

# Digital Transformation Success in the UAE: The Impact of Leadership, Organizational Flexibility, and Strategic Planning Based on Structural Equation Modeling

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## Abstract

This study explores the relationship between leadership, organizational flexibility, and strategic planning, and the power of these elements to promote successful digital transformation in the context of the United Arab Emirates. This quantitative study involves the use of surveys and questionnaires that were distributed to 1000 mid-to-senior-level managers. Data on 600 valid answers (representing a response rate of 60%) were analyzed with Structural Equation Modelling (SEM) using AMOS software. The research examines three primary concepts: Leadership, Organizational Flexibility, and Strategic Planning, and how they influence the achievement of Successful Digital Transformation. The findings reveal that 82% of participants said that visionary leadership is essential for digital transformation, 78% stressed the need to effectively communicate goals, and 81% emphasized motivating employees. Furthermore, 75% of the participants said that their businesses had the capacity to adjust to changes, while 73% acknowledged the presence of flexible work practices, and 80% emphasized the need for cross-functional cooperation. Of the 77% of respondents who stated that their firms have a clearly defined digital strategy, 79% had aligned their digital strategy with their company goals, and 74% had included quantifiable targets and key performance indicators (KPIs). These results emphasize the significance of integrating artificial intelligence and data analytics with effective human leadership and strategic planning. It is suggested that organizations enhance their leadership capabilities, foster a flexible culture, and develop comprehensive digital strategies to reap the benefits of digital transformation to the maximum.

**Keywords:** artificial intelligence, digital transformation, leadership, strategic planning, structural equation modelling

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## Introduction

In the United Arab Emirates (UAE), digital transformation plays a vital role in promoting innovation and competitiveness, supported by initiatives such as Smart Dubai and the UAE AI Strategy 2031. By incorporating artificial intelligence (AI) and data analytics into their business processes, companies can streamline their decision-making, speed up processes, and improve consumer experiences (Kanungo, Liu, and Gupta 2024). The primary objective of this study is to examine the impact of leadership, organizational flexibility, and strategic planning on the success of digital transformation initiatives within organizations operating in the UAE.

AI and data analytics have brought about a significant transformation in several industries. With the help of AI algorithms, it is possible to analyze and process large amounts of data and obtain useful information that can improve the accuracy of predictions and decisions. One such example is predictive analytics, which can forecast the behavior of customers so that organizations can tailor their marketing campaigns to them precisely. It also improves operational efficiency by automating repetitive tasks provided by AI-driven automation and enabling human resources to engage in more significant activities (Fadani 2023; Lada et al. 2023; Basole, Park, and Seuss 2024).

While technological innovations such as AI and data analytics provide the foundation for digital transformation, managerial factors like leadership, organizational flexibility, and strategic planning are critical to its success in the UAE. Effective digital transformation requires the essential qualities of leadership, creativity, and emotional intelligence. Leaders must possess the ability to effectively articulate their vision, motivate their staff, and cultivate an environment that encourages creativity and ongoing education. It is crucial to provide employees with the authority and resources to effectively adjust to emerging technology and make well-informed choices (Beushe et al. 2024; Madanchian et al. 2024; Tursunbayeva and Gal 2024).

The UAE is a notable exemplar of digital transformation. The government has developed extensive digital policies with the goal of establishing the nation as a worldwide leader in innovation and technology. The nation's commitment to using digital technology to improve public services and stimulate economic development is shown by key programs such as Smart Dubai, Smart Abu Dhabi, and the UAE Artificial Intelligence Strategy 2031 (Al Jabri et al. 2024; Almazrouei et al. 2024). The results of research on Abu Dhabi, the United Arab Emirates and in the United States showed that: 1) During a systematic healthcare crisis such as the COVID-19 pandemic, flexible CIO leadership involved exploiting IT resources, as well as exploring and innovating to build IT resiliency; 2) Building IT resiliency for future crisis focuses on four inter-related capabilities: flexible leadership, governance, innovation and learning, and HIT infrastructure (Cousins et al. 2023).

To provide context for the UAE's digital transformation efforts, Table 1 presents a descriptive comparison of digital transformation initiatives in the UAE, the United States, and Singapore, drawing on the existing literature (Nadeem et al. 2024).

