

Analyzing the Impact of Artificial Intelligence on Achieving Competitive Excellence and Entrepreneurship in the Labor Market

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Abstract

This research aims to analyze the impact of artificial intelligence on achieving competitive excellence and entrepreneurship within the labor market. The research was conducted on a sample of e-commerce platforms. examining artificial intelligence as the independent variable comprising four dimensions: digital transformation, deep learning, expert systems, and cognition with competitive excellence as the mediating variable and entrepreneurship as the dependent variable. The main tool was the questionnaire, the hypotheses were tested through correlation and effect coefficients using structural modeling, and the research reached conclusions the most important of which is artificial intelligence contributes to achieving entrepreneurship in the labor market supporting the discovery of new opportunities and developing ideas and supporting competitive capabilities.

Keywords: Artificial intelligence, competitive excellence ,entrepreneurship in the labor market

1. Introduction

Technological advancement has led to the integration of artificial intelligence into various fields, to the point where its use has become a competitive advantage distinguishing certain institutions from others. Institutions have been affected by technology despite the introduction of artificial intelligence into the auditing domain (Foster,2024), Artificial intelligence is becoming increasingly important in the business environment and in light of the transition of competition and digital transformation (Rodrigues, 2022). Organizations need to integrate artificial intelligence into their operations to improve the quality of services and products (Baek, 2023). especially in light of data processing and Decision Support, which is reflected in innovation and organizational efficiency (Peng, 2023), where artificial intelligence applications support quality improvement and the ability to support competitive advantage (Aifa, 2025). Artificial intelligence is an influential factor in the labor market (Webb, 2019), and in changing skills and generalization in the relationship between workers and technology. In job level, smart changes and development in creative and social skills (Huang, 2020) .These transformations have become increasingly evident with the adoption of smart technologies; studies indicate that artificial intelligence has reshaped jobs, capabilities, and governance (ESCWA, 2025). In the Iraqi context, the intersection of artificial intelligence and the labor market has gained significant importance due to the digital transformation experienced by Iraqi institutions and the evolution of work methods (Aga, 2025). Furthermore within the realms of e-commerce and digital platforms, the impact of artificial intelligence on customers has become increasingly significant, yielding competitive advantages; these platforms enhance search capabilities and the

customer experience, thereby securing a competitive edge (Bunea, 2026). Artificial intelligence can support entrepreneurship in the labor market by enhancing the ability of digital platforms to respond and innovate to changes and customer preferences. Entrepreneurship is not only related to increasing the number of customers but also to the volume and quality of sales (Muhammad, 2020). Accordingly this research aims to analyzing the impact of artificial intelligence in achieving competitive excellence and entrepreneurship in the labor market.

2. Literature Review

2.1. Artificial Intelligence

Artificial intelligence (AI) is considered one of the most important applications resulting from the Fourth Industrial Revolution and a hallmark of the modern era which is based on technological advancement (Velarde, 2020). In the current decade, AI has become a widely used concept among individuals professionals mass media and social media (Sadiku, 2021). Interest in the concept and its specialized applications in computing, information technology, and manufacturers of smart and digital devices, such as self-driving phones, cars, autonomous aircraft, and automated control systems for certain banking operations and those that mimic the human mind, has grown. AI is considered a significant enigma due to the ability of this small brain whether biological or electronic—to understand, predict, perceive, and interact with a world far broader and more complex than the brain itself. Artificial intelligence is a modern cognitive science that began in its formal form in the 1950s. (Abdullah, 2020). Recent technological advancements, particularly those leveraging AI and machine learning, challenge the concept of contemporary marketing, advertising, and advertising content (Fahmy, 2024).

2.2.Dimensions of Artificial Intelligence

1) Digital transformation: This refers to the adoption of digital technologies in business and other social processes. It is driven by the convergence of technologies (Huang, 2018). Digital transformation represents a shift in how companies operate, reducing repetitive tasks and allowing more time for strategic development and innovation . It accelerates daily workflows by leveraging technological advancements to execute tasks faster and more effectively. Digital transformation enhances operational efficiency, minimizing errors and boosting productivity (Naseer, 2021).

