





Providing a Digital Transformation Model for Public Sector Organizations (Case Study: Iraq)

Ali. Amer Naser¹, Saeid. Aghasi^{2*}, Ahmed Abdullah. Amanah³, Sayyed Mohammad Reza. Davoodi⁴

¹ PhD Student, Department of Public Administration, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

² Assistant Professor, Social and Cultural Researches Center, Dehaghan Branch, Islamic Azad University, Dehaghan, Iran

³ Assistant Professor, Department of Business Administration, Faculty of Management and Economics, Karbala University, Karbala, Iraq

⁴ Associate Professor of Social and Cultural Researches Center, Dehaghan Branch, Islamic Azad University, Dehaghan, Iran

* Corresponding author email address: Sae_aghasi@yahoo.com

Article Info

Article type:

Original Research

How to cite this article:

Amer Naser, A., Aghasi, S., Amanah, A. A., & Davoodi, S. M. R. (2023). Providing a Digital Transformation Model for Public Sector Organizations (Case Study: Iraq). *International Journal of Innovation Management and Organizational Behavior*, 3(4), 234-241.
<https://doi.org/10.61838/kman.ijimob.3.4.27>



© 2023 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

ABSTRACT

Objective: The study aimed to design a model of the impact of talent management on human capital with the mediating role of organizational innovation (a case study of the Tehran Municipality Sports Organization).

Methodology: This research employed a descriptive-correlational method. The statistical population included all employees (managers and experts) of the Tehran Municipality Sports Organization, totaling 300 individuals. The sample size was equal to the population size, employing a census method. Data collection tools included the standard Talent Management Questionnaire by Phillips and Roper (2009), the Organizational Innovation Questionnaire by Omid et al. (2002), and the Human Capital Questionnaire by Ghorbani et al. (2013). For data analysis, SPSS and LISREL software were utilized.

Findings: The results indicated a significant relationship between talent management and organizational innovation and between talent management and human capital. However, while there was a significant relationship between organizational innovation and human capital, the mediating role of organizational innovation in the relationship between talent management and human capital was not confirmed.

Conclusion: The overall conclusion of the research is that human resources are considered the most valuable capital of any organization and are central to development. It is evident that the Tehran Municipality Sports Organization, in its path toward growth and development, requires precise planning for this capital and the utilization of talent management and organizational innovation.

Keywords: digital transformation, public sector organizations, leadership, agility, strategy

1 Introduction

Given the significant impact that digitalization has had on the trajectory of organizations, many stakeholders have realized that managing the technology-related aspects is the simplest part of digital transformation (Cuong et al., 2023; Ramadan et al., 2023). Digital transformation enables companies to achieve greater flexibility and efficiency, optimize production processes, create value propositions for innovation ecosystems, and respond promptly to market needs. Moreover, digital transformation processes are essential for maintaining competitiveness in the market and staying at the forefront of technological innovation. Understanding how digital technologies can alter companies' processes, practices, and internationalization strategies is crucial (Feliciano-Cestero et al., 2023). In this regard, the United Nations' Sustainable Development Goals propose developing resilient infrastructure (both regional and transnational), promoting technological capabilities, increasing internet access for less developed countries, and facilitating entry and integration with global value chains for industries and small businesses. Additionally, digital transformation is an effective means for small and medium-sized enterprises, especially public sector organizations, to discover opportunities in foreign markets, including emerging and developed countries. Previous studies have shown that multinational corporations experience significant changes in their business strategy and structure to enhance global integration (Queiroz et al., 2020). Furthermore, the rise of digital technologies, coupled with current trends towards globalization and opening international borders, has reduced barriers to entry in many countries and enabled new entrants to compete in highly competitive global markets. Thus, stakeholders in business processes must understand the concept of each accepted and utilized technology and consider the importance of digital transformation alongside technological growth and transformation (Bertello et al., 2022).

Porfirio et al. (2021) define a digital strategy as a synergistic set of information technology and information system initiatives, guided by managerial decisions on how to exploit these existing infrastructures (Porfirio et al., 2021). McGrath and McManus (2020) reported that today, many business leaders plan large-scale investments in digital transformation with the hope of achieving the best for their organization (McGrath & McManus, 2020). This leads to costly digital transformation failures, resulting in management turnover and employee layoffs, followed by a

"back to basics" strategy where digital efforts are abandoned—an event that can lead to unpleasant consequences (AlNuaimi et al., 2022).

