the usage of IT and leverage gained in the competitive landscape act as supporting factors for the IT adoption. Further, variables such as small size of business operations, inadequate financial capacity, and deficiency of IT-skilled manpower act as constraining factors for the IT adoption. To overcome the constraint of IT-skilled manpower, the companies can resort to outsourcing strategy. Further, the issue of less financial capability can be addressed by the provision of subsidies and relevant schemes, incentives related to tax and loans with low rate of interest by the government. The medium enterprises can combine with each other and get access to the technology of cloud computing for overcoming the challenges of small size of business operations.

The empirical study of this literature review paper with factors such as governmental support systems and schemes, innovation-supportive culture of the firm and employees' reluctance to change will test their validity and reliability in terms of supporting or constraining factors for the adoption of IT among the medium enterprises in the auto ancillary industry. Future researchers can also focus on comparing the medium enterprises in the organized sector of auto ancillary industry with other industries for inter-sectoral studies.

CONCLUSION

The adoptions of IT by the medium enterprises play a significant role in the over-all development of the organization in today's tech-savvy world. Innovative schemes and relevant subsidies have to be framed and enforced by the government to ensure that they reach the intended beneficiaries of the automobile industry. These initiatives if implemented by the Central and State Government will act as a framework for the enhancement of the adoption of IT among medium enterprises in the auto ancillary industry. From the Organizational perspective, a number of training facilities related to IT applications has to be provided to the competent human resources for enriching their knowledge and for better usage of IT applications.

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