2) Deep Learning: Deep learning is a subset of machine learning—a field within artificial intelligence that enables systems to learn and improve from experience without being explicitly programmed for every specific task. It utilizes artificial neural networks, inspired by the structure of the human brain, to process data and recognize complex patterns. By leveraging these networks, deep learning systems can perform sophisticated tasks such as image recognition, natural language processing, and autonomous decision-making, often achieving performance levels that rival or surpass human capabilities. It serves a wide range of needs, including (Aggarwal, 2022).

3) Expert Systems: These are advanced computer programs designed to simulate the reasoning and decision-making processes of experts in specialized fields. (Zbeiba, 2023)

4) Cognition: Cognition encompasses a range of interconnected fields including natural language processing and knowledge representations robotics and neural networks.(Rawi & Sarraf, 2020)

2.3. Competitive Advantage

Strategy is linked to how an organization seeks to ensure its long-term survival. The decisions and actions taken within its operations directly impact the organization's ability to achieve this by securing, deploying, and utilizing resources to meet performance goals. Excelling in one or more operational performance objectives can lead to the adoption of a business strategy based on a specific competitive factor. Business strategy does not rely merely on operational capability to achieve performance excellence; rather, it hinges on how customers evaluate the specific competitive factors underpinning that strategy. Competitive advantage refers to the areas in which business organizations outperform their rivals; it is defined as the execution of activities with greater efficiency and effectiveness than competitors. It reflects the extent to which an organization leverages its resources to perform its activities, thereby creating value that competitors cannot match in their own operations (Hamdan & Idris). Competitive advantage defined as the capability technology or distinctive resource that enables an organization to create value and benefits for customers that exceed those offered by competitors. This distinctiveness is validated from the perspective of customers who recognize and value this differentiation, as it delivers benefits and value superior to what other competitors provide (Sulami, 2001). Competitive advantage is considered the absence of an organization's workforce having a higher degree of competitiveness in overcoming its material or bovine resources. It may be characterized by quality or technology the ability to reduce costs, marketing efficiency, innovation and continuous development excellence in management thinking, abundance of financial resources or possessing valuable village resources (Hariri, 2011). It refers

to an organization's ability to formulate and implement strategies (Atiqa, & Harairia, 2015).

The knowledge perspective considers the organization as an institution for the production and integration of knowledge, assuming that the critical input for production and the primary source of value is knowledge. In actual reality, the productivity of any human element of the company depends on it being an institution for the production and integration of knowledge. Therefore the essence of the organizations work lies in creating, transferring, employing and benefiting from knowledge. The difference in performance between organizations is due to the difference in the rules for the formation development distribution employment and use of knowledge (Saleem, 2010).

2.4. Entrepreneurship in the Labor Market

Entrepreneurship is a strategic endeavor; the organization focuses on identifying opportunities in the external environment and taking the initiative to adopt new ideas through innovation (Ali, 2017) .The repercussions of the current economic crisis have affected all sectors, making it essential to adopt new development strategies aimed at overcoming the crisis and revitalizing the economy. An entrepreneurial approach is proposed as an alternative model for economic development, driven by a shift from traditional, large-scale enterprises towards entrepreneurship seeking to adopt this model by integrating it across all business sectors. Entrepreneurship has gained increasing importance due to significant shifts in the labor market particularly given market diversification and the limited capacity of traditional employment to absorb the workforce. Consequently, entrepreneurship has emerged as a vital strategic tool for generating new ideas and

opportunities by transforming them into entrepreneurial ventures.(Anbari, 2018). The concept of entrepreneurship relies on a commitment to developing and reinforcing strengths while simultaneously working to rectify weaknesses in order to transform the latter into positive assets for the future. Various definitions of strategic entrepreneurship have been proposed by researchers, reflecting the multifaceted nature of the concept (Muhammad, 2017).