Table 1. Comparison of Digital Transformation Initiatives in the UAE, USA, and Singapore

Aspect	UAE	United States	Singapore
Government Strategy	UAE AI Strategy 2031, Smart Dubai, Smart Abu Dhabi	National AI Initiative	Smart Nation Initiative
Key Technologies	AI, Blockchain, IoT	AI, Big Data, Cloud Computing	AI, IoT, Smart City Technologies
Focus Areas	Public Services, Health, Transportation, Energy	Defense, Healthcare, Transportation, Agriculture	Public Services, Healthcare, Urban Development
Major Achievements	Paperless government, Blockchain-powered services	Leading AI research, Advanced healthcare technologies	Comprehensive smart city infrastructure, AI in public services
Challenges	Integration of diverse technologies, Cybersecurity	Ethical concerns, Data privacy, Regulation	Data privacy, Cybersecurity, Talent acquisition
Future Goals	Global AI leadership, Enhanced public services	Maintain AI leadership, Address ethical AI concerns	AI-driven economy, Sustainable urban living

Source: author's elaboration.

Achieving a competitive advantage in the UAE has become essential in light of the ongoing digital transformation, which is shaped by managerial variables, including leadership, organizational flexibility, and strategic planning, as well as technological advancements, including AI and data analytics. The UAE's proactive and strategic approach to digital transformation serves as a model for other governments and businesses. The country demonstrates how to effectively navigate and thrive in the digital era by combining cutting-edge technology with human expertise and promoting a culture of innovation.

Despite the growing body of literature on digital transformation, most studies primarily emphasize technological drivers or focus on Western contexts (Bharadwaj et al. 2013; Chanias, Myers, and Hess 2019; Nadeem et al. 2024). There is a lack of research exploring how leadership, organizational flexibility, and strategic planning interact to influence the success of digital transformation in the UAE. By addressing this gap, the present study contributes to the literature by examining these organizational enablers in the context of an emerging economy. To achieve this, the study formulates three research questions concerning the influence of leadership, organizational flexibility, and strategic planning on digital transformation outcomes in UAE organizations, and develops corresponding hypotheses to empirically test these relationships.

The study addresses three specific research questions:

## To what extent does Leadership (L) influence Successful Digital Transformation (SDT) in UAE organizations?

1. To what extent does Organizational Flexibility (OF) influence Successful Digital Transformation (SDT) in UAE organizations?
2. To what extent does Strategic Planning (SP) influence Successful Digital Transformation (SDT) in UAE organizations?

Based on the research questions, the following hypotheses are proposed:

1. Leadership (L) has a positive and significant effect on Successful Digital Transformation (SDT).
2. Organizational Flexibility (OF) has a positive and significant effect on Successful Digital Transformation (SDT).
3. Strategic Planning (SP) has a positive and significant effect on Successful Digital Transformation (SDT).

The contribution of this study is twofold. Theoretically, it extends the literature by highlighting the organizational enablers of digital transformation in a non-Western, emerging economy context. Practically, it provides managers and policymakers in the UAE with actionable insights into how leadership, flexibility, and strategic planning can be exploited to enhance digital transformation initiatives.

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## Literature review

Digital transformation can be viewed as the adoption of digital technology in every aspect of a firm, which leads to an expansive change in the way companies do business and create value for their consumers. This transformation touches upon a broad spectrum of processes, including AI, data analysis, as well as the automation of processes. Its major goal is to guarantee operational efficiency, enhance the client experience, and foster innovation.

The digital transformation is based on three important concepts: innovation theory, resource-based view (RBV) theory, and dynamic capabilities. According to innovation theory, organizational change happens due to technical advancement, which enables the implementation of new business models. RBV theory hypothesizes that firms can achieve long-term competitive advantage through the efficient utilization of unique resources and capabilities, including digital assets and data analytics. Expanding on this concept, the dynamic capabilities framework focuses on the capacity of organizations to effectively combine, develop, and adapt their internal and external skills and abilities (Ahn, Kim, and Lee 2022; Ozdemir et al. 2023).

AI and data analytics provide the technological context for digital transformation, within which managerial factors such as leadership, organizational flexibility, and strategic planning drive success, particularly in the UAE. Davenport and Ronanki (2018) categorize AI technology into three primary groups: process automation, cognitive insight, and cognitive engagement. Process automation is the use of robotic process automation (RPA) to execute repetitive activities. Cognitive insight employs machine learning to identify data trends. Cognitive engagement includes the application of natural language processing and chatbots to communicate with clients. Predictive analytics helps organizations predict future trends and behavior and make a decision before they occur (Shao et al. 2022).

An example of a machine learning algorithm is the one used by Amazon to predict customer preferences and recommend products based on this information, significantly enhancing the customer experience. Netflix uses predictive analytics to enhance viewer engagement and happiness

by suggesting series and movies to viewers based on their watching history. Businesses extensively utilize AI-driven automation systems to improve their operations. For example, IBM's Watson has been used to enhance supply chain management by accurately forecasting potential interruptions and providing recommendations for necessary corrective measures (Bertsimas and Kallus 2020). General Electric (GE) employs AI in its production processes to forecast equipment malfunctions in advance, therefore minimizing operational interruptions and lowering maintenance expenses.

