



## Entrepreneurial human capital and its role in developing digital transformation strategies (An analytical study in the Najaf Martyrs Directorate)

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**Abstract.** *The main objective of the study revolves around analyzing the nature of the relationship between two main variables, namely (entrepreneurial human capital, digital transformation strategies) by surveying and analyzing the opinions of senior management at all levels, represented by heads of departments, divisions and units in the Directorate of Martyrs of Najaf Al-Ashraf, using the intentional sample and the comprehensive survey method for all decision-makers in the directorate, the study sample. The study was based on a problem stemming from the field reality of the organization under study, represented by the important role of using and developing digital transformation strategies and benefiting from workers with skills, experience and capabilities, who represent the entrepreneurial human capital in the directorate. The size of the total community, represented by the director and his assistants, heads of departments and divisions, and officials of divisions and units in the Directorate of Martyrs of Najaf Al-Ashraf, amounting to (100), the researcher distributed the questionnaire to all members of this community, and the returned forms were (98), and the number of questionnaires valid for statistical analysis amounted to (90) questionnaires. The researcher used a set of statistical methods, such as Cronbach's alpha coefficient and regression analysis, using statistical programs (Spss.v26 and Smart Pls) to analyze data and extract results. The value of this study stems from the importance of its variables in light of rapid technological and digital development, which are essential for organizations to keep pace with these developments and implement digital transformation strategies in their service delivery. The results showed that entrepreneurial human capital plays a significant role in the Najaf Martyrs Directorate, as this variable received high levels of attention. The results also demonstrated its significant role in developing digital transformation strategies, as these strategies have not received sufficient attention from management at various levels within the organization under study. Therefore, the researcher recommends the need to improve and develop digital transformation strategies in the Najaf Martyrs Directorate, based on a clear strategic vision, and to adopt initiatives that support a culture of innovation and intellectual knowledge. Support should also be provided for digital capabilities and the use of technology in line with the strategic objectives the directorate seeks to achieve in providing services to the families of martyrs in Najaf Governorate.*

**Keywords:** *Entrepreneurial Human Capital, Digital Transformation Strategies, Najaf Martyrs Directorate.*

## 1. INTRODUCTION

Organizations are currently experiencing a critical phase, as the world is witnessing rapid technological developments that directly impact the areas of work and services they provide. Digital transformation is one of the most important trends that governments and organizations seek to adopt with the aim of improving performance and increasing efficiency, This is evident in the government program supporting the development of digital transformation in organizations, particularly public service organizations such as the Najaf Martyrs Directorate, which is the focus of this study. In this context, entrepreneurial human capital is one of the most important elements contributing to the success of digital transformation strategies, due to its effective role in innovation, strategic decision-making, and the implementation of modern technologies. Entrepreneurial human capital, which possesses knowledge, is a vital and pivotal element in bringing about change and enhancing the competitiveness of organizations, particularly in the areas of digital transformation. Digital transformation has become an urgent necessity imposed by rapid technological changes and developments. It is no longer just an option that can be ignored. Therefore, it has become necessary for organizations' strategies to be built on scientific and well-thought-out foundations that enable them to keep pace with these changes and ensure success. Hence, this research aims to demonstrate the role of entrepreneurial human capital in developing digital transformation strategies. This study is applied in the Najaf Martyrs Directorate and focuses on highlighting the importance of building an entrepreneurial culture capable of adapting to modern digital challenges. This is achieved through a comprehensive strategic vision that is consistent with the organization's ability to invest its human resources to achieve tangible results in facing the challenges associated with adopting digital transformation and effectively employing entrepreneurial human capital. This research will also analyze the factors influencing the development of digital transformation strategies, based on the organization's entrepreneurial human capital, innovative culture, digital capabilities, and intellectual property, in addition to its ability to employ technology to develop these strategies. The research will present practical proposals and recommendations for decision-makers in the organization under study, to develop action plans based on developing entrepreneurial human capital skills and enhancing entrepreneurial innovation, thus ensuring success. Sustainable digital transformation will be built on valuable insights that can be leveraged to meet current needs, as well as identifying the challenges and opportunities facing the organization in implementing these strategies. This research aims to highlight the importance of entrepreneurial human capital in developing digital transformation strategies within government institutions, through an analytical study conducted in the Directorate of Martyrs in Najaf. After reviewing previous studies, the researcher was able to identify the current problem. In this context, and by introducing a set of concepts that clarified the nature of the relationship between the two variables of the current research: entrepreneurial human capital and digital transformation strategies, the complexity of the current research led to the emergence of a number of follow-up inquiries related to the specific relationships within the Directorate of Martyrs in Najaf and between the studied variables. In this research, the researcher addressed these issues by analyzing the variables under study and drawing conclusions about the nature of their relationship using the data we collected. The research reached conclusions that highlight the interaction between the variables and offers proposals based on the results of the statistical analysis.

