

The Impact of Emerging Technologies on the Organization's Innovation Capabilities

Digambar Dhyani,
Asst. Professor, School of Management, Graphic Era Hill University, Dehradun
Uttarakhand India
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Abstract

Innovation occupies a significant position in the realm of technology. It aids in increasing competence and offers superior competitive performance. Understanding innovation involves the capacity and aptitude to apply in many contexts. Because of the intellectual side of innovation, technology is always evolving, paving the door for new technologies. Despite the fact that the idea of emerging technology is not new, its use in many organisations may not have even begun. Emerging technologies modify the nature of competition and generate new industries or reshape current ones. It is crucial for any firm to recognize its capacity for innovation to fully utilize new Technology to meet long-term goals and thrive in a cutthroat environment. Any organization's capacity for innovation is related to the work done with its resources. The resources might be in the form of personnel, technological advancements, or other organisational assets. These resources can communicate with both the internal environment and the external environment. These interactions aid in identifying the knowledge and expertise required to integrate innovation capabilities within the business, which eventually leads to the creation of new, highly valuable products and processes.

Keywords: Emerging Technologies, Innovation Capabilities, Innovation Technology, Product Innovation, Service Innovation

Introduction

Innovation helps the firm maintain a competitive edge. Innovation increases an organization's capacity and gives it a competitive advantage to function under different conditions. Due to increased rivalry brought on by globalisation, businesses must constantly improve their capacity for innovation across all industries. Innovation helps an organisation become more skilled.

Innovation is not just about creating new or better products or services; it is also necessary to provide the greatest items on the market. The capacity to use information or combine it with fresh knowledge to create a novel product or method is referred to as innovation capability. In other words, innovation capability refers to the capacity to investigate both regular and novel actions that may aid in the discovery of new information, processes, products, or services. The capacity to create a routine of innovative activities and instill a new innovation culture inside the business is another definition of innovative competence. Internal and external innovation capabilities come in two varieties. Intellectual capital, a focus on learning, information exchange, human and technological aspects, quality management, etc. are examples of internal capabilities. The majority of an organization's internal innovation capability characteristics are connected to its people. It implies that businesses must make investments in people in order to recognise and use their capacity for learning and information sharing. External elements of innovation capabilities are those that exist outside of the enterprise. It implies that external elements affecting innovation capabilities include strategic alliances, social responsibility, forecasting skills, suppliers, and relationships with consumers, among others (Silva, & Cirani, 2020).

Emerging technology refers to both new technology and ongoing development of an existing technology. With each new application, emerging technology's definition evolves. These technologies have the potential to alter social and economic elements of society as well as open up new opportunities. Although a precise description of emergent technology is not yet accessible, it is obvious from existing definitions that these technologies are radical in nature, expanding quickly, ongoing, having a significant influence, and having unpredictable future applications. Information processing is the primary innovative characteristic that lessens the effects of an unpredictable environment within an organisation. The ability to process the excessive amount of information that a company must handle is increased by technical tools connected to information processing. The need to produce, process, and disseminate information across many parts of an organisation has grown because of the environment of many customers, workers, and other service partners. To fully meet the information demands that can be supported in any unpredictable environment, an organisation must build an information processing competence. A firm may acquire a thorough and well-rounded awareness of its consumers' needs and computer plans with the use of creative information analysis (Kroh, Luetjen, Globocnik, & Schultz, 2018 and Rotolo, Hicks, & Martin, 2015).

Literature Review

In a research, it was estimated that global enterprises assisted in the quick expansion of many activities as a result of the many technological, communicational, and transportation improvements. The forms have been improved in terms of efficiency and efficacy by globalisation. Organisations are putting new procedures and techniques into place to boost production and decrease costs so they can provide better goods and services to the market. Businesses must implement an innovative strategy in order to survive in the global market. Innovative ideas now have new channels because of technology. Technology advancements have made it possible to modify current goods and procedures in novel ways. It has also been successful in obtaining a greater level of productivity and gaining access to new technological developments that can influence the capacity to provide more inventive goods and services. This innovative capacity has the potential to support development and competitiveness in the global market. (Raghuvanshi, Agrawal, & Ghosh, 2019 and Ndesaulwa, & Kikula, 2016).

