Role of creativity and technological innovation in achieving entrepreneurial success

Dr. Ifeanyi Mbukanma1, Dr. Tulsee Giri Goswami2

1Department of Economic and Business Sciences, Faculty of Commerce and Administration, Walter Sisulu University, ZMK, Mthatha, South Africa, 2Assistant Professor, Department of Management, Central University of Rajasthan, India

ABSTRACT

Purpose: “Necessity is the mother of invention” which acts as the baseline for any businesses to start, flourish, survive, and reinvent itself to cater to the needs of the customers. Creativity, innovation, and entrepreneurship are crucial for the business owners to sustain their business. In the aftermath of COVID-19, technological innovations disrupted the way how businesses were functioning so far. Hence, there is a need exists to review the role played by creativity and technological innovation in achieving success. Methodology: The current review work follows an exploratory research framework and a multi-pronged approach was followed to study about the topics relevant to creativity, business innovation, technological innovation, entrepreneurial success, change management, and the policy recommendations. Findings: With the advent of technologies and its obvious evolution in the upcoming decade, it is crucial for the business owners to be creative, dynamic enough, and adapt to the growing market conditions. The current review detailed about the impact of artificial intelligence (AI), machine learning, and other disruptive technologies on entrepreneurial success. The role played by AI in upgrading the industrial ecosystem and the automation of processes has been investigated in detail. Further, the issues pertaining to change management and the implementation of AI have been discussed in detail. Implications: The review article provides an overview on how entrepreneurs should be tech-savvy, ready to migrate to new technologies, adapt to digital transformation so as to achieve success, and sustain in a highly competitive market. Novelty: The current review is a first-of-its-kind that dealt with technological innovation and creativity to achieve entrepreneurial success in India. The study provided recommendations from substantial reports for the implementation of AI for an affordable social upbringing.

Key words: Artificial intelligence, business model, chat generative pre-trained transformer, creativity, disruptive technology, innovation, machine learning, technology

JEL Classifications: Q55, O32

INTRODUCTION

Creativity has a strong and influential outcome on entrepreneurial intention and is considered as a primary driving factor behind every business. Having been identified as a key cognitive processing component, it starts from the development of original and practical ideas, realizing them followed by its market establishment. Although various definitions exist for creativity, the creativity theory postulated by (Rhodes, 1961), identified four Ps such as Process, Product, Person, and Place gained much attention among the researchers. Creativity, when combined with
resources at right place by the right persons, becomes an innovative business (Shi et al., 2020). Numerous concerns were raised across the globe about the impact of COVID-19 on creativity among the businesses. However, the businesses have travelled a long way now, transforming the issues as opportunities and waving ahead with flying colors (Tang et al., 2022). Creativity is a crucial factor for the organizations in developing countries like India, the Philippines, Brazil, Indonesia and so on (Ravinder, 2023).

Innovation makes a business healthy, sustainable, and progressive in all aspects. It is crucial for the business leaders to innovate products, services, business models, and strategies to lead the market. In the aftermath of COVID-19, most of the established business models failed to prove its vibrant capability to cater to the needs of their target audience. Not only creating a new product altogether, the innovation exists in refining the existing processes/products too, since the sole purpose is to increase the market share, revenue, and enhance the customers’ satisfaction (Emeritus, 2023). According to Ayala and Manzano, 2014, entrepreneurial success can be achieved by courage, ingenuity, and optimism. Technological innovation has played a key role for the businesses to sustain in the digital era. Having been identified as a broad socio-technological phenomenon, the Industry 4.0 conceptualizes economic growth through increased risk capital financing, innovation-based entrepreneurship, and international protection of intellectual property. Industry 4.0 has made it mandatory for the business owners to incorporate digital technologies into their production systems (Roblek et al., 2021). Hence, technological innovation has become a part of most of the industries, though it has been confined to only a few in the previous industrial era.

The Deloitte Tech Trends 2023 report (Deloitte, 2023a), with special focus on India, detailed about the impact created by the adoption of disruptive technologies in various industries such as BFSI, health care, e-commerce, retail, pharma, and manufacturing. With the advent of technologies such as big data, blockchain, distributed architecture, and internet of Things, the tech industry has experienced a 15.5% growth in India for the financial year 2022, which is currently valued at 227 Billion US dollars. Data mining plays a crucial role in analyzing the data and finding patterns that help the businesses to predict or find the need for a service/product, which in turn helps in achieving entrepreneurial success (Malik, 2013). The penetration of AI into businesses has increased which can be understood through the Year-On-year investments made by the business owners in 2022 than the previous FY2021. The predictions of NASSCOM, toward the investments to be made in 2023 on artificial intelligence (AI), include 881 Million USD at a CAGR of 31.8%.

