



A Study On The Performance Of Smes On Innovation And Technology Adoption Challenges

Atul Ashokrao Patil Research Scholar, Department of Management, Himalayan University, Itanagar, A.P

Dr. A Sajeevan Rao Assistant professor. Research Supervisor, Department of Management, Himalayan University, Itanagar, A.P

ABSTRACT

SMEs (Small and Medium Enterprises) are crucial factors in the development of the economic and financial growth of a nation but because of several challenges, they failed to evolve to their complete capability. Several forms have detained on opportunities to pursue and many times attain better economy range. Mainly in a few nations, nonetheless, the evolution of technology forms an effective challenge for small business entrepreneurs. The growth of technology plays a crucial role in the development of small and medium enterprises (SMEs). This paper tries to study one of the challenges, invention, adoption of technology and also find out the consequences on the performance of the SMEs. Hence, Small and medium enterprises ought to make decisions carefully with a concern related to planning and operations to neglect any of the loss to the company, mainly in the cost of execution.

Keywords: Innovation and Technology Adoption, Risk, Small and Medium Enterprise, Performance, Manufacturing

I. INTRODUCTION

Regardless of being a grown or growing nation, SMEs play a crucial and dominant role in almost all of the economies of nations. All the nations now have been considerably contributing towards the national income, generation of workforce, effective economic development, etc. As per the theory of [38], SMEs are evolving as one of the essential factors in economic growth and also give many advantages to the nations as they give work to the people, enhance income and promote financial development of the nation.

In any of the nations, SMEs mainly considerably contribute towards GDP and cover near about 90% of the business population [1]. Nonetheless, presently SMEs are now facing several challenges of social, economic, business, and technology-related. Digitization and technology implementation is one of the severe challenges faced by SMEs. As digitization

and modern technology are continuously changing the lives of humans it has also been reflected in the business world. Digitization helps businesses to attain the required effective growth. There is a complete requirement to adapt ICT (Information and communication technology). Nowadays, in this modern digital period, we can say that businesses can't exist until they adopt ICT.

II. DYNAMIC CAPABILITIES THEORY

As per the theory of [31], It is an extension theory of RBV i.e., resource-based view theory, dynamic capabilities mainly refer to the capacity of firms to innovate, implement changes, and form changes that are highly favourable to customers and unfavourable to competitors. In the case of a dynamic environment, most companies must form modern items with the purpose to gain competitive benefits [18]. Modern technology and invention are considerably contributed towards dynamic capabilities., dynamic capabilities highly encourage the performance of a company via modern innovation activities. In case SMEs do not accept modern technology then they create a negative impact on their company and on the performance of the company also.

III. ROLE OF ICT IN SMEs

- **Innovation and productivity**

ICT implements the latest items for the customers and combines the potential to the internal study and growth of working. It also makes an impact on the modern technology and productivity of firms.

- **Open and closed innovation**

Based on modern innovation, SMEs make their existence in the competitive market. Initiation of product or growth can no longer be individually found by internal R&D working but instead of this, it mainly relies on the considerable contributions of a wide range of external players. Suppliers, customers, and research institutes are basically known as External players. Hence, open and closed modern technologies are critical components in businesses fields.

- **Economic role**

In the case of economics, ICT basically plays 2 essential tasks i.e., strategic management and reduction of cost. The firms using ICT changes the fundamental policy of investment, business process, and practice of work and create flexible surroundings.

- **Entrepreneur's role**

There are several factors on which SMEs differ such as the comfort of access to sources of funding, the skills base, and classification of regional markets.

IV. INTERNAL AND EXTERNAL POLICIES REGARDING ADOPTION OF ICT IN SMEs

Most of the businesses policies have shifted over time as firms and economies have now diffused rather than focusing on e-readiness and better connectivity, it also now moving towards mature e-business approaches which combine wide policies for the business surroundings with policies for specific areas like as IPRs (Intellectual property rights).

- **B2B participation**

Concentrating on the smoothness of the participation of SME in Business to Business (B2B) product and sector value chains comprising technology improvement and interoperability between several systems.