According to a research, for the greatest position in the cutthroat market, businesses all over the world are using innovative technologies and embracing new developing technology. The most prominent and well-liked trend in cutting-edge technology is artificial intelligence. The relevance of new and quickly growing technology is now widely recognised by businesses, and these firms are using these new technologies to improve their operations. The idea of business model innovation has evolved because of new technologies being used by many sectors. One business model innovation is artificial intelligence, which refers to an intelligence system built to employ data analysis and observation to carry out certain tasks without the need for programming. It stands for the most significant technical advancement. The goal of artificial intelligence is to build a self-aware system that can reason rationally and independently. To comprehend and filter the vast and growing amount of data, a precise and thorough increase of processing power and algorithm is required. Data is the most valuable resource for every business; thus it must be processed in a certain way to guarantee good quality. Many businesses are automating the preprocessing of data using artificial intelligence, and some have even created solutions to guarantee data quality and enrichment (Lee, Suh, Roy, & Baucus, 2019).

In research it was observed that services are vital to the sustainability of several organisations. Some companies focus mostly on intangible goods, and to thrive in a cutthroat market, their

services also require a creative strategy. Service innovation, a powerful strategy for improving an organization's performance and ensuring long-term survival in the fiercely competitive market, combines service with innovation. Since service innovation is challenging to implement, it requires careful consideration to be effective. Technology has a significant part in the enablers and facilitators that might favourably influence the creation of improved services and the introduction of such services to the market. The service idea, service delivery, client interface, and technology are only a few examples of the different service innovation dimensions. Three more capabilities—human resource management, collaboration, and marketing—are included in the concept of service innovation. These three abilities effectively connect the dimensions of service innovation. The three capabilities of the service innovation method were altered to a strategy that focuses on service development, service delivery, and customer interaction. This new partnership improved the firm's performance and increased confidence in the company (Rewatkar, Mansuri, 2019).

According to a study, one of the newest and most competitive emerging technologies is blockchain technology. Supply chain management is anticipated to benefit from the implementation of blockchain technology. The potential and difficulties have grown globally because of the internationalisation of the production and distribution networks. Blockchain technology has the potential to alleviate issues with complicated supply chains by enhancing information sharing, building trust and transparency among network participants, getting rid of expensive middlemen, and enhancing traceability. Additionally, blockchain technology can improve the effectiveness of group decision-making. Blockchain technology is a technical breakthrough that can assist in the process of introducing information technology, which can decrease process costs and time and increase process quality, flexibility, and other business goals. The blockchain's distributed and decentralised nature eliminates the need for expensive, frequently laborious reconciliation operations between trade partners, overcomes disclosure issues between parties with opposing interests, and gives each network member better and more timely view of overall activities (Wamba, & Guthrie, 2020).

In research it was observed that technology advancements are one of the main factors influencing an organization's success in today's technologically globalised world. Businesses always strive to provide their clients a true view of the goods and services they offer. 3D is one of the most

important and well-known technological innovations today. The use of 3D technologies and services is becoming more and more popular. People want to operate objects in three dimensions before making any purchases. The potential of virtual and augmented reality is unbounded. A technology known as virtual reality generates a visually realistic, three-dimensional experience. Specialised eyewear that displays 3D simulations through interactive imagery can help with this. Real world and virtual environments are combined in augmented reality. Business models and emerging technological advances are intertwined. Emerging technologies like virtual and augmented reality have the potential to improve the business model. Virtual reality and augmented reality have already been implemented into marketing tactics by several biggest firms. With the use of augmented reality, marketers can produce more engaging commercials and give customers a brand-new way to experience their products (Hagl, & Duane, 2017).

