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The Role of Artificial Intelligence on the Development of Entrepreneurship for Businesses

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Abstract

The purpose of this article is to investigate the role of artificial intelligence on the development of entrepreneurship for businesses. As AI technologies become more pervasive in the workplace, businesses and other professionals need to familiarize themselves with the principles upon which these technologies are built, to assess their potential and weaknesses. In this regard, this article, with the aim of investigating the role of artificial intelligence on the development of entrepreneurship for businesses, uses these technology applications as a basis for discovering the challenges and opportunities of artificial intelligence algorithms in the global market. The use of artificial intelligence helps to improve the quality of products by choosing the right raw materials through technology. In addition, the use of artificial intelligence in business organizations helps to better manage the supply chain. Since the use of artificial intelligence helps to improve the delivery process and supply chain management and product quality, therefore, it leads to the development of customer service. Also, better customer service helps in getting good feedback from customers and helps in getting more loyal customers for companies. Therefore, the increase in the number of customers leads to the development of the company's sales rate; At the same time, it helps to gain knowledge about market trends, and start-up businesses can improve their products; On the other hand, it is an innovative strategy to increase the sales rate of start-up businesses.

Keywords: artificial intelligence, entrepreneurship, entrepreneurship development, businesses.

Introduction

In recent years, thanks to big data, increased speed of computer hardware and innovation in machine learning algorithms, research in the field of artificial intelligence has made significant progress. Artificial intelligence technologies are being developed, deployed and used in an increasing number of domains to perform complex tasks, which previously could only be achieved by humans. Artificial intelligence can

potentially become the most disruptive technology in human history and have profound effects on life, especially in the labor market (Minocha et al., 2018). In a recent study by the McKinsey Global Institute, it is estimated that about 70% of companies will use at least one type of artificial intelligence technology by 2030, and 60% of current jobs can be automated in the next 10 years. Companies and organizations will need employees who understand the concepts and methods of artificial intelligence, can use their knowledge and skills to manage the workplace with artificial intelligence, and have sufficient skills in collaborating with artificial intelligence agents (Ransbotham et al. , 2017). Realizing the critical role that AI will play in defining competition, many countries are now making AI a priority. The United States launched the American Artificial Intelligence Initiative in 2019 with the mission of advancing its leadership in the research, development, and application of artificial intelligence. One of the 8 national strategies identified in this initiative is to "provide educational opportunities to prepare businesses for the new era of artificial intelligence" (National Science and Technology Council, 2019). Entrepreneurs' willingness to embrace advanced technology has paved the way for start-ups to use technology to improve knowledge sharing and support overall business growth. In this context, artificial intelligence supports the automation of business processes. Internet and online interaction, which has a large impact on the marketing and operational context, can help to collect and use data on consumer and seller profiles to improve knowledge generation. It also helps to unify data to share information and communicate with the target audience, while communicating and engaging the audience using preferred channels is effective (Dundapati et al., 2022). At the business level, some of the benefits of AI include: quickly uncovering patterns in big data, fast visualization and analysis, new product design and development, providing accurate insights and many more. These benefits are expected to introduce new levels of service, increase profits, expand businesses, improve efficiency and cost structure (Faridi, 2018). The three forces that drive the economy are innovation, knowledge and entrepreneurship. New growth economics, Neo-Schumpytrian economics, is used as a basic model to analyze the impact of artificial intelligence on business. Therefore, artificial intelligence has not only changed the way of producing and using information for decision-making, but also the way of doing business (Schneider and Lair, 2019), and on business and management practices in several sectors that provide competitive and sustainable products or services. (Govindan et al., 2019). As AI technologies become more pervasive in the workplace, businesses and other professionals need to familiarize themselves with the principles upon which these technologies are built, to assess their potential and weaknesses. In this regard, this article, with the aim of investigating the role of artificial intelligence on the development of entrepreneurship for businesses, uses these technology applications as a basis for discovering the challenges and opportunities of artificial intelligence algorithms in the global market