### *1.1. The Problem and Questions of the Study*

Digital transformation is of great importance in enhancing efficiency and innovation in organizations. Success in implementing digital transformation strategies depends largely and fundamentally on entrepreneurial human capital, which possesses leadership skills and experience, innovative thinking, and the ability to adapt to modern technology. However, significant challenges remain for organizations in optimally utilizing entrepreneurial human capital to develop digital transformation strategies. These challenges include a lack of entrepreneurial skills appropriate to the work environment, resistance to change within organizations, and the absence of effective integration strategies between human resources and the technology available within the organization. Public service organizations face increasing challenges in keeping pace with technology in a rapidly changing environment, highlighting the great need to adopt a digital transformation strategy to improve their efficiency and develop their services. The problem lies in the following main question: To what extent does the organization under study possess leadership skills, innovative thinking, and the ability to adapt to modern technology and optimally utilize entrepreneurial human capital to develop digital transformation strategies?

From this question, the following sub-questions emerge:

1. What are the key factors that influence the success of digital transformation in the organization under study?
2. What are the most prominent challenges facing the researched organization in the digital transformation process?
3. How does digital transformation impact improving the efficiency and quality of services provided by the researched organization?
4. What is the knowledge gap between digital transformation strategies and the actual implementation of these strategies within the organization?
5. To what extent does entrepreneurial human capital contribute to developing and enhancing the effectiveness of digital transformation strategies within the researched organization?
6. Does developing digital transformation strategies contribute to improving customer service delivery and enhancing the effectiveness of government performance?

### *1.2. The Importance of the Study*

The importance of the study can be summarized in the following points:

1. The trend toward the use of digital technology is due to its significant role in improving operations and reducing human errors, thus contributing to increased productivity and the performance of tasks assigned to human resources.
2. Working to enhance competitiveness through the use of the latest technologies that enable the organization to quickly adapt to changes to deliver the best services that meet customer needs.
3. The availability of digital tools contributes to better data collection and analysis and helps decision-makers navigate strategic visions that support the organization's work.
4. The use of digital systems helps improve customer communication and provide better services, which achieves customer satisfaction and loyalty.
5. The organization's commitment to digital strategies in its operations supports continuous innovation in service delivery and enhances the organization's ability to adapt and grow in a competitive environment.



### *1.3. Study Objectives*

The current study seeks to achieve a set of objectives, the most important of which are:

1. Determine the level of interest of the Najaf Martyrs Directorate in the dimensions of entrepreneurial human capital.
2. Diagnose the level of interest of the Najaf Martyrs Directorate in digital transformation strategies.
3. Identify the correlation between entrepreneurial human capital and digital transformation strategies.
4. Identify the impact of entrepreneurial human capital on digital transformation strategies.
5. Develop a set of conclusions and recommendations that support the work of the Najaf Martyrs Directorate.

### *1.4. Study Hypotheses*

Based on the hypotheses of the theoretical aspect that will address the study variables (entrepreneurial human capital and digital transformation strategies), and in order to achieve the objectives and answer its questions, the following hypotheses were developed:

"main hypothesis": "The results do not show any statistically significant effect" of entrepreneurial human capital on digital transformation strategies. From this hypothesis, the following sub-hypotheses emerge:

1. Sub-hypothesis First: "There is no statistically significant effect" of entrepreneurial learning on digital transformation strategies.
2. Sub-hypothesis Second: "There is no statistically significant effect" of entrepreneurial experience on digital transformation strategies.
3. Sub-hypothesis Third: "There is no statistically significant effect" of entrepreneurial skills on digital transformation strategies.

### *1.5. The hypothetical plan of the study*

Based on the study's problem, importance, and objectives, the hypothetical plan of the study was designed, which illustrates the paths of relationships between the study variables. Entrepreneurial human capital as the independent variable is represented by three paths (entrepreneurial education, entrepreneurial experience, and entrepreneurial skills). These dimensions were determined based on (Amin, 2018: 4). The variable of digital transformation strategies as the dependent variable with its dimensions (strategic vision, innovation culture, digital capabilities, knowledge, and intellectual property, strategic alignment, and use of technology) was determined based on (Gurbaxain, & Dunkle, 2019: 6). Figure (2) illustrates the hypothetical plan of the study.