- **Staff training**

Several training programs conduct for SME managers and workers to concentrate on both technical and managerial skills which are required to be provided in cooperation with business and sector firms, training organizations, and services of commercial training firms.

- **Privacy issues**

Monitor the privacy issue, trust, and confidence with the help of a wide policy framework and several self-regulatory tools, and reasonable redress functioning.

Inexpensive redress functioning is being addressed in Organisation for Economic Co-operation and Development (OECD) work on additional online argument resolution.

- **Potential market power**

Electronic business becomes more widespread, electronic marketplace and capable market power increase so it observes anti-competitive behaviour of the business.

- **E-governance**

Utilization of electronic governance initiatives to give an extra pay out for SMEs to go online by evaluating administrative process, cost reduction, and enabling them to enter into new markets.

- **Growth analysis**

A wide collection of available statistics on electronic businesses and electronic commerce to address the growth and enhance the cross-country statistics. The organization ought to observe all those components at the time of acceptance of ICT in SMEs.

V. INNOVATION AND TECHNOLOGY ADOPTION RISK

The National SME Development Council (2012) asserted that the most imperative execution lever is innovation and technology appropriation. Innovation can be characterized as "executing novel thoughts that make value". Being creative is basic for the organization to support its market position and to reinforce its execution level. Nonetheless, to become imaginative is hard for SMEs regardless of whether they rapidly adjust their resources to react to business climate and demands. SMEs have numerous challenges in embracing innovation. Not just that, the creators contend that there are three challenges to innovation that altogether influence SMEs execution: financial, natural, and human resources, and these challenges must be killed to expand SME execution

CHALLENGES OF SMES ON INNOVATION AND TECHNOLOGY ADOPTION

- **Supporting challenges**

Across all the sectors and countries, SMEs do not take any of the benefits from ICT. In growing nations, specifically in India, the Unavailability of SMEs in the human technological resources is required for acceptance of ICT.

There are some most evident restrictions to acceptance of ICT such as the Absence of awareness, setup cost difficulties, and privacy issues. Nowadays, SMEs are facing financial and political distress and cultural elements are also evolving as the large restrictions for acceptance of ICT in India.

- **Technical challenges**

From the technological viewpoint, a company ought to have someone who has a good amount of awareness related to technology generally. Hence, the implementation of an ICT application may be challenging without the internal technological capabilities while it is essential to seek suggestions and assistance from IT professionals, most SMEs don't generally afford to do that due to the high cost of pricing.

- **Managerial challenges**

From the point of view of the Manager of SMEs, it perhaps also shows the unavailability of managerial understanding and skills. An SME requires to completely reshape its present framework because the projects of acceptance of ICT are quite complicated in nature.

- **Administrative challenges**

Most of the times managers of SMEs take their decisions on the basis of current requirements and circumstances. The decision-making process of the managers is fairly natural, in light of intuitive decisions and is less subject to formal models of decision-making. They tend not to pass on data and don't designate decision-making forces to their inferiors. They are frequently the solitary individuals in the organization who have the authority, duty, and admittance to the data fundamental for recognizing business openings including usage of data technologies for vital and serious purposes.

VI. TECHNOLOGY ADOPTION: SOLUTION FOR SMES DURING COVID-19

The appropriation of technology in SMEs can help them in taking care of the issues that happened during COVID-19. It is conceivable by viable usage of web-based business, social media, and a few other mechanical platforms. Social media devices cover Facebook, LinkedIn, blogs, Twitter, YouTube, Instagram; E-commerce channels incorporate a few platforms like Alibaba, Magento, Shopify, Weebly, and the other mechanical platforms incorporate technology 4.0 (artificial insight, 3D printing, machine learning, mechanical technology, drone and so forth) and cloud computing and different types of technology.

A. Technology 4.0

These days, technology 4.0 is arising as an answer supplier for SMEs in the midst of the COVID19 pandemic. Artificial knowledge-based algorithms and models can help in quick processing and thinking [3]. Another part of technology 4.0 is huge information investigation which can help in removing data from a major piece of information. Cloud computing is another part that helps in renting different computers continuously and has fewer resources. Sales and turnover are ceaselessly lacking for SMEs. Artificial knowledge-based propensity models and arrangements can help in recognizing expected clients. The sales managers are in a difficulty wherein clients should be focused on.