In this background, there is a need exists to analyze the importance of creativity and technological innovations on achieving success in businesses. In addition to success, the businesses strive hard to sustain their position in the market since the market is changing dynamically. With the help of technological advancements in recent years, the market share of the businesses has increased in various domains such as the transportation (Devi, 2018), hospitality (Bilgihan and Nejad, 2015), banking (El Chaarani and El Zouhour, 2018), e-commerce (Illescas-Manzano et al., 2021), fashion, communication, etc. (Agrawal et al., 2022). The tasks delivered by human beings are silently getting replaced by AI and machine learning systems that not only process huge amounts of data, but also provide precise outcomes as per the requirement.

Although technologies tend to evolve over a period of time, the entrepreneurs must be ready to critically think out of the box and creative enough to lead the market. The current review analyses the importance of creativity and the opportunities provided by technological innovations to business owners to have an edge over their competitors. Further, it also delves into the risks involved in incorporating technology to an extent such that the human intervention is getting less day-by-day. The review not only outlines the growth of AI and its application across the industries, but also covers the aspects on how Chat Generative Pre-trained Transformer (ChatGPT) can be a game-changer in certain industries. The authors provide a set of recommendations for the business owners in Indian setting on how to adapt to the evolving technologies so as to lead the market, bypassing the competitors.

**CREATIVITY: THE BACKBONE OF BUSINESSES**

Creativity is the backbone of any business that tends to change the perspectives of the world, if entrepreneurship joins hand with it. It acts as the key driver of innovation (Ravinder, 2023). It can be roughly defined as one’s ability to create a product, service, idea, concept, or enhance the existing products/services so that it has an added advantage (Jain, 2019). Creative minds often perceive issues too as opportunities since there is a space for innovation and room for improvement in any situation. This is especially applicable in case of developing nations like India where the resources (human, financial, and technological) are less while the requirements are high. Innovation-enhancing
design, supportive government policies, and knowledge pool remain the key factors for the development of organizations (Khandwalla, 2014).

In Coulson-Thomas, 2018, the author analyzed the role played by boards in terms of defining creativity, innovation, and entrepreneurship when establishing the board. The authors emphasized the need to have a dynamic board that aligns with strategic directions of the board so as to achieve the desired performance outcomes. The paper further stressed that creativity and innovation must be leveraged for the welfare of the people, add value to them, yet affordable and sustainable. Creativity propels the innovation and the incorporation of the businesses while it is crucial to address the challenges encountered by India in terms of affordable healthcare (especially after COVID-19), education, waste management, green energy generation etc. (Benedict, 2019). The creativity of the business founders and the growth of the business were found to be positively correlated whereas innovative business models keep this relationship healthy. The significant role played by business model innovation, on the growth of start-ups, has been detailed in the literature (Li et al., 2022). Entrepreneurs must be open to new ideas and creative solutions to achieve success while a significant positive relationship has been established between the entrepreneur’s creative personality and creativity in literature. In terms of creativity of an entrepreneur, both creative personality and entrepreneurial openness are crucial factors (Peljko and Auer Antončič, 2022).

TECHNOLOGICAL INNOVATIONS: PRESENT AND THE FUTURE

Christensen (1997) coined the term “Disruptive technology” meaning a novel technology that incurs less cost yet the performance is high, evolutionary in nature, leverage the market niche, and threaten the existence of contemporary products/services (Shekar; Anjali; Pavithra 2017).

Deloitte, in its Tech Trends 2023 report (Deloitte, 2023b), mentioned about six macro forces of information technology such as the business of technology, cyber and trust, core modernization, interaction, information, and computation. Under information wing, the AI, exponential intelligence, and data analytics are placed. While under computation wing, the report has placed quantum and cloud computing. According to the report, the disruptive technologies such as the augmented and virtual reality (Metaverse) have transformed the way how businesses operate, that is, change in business models. The report adds that 73% of the businesses firmly believe that AI is a crucial element to achieve success. In the previous decade, the AI has replaced the humans in terms of speech recognition, object detection, image, and text generation tasks. If the organizations have to be frontrunners in leveraging the AI, then it indeed expects data transparency, algorithmic explainability, and AI reliability.

AI has transformed the way how businesses function, after COVID-19 outbreak, since the global firms and the community accepted digital transformation to achieve a sustainable growth (Chow et al., 2023). Various reasons are attributed to the incorporation of AI in business innovation processes such as the need to sustain in highly-volatile environments, competitive global markets, and the dynamics of global politics (Jones et al., 2016; O’Cass and Wetzels, 2018). According to Iansiti and Lakhani, 2020; von Krogh, 2018, AI has the best prospects to flourish in business and global economy by surpassing the human performance and by introducing disruptive management practices into firms of high calibre. Lansiti and Lakhani (2020) confirmed that AI is set to revolutionize almost all types of industries. Although it is in early stages, the AI is set to overtake the innovation practices in this decade (Füller et al., 2022).