### *1.6. Study Methodology*

Through questionnaire questions, which sample members of the organization answered under study, and to complete the theoretical and field frameworks of the study, the researcher used the descriptive and analytical approach in his research. This approach seeks to understand the problem accurately, then analyze it and uncover the relationships of influence and correlation between its variables in order to interpret them and arrive at conclusions that contribute to diagnosing reality, as

well as ensuring the suitability of this scientific approach to the study's objectives. Tenth: Description of the Study Community and Sample

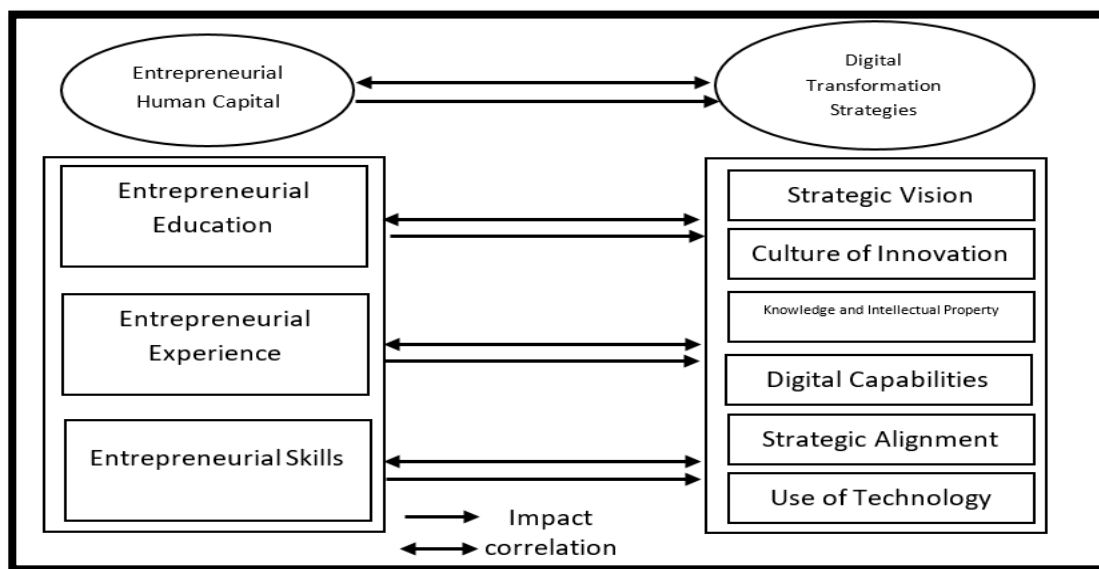


Fig. 1. The researcher's literature-based hypothetical model of the study

### 1.7. Study Limits

The study limits are as follows:

1. Cognitive Limits: The cognitive limits of the study were represented by the main variables (entrepreneurial human capital, digital transformation strategies) and their sub-dimensions.
2. Spatial Limits: The spatial limits were represented by the research field chosen to test the study's hypotheses and answer its questions. The location was determined by (Najaf Martyrs Directorate).
3. Human Limits: The human limits of the study were represented by all senior leaders and decision-makers in the directorate, including (the director and his assistants, department directors, and division and unit heads).

## 2. LITERATURE REVIEW

### 2.1. The Concept of entrepreneurial human capital

The term "entrepreneurial human capital" blends the concepts of "human capital" with "entrepreneurship." Capital is one of the production elements utilized in the production of goods and services, according to economic theory. Here, "human capital" means the individual who is ultimately accountable for every action taken by a company. (Lawal & Oladejo, 2021: 63). The term "entrepreneurship" has different meanings. It often refers to the context of inception or launch. The



owners of pioneering organizations are those who initially compete to establish their new businesses in uncertain and ambiguous environments, or they introduce innovations within a traditional organization with the aim of increasing productivity and profits (Ahmed and Al-Khansa, 2019: 43). The term "entrepreneur" refers to a person who can organize and manage businesses, take risks, and has a high capacity to accomplish tasks. The following table (1) represents a variety of concepts as perceived by a variety of writers and researchers.

**Table 1. The concept of entrepreneurial human capital "Source: Researcher-prepared from included literature."**

	Researcher and year	The Concept
1-	(Bosio, Tomelleri,2018:1)	A multidimensional and complex set of assets consisting of specialized, high-quality entrepreneurial skills and knowledge related to business aspects such as service development, negotiations, risk assessment, and adaptation to organizational work environments.
2-	(Index,2020:173)	Developing entrepreneurial skills and competencies among employees to enhance job opportunities and increase organizational competitiveness.
3-	(Queiró,2022:7)	The ability to continuously reallocate resources in response to changes in economic conditions.
4-	(Braunerhjelm,&Lappi,2023:3)	A set of skills and capabilities acquired through previous entrepreneurial experience that can be transferred to the job when transitioning from entrepreneurship to employee work within an organization.