B. Social Media Tools

Another class of online resources is social media devices and platforms. Social media apparatuses are giving different freedoms to small and medium enterprises for a superior shopping experience, communication, and cooperation.

The social media instruments are best not to improve permeability in the market yet additionally to acquire the trust and certainty of clients. In created and non-industrial nations, numerous clients are utilizing social media accounts either on cell phones or workstations. The conventional marketing channels and print media were just upgrading single-direction communication between two parties. All things considered, with the

assistance of social media apparatuses, two-way communication is conceivable on the grounds that clients can remark and offer their thoughts. Small and medium enterprises can receive the conceived worldwide methodology since the hour of their commencement by utilizing social media instruments.

C. E-commerce Channels

To keep business practices and to counter the rivalry, the SMEs can utilize e Commerce platforms to upgrade their presentation. Web-based business platforms are a practical answer for developing sales and business extensions. These online business platforms likewise increment the worldwide reach of the companies outside India. The internet business channels produce higher revenues since it furnishes the client with a chance to interface with the organization 24X7.

Web-based business platforms are giving various kinds of benefits and higher profits to SMEs still just 27% of small and medium enterprises are utilizing those platforms.

VII. CONCLUSION

This review paper tries to present a few proofs regarding the challenges evolving in modern technology and innovation and it also makes an influence on the performance of the company. It looks like the lack of acceptance of modern technology and innovation in SMEs would lead to negative effects on their performance. Whenever firms failed to be innovative and accept technology, it mainly reduces the performance of the company in the overview of competitive businesses surroundings. Many past studies recommended that it is beneficial for the companies when SMEs put an important accent on invention and modern technology acceptance as it will surely enhance or improve the performance of the company. Furthermore, modern invention is the prime component for existing competitive approaches and development with value-added products that could create rivalry benefits against rival firms. As per the previous literature, modern invention plays an effective role for SMEs as well as large companies. Nonetheless, there are several difficulties in the acceptance of modern technology in SMEs. Hence, it is essential for SMEs to take decisions carefully regarding planning and working to neglect any loss to the firm, mainly in the cost of execution.

REFERENCES

- [1].Ainin, S., Parveen, F., Moghavvemi, S., Jaafar, N. I., & Shuib, N.L.M. (2015). Factors influencing the use of social media by SMEs and its performance outcomes. *Industrial Management & Data Systems*.
- [2].Ajzen, I., (1991). *The Theory of Planned Behavior*. Organization Behavior and Human Decision. s.l.: Academic Press, Inc.