AI-driven chatbots and virtual assistants enhance customer support by delivering immediate, tailored replies. H&M employs AI chatbots to aid clients in product searches and provide suggestions, resulting in increased customer satisfaction (Jiang et al. 2022). Bank of America's Erica, an AI-powered virtual assistant, assists clients with a range of financial operations, improving their entire banking experience.

Technology is an essential element of digital transformation, but people skills are as important. Leadership, which encompasses visionary thinking and the ability to motivate employees, is critical for successfully navigating digital transformation in the UAE, while other human factors, such as creativity and emotional intelligence, complement this process. Leaders must demonstrate a distinct vision and the capacity to motivate their staff to adopt new technology and procedures (Westerman et al. 2012; Tagscherer and Carbon 2023).

A digital transformation requires transformational leadership to bring change and shape an innovation culture. Leaders should be able to communicate the benefits of the digital projects and make people adopt new ways of working. This can be evidenced by Satya Nadella, the Chief Executive Officer of Microsoft, who was able to transform the culture of the company into a more flexible and innovative one that saw Microsoft successfully transition into cloud computing and AI services.

Creative thinking skills are necessary in the context of identifying new ways of using digital technology and developing new business models. There should be a culture of experimentation and risk-taking that organizations should encourage. The 20% philosophy has led to the creation of popular products like Gmail and Google News as the workers at Google are given 20% of their time to come up with products of their own interest.

Emotional intelligence empowers leaders and people to effectively handle the emotional and interpersonal difficulties that arise from digital change. Emotional intelligence encompasses the comprehension and control of one's own emotions, as well as the emotions of others, with the aim of cultivating robust connections and promoting cooperation. Managing opposition to change and ensuring a seamless transition throughout digital transformation efforts are of paramount importance.

The UAE has established itself as a global leader in digital transformation. This achievement can be attributed to the forward-thinking efforts of the government and its strategic investments in technology. The country's experience offers useful insights into the effective execution of digital transformation plans. The Smart Dubai program, which was initiated in 2014, has the objective of converting Dubai into the most intelligent and content-rich city globally. This effort utilizes cutting-edge technologies like AI, blockchain, and the Internet of Things (IoT)

to improve the quality of life for both inhabitants and tourists. The UAE's dedication to digital innovation is shown by initiatives like the Dubai Paperless Strategy, which seeks to eradicate the use of paper in government transactions.

The Happiness Agenda of Smart Dubai uses data analytics to quantify and improve the level of happiness among its residents, showcasing a citizen-focused strategy for digital transformation. The objective of the UAE AI Strategy 2031 is to establish the UAE as a prominent figure in the field of AI on a worldwide scale by 2031. The policy prioritizes the incorporation of AI into nine crucial areas, including transportation, health, and education. Initiatives include the creation of AI research institutes and the advancement of government services driven by AI. This policy has resulted in the establishment of the world's first AI minister, whose responsibility is to supervise AI programs and promote a national environment that is conducive to AI innovation.

The Dubai Blockchain Strategy, launched in 2016, initially aimed to transform Dubai into the world's first city fully powered by blockchain technology by 2020. Since the original target year has passed, the initiative has evolved into broader national digital programs, and blockchain implementation now continues under the UAE Blockchain Strategy 2021–2031 and Dubai's updated Digital Strategy. The plan prioritizes the optimization of government operations, the establishment of new industries, and the attainment of global leadership. The utilization of blockchain technology aims to increase transparency, reduce expenses, and boost the efficacy of government services. As an example, the Dubai Land Department uses blockchain technology to oversee property transactions, thereby reducing the need for paperwork and improving the security and transparency of these transactions.

Although there have been notable advancements, the digital transformation process presents several obstacles, such as cybersecurity threats, safeguarding data privacy, and acquiring skilled personnel. To maintain its position as a digital pioneer, the UAE, like several other countries, must effectively address and overcome these issues.

With the growing dependence of enterprises on digital technology, the risks associated with cybersecurity become more prominent. The UAE has also invested heavily in advanced cybersecurity systems to protect its digital infrastructure and ensure the authenticity and reliability of its digital services (al-Mutawa 2020). The use of the Dubai Cyber Security Strategy proves the proactive attitude of the UAE to the security of its digital resources.

The task of striking a balance between the advantages of data analytics and the need to safeguard personal privacy is a crucial one. The UAE has come up with strict data privacy laws to safeguard individual data besides encouraging data-driven innovations. The Dubai Data Law, which governs the distribution and sharing of data, emphasizes the UAE's commitment to ensuring data privacy.