The researcher believes that the concept of entrepreneurial human capital is the set of capabilities, skills, experiences, and knowledge possessed by individuals within an organization. It is considered a true wealth and an important resource, as the organization works to invest it in the best possible way to achieve outstanding levels of performance.

## *2.2. The Importance of Entrepreneurial Human Capital*

Supriyanto & Mariyanti (2022:91-99) agree that the importance of entrepreneurial human capital lies in the following points:

1. It is an important source of competitive advantage for the organization.
2. It helps improve organizational performance.
3. It helps enhance the efficiency and ability of individuals to manage their businesses optimally and provide superior customer service.
4. It is an important and difficult-to-imitate resource, and it is one of the unique and important sources of performance improvement.
5. Entrepreneurial human capital represents a set of characteristics that distinguish entrepreneurs from employees. These characteristics include their ability to make decisions under conditions of uncertainty.



### *2.3. Dimensions of Entrepreneurial Human Capital*

Amin (2018:5) indicated that the dimensions of entrepreneurial human capital are among the most important components of entrepreneurship for organizations and individuals, as they include elements such as entrepreneurial education, entrepreneurial skills, and entrepreneurial experience. These dimensions of entrepreneurial human capital play a significant and pivotal role in developing business plans aimed at improving organizational performance, achieving competitive advantage, and creating value for organizations. These include the following:

#### **1- Entrepreneurial Education**

Entrepreneurial education is considered one of the key dimensions of entrepreneurial human capital that enhances entrepreneurial intentions. Entrepreneurial learning contributes to increasing individuals' skills and knowledge, which leads to improved self-confidence and a drive towards entrepreneurship (Kong & Kim, 2022: 4). Entrepreneurial education plays a significant and fundamental role in empowering individuals within an organization through training and developing their expertise and skills. Entrepreneurial education contributes to individuals gaining confidence in their ability to work within the organization and achieve success in the field of leadership (Cho & Lee, 2018: 127).

#### **2- Entrepreneurial Experience**

This represents the second dimension of entrepreneurial human capital after entrepreneurial education. It is defined as not merely the accumulation of experience but rather requires self-organized learning capabilities that enable entrepreneurs to transform their experiences into actionable knowledge and strategies to increase opportunities for organizational success (Winkler & Jenert, 2023: 8). The development of entrepreneurial expertise relies on three stages. The pre-conceptualization stage, the performance stage, and the self-reflection stage are considered a primary source of entrepreneurial education because they are linked to an individual's initial level of experience, intellectual characteristics, and entrepreneurial tendencies (Yasir & Guo, 2023: 7).

#### **3-Entrepreneurial skills**

Entrepreneurial skills play a key role in enhancing individuals' ability to innovate and think strategically within an organization. This requires individuals to identify opportunities to improve performance, open new business horizons, and achieve greater operational efficiency, which contributes to achieving the organization's goals. Individuals with entrepreneurial skills within an organization can take proactive steps in leading new projects and proposing and innovating ideas that align with the organization's strategic vision. Entrepreneurial skills are essential for most jobs, and these skills are significantly developed during the educational stages (Erdmann et al., 2022: 89).

### *2.4. The Concept of Digital Transformation Strategies*

Digital transformation strategies have become a 21st-century phenomenon that has transformed all traditional organizational contexts, impacting all levels of business and society. Incorporating digital solutions into organizations requires systematic changes in work, as organizational performance

is influenced by new technologies and communication between stakeholders across the value chain (Kraus et al., 2021: 558). Over the past three decades, global technologies, especially in the field of information and communications technology (ICT), have advanced at a tremendous rate. This unprecedented progress is generally viewed as a digital transformation, as data processing and storage capabilities have expanded significantly. This has enabled the creation of more advanced digital applications, such as cloud-based applications, the Internet of Things, machine learning, and others. These changes impact products, organizational structures, and management concepts and extend beyond the boundaries of the organization (He et al., 2020: 602). Below are a number of concepts related to digital transformation strategies. The following table summarizes a number of concepts related to digital transformation strategies, according to the opinions of a number of writers and researchers.

**Table 2. A set of concepts for digital transformation strategies.**

	Researcher and year	The Concept
1.	Zhao et al.2023:5	An organization's digital transformation strategy reflects the effective promotion of the application of digital, smart, and automation technologies to the organization's overall operational performance and value proposition, achieving competitive advantage.
2.	Cao & Wang,2023:84	An organizational strategic process formulated and implemented by leveraging digital resources and integrating them with business strategy to create a differentiated value proposition for the organization, enabling it to build a competitive position.
3.	Klein, & Söllner,2024:999	A process aimed at improving an entity by significantly changing its characteristics through a combination of information, computing, communications, and communication technologies.
4.	Najem, et al,2024:927	A process of significant changes in an organization's culture, work methods, and capabilities, and adopting new technologies to achieve success in the era of artificial intelligence.