These are organizational measures adopted by the organization to manage innovation and identify growth opportunities in alignment with its entrepreneurship's strategic vision, while accepting the risks associated with market imbalances or structural changes through the analysis of current and future opportunities. Leveraging these measures serves as a sustainable competitive advantage for generating value and wealth (Fatlawi, 2022).

3. Methodology

3.1.Instrument

The study used questionnaire as a tool to collect data from the e-commerce platforms in Iraq , the field of the study includes e-commerce platforms in Iraq and a sample of 115 employees from these platforms was selected.

3.2.Research Model

The research model in Figure 1 includes three variables were used qualitative the independent variable is artificial intelligence and its dimensions (digital transformation, deep learning, expert systems, cognition: cognition) the mediator variable is competitive advantage , the dependent variable is entrepreneurship in the labor market the variables were represented by qualitative data collected through a questionnaire.

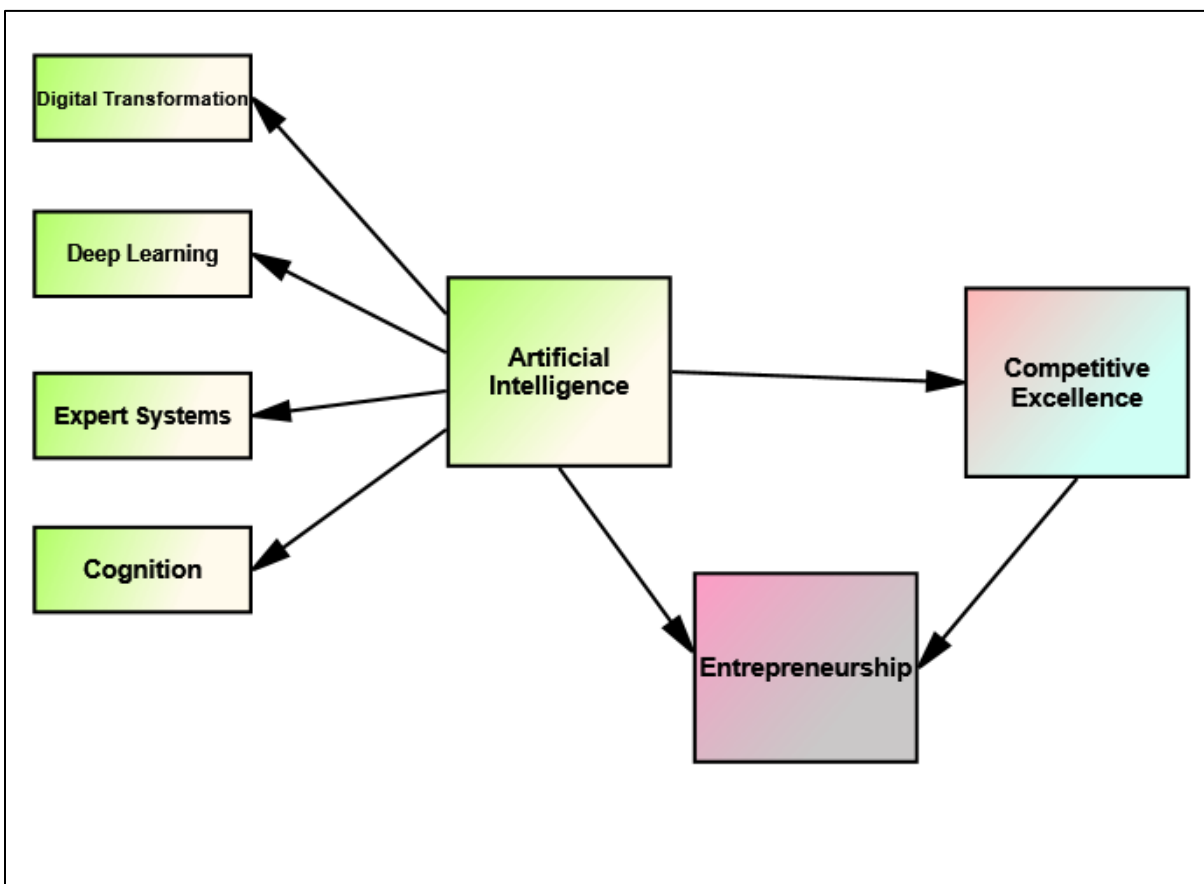


Figure 1. Research Model

3.3. Assessment of the Measurement Instrument Reliability

The findings of the reliability analysis that shown in Table 1 refer to Cronbach alpha analysis and achieve strong consistency , the coefficient of Cronbach alpha for (IV) is (0.925) and the coefficient for (MV) is (0.789) Also the coefficient for (DV) is (0.934) and the overall model is (0.954) .The results indicate that the instrument achieve adequate reliability.

Table1. Assessment of the Measurement Reliability

Variable	Code	Reliability
Artificial Intelligence	IV	0.925
Competitive Excellence	MV	0.789
Entrepreneurship	DV	0.934
Model		0.954

4.Results

4.1.Correlation

1) The relationship between artificial intelligence and entrepreneurship

The results in Table 2 show that there is positive relationship with coefficient of (0.571) with significant relation for the value of (<0.05). this results support the H1 hypothesis .

2) The relationship between competitive excellence and entrepreneurship

The results show that there is positive relationship with coefficient of (0.766) with significant relation for the value of (<0.05). this results support the H2 hypothesis.

3) The relationship between artificial intelligence and competitive excellence