Digital transformation and digitalization in organizations started in the early 1950s and, over the years, initially transformed the accounting sector and routine activities, processing transactions, and ultimately, through computational and analytical capabilities, machine learning, big data, artificial intelligence applications, the Internet of Things, and cloud computing, are now playing a significant role in modern organizations (Izadi Yazdanabadi et al., 2023). Digital transformation not only empowers our internet and social media but increasingly becomes part of all products and processes. There are numerous definitions of digital transformation. According to researchers, digital transformation is defined as a "social phenomenon," a "cultural transformation," and "the transformation and creation of new business models" rooted in the daily activities and culture of companies. Digital transformation is defined as the use of transformative technologies to improve organizational performance and reach, representing a gradual yet profound change in organizations as managers digitally transform three key areas: customer experience, business models, and operational processes (Henriette et al., 2016).

Zhang et al. (2023) explored the interaction between digital technology adoption, strategic flexibility, and business model innovation, demonstrating how these factors are influenced by the institutional environment. The world of digital transformation presents subtle challenges that go beyond technological limitations (Zhang et al., 2023). This research, by providing a digital transformation model focused on the link between leadership, agility, and strategy, can be a strategic subject for organizations, particularly private sector organizations, and offer practical and operational recommendations for organizational transformation. Hence, the question arises:

What is the digital transformation model for public sector organizations (Case Study: Iraq)?

2 Methods and Materials

Given that the purpose of this study is to propose a digital transformation model for public sector organizations (Case Study: Iraq), the research method is classified as exploratory-applied based on the objective. Regarding the time of data collection, it is cross-sectional, philosophically inductive-deductive, and in terms of data collection method

or the nature and approach of the research, it is survey-based. The meta-analysis method was used to conduct the research.

The statistical population of this study includes books and scientific lectures between 2012 and 2023 in the field of digital transformation in organizations. Additionally, research articles published in reputable scientific research and promotional journals between 2012 and 2023, addressing the role of digital transformation, are considered part of the study's population.

Sample Population: The following sources were used to find relevant research:

1. Elsevier database (<https://www.elsevier.com>)
2. Springer database (<https://link.springer.com>)
3. MDPI database (<https://www.mdpi.com>)
4. Wiley Publications (<https://onlinelibrary.wiley.com>)
5. SAGE Publications (<https://us.sagepub.com>)
6. Jahad-e-Daneshgahi Publications (<https://sid.com>)

The total population in this study consists of 120 research articles, 9 theses, and 6 books on organizational digital transformation.

3 Findings and Results

To select the studies for conducting the meta-analysis in this research, the following criteria were considered:

a) Studies that included variables related to organizational digital transformation were selected.

b) The studies had to contain quantitative and statistical values and either utilize field studies or refer to the statistical sections of other research.

c) The studies had to provide the necessary information to calculate effect sizes.

According to the results, the highest number of studies were conducted between 2021 and 2024, representing 78.83% of the total, while the lowest number of studies occurred between 2015 and 2016, accounting for 5.41%. Additionally, the results indicated that most studies were articles, with 81.08% frequency, while the lowest were theses/dissertations, accounting for 5.40%. Furthermore, the results showed that cluster random sampling was the most common method, with 78.37% frequency, and simple random sampling was the least used, with a rate of 5.40%. Finally, the results revealed that small variance accounted for 89.18% of the total, with a minimal variance of 10.82%.

The findings in [Table 1](#) show the effect sizes of factors influencing the provision of a digital transformation model for public sector organizations. The correlation of all these variables with the digital transformation model for public sector organizations was calculated using Pearson's correlation coefficient. This statistic, along with sample size and the direction of the relationship, was entered into the comprehensive meta-analysis software, and the effect size results were extracted as output, as shown in [Table 1](#).

Table 1

Effect Sizes of Factors Influencing the Provision of a Digital Transformation Model for Public Sector Organizations