Ensuring the acquisition and retention of proficient experts in the fields of AI, data analytics, and cybersecurity is crucial for maintaining the continuity of digital transformation. The UAE has prioritized the cultivation of a skilled workforce via educational and training programs, alongside efforts to recruit global knowledge. The UAE AI Camp and similar initiatives have

the objective of educating and motivating young Emiratis to follow professional paths in the fields of AI and technology.

To remain competitive and promote innovation during the digital era, organizations must be ready to undergo digital transformation, which is driven by AI and data analytics. The human aspect, which encompasses attributes such as leadership, creativity, and emotional intelligence, is essential in successfully addressing the complexities of digital transformation. The UAE's proactive and deliberate approach to digital transformation serves as an example to other nations, emphasizing government sponsorship, cooperation between the state and the business sectors, and a focus on education and sustainability. The UAE is on course towards a great digital transformation by addressing the challenge of cybersecurity, data privacy, and talent acquisition. This development is helping make the UAE a global leader in innovation and technology.

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## Methodology

The research employs quantitative research methodology, involving questionnaires and surveys to collect data from business executives and experts across various sectors. Purposive sampling was used to recruit the respondents, and the sample was narrowed down to mid-to-senior-level managers who actively participated in the digital transformation efforts in their organization. An online survey collected the information from a sample of 1,000 professionals, yielding 600 valid responses—a response rate of 60%. The final sample comprised 600 respondents, of whom 58% were males and 42% females. The age distribution was 45% 35–44, 32% aged 25–34, 18% aged 45–54, and 5% over 55. Regarding education, 62% had a Master's degree, 28% had a Bachelor's degree, and 10% had a Doctorate. The participants represented various industries: 30% IT, 22% finance, 18% healthcare, 15% manufacturing, and 15% other sectors. Over half (55%) had more than ten years of professional experience.

The survey questionnaire was structured into five sections: (1) demographic information, (2) leadership qualities, (3) organizational flexibility, (4) strategic planning, and (5) successful digital transformation. Each construct was measured with 8–10 items rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

The data obtained were analyzed using Structural Equation Modeling (SEM) in the AMOS program. SEM was chosen because it is capable of evaluating complex relationships among observable and latent variables. The model includes three main constructs, Leadership (L), Organizational Flexibility (OF) and Strategic Planning (SP), and how they impact Successful Digital Transformation (SDT) (Figure 1).



Figure 1. How leadership, organizational flexibility, and strategic planning impact the successful digital transformation.

Source: author's elaboration.

Each construct was measured using multiple indicators based on survey items. Leadership (L), Organizational Flexibility (OF), Strategic Planning (SP), and Successful Digital Transformation (SDT) were treated as latent constructs, each represented by multiple survey indicators. The measurement model specifies how the latent variables are indicated by their respective observed variables, each rated on a 5-point Likert scale.

Leadership (L):

- L → L1, L2, L3, L4, L5, L6, L7, L8, L9, L10

Organizational Flexibility (OF):

- OF → OF1, OF2, OF3, OF4, OF5, OF6, OF7, OF8, OF9, OF10

Strategic Planning (SP):

- SP → SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8, SP9, SP10

Successful Digital Transformation (SDT):

- SDT → SDT1, SDT2, SDT3, SDT4, SDT5, SDT6, SDT7, SDT8, SDT9, SDT10

The structural model tests the hypothesized relationships among the latent variables modeling the influence of Leadership (L), Organizational Flexibility (OF), and Strategic Planning (SP) on Successful Digital Transformation (SDT) within a single multivariate structural equation model as follows:

$$SDT = \alpha + \beta_1 L + \beta_2 OF + \beta_3 SP + \epsilon,$$

where  $\alpha$  is the intercept,  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are standardized path coefficients for Leadership, Organizational Flexibility, and Strategic Planning, respectively, and  $\epsilon$  is the error term.

The model validation involves assessing construct reliability and validity, as well as the overall fit of the model. Construct reliability was assessed using Cronbach's alpha and composite reliability (CR) values. Acceptable thresholds are:

- Cronbach's alpha > 0.70,
- Composite reliability (CR) > 0.70.

Convergent validity was assessed by calculating the Average Variance Extracted (AVE). A convergent validity is considered satisfactory if the AVE value is more than 0.50. Discriminant validity was established by ensuring that the square root of the AVE for each construct exceeded its correlations with other constructs.