"Source: Researcher-prepared from included literature."

The researcher believes that the concept of digital transformation strategies involves an organization adopting plans and guidelines aimed at using and applying digital technologies to improve performance, support effectiveness, and increase efficiency to achieve sustainable growth in the digital age. This is achieved by focusing on all aspects of internal organizational operations, as well as interactions with customers and partners and developing products and services.

## 2.5. The Importance of Digital Transformation Strategies for Organizations

Tabbani and Aqoun (2022: 26) indicated that digital transformation strategies are of great importance not only to organizations but also to customers. They contribute to the development of organizations, increase their influence, speed up access to customers, reduce costs, and increase their effectiveness in creating new, high-value content. The most important of these strategies are:

- Creating opportunities to provide innovative and creative services.





- Simplifying procedures and improving quality.
- Improving and organizing operational efficiency which leads to significant cost and effort savings.
- Aiding in widespread dissemination and reaching a larger segment of customers.

Albukhitan (2020:665) believes that the importance of digital transformation strategies in organizations contributes to the following:

- Integrating digital technologies and new business models across multiple fields.
- Leading to significant changes in how products and services are delivered to customers.
- Digital transformation integrates changes in organizational structures through the use of digital technologies.
- The ability to generate new paths for value creation in the digital age and the presence of a differentiated organizational culture, processes, and infrastructure.

## 2.6. Dimensions of Digital Transformation Strategies

The Gurbaxani & Dunkle (2019:6) model will be used. The following provides a detailed explanation of each dimension:

### 1- Strategic Vision

It helps organizations define long-term goals that can be used as guidelines for successful decision-making. Organizations must consider external environmental factors to understand current business conditions and opportunities. A SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) can be used (Susanto & et al., 2023:2). To determine these factors, the organization's resources must be considered. These resources include not only financial resources but also human and technological resources. These resources have long been recognized as an important strategic tool used by senior management to determine a new direction for the organization (Madsen & Ulhoi, 2020:3).

### 2- Culture of Innovation

In an increasingly competitive global business environment, the strategic goal of many organizations has become a culture of innovation to improve their organizational sustainability effectively. A culture of innovation is the most direct and effective measure that has a direct impact on creating a competitive advantage for the organization. Therefore, a culture of innovation is considered an important element. It is essential to an organization's competitiveness. It must be properly managed to enhance its performance (Xue et al., 2023:1). Many researchers have explored several methods for improving the culture of innovation and performance, including formulating and implementing an organization's strategy and using techniques and tools to manage innovation within the organization (Zhang et al., 2023:2).

### 3- Knowledge and Intellectual Property

Intellectual property management within an organization plays a pivotal role in maximizing the value of innovative ideas, discoveries, and inventions. Effective intellectual property management involves identifying, protecting, and exploiting intellectual property assets to ensure organizations gain a competitive advantage. Effective intellectual property management practices encourage the sharing and exchange of knowledge and technology. By fostering a culture of innovation and entrepreneurship (Sempiri, 2024:3), intellectual property management within organizations enables them to leverage their intellectual capital for societal impact, economic growth, and sustainable development (Kline & Kappos, 2024:2).

### 4- Digital Capabilities

Refer to a set of skills and capabilities that enable organizations to use digital technology to improve their operations and performance. These capabilities help organizations leverage the information available in the digital environment and utilize technology in ways that align with their strategies. This includes using digital tools to improve the quality of products and services, reduce costs, and redesign processes (Heredia et al., 2022: 4).

### 5- Strategic Alignment

In the 1990s, Henderson and Venkatraman established this theoretical framework to help businesses better integrate their IT strategies and infrastructure with their overall business goals. To help organizations achieve their strategic objectives, it offers a structured way to ensure that these important parts are coherent and integrated (Adama et al., 2024: 1277). The strategic alignment model assumes that organizational performance depends on alignment between four key areas: business strategy, IT strategy, organizational infrastructure, and IT infrastructure (Sarwar et al., 2024: 878).

### 6- Use of Technology

Refers to the automation of organizational information systems and business processes, radically changing the organization's development strategies, objectives, methods, organizational structure, and cultural mindset. With a fundamental change in the business model, the organization begins to transition to the use of technology, which is the foundation of its digital transformation. This is achieved by creating a digital ecosystem that integrates the organization's entire operations and ensures a comprehensive change in the organization's internal processes (Jabborova et al., 2024:2).