Artificial Intelligence

Artificial intelligence changes business, economy and society by changing experiences and relationships between stakeholders and citizens. Artificial intelligence may have its roots in ancient Greek, Chinese, and other mythic cultures, where automatons were thought to be imbued with real minds, capable of reason and emotion. However, the term was coined in a workshop at Dartmouth College (USA) in 1956, which is called the birth of artificial intelligence. Since then, research on artificial intelligence has originated from various fields of knowledge. Social scientists have debated the ethical and legal implications of artificial intelligence, and computer scientists have developed advanced deep learning algorithms (El Kahn et al., 2015). While researchers in business management have studied the effects of artificial intelligence on customers. Companies and stakeholders in the business world are increasingly studying automated machines and related topics. Artificial intelligence usually refers to the artificial construction of the human mind that can learn, program, understand or process natural language. It is the theory and development of

computer systems that can generally perform activities that require human intelligence, such as visual perception, speech recognition, decision making, and language translation (Mani and Cansetti, 2021). Artificial intelligence is an IT industry that mostly deals with machines that are made to work like a human. John McCarthy (Father of Artificial Intelligence) describes AI as "the scientific and technical knowledge of developing, especially, intelligent computer programs". Machine learning and deep learning are two of the most common artificial intelligence methods (Polraj and Nelamgan, 2014).

The applications of artificial intelligence and machine learning in business management, e-commerce and finance are discussed in the following sections (Nandhini and Marcelin, 2020):

Chatbots: Most e-commerce and financial websites use chatbots to improve customer satisfaction and provide enhanced customer service. These chatbots are developed using artificial intelligence and machine learning techniques. They can act like humans. These chatbots have the ability to learn; Based on the availability of past data, they can provide the best advice to customers.

Image search: Image search on the e-commerce website is performed using artificial intelligence. It is based on image processing algorithms; helps improve customer service; And customers can search any item or item by its images. There is no need to search using keywords (Palatadeka et al., 2023).

Customer data management: E-commerce has a large amount of related data. Machine learning algorithms are able to perform analytical study on past data related to sales, human resources, marketing and customer buying patterns. This analytical result can help maximize profit, maximize sales, and optimize resources. It also helps e-commerce companies to finalize their products for a specific group of customers (Nandhini and Marcelin, 2020).

Recommender systems: Machine learning algorithms are able to analyze past customer data related to customer choice and behavior. They can effectively predict the customer's choices and suggest or recommend the most suitable products to the customer (Nandhini and Marcelin, 2020).

Inventory Management: AI algorithms help e-commerce companies in inventory management. These algorithms perform an analytical study on past sales data and establish a correlation between current sales and future sales. This helps managers to predict future sales and maintain inventory accordingly (Nandhini and Marcelin, 2020).

Cyber Security: Machine learning algorithms are able to identify system vulnerabilities and provide appropriate security solutions to keep the e-commerce platform safe. Financial companies consider machine learning algorithms suitable for fraud detection and prevention (Soni et al., 2020).

CRM: In the past, CRM used employees to collect vast amounts of data to collect data and serve customers. Today, however, AI is able to predict which customers will buy and how to best deal with them. Artificial intelligence applications may be used to help determine trends and plan activities based on the latest trends (Nandhini and Marcelin, 2020; Soni et al., 2020).

Portfolio management: Machine learning algorithms are able to classify past data and can predict future data based on past data analysis. This helps companies reduce risk (Nandhini and Marcelin, 2020; Soni et al., 2020).

HR: Nowadays, AI bots are used for video interviews. This can save time and improve the hiring process. But after being recruited and selected, it does not stop. Employee commitment is also an important part that artificial intelligence can improve. Machine learning can suggest innovative training techniques (Nandhini and Marcelin, 2020; Soni et al., 2020).

Sales: Sales begin with attracting customers. AI can evaluate company goals along with multiple data sources and then suggest the most relevant customer acquisition possibilities. It is also possible to optimize the price with the help of artificial intelligence to maximize profit. AI can help improve consumer propositions and market portfolio analysis to improve sales (Nandhini and Marcelin, 2020; Soni et al., 2020).