| Variable Category | Extracted Variables | Count | Fixed Combined Effects | Confidence Interval for Fixed Effects | Random Combined Effects | Confidence Interval for Random Effects | Homogeneity Test |
|----------------------------------|--|-------|------------------------|---------------------------------------|-------------------------|--|------------------|
| Managerial and Strategic Factors | Defining digital strategy in the organization | 23 | *0.56 | 0.60 – 0.50 | *0.77 | 0.80 – 0.70 | *86.03 |
| | Organizing and appropriately allocating resources | 20 | *0.59 | 0.60 – 0.50 | *0.75 | 0.80 – 0.70 | *82.15 |
| | Leadership will and commitment | 15 | *0.45 | 0.50 – 0.40 | *0.69 | 0.70 – 0.60 | *75.16 |
| | Creating specialized agile teams | 16 | *0.46 | 0.50 – 0.40 | *0.71 | 0.80 – 0.70 | *62.19 |
| | Evaluating and monitoring digital transformation performance | 14 | *0.42 | 0.50 – 0.40 | *0.66 | 0.80 – 0.70 | *58.34 |
| Organizational Factors | Developing digital innovation and creativity | 20 | *0.51 | 0.60 – 0.50 | *0.58 | 0.60 – 0.50 | *48.07 |
| | Developing organizational digital flexibility | 16 | *0.45 | 0.50 – 0.40 | *0.52 | 0.60 – 0.50 | *43.16 |
| | Promoting digital values and principles | 13 | *0.39 | 0.40 – 0.30 | *0.49 | 0.50 – 0.40 | *42.09 |
| | Ability to understand and adapt to digital transformations | 11 | *0.30 | 0.30 – 0.20 | *0.47 | 0.50 – 0.40 | *34.71 |

| | | | | | | | |
|------------------------------|--|----|-------|-------------|-------|-------------|--------|
| Process Factors | Developing skills to interact with external technology hubs | 6 | *0.24 | 0.62 – 0.58 | *0.29 | 0.30 – 0.20 | *28.31 |
| | Standardizing and automating tasks | 14 | *0.49 | 0.50 – 0.40 | *0.52 | 0.55 – 0.45 | *74.36 |
| | Facilitating coordination and communication among organizational members | 7 | *0.30 | 0.40 – 0.30 | *0.28 | 0.30 – 0.20 | *38.64 |
| | Proper data aggregation, storage, and analysis | 19 | *0.53 | 0.60 – 0.50 | *0.58 | 0.65 – 0.55 | *67.07 |
| Job Factors | Managing digital organizational changes effectively | 20 | *0.57 | 0.60 – 0.50 | *0.62 | 0.65 – 0.55 | *58.19 |
| | Optimizing processes | 19 | *0.54 | 0.60 – 0.50 | *0.60 | 0.70 – 0.60 | *61.37 |
| | Developing employees' digital education and readiness | 17 | *0.52 | 0.55 – 0.45 | *0.55 | 0.60 – 0.50 | *54.41 |
| | Creating educational opportunities and career growth for employees in digital areas | 19 | *0.58 | 0.60 – 0.50 | *0.61 | 0.70 – 0.60 | *75.06 |
| | Providing open web facilities for sharing knowledge and experiences | 20 | *0.66 | 0.70 – 0.60 | *0.69 | 0.70 – 0.60 | *61.34 |
| | Encouraging employees to present innovative and creative ideas | 18 | *0.57 | 0.60 – 0.50 | *0.60 | 0.60 – 0.50 | *57.07 |
| | Creating a space for exchanging ideas and experiences | 8 | *0.35 | 0.40 – 0.30 | *0.29 | 0.30 – 0.20 | *49.15 |
| Security and Privacy Factors | Establishing policies and guidelines related to information security and privacy in the organization | 16 | *0.44 | 0.55 – 0.45 | *0.49 | 0.50 – 0.40 | *67.03 |
| | Assessing and managing security risks in the organization | 19 | *0.56 | 0.60 – 0.50 | *0.59 | 0.60 – 0.50 | *61.11 |
| | Implementing physical measures to protect the organization's equipment, hardware, and digital resources | 20 | *0.59 | 0.60 – 0.50 | *0.66 | 0.70 – 0.60 | *59.30 |
| | Taking necessary steps to protect individuals' privacy and maintain confidentiality of information in the organization | 21 | *0.62 | 0.65 – 0.55 | *0.67 | 0.70 – 0.60 | *49.01 |
| | Controlling access to information based on job requirements | 17 | *0.58 | 0.60 – 0.50 | *0.59 | 0.60 – 0.50 | *77.29 |

*p<0.01

Table 1 presents the effect sizes of various factors influencing the provision of a digital transformation model for public sector organizations. Managerial and strategic factors, such as defining a digital strategy (0.77), organizing and allocating resources (0.75), and leadership commitment (0.69), show high effect sizes. Other significant factors include creating agile teams (0.71) and evaluating digital transformation performance (0.66). Organizational factors like digital innovation (0.58) and flexibility (0.52) also exhibit moderate to high effect sizes. Among process factors, proper data aggregation (0.58), managing digital changes

(0.62), and optimizing processes (0.60) are particularly impactful. In terms of job factors, the highest effects were found for providing open web facilities for knowledge sharing (0.69) and encouraging innovation (0.60). Security and privacy factors, such as implementing physical security measures (0.66) and protecting information privacy (0.67), also demonstrated significant effects.