In literature (Füller et al., 2022), the researchers segregated the AI-savvy innovation managers as four types such as frontrunners, practitioners, occasional innovators, and traditional innovators. These groups were segregated not only in terms of applying AI in their business innovation practices, but also based on strategies, organizational structure and skill-building. The study forecasted that innovation ecosystems may turn into AI-based ones since the latter may predict and recommend the technological type, patterns of customer requirements and the required prototypes to fulfill the same.

In KPMG report (KPMG, 2023), the issues pertaining to AI have been discussed in terms of monitoring and complying with data privacy laws. Figure 1 shows the eight core principles for a responsible AI. According to the report, the European Union has already started its footprint to frame the risk-based regulatory approaches and other such legal provisions for AI. Earlier, in January 2023, the US National Institute of Standards and Technology has published AI risk management framework for the organizations to overcome the risks involved in AI systems’ designing, development, and deployment.

The collective hybrid review published recently (Bahoo et al., 2023) developed a total of eight focal fields that
deals with the intersection of AI in corporate innovation such as the business models, product and open innovation, innovative firm structure, knowledge and market performance, and finally supply chain management. The introduction of AI chatbots, especially ChatGPT gained hyper attention among the businesses since the AI is gaining knowledge on how to respond to queries raised by the users, much alike the human. ChatGPT may be a revolutionary concept since its application is being planned across the domains such as medicine, retail, banking, and technology (Chow et al., 2023). The existing chatbots are predicted to be replaced by ChatGPT in the near future though its current status remains questionable. This is because of continuous knowledge update by the ChatGPT through user feedback, performance data, machine learning from databases, and so on (Chow et al., 2023). In addition to ethical concerns, other issues such as data confidentiality and transparency, privacy, and potential biases should be overcome in case of ChatGPT. ChatGPT remains a useful platform for businesses to achieve digital transformation in terms of their processes, domains, models, etc. For instance, sales pipeline management and the automation of customer service process are simple application of ChatGPT that can help the businesses render support to their customers without human intervention. Efficiency, custom-made solutions, strategic decisions, knowledge-acquisition, actionable insights, and resourceful conversion are some of the advantages in ChatGPT (George et al., 2023).

CHALLENGES AHEAD IN POLICY GUIDELINES

Although AI is not a new topic, its extensive application in different industries as a solution provider for socioeconomic problems must be carefully viewed in the perspectives of safety, privacy, data confidentiality, ethics, transparency, and so on. NITI Aayog published the strategic framework for AI on June 4, 2018, in which the policy guidelines were framed aiming at economic prosperity, social, and inclusive development. The MeitY installed four committees to develop the policy framework for AI as shown in Figure 2.

In spite of the threats posed by automation in various sectors, creativity helps the businesses to withstand, overcome it, and also makes it immune. The report by Asian Development Bank Institute (Kkreja et al., 2022) recommends support from the governments through policy measures, funds availability, helping in gaining global recognition, intellectual property right (IPR) framework, and human capital development so that the creative businesses can flourish. The report published by Telecommunication Engineering Centre under the Ministry of communications,
As per the latest statement from the GOI (Business Today, 2023), the government has no plans to frame the AI-related industrial laws though the government has already acknowledged its implementation in a few industries. The concerns raised on the ChatGPT in terms of data transparency and privacy violations were taken into account by the National Strategy for AI. Further, the development of AI Research, Analytics and Knowledge Dissemination Platform is under process by the MeitY.

The GOI must make policy decisions to streamline the AI and other such technology players for an effective business ecosystem that is safe, secure, and guarded by legal provisions. The need to incorporate skills among the business owners toward technology adoption is high ever now than before. Hence, measures must be taken to meet the needs.

CONCLUSION

The current review analyzed the aspects of creativity from the business owners’ viewpoint and also detailed about the technological innovation. The performance of disruptive technologies among the Indian firms is commendable after the COVID-19 outbreak. Hence, the study discussed about the need to maintain this pace among the Indian firms to be a global leader in technology-driven entrepreneurship. The paper also detailed about the latest technological revolution in AI, that is, chatGPT which is expected to drive Indian firms to next level, if leveraged appropriately. In spite of the visible advantages, the resistance to adapt to novel technologies should be handled in a multi-faceted approach since resistance to change is common across the domains. The study provided recommendations for the policy makers and the business owners to make a transition toward digitization of the businesses.

AUTHOR’S CONTRIBUTION

The both authors have made substantial contributions to the development of this review article. Their collaborative efforts in conceptualization, literature review, data analysis, writing, and editing have enriched the content and ensured a comprehensive exploration of the role of creativity and technological innovation in achieving entrepreneurial success.

FINANCIAL SUPPORT

There is no financial support and sponsorship for this research.
ACKNOWLEDGMENT

We would also like to acknowledge the reviewers and editors who invested their time and expertise in reviewing and providing feedback on this article. Their thorough evaluation and suggestions have helped us refine and improve the overall manuscript.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest regarding the research and writing of this article.

REFERENCES