#### *2.7. The Relationship Between Entrepreneurial Human Capital and Digital Transformation Strategies*

In today's digital landscape, the ability to harness the human potential to generate and implement innovative ideas has become the cornerstone of organizational excellence. Organizations seek to achieve this through entrepreneurial human capital, which contributes to enhancing the interconnectedness of information technology tools. Matt, communications, and developing digital

transformation strategies by improving processes such as data collection, analysis, and decision-making. This is achieved by providing employees with education, skills, and entrepreneurial experience to enhance their capabilities, potential, and effectiveness. (Alawneh et al., 2025: 5) Digital tools contribute to innovation in business models and value creation, as organizational managers must be able to sense and learn new digital skills continuously. Previous studies have indicated that digital transformation is essential to enhance resilience. This transformation relies on effective human resource change, including equipping employees with digital skills and fostering a culture of innovation that embraces technological progress (Sagala & Ori, 2024: 3).

### 3. MATERIALS AND METHODS

#### 3.1. MATERIALS

- **The Study Community and Sample**

*The study community and sample are represented by the leaders and decision-makers in the Najaf Martyrs Directorate, namely (the director, his assistants, department managers, and division and unit officials). The study sample is deliberate, represented by a comprehensive survey of all leaders, whose number reached (100). They were adequately selected systematically to ensure that the study results were disseminated to the community as a whole. The researcher targeted the leaders and decision-makers in the directorate who possess competent experience and skills and who play a role in advancing the directorate, keeping pace with change, and using technology in line with the government program to move towards digital transformation in all state institutions. The sample was selected from the original community, which numbered (100). The sample size was determined based on (Ahmed & Halim, 2017: 29). Based on the organizational chart, after distributing the questionnaire, the number of respondents reached (100). Due to the neglect of the remaining questionnaires and their failure to benefit from and retrieve them, the number of retrieved questionnaires reached (100). (98) The net number of forms that were subjected to analysis represented a sample of (90).*

- **Coding of the study scale, (normal) distribution, and scale stability**

To facilitate data processing in SPSS and SMARTPLS V4.0.8.4. Ver.26 Coding of the study scale, as shown in Table (3) below:

**Table 3. Coding of the study variables**

variable	Dimension	The symbol	Number of questions	Skewness	Kurtosis	Cronbach's alpha value
Entrepreneurial Human Capital	Entrepreneurial Education	X	7	-1.891-	.078	0.715
	Entrepreneurial Experience		5	-1.225-	1.732	0.880
	Entrepreneurial Skills		6	-1.168-	-.072-	0.775
	Strategic Vision	Y	5	-1.048-	-.643-	0.815
	Culture of Innovation		5	-.864-	1.812	0.866

Digital Transformation Strategies	Knowledge and Intellectual Property		5	-.734-	.480	0.786
	Digital Capabilities		5	-1.676-	1.420	0.737
	Strategic Alignment		5	-1.118-	1.320	0.770
	Use of Technology		6	-1.756-	1.300	0.818

**Source: Prepared by the researcher.**

Upon examining the two research variables (entrepreneurial human capital and digital transformation techniques) and their respective dimensions, as seen in the aforementioned table, all data resided within a range of ( $\pm 1.96$ ), signifying a normal distribution. This necessitates the application of parametric methods for additional statistical analysis.

The scale's reliability is quantified on a continuum from 0 to 1, where elevated values signify enhanced reliability. Cronbach's alpha coefficient is commonly employed to evaluate dependability, with values exceeding 70% deemed acceptable in management and behavioral research (Nunnally & Bernstein, 1994). Upon evaluation, it was determined that all scales attained commendable outcomes both individually and collectively, as illustrated in the table above.

The Cronbach's alpha coefficient values varied from 0.715 to 0.880, signifying that reliable results can be achieved when the instrument is administered to the same sample at different intervals, considering the research variables and dimensions.

## 4. RESULTS AND DISCUSSION

### 4.1. RESULTS

#### 4.1.1 Descriptive Analysis of Study Variables

Reviewing the opinions and preferences of employees (at the institution under investigation) in the study sample and ascertaining the degree of agreement on the fit of the items of the measuring tool to their attitudes, this part presented the study results. Focusing on descriptive statistical studies covering (relative importance, arithmetic mean, coefficient of variation, level and direction of response, standard deviation,) helped one to reach this. The comparison and dimensions were based on getting the maximum degree of relative relevance since this indicates the level of availability, practice, interest, and homogeneity of the primary dimensions and variables by the institution under examination.

#### 1. Descriptive Analysis of the Entrepreneurial Human Capital Variable

The results for the entrepreneurial human capital variable are generally summarized in the table below. It attained a relative importance of (23.5%) and an overall mean of (3.618) with "a standard deviation of" (0.849). The findings suggest that the institution under investigation exhibited an average level of interest in entrepreneurial human capital. Regarding the dimensions, they all centered around agreement, with (entrepreneurial experience) coming first in the sequence because it obtained the highest values, while (entrepreneurial education) came second because it received the lowest values.