Entrepreneurship

Entrepreneurship is a multi-dimensional, multi-level and interdisciplinary concept that the disciplines of economics, management and psychology have played a significant role in completing and developing. This concept has a long history, but it has received less attention in economic literature than other fields (history, psychology, sociology, and anthropology) (Samadi, 2018). In 1775, the term entrepreneurship was used for the first time by Cantillon (1775). He introduced the entrepreneur as a risk taker. In the 20th century, due to the definition that Schumiter (1954) provided of the entrepreneur, a different and influential turn of the definition of entrepreneurship was created. He introduced the entrepreneur as the agent of change in the economy through "creative destruction"; This means that the innovative person or (team) brings his creative product to the (competitive) market (Danishnia et al., 2021).

In today's dynamic environment of global competition, despite rapid global changes, organizations are increasingly committed to entrepreneurial activities in order to survive and achieve competitive success. Today, entrepreneurship plays a central role in economic development through creating employment-generating activities, creating innovation, expanding creativity and creating a competitive environment. As a developing country, more attention should be paid to increasing the efficiency of government institutions and making the government more dynamic in order to make the path of development smoother. Today, entrepreneurship is known as the solution to these problems and it has been observed that entrepreneurial organizations have always had more growth and dynamism and higher efficiency than traditional organizations (Nazifi et al., 2019).

Entrepreneurship causes optimal and correct consumption of resources, increasing efficiency and reducing the cost of organizations in order to achieve development and respond better to the problems and needs of society. In fact, the importance of entrepreneurship goes beyond the organizational level because the motivations related to entrepreneurship penetrate into all parts of society. Although many dimensions have been proposed for entrepreneurship in various researches, but until now there is no agreement among researchers for the most acceptable definition or approach to entrepreneurial banking. While the debate about what constitutes entrepreneurship continues. In particular, entrepreneur-oriented banks follow and respond to changes in their environment through innovation, pioneering, and risk-taking; Therefore, the degree of banks' entrepreneurship orientation depends on the extent to which they are innovative, act in a pioneering way, and are risk-takers. The entrepreneurial process has several stages that are discussed in detail below:

Thought formation stage: Individual, organizational and environmental interaction along with a speed-generating event causes some personality traits such as the need for independence, the need for success and risk-taking to strengthen in a person. Then, according to his education, work experience and the people he is in contact with, and his perception of the environment, the person starts to identify the market gaps and evaluate them, and finally, according to the insight and evaluation of the opportunity and its compatibility with his level of riskiness. Acts as an entrepreneur.

The stage of compiling the work activity plan: A- Compiling the work activity plan in independent entrepreneurship: in this stage, the entrepreneur undertakes three important activities. First, it determines the structure of the activity in terms of whether to start its activity personally or as a partnership and how much authority it has in the partnership stage. Then he realistically identifies his available resources. Finally, the entrepreneur determines the general goals and clarifies his operational strategies after obtaining the assurance of the necessary financial support for the activities and according to the financial capabilities and existing support.

Developing work activity plans in organizational entrepreneurship: in this stage, the first step is to reengineer organizational thinking, before any action, the entrepreneur must evaluate his organizational climate in terms of accepting innovative actions. After evaluating the organizational climate for accepting entrepreneurship at the organization level, the entrepreneurial manager should act to change attitudes, encourage innovation, change the organizational culture and finally select talented people to form entrepreneurial teams. Then the manager evaluates the financial, technical and hardware aspects and external support to implement the idea.

Thinking implementation stage: In this stage, the entrepreneur should start implementing thinking by performing two parallel activities, i.e. providing resources and overcoming obstacles. Bygrave (1994) proposed a model that combines theoretical concepts in basic social sciences with practical concepts in applied sciences. The figure below shows four distinct events: Innovation → Initiating Event → Implementation → Growth

Figure 1 shows some of the many elements influencing each process (Nazifi et al., 2019).