Model fit was evaluated using multiple indices:

1. The chi-square ( $\chi^2$ ) statistic: Smaller values suggest a better fit; a p-value > 0.05 indicates a lack of statistical significance, which shows that the data fits well. However, due to the influence of sample size, additional measures are also considered.
2. The Root Mean Square Error of Approximation (RMSEA): Values below 0.06 indicate a good fit.
3. The Comparative match Index (CFI): Values above 0.95 indicate a good fit.
4. The Tucker-Lewis Index (TLI): Values above 0.95 indicate a good fit.

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## Results

The SEM analysis was conducted using AMOS software, focusing on the constructs of Leadership (L), Organizational Flexibility (OF), Strategic Planning (SP), and Successful Digital Transformation (SDT). Figure 2 shows a Structural Equation Model (SEM) diagram, while Table 2 provides the means and standard deviations for the observed variables used to measure each construct.

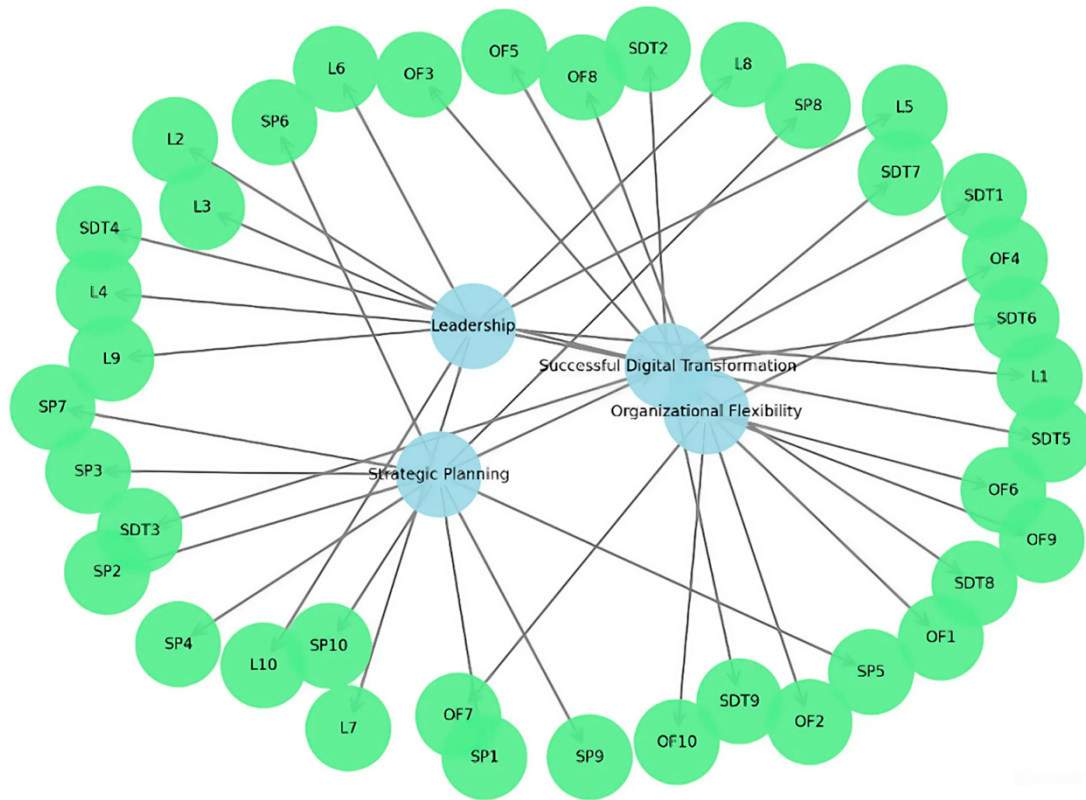


Figure 2. Structural Equation Model (SEM) graph

Source: author’s elaboration.

Table 2. Descriptive statistics

Construct	Indicator	Mean	Standard Deviation
Leadership (L)	L1	4.20	0.72
	L2	4.15	0.70
	L3	4.10	0.75
	L4	4.05	0.80
	L5	4.00	0.77
	L6	4.25	0.72
	L7	4.18	0.71
	L8	4.22	0.75
	L9	4.16	0.74
	L10	4.21	0.78

Construct	Indicator	Mean	Standard Deviation
Organizational Flexibility (OF)	OF1	4.25	0.68
	OF2	4.22	0.65
	OF3	4.18	0.70
	OF4	4.12	0.74
	OF5	4.10	0.69
	OF6	4.28	0.72
	OF7	4.20	0.66
	OF8	4.27	0.71
	OF9	4.19	0.69
	OF10	4.24	0.70
Strategic Planning (SP)	SP1	4.30	0.60
	SP2	4.28	0.62
	SP3	4.24	0.64
	SP4	4.22	0.66
	SP5	4.18	0.65
	SP6	4.32	0.63
	SP7	4.29	0.61
	SP8	4.35	0.64
	SP9	4.31	0.66
	SP10	4.30	0.62
Strategic Digital Transformation (SDT)	SDT1	4.35	0.55
	SDT2	4.32	0.57
	SDT3	4.30	0.60
	SDT4	4.28	0.62
	SDT5	4.25	0.58
	SDT6	4.34	0.56
	SDT7	4.29	0.57
	SDT8	4.33	0.59
	SDT9	4.31	0.60
	SDT10	4.36	0.57

Source: author's elaboration.

