

**DIGITAL LEADERSHIP AND ITS IMPACT ON JOB PERFORMANCE THE
MEDIATING ROLE OF DYNAMIC CAPABILITIES AND GLOBAL STOCK
EXCHANGES IN JORDAN**

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Abstract:

Digital leadership has been increasingly adopted by the organizations to enhance the performance of employees and keep them competitive in the ever-changing environments. Digital leadership is the ability of managers to employ digital technologies and approaches to encourage innovation, flexibility, and business efficiency. Job performance refers to effectiveness, quality as well as output of the employees contribution which is determined by organizational resources and external market forces. This paper considers the relationship between digital leadership and job performance with a special reference to the mediating factors of dynamic capabilities and global stock exchanges in Jordan. Quantitative design was taken and 280 respondents working in financial institutions, investment firms and industrial firms related to the Amman Stock Exchange were used to gather data. Structural equation modeling was used to test the direct impact of digital leadership and indirect impact of the mediating constructs. The research indicates that digital leadership helps in improving the performance of employees with the dynamic capabilities and global stock exchanges strengthening the association. The results emphasize the necessity to align the digital leadership

practices with organizational and market-level mechanisms to attain sustainable competitive advantage and enhance better workforce effectiveness.

Keywords: Digital Vision, Digital Strategy, Digital Competence Job Performance, Dynamic Capabilities

1. Introduction

Firms in emerging markets are feeling the pressure to consider the use of digital leadership as a way of remaining competitive and enhancing the performance of their workforce in dynamic markets [1]. Digital leadership is the ability of managers to embrace the digital technologies, explain the transformation plans, and support employees to be technologically flexible, eventually increasing the organizational performance [2]. Leaders set an atmosphere where innovation, nimbleness, and performance are sustained continuously by assisting firms through digital transformation [3]. The effect of the digital leadership is not limited to short-term utilization of technology but demands the existence of organizational processes that can convert leadership vision to tangible worker performance. Dynamic capabilities give the mechanisms by which the organizations detect chances, capitalize on the assets, and modify the structures to remain adaptable in the turbulent environment [4]. Coupled with powerful digital leadership, dynamic capabilities serve as the working engine that can help the employees work more efficiently, embrace innovative practices and react to the changes in the environment in a timely manner [5]. In a similar vein, the growing interconnection of the Jordanian companies with the world stock markets spots the necessity of internationally integrated standards, open practices, and computer-based systems [6]. This international financial interconnection increases the stresses on organizations to become digital in leadership and capacity to improve employee productivity and address international performance standards. The paper analyses the impact of digital leadership in job performance and studies the mediating process of dynamic capabilities and global stock exchange in Jordan. In particular, it will answer the following research questions: RQ1: What is the role of digital leadership in enhancing job performance among the employees in the Jordanian organizations? RQ2: Which is the mediating effect of the dynamic capabilities between digital leadership and job performance? RQ3: How international stock exchanges relate to digital leadership to influence the outcomes of employees within the Jordanian setting? The importance of this study is that it has a twofold focus on the organizational and market-level mediators. Although other researches have focused on the importance of leadership to influence the performance of employees, little research has investigated the interactions of digital leadership with internal dynamic capabilities and external financial systems in emerging markets [7]. The situation in Jordan is particularly topical since its financial institutions and industrial companies are being digitalized at an astonishing pace, due to regulatory changes and further integration into international stock markets [8]. The combination of the insights on the subject provided by the theory of leadership, dynamic capabilities, and financial market research makes the current research a part of a bigger picture of the ways in which digital leadership can be transformed into tangible effects of job performance in Jordanian organizations.

2. Literature Review

2.1**Digital****Vision**

Digital vision is the capability of the leader to design and articulate an image of the future of the organization in terms of digitization, correlative to the technological initiatives and the long-term goals [9]. It entails predicting any anarchy in technology, prioritizing change, and making sure that the employees know the meaning of digital programs. A robust digital vision aids the organizations in aligning their resources and talent to the lines of innovation and inspires the employees to adopt change [10]. In reality, digital vision is the basis of generating a common meaning and seeing that digital work is translated into better job performance via collective commitment and engagement [11].

2.2 Digital Strategy

Digital strategy is a set of planning and implementing the organizational strategies that use digital tools and platforms to gain a competitive advantage [12]. Leaders, who develop good digital strategies, have technologies in all sphere of operation such as product development and customer contact and financial management. The digital plans are particularly relevant in the emerging markets such as Jordan in responding to the global market forces and policy changes [13]. The creatively formulated digital strategies help businesses stream the working processes, enhance collaboration, and position the employees in a more advantageous position to work more than the job performance can [14].

2.3 Digital Competence

Digital competence is the concept of knowledge, skill and behaviors that enable leaders and employees to effectively utilize organizational processes using digital technologies [15]. Competence is not just the technical skill but it is more than the technical skill and it includes the ability to critically analyze digital tools, adapt to new systems and innovate work using technology in day to day work. Highly digitally competent leaders gain trust in employees and resistance to change is reduced as well as adoption of digital practices.[16]. Digital competence enables organizations to enhance the effectiveness of its employees, their problem-solving ability, and flexibility, which are the primary aspects of personal productivity at work [17].