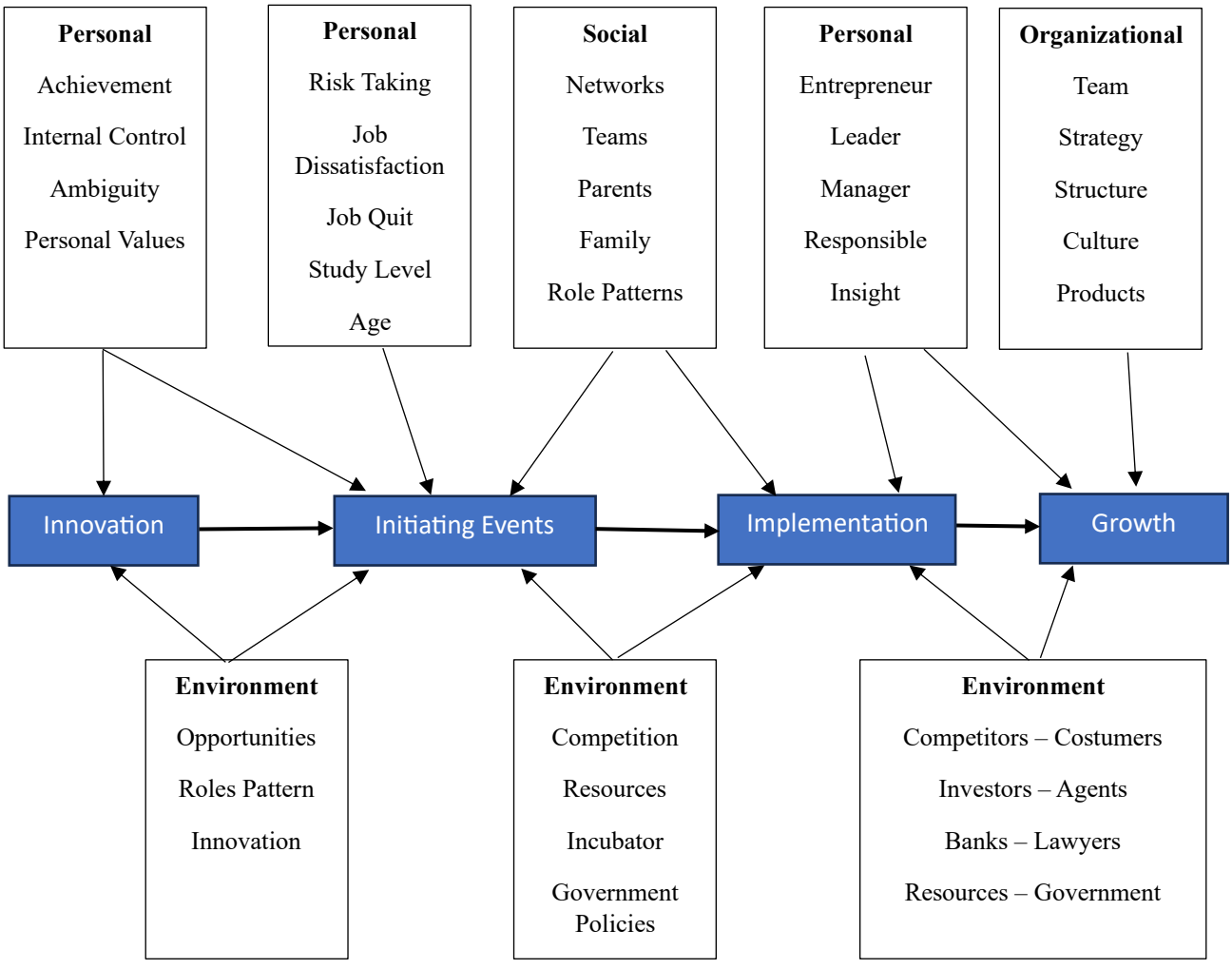

Figure.1: Entrepreneurship process and the elements affecting it (Nazifi et al., 2019)

The role of artificial intelligence on the development of entrepreneurship and the growth of start-up businesses