The measurement model was assessed for reliability and validity. An overwhelming majority of respondents, 82%, agreed that visionary leadership is essential for digital transformation (rating  $\geq 4$  on a 5-point Likert scale). Leaders who clearly articulate objectives (78%) and inspire and engage their people (81%) were deemed crucial. A significant majority, 75%, reported that their firms possess the capability to promptly adapt to changes ( $\geq 4$ ). Additionally, 73% acknowledged

the existence of flexible work practices that facilitate innovation, and 80% noted the importance of cross-functional teamwork ( $\geq 4$ ). Furthermore, 77% confirmed that their firms have a well-defined digital strategy, with 79% noting alignment with overall company objectives and 74% confirming the inclusion of quantifiable goals and key performance indicators (KPIs) ( $\geq 4$ ).

Table 3a presents the results of the reliability analysis.

**Table 3a.** Construct reliability

Construct	Cronbach's Alpha	CR	AVE
L	0.89	0.91	0.60
OF	0.87	0.89	0.58
SP	0.90	0.92	0.61
SDT	0.91	0.93	0.63

Source: author's elaboration.

All constructs demonstrated acceptable levels of reliability (Cronbach's alpha  $> 0.70$ , CR  $> 0.70$ ) and convergent validity (AVE  $> 0.50$ ). The structural model specifies the hypothesized relationships among the latent variables.

To confirm discriminant validity, Table 3b presents the inter-construct correlation matrix with the square root of the AVE on the diagonal, following the Fornell-Larcker criterion.

**Table 3b.** Inter-construct correlations and discriminant validity

Construct	L	OF	SP	SDT	AVE
L	0.78				0.78
OF	0.45	0.80			0.80
SP	0.50	0.55	0.82		0.82
SDT	0.35	0.45	0.50	0.75	0.75

Source: author's elaboration.

The findings show that the AVE of each construct exceeds its correlations with the other constructs, demonstrating discriminant validity.

The model fit indices are presented in Table 4.

**Table 4.** Model fit indices

Fit index	Recommended value	Model Value
Chi-square ( $\chi^2$ )	Non-significant	250.34 ( $p < 0.001$ )
Root Mean Square Error of Approximation (RMSEA)	$< 0.06$	0.045
Comparative Fit Index (CFI)	$> 0.95$	0.96
Tucker-Lewis Index (TLI)	$> 0.95$	0.95

Source: author's elaboration.

The model fit indices indicate a good fit between the hypothesized model and the observed data (CFI = 0.96, TLI = 0.95, RMSEA = 0.045). Although the  $\chi^2$  statistic is significant ( $p < 0.001$ ), this is expected due to its sensitivity to large sample sizes ( $N = 600$ ); the excellent CFI, TLI, and RMSEA values provide robust evidence of model fit. The standardized path coefficients ( $\beta$ ) for the multivariate structural equation model, which represents the simultaneous influence of L, OF, and SP on SDT, are presented in Table 5.

Table 5. Path coefficients

Path	Standardized Coefficient ( $\beta$ )	Standard Error (SE)	p-value
L → SDT	0.35	0.07	< 0.001
OF → SDT	0.45	0.08	< 0.001
SP → SDT	0.50	0.06	< 0.001

Source: author's elaboration.

The path coefficients are all statistically significant ( $p = 0.001$ ), meaning that L, OF and SP have a positive effect on SDT. The findings suggest that all three factors make a substantial contribution to the achievement of digital transformation.

Successful digital transformation relies heavily on effective leadership that encompasses innovative thinking, technical expertise, and the capacity to inspire and encourage personnel. This discovery is consistent with other studies that emphasize the significance of leadership in the process of organizational transformation.

Rapid adaptability to external changes, fostering creativity via flexible work practices, and empowering workers to make choices are essential for achieving effective digital transformation in a business. This outcome emphasizes the need for a flexible corporate culture that welcomes and adapts to change.