- [3]. Akpan, I. J., Udoh, E. A. P., & Adebisi, B. (2020). Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic. *Journal of Small Business & Entrepreneurship*, 1-18.
- [4]. Al Mursalin, J. (2012). Information system adoption and usage: Validating UTAUT model for Bangladeshi SMEs. *International Journal of Management, IT and Engineering*, 2(10), 1-19.
- [5]. Alam, S. S., & Ahsan, M. N. (2007). ICT adoption in Malaysian SMEs from services sectors: Preliminary findings. *Journal of Internet Banking and Commerce*, 12(3).
- [6]. Alam, S. S. (2009). Adoption of internet in Malaysian SMEs. *Journal of Small Business and Enterprise Development*, 16(2): 240-255.
- [7]. Alves, A. C., Barbieux, D., Reichert, F. M., Tello-Gamarra, J., & Zawislak, P. A. (2017). Innovation and dynamic capabilities of the firm: defining an assessment model. *Revista de Administração de Empresas*, 57(3), 232-244.
- [8]. Anderson, J. E., & Schwager, P. H. (2004, February). SME adoption of wireless LAN technology: applying the UTAUT model. In *Proceedings of the 7th annual conference of the southern association for information systems (Vol. 7, pp. 39-43)*.
- [9]. Anuar, A., & Yusuff, R. M. (2011). Manufacturing best practices in Malaysiansmall and medium enterprises (SMEs). *Benchmarking: An International Journal*, 18(3): 324-341.
- [10]. Apulu, I., & Latham, A. (2011). Drivers for information and communication technology adoption: A case study of Nigerian small and medium-sized enterprises. *International Journal of Business and Management*, 6(5), 51.
- [11]. Apulu, I., & Latham, A. (2011). Drivers for information and communication technology adoption: A case study of Nigerian small and medium-sized enterprises. *International Journal of Business and Management*, 6(5), 51.
- [12]. Atalay, M., Anafarta, N., & Sarvan, F. (2013). The relationship between innovation and firm performance: Anempiricalevidencefrom Turkishautomotivesupplier industry. *Procedia-Social and Behavioral Sciences*, 75, 226-235.
- [13]. Aziz, N. N. A., & Samad, S. (2016). Innovation and competitive advantage: Moderating effects off irmwarein foods manufacturing SME sin Malaysia. *Procedia Economicsand Finance*, 35, 256-266. Bank Negara Malaysia. (2013). Circular on New Definition of Small and Medium Enterprises (SMEs).
- [14]. Bakos, Y. (1998). The emerging role of electronic marketplaces on the Internet. *Communications of the ACM*, 41(8), 35-42.
- [15]. Bartik, A.W., Bertrand, M., Cullen, Z., Glaeser, E.L., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, 117(30), 17656-17666.
- [16]. Bayo-Moriones, A., Billón, M., & Lera-López, F. (2013). Perceived performance effects of ICT in manufacturing SMEs. *Industrial Management & Data Systems*. 113(1), pp. 117-135.
- [17]. Beraha, I., & Đuričin, S. (2020). The impact of the COVID-19 crisis on medium-sized enterprises in Serbia. *Economic Analysis*, 53(1), 14-27.
- [18]. Blonigen, B. A., & Taylor, C. T. (2000). R&D intensity and acquisitions in high-technology industries: Evidence from the US electronic and electrical equipment industries. *Journal of Industrial Economics*, 48(1), 47-70.

- [19]. Bobera, D. (2013), "Barriers to Innovation In Northern Backa County", Discussion Paper
- [20]. Brunn, P., Jensen, M., & Skovgaard, J. (2002). e-Marketplaces: Crafting A Winning Strategy. *European Management Journal*, 20(3), 286-298.
- [21]. Chairael, L., Widyarto, S., & Pujani, V. (2015). ICT adoption in affecting organizational performance among Indonesian SMEs. *The International Technology Management Review*, 5(2), 82-93.
- [22]. Chan Kim, W., & Mauborgne, R. (2005). Value innovation: a leap into the blue ocean. *Journal of business strategy*, 26(4), 22-28.
- [23]. Chesbrough, H., Vanhaverbeke, W., & West, J. (Eds.). (2006). *Open innovation: Researching a new paradigm*. Oxford university press.
- [24]. Chong, A.Y.L., Chan, F.T., & Ooi, K.B. (2012). Predicting consumer decisions to adopt mobile commerce: Cross country empirical examination between China and Malaysia. *Decision support systems*, 53(1), 34-43.
- [25]. Consoli, D. (2012). Literature analysis on determinant factors and the impact of ICT in SMEs. *Procedia-social and behavioral sciences*, 62, 93-97.
- [26]. Conto, S. M. D., Júnior, A., Valle, J. A., & Vaccaro, G. L. R. (2016). Innovation as a competitive advantage issue: a cooperative study on an organic juice and wine producer. *Gestão&Produção*, 23(2), 397-407.
- [27]. Cora, E. L., & Tançau, A. D. (2013). A risk mitigation model in SME's openinnovation projects. *Management & Marketing*, 8(2).
- [28]. Dai, R., Feng, H., Hu, J., Jin, Q., Li, H., Ranran, W. & Zhang, X.Z. (2020). The impact of covid-19 on small and medium-sized enterprises: evidence from two-wave phone surveys in china. Working paper.
- [29]. Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-340
- [30]. Dean, C. C., & Le Master, J. (1995). Barriers to international technology transfer. In *Business Forum*, 20(1-2), 19-24.
- [31]. Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic management journal*, 21(10-11), 1105-1121.
- [32]. Environmental Science (Vol. 485, No. 1, p. 012037). IOP Publishing.