The results show that there is positive relationship with coefficient of (0.856) with significant relation for the value of (<0.05). this results support the H3 hypothesis.

Table 2. Correlation Results

Variable		IV1	IV2	IV3	IV4	IV	MV	DV
IV1	Pearson Correlation	1	.739**	.719**	.706**	.889**	.719**	.722**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
IV2	Pearson Correlation	.739**	1	.794**	.707**	.902**	.892**	.775**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000
IV3	Pearson Correlation	.719**	.794**	1	.773**	.912**	.769**	.813**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000
IV4	Pearson Correlation	.706**	.707**	.773**	1	.885**	.695**	.824**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000
IV	Pearson Correlation	.889**	.902**	.912**	.885**	1	.856**	.571**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000
MV	Pearson Correlation	.719**	.892**	.769**	.695**	.856**	1	.766**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000
DV	Pearson Correlation	.722**	.775**	.813**	.824**	.871**	.766**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	

4.2.Path coefficient

1) The effect between artificial intelligence and entrepreneurship

The results in Table 3 and Figure 2 show that there is positive effect with path coefficient of (B=0.311) and ($R^2 = 0.326$) with significant relation for the value of (<0.05). this results support the H4 hypothesis.

2) The effect between competitive excellence and entrepreneurship

The results show that there is positive effect with path coefficient of (B=0.803) and

($R^2 = 0.587$) with significant relation for the value of (<0.05). this results support the H5 hypothesis.

3) The effect between artificial intelligence and competitive excellence

The results show that there is positive effect with path coefficient of ($B=0.811$) and ($R^2 = 0.733$) with significant relation for the value of (<0.05). this results support the H6 hypothesis.

4) The effect between artificial intelligence and entrepreneurship through competitive excellence

The results show that there is positive effect with path coefficient of ($B=0.651$) and ($R^2 = 0.602$) with significant relation for the value of (<0.05). this results support the H7 hypothesis.

Table 3. Path Analyses Results

Path	B	R^2	Sig.
Artificial Intelligence ..> Entrepreneurship	0.311	0.367	0.000
Competitive Excellence ..> Entrepreneurship	0.803	0.521	0.000
Artificial Intelligence ..> Competitive Excellence	0.811	0.527	0.000
Artificial Intelligence ..> Competitive Excellence..> Entrepreneurship	0.651	0.602	0.000