The standardized coefficients from the LISREL output and the t-scores for each path coefficient are presented in Table 2.

Table 2*Results of Effect Size for Each Research Variable*

| Variable Category | Extracted Variables | Random Effects | Combined | Effect Size |
|----------------------------------|--|----------------|----------|-------------|
| Managerial and Strategic Factors | Defining digital strategy in the organization | *0.77 | | High |
| | Organizing and appropriately allocating resources | *0.75 | | High |
| | Leadership will and commitment | *0.69 | | High |
| | Creating specialized agile teams | *0.71 | | High |
| Organizational Factors | Evaluating and monitoring digital transformation performance | *0.66 | | High |
| | Developing digital innovation and creativity | *0.58 | | High |
| | Developing organizational digital flexibility | *0.52 | | High |
| | Promoting digital values and principles | *0.49 | | Medium |
| | Ability to understand and adapt to digital transformations | *0.47 | | Medium |
| | Developing skills to interact with external technology hubs | *0.29 | | Low |
| Process Factors | Standardizing and automating tasks | *0.52 | | Medium |
| | Facilitating coordination and communication among organizational members | *0.28 | | Low |
| | Proper data aggregation, storage, and analysis | *0.58 | | High |
| | Managing digital organizational changes effectively | *0.62 | | High |
| | Optimizing processes | *0.60 | | High |
| Job Factors | Developing employees' digital education and readiness | *0.55 | | High |
| | Creating educational opportunities and career growth for employees in digital areas | *0.61 | | High |
| | Providing open web facilities for sharing knowledge and experiences | *0.69 | | High |
| | Encouraging employees to present innovative and creative ideas | *0.60 | | High |
| | Creating a space for exchanging ideas and experiences | *0.29 | | Low |
| Security and Privacy Factors | Establishing policies and guidelines related to information security and privacy in the organization | *0.49 | | Medium |
| | Assessing and managing security risks in the organization | *0.59 | | High |
| | Implementing physical measures to protect the organization's equipment, hardware, and digital resources | *0.66 | | High |
| | Taking necessary steps to protect individuals' privacy and maintain confidentiality of information in the organization | *0.67 | | High |
| | Controlling access to information based on job requirements | *0.59 | | High |

Table 2 outlines the effect sizes for each research variable across different categories. In managerial and strategic factors, the highest effects are seen in defining digital strategies (0.77), organizing resources (0.75), and creating agile teams (0.71). Organizational factors also play a crucial role, with digital innovation (0.58) and flexibility (0.52) showing high effects, while promoting digital values has a moderate effect (0.49). Process factors like managing digital changes (0.62) and optimizing processes (0.60) exhibit high effects, while coordination between members has a low effect (0.28). Job factors include high effects for providing educational opportunities (0.61) and knowledge sharing (0.69). Security and privacy factors are also significant, with high effects in protecting privacy (0.67) and managing security risks (0.59).

4 Discussion and Conclusion

This research aimed to propose a digital transformation model for public sector organizations (Case Study: Iraq).

The research method was qualitative, utilizing the meta-analysis technique. Based on calculations and a survey of relevant articles, the following results were obtained.

In the structural factors category, all variables—such as defining a digital strategy within the organization, organizing and appropriately distributing resources, the will and commitment of organizational leaders, creating specialized agile teams, and evaluating and monitoring digital transformation performance—had the greatest impact on providing a digital transformation model for Iraq's public sector organizations. The heterogeneity test results for the variables indicate that the test is significant, showing that the studies are largely heterogeneous, and thus combining them with a fixed-effects model is unjustified, necessitating the use of a random-effects model for combining the results. These tests reveal that the studies on the relationship between these variables and the digital transformation model for public sector organizations are highly diverse in their features and characteristics. Therefore, the random-effect