**Table 4. Summary of Descriptive Measures for the Elements of the Entrepreneurial Human Capital Variable**

	Dimensions of the Entrepreneurial Human Capital Variable	Mean	S.D	Answer direction	relative importance	Answer Level	No.
1	Entrepreneurial Education	3.492	0.824	Agreed	69.8%	High	3
3	Entrepreneurial Experience	3.782	0.862	Agreed	75.6%	High	1
4	Entrepreneurial Skills	3.580	0.860	Agreed	71.6%	High	2
	Entrepreneurial Human Capital Variable	3.618	0.849	Agreed	72.4%	High	

"Source: SPSS V.28 output"

## 2. Descriptive Analysis of the Digital Transformation Strategies Variable

Generally speaking, the table below shows the outcomes for the several digital transformation initiatives varied. With "a standard deviation of" (0.800) it obtained an overall mean of (3.581), so attaining a relative relevance of (71.6%). The findings show that the investigated company has high degree of availability of digital transformation strategies. As for the dimensions, they focused on agreement, with (knowledge and intellectual property) coming first in the sequence because it obtained the highest values, while (strategic alignment) came second because it received the lowest values.

**Table 5. Summary of Descriptive Measures for the Elements of the digital transformation strategies variable.**

	Dimensions of Digital Transformation Strategies	Mean	S.D	Answer direction	relative importance	Answer Level	No.
1	Strategic Vision	3.62	0.895	Agreed	72.4%	High	2
2	Culture of Innovation	3.59	0.707	Agreed	71.8%	High	3
3	Knowledge and Intellectual Property	3.75	0.882	Agreed	75.0%	High	1
4	Digital Capabilities	3.562	0.647	Agreed	71.2%	High	4
5	Strategic Alignment	3.432	0.904	Agreed	68.6%	High	6
6	Use of Technology	3.532	0.765	Agreed	70.6%	High	5
	Digital Transformation Strategies	3.581	0.800	Agreed	71.6%	High	

"Source: SPSS V.28 output"

### 4.2.2. Structural Model Evaluation Criteria

The structural model evaluation criteria, using the PLS-SEM method, include four criteria, as shown in Table (6). These four criteria are explained below:

**Table 6. Structural Model Evaluation Criteria**

Criterion	Acceptable limit
VIF (Linear Correlation Assessment)	Variance inflation factor (VIF) < 5
Significance of Path Coefficients	P value < 0.05, t value > 1.96
Coefficient of Determination (R2)	0.25, 0.50, 0.75 indicate a small, medium, or large effect
Effect Size (f2)	0.02, 0.15, 0.35 indicate a small, medium, or large effect
Predictive Fit (Q2)	It can't be less than zero



**Source:** Hair, J., Hult, T., Ringle, C. & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM). Los Angeles: Sage

#### 4.2.3. Testing "main hypothesis":

The second "main hypothesis" (H1) holds: (digital transformation techniques) the dependent variable is not significantly influenced by the independent variable, entrepreneurial human capital. The structural model was built in the table below and the results of assessing it for this hypothesis were displayed.

The "main hypothesis" (H1) holds: (digital transformation techniques) the dependent variable is not significantly influenced by the independent variable, entrepreneurial human capital. The structural model was built in the table below and the results of assessing it for this hypothesis were displayed.

**Table Error! No text of specified style in document.7. Findings of assessing the model for the key hypothesis.**

hypothesis	Path	VIF	Path coefficient	t Value	P Value	Result	f <sup>2</sup>	R <sup>2</sup>	Adjusted R <sup>2</sup>	Q <sup>2</sup>
H2	Entrepreneurial Human Capital -> Digital Transformation Strategies	1	0.957	122.853	0.000	Reject the null hypothesis and accept the alternative hypothesis	0.351	0.829	0.821	0.53

**"Source: The researcher's analysis of the outputs of the statistical program SMARTPLS V4.0.8.4"**

Results from the structural model assessment for the "main hypothesis" are shown above; the path coefficient (impact) came out to be 0.788, which is significant when the t value is higher than 1.96. Based on the criteria, the P value falls short of 0.05 (Hair et al., 2017). As so, the alternative hypothesis was approved while the null hypothesis was disproved.

The results also showed that the adjusted coefficient of the determination reached 0.821, indicating that the variable (entrepreneurial human capital) a percentage of 0.821 to account for the dependent variable (digital transformation techniques), whereas the other percentage was accounted for by other factors that were not considered in the study. The preceding findings, the hypothesis that states: "There is no significant influence of the independent variable (entrepreneurial human capital) on the dependent variable (digital transformation strategies) will be rejected."