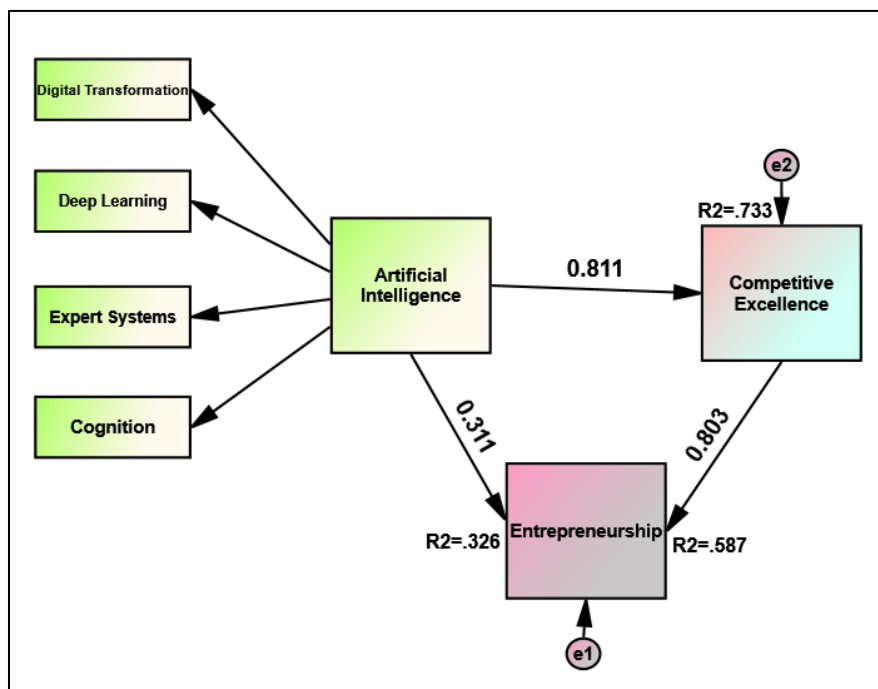


Figure 2. Path Analyses Model

5. Conclusions and Recommendations

5.1. Conclusions

- 1) Artificial intelligence contributes to the transition from traditional to modern systems by enabling rapid decision-making, enhancing the customer experience and fostering flexibility and adaptability.
- 2) Artificial intelligence contributes to achieving entrepreneurship in the labor market by leveraging AI technologies supporting the discovery of new opportunities and facilitating the development of ideas.
- 3) Competitive excellence has a positive impact on entrepreneurship which indicates that possessing the elements of competitive excellence and the quality of products and products achieves entrepreneurship

- 4) Artificial intelligence achieves competitive excellence and employing artificial intelligence capabilities improves operations, supports decision-making, and develops services and products
- 5) Artificial intelligence is more capable of achieving entrepreneurship when improving competitive excellence through achieving tangible competitiveness and quality performance and innovation
- 6) The adoption of modern technologies of artificial intelligence as a technical resource in addition to competitive excellence to convert them into value leads to the highest opportunities for entrepreneurship in the labor market.
- 7) The integration between artificial intelligence and competitive excellence and entrepreneurship reflects the importance of investing in artificial intelligence to find competitive and entrepreneurial imposition.

5.2.Recommendations

- 1) Adoption of artificial intelligence technologies in institutions and organizations working in the labor market especially in support of decisions and quality of services and products.
- 2) Linking AI investments to the objectives of competitive excellence and its ability to find quality and speed and improve the customer experience.
- 3) Developing the digital skills of employees through continuous training courses and programs that help workers make effective use of artificial intelligence systems.
- 4) Supporting innovation and entrepreneurship in the labor market by fostering a regulatory environment that encourages the introduction of new ideas and promising digital solutions.

- 5) (5)Enhancing the use of data analytics in decision-making and maximizing the utilization of artificial intelligence tools to analyze competitors and market data, as well as to identify entrepreneurial opportunities.
- 6) Strengthening collaboration with other institutions and platforms to enhance competitiveness, develop capabilities and skills, and bridge gaps.
- 7) Adopting artificial intelligence as a strategic approach to achieving competitive excellence that enhances entrepreneurship in the labor market by supporting human and organizational skills and capabilities.

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