sizes were used for evaluation. The random-effects results show that the relationship between defining a digital strategy and providing a digital transformation model for public sector organizations across 23 reviewed studies is 0.77, indicating a positive and significant relationship. According to Cohen's effect size interpretation table, this effect size is high. Similarly, the relationship between organizing and appropriately distributing resources and providing a digital transformation model for public sector organizations across 20 studies is 0.75, showing a positive and significant relationship, with a high effect size according to Cohen's table. The relationship between the will and commitment of organizational leaders and providing a digital transformation model for public sector organizations across 15 studies is 0.69, also positive and significant, with a high effect size. The relationship between creating specialized agile teams and providing a digital transformation model across 16 studies is 0.71, positive and significant, with a high effect size. Lastly, the relationship between evaluating and monitoring digital transformation performance and providing a digital transformation model across 14 studies is 0.66, with a positive and significant relationship and a high effect size.

In the organizational factors category, variables such as developing digital innovation and creativity, developing organizational digital flexibility, promoting digital values and principles, the ability to understand and adapt to digital transformations, and developing skills to interact with external technology-focused hubs had the greatest impact on providing a digital transformation model for public sector organizations. The random-effects results show that the relationship between developing digital innovation and creativity and providing a digital transformation model across 20 studies is 0.58, indicating a positive and significant relationship with a high effect size. Similarly, the relationship between developing organizational digital flexibility and providing a digital transformation model across 16 studies is 0.52, positive and significant, with a high effect size. The relationship between promoting digital values and principles and providing a digital transformation model across 13 studies is 0.49, showing a positive and significant relationship with a moderate effect size. The relationship between the ability to understand and adapt to digital transformations and providing a digital transformation model across 11 studies is 0.47, positive and significant, with a moderate effect size. Lastly, the relationship between developing skills to interact with external technology-focused hubs and providing a digital

transformation model across six studies is 0.29, with a positive and significant relationship and a low effect size.

In the process factors category, variables such as standardizing and automating tasks, facilitating coordination and communication among organizational members, proper data aggregation, storage, and analysis, effectively managing digital organizational changes, and optimizing processes had the greatest impact on providing a digital transformation model for public sector organizations. The random-effects results show that the relationship between standardizing and automating tasks and providing a digital transformation model across 14 studies is 0.52, positive and significant, with a moderate effect size. Similarly, the relationship between facilitating coordination and communication among organizational members and providing a digital transformation model across seven studies is 0.28, positive and significant, with a low effect size. The relationship between proper data aggregation, storage, and analysis and providing a digital transformation model across 19 studies is 0.58, positive and significant, with a high effect size. The relationship between effectively managing digital organizational changes and providing a digital transformation model across 20 studies is 0.62, positive and significant, with a high effect size. Lastly, the relationship between optimizing processes and providing a digital transformation model across 19 studies is 0.60, positive and significant, with a high effect size.

In the job factors category, variables such as developing employees' digital education and readiness, creating educational opportunities and career growth for employees in the digital field, providing open web facilities for knowledge and experience sharing, encouraging employees to present innovative and creative ideas, and creating a space for exchanging ideas and experiences had the greatest impact on providing a digital transformation model for public sector organizations. The random-effects results show that the relationship between developing employees' digital education and readiness and providing a digital transformation model across 17 studies is 0.55, positive and significant, with a high effect size. Similarly, the relationship between creating educational opportunities and career growth for employees in the digital field and providing a digital transformation model across 19 studies is 0.61, positive and significant, with a high effect size. The relationship between providing open web facilities for knowledge and experience sharing and providing a digital transformation model across 20 studies is 0.69, positive and significant, with a high effect size. The relationship between

encouraging employees to present innovative and creative ideas and providing a digital transformation model across 18 studies is 0.60, positive and significant, with a high effect size. Lastly, the relationship between creating a space for exchanging ideas and experiences and providing a digital transformation model across eight studies is 0.29, positive and significant, with a low effect size.

In the security and privacy factors category, variables such as establishing policies and guidelines related to information security and privacy in the organization, assessing and managing security risks, implementing physical measures to protect equipment, hardware, and digital resources, taking necessary steps to protect individuals' privacy and maintain confidentiality, and controlling access to information based on job requirements had the greatest impact on providing a digital transformation model for public sector organizations. The random-effects results show that the relationship between establishing security and privacy policies and guidelines and providing a digital transformation model across 16 studies is 0.49, positive and significant, with a moderate effect size. Similarly, the relationship between assessing and managing security risks and providing a digital transformation model across 19 studies is 0.59, positive and significant, with a high effect size. The relationship between implementing physical measures to protect equipment, hardware, and digital resources and providing a digital transformation model across 20 studies is 0.66, positive and significant, with a high effect size. The relationship between taking steps to protect individuals' privacy and confidentiality and providing a digital transformation model across 21 studies is 0.67, positive and significant, with a high effect size. Lastly, the relationship between controlling access to information based on job requirements and providing a digital transformation model across 17 studies is 0.59, positive and significant, with a high effect size.