According to a study adopting novel items or procedures via innovation helps businesses become more competitive and profitable overall. It incorporates new techniques for determining the demands of prospective and current clients. One of the biggest problems facing business management today is innovation. To allow businesses to compete in both home and international markets, innovation is essential. When companies and start-ups claim that direct rivalry with existing players is doomed to fail owing to resource shortages, scale diseconomies, and dubious reputations, they are encapsulating the significance of innovation for businesses and start-ups. Innovation is essential for competitiveness since it is difficult for rivals to imitate innovativeness. Innovation is a crucial part of the growth of an organization, and it is a source of competitive advantage too. The primary goal of innovation is to create new possibilities or to seize ones that already exist. The development of new products and the production of new innovations both heavily rely on technology. Utilizing modern technology helps companies innovate new goods and services and offers solutions to problems within the firm. An organization requires a technological infrastructure, which consists of software, hardware, networks, information technology, services, and research labs, to develop new products or services or to put new innovative practices into practice. An organization requires a technical team that can work together to design a new product or service to manage this technological infrastructure (Davoudi, Fartash, Baklashova, Svechnikova, Nikolaeva, Grimalskaya, & Beloborodova, 2018 and Mafimisebi, Obembe, & Aluko, 2020).

Methodology

This study is descriptive in nature in which data is obtained from 215 respondents who have used various innovative and emerging technologies in the business processes. A checklist question was used to analyze and interpret the data. In a checklist question respondents choose “Yes” or “No” for all the questions.

Table1. The Impact of Emerging Technologies on the Organization’s Innovation Capabilities

SL. No.	The Impact of Emerging Technologies on the Organization’s Innovation Capabilities	Yes	%Yes	No	%No	Total
1	Emerging Technology like AI automates the process of Logical thinking	174	80.93	41	19.07	215
2	Blockchain Technology nature eliminates expensive, laborious reconciliation operations between trade partners	169	78.60	46	21.40	215
3	Blockchain Technology enhances Information sharing	181	84.19	34	15.81	215
4	Augmented reality and virtual reality produces more engaging advertisements	186	86.51	29	13.49	215
5	Emerging Technology helps in the process of innovation	172	80.00	43	20.00	215
6	Emerging technology decreases the process, cost and time for creating new innovative ideas	183	85.12	32	14.88	215
7	Emerging Technology increases the quality of innovative services and product	165	76.74	50	23.26	215
8	Emerging Technology provide innovative strategies to launch a new product or service	177	82.33	38	17.67	215

Table 1 shows that 86.51% respondents agree that Augmented reality and virtual reality produces more engaging advertisements, while 85.12% respondents agree that Emerging technology decreases the process, cost, and time for creating new innovative ideas. 84.19% respondents

agree that Blockchain Technology enhances Information sharing while 82.33% respondents agree that Emerging Technology provides innovative strategies to launch a new product or service. 80.93% respondents agree that Emerging Technology like AI automates the process of Logical thinking while 80.00% respondents agree that Emerging Technology helps in the process of innovation. 78.60% respondents agree that Blockchain Technology nature eliminates expensive, laborious reconciliation operations between trade partners, while 76.74% respondents agree that Emerging Technology increases the quality of innovative services and products.

Conclusion

Innovations include more than just new goods or improved services; they also include the potential for commercial success. The capacity to mobilize staff knowledge and combine it with other fresh information to create new goods or processes is an example of innovation capability. The lifeblood of businesses competing in changing circumstances is product innovation. A complex organizational configuration is needed for the capacity to innovate products radically, and these components include senior leadership, organizational culture, organizational architecture, the radical process of product innovation creation, and product launch strategy. Factors both internal and external that might affect a company's capacity for innovation. The owner's professional experience, the workforce's abilities, and internal initiatives to advance technology are the internal variables. Relationship intensity in networking, proximity benefits associated to networking, and government help are examples of external variables. In the world of technology, innovation plays a crucial role. It promotes competence growth and provides superior competitive performance. Understanding innovation requires the ability to apply in a variety of settings. Technology is always developing due to the intellectual component of innovation, opening the door for new innovations. Even if the concept of emerging technology is not brand-new, many businesses may not have even started using it yet. The nature of competition is altered by emerging technology, which also creates new sectors or remodel existing ones. Any company that wants to properly use new technology to fulfil long-term goals and succeed in a competitive climate must be aware of its potential for innovation.

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