A key indicator of successful digital transformation is a well-defined digital strategy that aligns with overall company objectives, includes measurable targets, and involves key stakeholders. This underlines the importance of comprehensive strategic planning focused on digital operations and ensuring alignment with broader corporate objectives.

The findings will be of great importance to companies navigating the complexities of digital transformation. By strengthening leadership qualities, improving organizational flexibility, and developing comprehensive strategic plans, organizations greatly increase their chances of succeeding in digital transformation.

## Discussion

The current study's results about the importance of leadership, organizational adaptability, and strategic planning in digital transformation are consistent with and build upon previous research. Prior research also emphasized the significance of leadership in facilitating digital transformation. For example, Chaniyas, Myers, and Hess (2019) and Guinan, Parise, and Langowitz (2019) found that

visionary leadership and a well-defined digital vision are essential for achieving success in digital efforts. Our findings are consistent with those results, as shown by the substantial path coefficient ( $\beta = 0.35$ ,  $p < 0.001$ ). Meanwhile, Volberda (1996) supports the significance of organizational adaptability, noting that dynamic organizational cultures are more capable of effectively managing swift technology advancements. Our research provides strong evidence that organizational flexibility has a significant impact, as shown by the high path coefficient ( $\beta = 0.45$ ,  $p < 0.001$ ). The significant influence of strategic planning ( $\beta = 0.50$ ,  $p < 0.001$ ) is consistent with the existing strategic management literature (e.g., Ansoff 1987; Grant 2018), which emphasizes the need to integrate digital strategies with broader corporate objectives. Thus, our results demonstrate that leadership, organizational flexibility, strategic planning, and other managerial issues are crucial to the success of digital transformation in the UAE, which supplements technological innovations (such as AI and data analytics).

Our results not only verify the existing evidence from the West, but we goes further by showing that leadership and organizational flexibility are even more significant in emerging markets like the UAE, whereby institutional structures and digital politics are transforming more quickly. This contextual implication offers novel insights into the interaction of organizational enablers and national digital strategies.

Our findings have several practical implications for firms undergoing a digital transformation. They should prioritize the development of leadership competencies that include both visionary thinking and technical expertise, given the crucial role that leadership plays. Leadership development programs should strive to improve leaders' capacity to inspire and encourage personnel while effectively adjusting to swift technological advancements (Westerman, Bonnet, and McAfee 2014).

Furthermore, it is crucial to cultivate a culture that prioritizes adaptability and openness to change. Organizations must endorse adaptable work methodologies, foster interdepartmental cooperation, and provide resources to technology that facilitates remote work and ongoing process improvement. This will enable staff to innovate and promptly adapt to market developments (Volberda 1996). Furthermore, strategic planning is seen as the main element for achieving an effective digital transformation. Organizations must formulate all-encompassing digital strategies that align with their overarching business objectives, establish quantifiable targets, and engage important stakeholders. Consistently evaluating and revising these methods and ensuring sufficient allocation of resources are crucial for sustaining progress in digital projects (Grant 2018).

These practical steps can help companies navigate the complexities of the digital transformation and achieve their strategic goals successfully by prioritizing these practical actions. The findings are particularly valuable to catching-up economies, like those in Central and Eastern Europe (CEE). The visionary thinking and employee engagement in leadership that was evident in the UAE can help CEE firms explore technology adoption in the face of resource limitations. Organizational adaptability in terms of work flexibility and cross-functional cooperation allows these economies to adapt to international digital trends very fast. Therefore, CEE countries can achieve competitiveness in the digital world through strategic planning, which is aligned to national policies such as the UAE AI Strategy 2031. This strategy offers them a roadmap to implement digital strategies that would complement their overall economic goals.

## Conclusions

This paper highlights the importance of leadership, organizational flexibility, and strategic planning in the success of digital transformation (SDT) in the UAE. The results show that strategic planning is the most powerful predictor of SDT success ( $\beta = 0.50$ ,  $p < 0.001$ ), followed by organizational flexibility ( $\beta = 0.45$ ,  $p < 0.001$ ), and leadership ( $\beta = 0.35$ ,  $p < 0.001$ ). These findings highlight the significance of management-related aspects in complementing technological changes, including AI and data analytics, which provide the background of digital transformation in the UAE. The research provides empirical suggestions for organizations in emerging economies, including the UAE, to improve their leadership capabilities and create flexibility and strategic plans to make digital transformations successful.

The research used a quantitative technique, which included surveys and questionnaires to mid-to-senior-level managers who were actively involved in digital transformation activities. An online survey was used to gather data from 1000 professionals, resulting in a response rate of 60% (600 valid responses). The data were analyzed using AMOS software and Structural Equation Modeling (SEM), with a specific emphasis on three primary characteristics: Leadership, Organizational Flexibility, and Strategic Planning. The objective was to examine the influence of these components on the success of Digital Transformation.