Based on the research results, the following recommendations are provided for Iraq's public sector organizations:

- Regarding managerial and strategic components, organizations should define their digital strategies and set managerial objectives to achieve these strategies.
- In terms of job-related components, there should be a focus on developing digital skills, particularly enhancing employees' skills in areas related to digital transformation.
- Providing motivation and job satisfaction through career advancement opportunities and recognizing digital successes can facilitate digital transformation.
- In terms of process components, utilizing modern technologies, such as artificial intelligence, e-commerce, and cloud computing, can improve organizational performance and efficiency through digital transformation.
- Regarding organizational components, the alignment between organizational structure and digital strategies is crucial, and organizations should adjust their structure to support digital transformation.
- In terms of security components, regular security reviews and penetration testing should be conducted to identify vulnerabilities and strengthen cybersecurity. Implementing Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS) can help identify and prevent cyberattacks. Compliance with security regulations for the protection of sensitive information is essential, along with conducting crisis management training to prepare for cyberattacks and other adverse events.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

Not applicable.

References

- AlNuaimi, B. K., Singh, S. K., Ren, S., Budhwar, P., & Vorobyev, D. (2022). Mastering digital transformation: The nexus between leadership, agility, and digital strategy. *Journal of Business Research*, *145*, 636-648. <https://doi.org/10.1016/j.jbusres.2022.03.038>
- Bertello, A., De Bernardi, P., Santoro, G., & Quaglia, R. (2022). Unveiling the microfoundations of multiplex boundary work for collaborative innovation. *Journal of Business Research*, *139*, 1424-1434. <https://doi.org/10.1016/j.jbusres.2021.10.039>
- Cuong, N. M., Balaganesh, D., Bertero, L., & Mutai, N. (2023). Transformational Leadership And Digital Transformation Challenges: The Case Study Of Deoca Group In Vietnam. *Journal of Namibian Studies: History Politics Culture*, *35*, 1081-1105. <https://namibian-studies.com/index.php/JNS/article/view/3661>
- Feliciano-Cestero, M. M., Ameen, N., Kotabe, M., Paul, J., & Signoret, M. (2023). Is digital transformation threatened? A systematic literature review of the factors influencing firms' digital transformation and internationalization. *Journal of Business Research*, *157*. <https://doi.org/10.1016/j.jbusres.2022.11.3546>
- Henriette, E., Feki, M., & Boughzala, I. (2016). Digital Transformation. <https://aisel.aisnet.org/mcis2015/10/>
- Izadi Yazdanabadi, F., Ashtiani, T., Heidari, A. A., & Mahmoudzadeh, S. M. (2023). Digital transformation and its impact on the trajectory of tourism businesses. <http://journalitor.ir/en/Article/36111>
- McGrath, R., & McManus, R. (2020). Discovery-driven planning. *Harvard business review*. <https://hbr.org/1995/07/discovery-driven-planning>
- Porfírio, J. A., Carrilho, T., Felício, J. A., & Jardim, J. (2021). Leadership characteristics and digital transformation. *Journal of Business Research*, *124*, 610-619. <https://doi.org/10.1016/j.jbusres.2020.10.058>
- Queiroz, M. M., Fosso Wamba, S., Machado, M. C., & Telles, R. (2020). Smart production systems drivers for business process management improvement: An integrative framework. *Business Process Management Journal*, *26*(5), 1075-1092. <https://doi.org/10.1108/BPMJ-03-2019-0134>
- Ramadan, M., Bou Zakhem, N., Baydoun, H., Daouk, A., Youssef, S., El Fawal, A., & Ashaal, A. (2023). Toward Digital Transformation and Business Model Innovation: The Nexus between Leadership, Organizational Agility, and Knowledge Transfer. *Administrative Sciences*, *13*(8). <https://doi.org/10.3390/admsci13080185>
- Zhang, H., Ding, H., & Xiao, J. (2023). How Organizational Agility Promotes Digital Transformation: An Empirical Study. *Sustainability*, *15*(14). <https://doi.org/10.3390/su151411304>