Testing the sub-hypotheses of the "main hypothesis"

**The sub-hypotheses of the "main hypothesis" state the following:**

1- There is no significant influence between entrepreneurial education and digital transformation strategies:

The table below indicates a notable relationship between entrepreneurial education and digital transformation strategies. The influence coefficient between them was measured at 0.266, which is considered non-significant at the level of 0.002. This necessitates the rejection of the null hypothesis and the acceptance of the alternative hypothesis.

2- There is no substantial impact of entrepreneurial experience on digital transformation strategies. There does not appear to be any statistically significant influence of entrepreneurial expertise on digital transformation strategies. The influence coefficient between them was measured at 0.042, with a significance level of 0.210. This necessitates the acceptance of the null hypothesis and the rejection of the alternative hypothesis. Alternative Hypothesis.

3- There is no "significant relationship between" entrepreneurial skills and digital transformation strategies:

The table below shows a "significant relationship between" entrepreneurial skills and digital transformation strategies. The value of the influence coefficient between them reached (0.634) at a significance level of (0.000), which necessitates taking the alternative hypothesis into consideration and rejecting the null hypothesis.

**Table 8. Results of evaluating the sub-hypotheses model for the "main hypothesis"**

Path	VIF	Path coefficient	t Value	P Value	Result	f <sup>2</sup>	R <sup>2</sup>	Adjusted R <sup>2</sup>
Entrepreneurial Education - Digital Transformation Strategies	2.32	0.266	32.279	0.002	Reject the null hypothesis	0.104	0.820	0.812
Entrepreneurial Experience - Digital Transformation Strategies	5.6	0.042	1.21	0.210	Accept the null hypothesis	0.08		
Entrepreneurial Skills - Digital Transformation Strategies	1.32	0.634	121.65	0.000	Reject the null hypothesis	0.218		

**"Source: The researcher's analysis of the outputs of the statistical program SMARTPLS V4.0.8.4"**

#### 4.2. DISCUSSION

In the table above, the structural model for the sub-hypotheses of the "main hypothesis" showed that their path coefficients are significant when the t value exceeds 1.96 and the P value does not exceed 0.05 (Hair et al., 2017). From the table above, it is clear that the first and third null hypotheses were rejected, and the alternative hypotheses (H2-1, H2-2, H2-3) were accepted. The results also showed that the adjusted coefficient of the determination reached (0.812), indicating that the dimensions of the independent variable (entrepreneurial human capital) were able to explain the dependent variable (digital transformation strategies) by (0.812), and the rest being other variables that were not included for the research. We will reject the null hypotheses (H2-1, H2-2, and H2-3) based on the results presented above.

#### 5. CONCLUSIONS AND RECOMMENDATIONS

These conclusions can be summarized in the following points:

1. There is moderate interest in entrepreneurial human capital, with its dimensions (entrepreneurial education, entrepreneurial experience, and entrepreneurial skills), in the studied organization. The overall average of the sample's responses was moderately neutral.

- This explains the moderate interest shown by the management of the studied organization in entrepreneurial human capital activities and strategies.
2. The company in Najaf Governorate has a high availability of digital transformation strategies, including strategic vision, innovation culture, knowledge, proprietary information, computer skills, coordinating goals, and making use of technological resources. The majority of respondents felt this way, suggesting that management has done little to curb these unsavory practices among current and future clients.
  3. The alternative hypothesis suggests a considerable direct relationship between entrepreneurial human capital and digital transformation tactics at a broad level. The results showed that entrepreneurial education, experience, and talents individually have a significant, direct, and high effect on digital transformation strategies.

### *5.1. Recommendations*

To complement the study requirements and in light of the current study's findings, as follows:

#### **First: Entrepreneurial Education**

- Providing internal digital learning platforms that allow employees to access modern educational resources in the field of digital transformation.
- Motivating staff members to take part in training on digital transformation as well as conferences and seminars
  - Encouragement of staff members to share thoughts and recommendations on digital transformation as well as tools for assessing and applying these ideas.

#### **Second: Experience in Entrepreneurship**

- Offering a flexible workspace so staff members may start and carry out creative digital initiatives.
- Creating teams to work on digital transformation initiatives including staff members from several departments and fields.
- Promoting among team members cooperative efforts and sharing of experiences.

#### **Third: Skills of Entrepreneurship**

- Setting up seminars and training courses emphasizing improving staff members' critical thinking and problem-solving ability.
- Giving staff members chances to grow in leadership and communication via involvement in digital transformation initiatives.
- Motivating staff members to cooperate and operate as a team toward objectives related to digital transformation.

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