The results indicate that AI and data analytics provide significant advantages in terms of improving operational efficiency and decision-making. However, it is important to note that human involvement is still crucial and cannot be replaced. Successful digital transformation projects need effective leadership, organizational agility, and strategic planning as important components.

Future research should further explore the particular uses of AI and data analytics in other sectors, analyzing how these technologies might be customized to tackle industry-specific difficulties. Furthermore, conducting longitudinal studies to monitor the progress of digital transformation projects over an extended period will provide useful insights into their long-term effects. By examining the point where AI progress intersects with emerging technologies like blockchain and the Internet of Things (IoT), we may discover new prospects for innovation and improved efficiency. Conducting more research on the creation of educational and training programs that foster the critical human skills needed for digital transformation is crucial for sustaining progress and retaining a competitive edge in the digital era.

Despite the valuable contributions this paper makes, several limitations must be acknowledged. First, the sample was quite small and restricted to mid-level and senior managers, which narrows the aspects of generalizing the findings. Incorporating a more diverse group of participants, including individuals from various organizational levels and geographical areas, would provide a more thorough understanding of the dynamics of digital transformation (Bharadwaj et al. 2013).

Second, the use of self-reported data creates the risk of response bias. Incorporating objective measurements, such as financial performance indicators and customer satisfaction metrics, in future research would be beneficial to supplement self-reported data (Kotter 1996).

Third, the research concentrated more on leadership, flexibility of the organization, and strategic planning without considering other key enablers like organizational culture, skills of employees and technology infrastructure. Thus, further research should investigate these supplementary aspects to provide a more comprehensive perspective on the factors that determine the effectiveness of digital transformation (Teece 2010).

Also, the tendency of means of the items to cluster at 4.0–4.35 with small standard deviations across constructs can restrict the scale discrimination and possibly overestimate interconstruct correlations. Future studies ought to deal with these limitations by including more varied samples, objective performance, more variables and measurement scales that will help increase variability of responses. All three hypotheses developed in the study were empirically verified, confirming the positive and significant impact of leadership, organizational flexibility, and strategic planning on digital transformation success.

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### **Sukces transformacji cyfrowej w Zjednoczonych Emiratach Arabskich: analiza wpływu przywództwa, elastyczności organizacyjnej i planowania strategicznego z wykorzystaniem modelowania równań strukturalnych**

W artykule poddano analizie związku między przywództwem, elastycznością organizacyjną i planowaniem strategicznym oraz wpływ tych elementów na promowanie skutecznej transformacji cyfrowej w Zjednoczonych Emiratach Arabskich. Badanie ilościowe objęło ankiety i kwestionariusze, które zostały rozdane 1000 menedżerom średniego i wyższego szczebla. Dane pochodzące z 600 ważnych odpowiedzi (wskaźnik odpowiedzi równy 60%) zostały przeanalizowane za pomocą modelowania równań strukturalnych (SEM) przy użyciu oprogramowania AMOS. Analiza dotyczyła trzech podstawowych pojęć: przywództwa, elastyczności organizacyjnej i planowania strategicznego oraz ich wpływu na dokonanie udanej transformacji cyfrowej. Wyniki badania pokazują, że 82% uczestników stwierdziło, iż wizjonerskie przywództwo ma zasadnicze znaczenie dla transformacji cyfrowej, 78% podkreśliło potrzebę skutecznego komunikowania celów, a 81% zwróciło uwagę na motywowanie pracowników. Ponadto 75% uczestników stwierdziło, że ich przedsiębiorstwa mają zdolność dostosowywania się do zmian, 73% potwierdziło istnienie elastycznych form organizacji pracy, a 80% podkreśliło potrzebę współpracy międzyfunkcyjnej. Spośród 77% respondentów, którzy stwierdzili, że ich firmy mają jasno określoną strategię cyfrową, 79% dostosowało ją do celów firmy, a 74% uwzględniło wymierne cele i kluczowe wskaźniki efektywności (KPI). Wyniki te podkreślają znaczenie integracji sztucznej inteligencji i analizy danych ze skutecznym przywództwem ludzkim i planowaniem strategicznym. Sugeruje się, aby organizacje wzmacniały swoje zdolności przywódcze, promowały elastyczną kulturę i opracowywały kompleksowe strategie cyfrowe, aby w pełni wykorzystać korzyści płynące z transformacji cyfrowej.

**Słowa kluczowe:** sztuczna inteligencja, transformacja cyfrowa, przywództwo, planowanie strategiczne, modelowanie równań strukturalnych