From the point of view of literature, in the simplest definition, entrepreneurship can be considered as including the use of skills to bring innovation to business or to develop new businesses (Shetty et al., 2021). Nowadays, special attention is paid to entrepreneurship and entrepreneurs in different countries, and strengthening entrepreneurship and creating a suitable platform for its development is considered as one of the tools of economic progress of countries, especially developing countries. In every country, entrepreneurs exist in a potential form, and efforts should be made to increase their abilities, and most importantly, new technologies allow the expression of entrepreneurs and their actual abilities. Therefore, one of the main factors in the business world, as well as one of the important categories at the national level, is the issue of entrepreneurship (Lee et al., 2011). In practice, entrepreneurship is the ability to create something from nothing; In other words, any type of effort in creating a new business or new risky activities such as self-employment, creating a new organization or organizational development, using a person, a group or an organization that has already been established, is called entrepreneurship (Kamalian and Fazel). , 2011). The growth of entrepreneurship and business development is due to providing a context for change. According to many researchers, the internationalization of businesses and international entrepreneurship examines new international economic activities, emerging issues or global events. In early studies in this field, McDougall states that it is the development of new economic activities that are obtained from outside (Scandon-Barriosa et al., 2023). The first issue raised in international entrepreneurship research and start-up business development was the emphasis given to capacities, specific assets, and the unit of new economic activities. Ownership, capacities and assets can be a sign of successful growth of a business. Entrepreneurial intelligence is a technology-driven process of gathering, integrating, analyzing, and presenting business information. Therefore, the first emphasis is research on artificial intelligence as a technology-based software, and the use of this technology in the global economy is increasing day by day. The use of artificial intelligence allows start-up businesses to improve economic conditions and business growth (Dundapati et al., 2022).

Artificial intelligence technology can be applied in several sectors such as marketing, supply chain management, various operations, customer service, product quality and more. Also, the use of artificial intelligence helps to improve the quality of products by choosing the right raw materials through

technology. In addition, the use of artificial intelligence in business organizations helps to better manage the supply chain (Vishoni et al., 2018). Since the use of artificial intelligence helps to improve the delivery process and supply chain management and product quality, therefore, it leads to the development of customer service. Also, better customer service helps in getting good feedback from customers and helps in getting more loyal customers for companies. Therefore, the increase in the number of customers leads to the development of the company's sales rate; At the same time, it helps to gain knowledge about market trends, and start-up businesses can improve their products; On the other hand, it is an innovative strategy to increase the sales rate of start-up businesses (Dundapati et al., 2022). It helps to improve the level of service provided to the company's customers and enhance the customer experience. Marketing is a very important part of any business and the use of artificial intelligence in marketing can improve the marketing strategies of companies; Even in many cases, managers use the smart parts of their business to increase profitability, productivity and positioning. Therefore, the use of artificial intelligence helps to automate processes, optimize operations and increase the productivity and profitability of start-up businesses. These are the useful capabilities and applications of artificial intelligence in the development of entrepreneurship and the growth of start-up businesses (Dundapati et al., 2022).

Conclusion

The world moves faster with new technologies and it is easy for organizations to make missteps. Organizations are advised to exercise caution when deploying AI services. For effective and efficient management of artificial intelligence systems, proper insight is required. The present research provided some ideas on how to adapt opportunities and functions to emerging artificial intelligence technologies. The privacy of human resource data poses many challenges for the development of artificial intelligence. It is important to be aware of the protection of employee data, and when dealing with artificial intelligence, appropriate governance guidelines should be put in place. Such guidelines should address not only general technical and data entry processes, but also a number of legal and ethical issues. In some cases, it may not be clear to individuals that their data is being collected, and this lack of transparency can mean that start-ups lose trust. Artificial intelligence technology can be applied in several sectors such as marketing, supply chain management, various operations, customer service, product quality and more. Also, the use of artificial intelligence helps to improve the quality of products by choosing the right raw materials through technology. In addition, the use of artificial intelligence in business organizations helps to better manage the supply chain. Since the use of artificial intelligence helps to improve the delivery process and supply chain management and product quality, therefore, it leads to the development of customer service. Also, better customer service helps in getting good feedback from customers and helps in getting more loyal customers for companies. Therefore, the increase in the number of customers leads to the development of the company's sales rate; At the same time, it helps to gain knowledge about market trends, and start-up businesses can improve their products; On the other hand, it is an innovative strategy to increase the sales rate of start-up businesses.

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