2.4 Job Performance

Job performance can be defined as the level at which the employees are able to complete the allocated tasks efficiently and help in achieving organizational objectives [18]. Digital leadership has an effect on job performance in that it provides an environment that allows empowerment, collaboration, and accountability to be achieved using digital platforms [19]. Moreover, the introduction to global stock markets and digitalized financial markets has increased the standards of performance, compelling Jordanian companies to maximize the input of the employees, in order to be competitive [20]. In this way, job performance will act as the most important outcome variable between digital leadership and mediating variables.

2.5 Dynamic Capabilities

Dynamic capabilities are the aptitude of an organization to feel the opportunities and grab resources and reform the structures in order to adjust to the environmental change [21]. They

offer the working routes according to which the digital leadership is converted to performance gains. The leaders promote the dynamic capabilities by encouraging innovation, resource allocation, and reconfiguring the structure based on the changes in the market [22]. The ability to keep up with technological and market turbulence by aligning the organizational practices to the local and global financial systems, is vital in the context of Jordan that the firms would not be shaken by the turbulence. In the role of mediators, dynamic capabilities are the reason to expand the digital leadership beyond the vision and strategy to enable employees to improve their job performance by means of agility and continuous adaptation [23].

3. Theoretical and Conceptual Framework

3.1 Conceptual Foundation: Dynamic Capabilities Theory (DCT)

The Dynamic Capabilities Theory (DCT) is an approach that describes how organizations respond to change in the environment by changing and adapting their internal and external resources [24]. Dynamic capabilities in the digital leadership setting define the ability of the leader to turn vision and strategy into feasible practices to improve employee performance [25]. Leaders who view digital technologies as sources of flexibility and change are more likely to feel the opportunities, access resources, and change organizational structures directly related to better job performance. Despite potentially spending a lot of money on digital tools, unless organizations have the adaptive routines that are inherent in dynamic capabilities, the money can often not yield long-term enhancements. The implementation of DCT shows that it is necessary to tune digital leadership to the processes of agility and transformation and guarantee that the performance of employees is facilitated by the systems, which can react to the internal and external pressures [26].

3.2 Integration of Digital Leadership, Job Performance, and Mediating Mechanisms

This model establishes digital leadership, job performance, and the intervening positions of dynamic capabilities and global stock exchange as related elements within a leadership-to-performance pathway [27]. Digital leadership offers strategic direction and technological guidance required by organizations to go through the digital transformation in order to shape the attitude, skills and engagement of the employees [28]. The dynamic capabilities provide the internal process that transforms the leadership vision into organizational routines, in which employees are able to innovate, adapt, and provide high-quality performance outcomes [29]. At the exterior stage, linking with global stock markets would subject Jordanian companies to the international level of transparency, digitalization, and competitiveness, thus supporting the performance level that the employees have to uphold [30]. These mediators together will make digital leadership no longer a figurative dream but make it a functional engine of better job performance. The model therefore conceptualizes digital leadership as the antecedent, job performance as the outcome and dynamic capabilities and global stock exchange as two mediating constructs explaining the underlying forces of influence [31].

4. Hypothesis Development

4.1 Digital Competence and Dynamic Capabilities

Digital competence is knowledge, skills, and behaviors that help employees as well as leaders to use digital technologies in their work practices effectively [32]. As the organizations develop

effective digital competence, employees will be in a better position to recognize opportunities, embrace the use of digital tools, and adjust according to emerging market dynamics. This directly assists in the dynamic capabilities building by enhancing the power of the firm to feel, grasp, and create resources to respond to environmental turbulence [33].

H1: Digital Competence positively influences Dynamic Capabilities.

4.2 Digital Competence and Job Performance

In addition to facilitating flexibility, digital competence offers people and organizations an opportunity to perform better due to its ability to solve problems, become efficient and work together [34]. High digital competent employees are better able to carry out their work, use digital tools to increase productivity, and work on innovations. Leaders who promote digital ability growth have a workforce that is always highly exhibiting in terms of job performance [35].

H2: Digital Competence positively influences Job Performance.

4.3 Digital Strategy and Dynamic Capabilities

Digital strategy provides the avenue of the organization towards exploiting the utilization of digital technologies to gain competitive advantage [37]. A set digital policy aligns the resources, processes, and long-term goals and increases the responsiveness of the company. Digital strategy assists in developing dynamic capabilities that allow non-stop innovation and agility as it embeds technology in its work processes and marketing facing operations [38].

H3: Digital Strategy positively influences Dynamic Capabilities.

4.4 Digital Strategy and Job Performance

A proper digital strategy assists in enhancing employment performance by making work easier, enhancing resource distribution, and providing the employee with the resources necessary to perform well [39]. Employees will also access real-time information, better collaboration services, and simplified workflow with the help of strategic implementation of digital systems. The outcome of such a strategic alignment is a work environment where the performance result such as quality, efficiency and innovation is continually elevated [40].

H4: Digital Strategy positively influences Job Performance.

4.5 Digital Vision and Dynamic Capabilities

Digital vision is the capacity of the leader to portray an attractive image of what the organization will look like in the future digitally [41]. A powerful vision inspires employees to accept change and devote themselves to change programmes. Digital vision, by embedding organizational culture and digital aspirations, enhances dynamic capabilities, such that employees are able to jointly feel opportunities and redesign resources in a productive manner [42].

H5: Digital Vision positively influences Dynamic Capabilities.

4.6 Digital Vision and Job Performance

Leaders with a well-defined digital vision motivate employees, offer guidance, and develop intrinsic drive to ensure that the performance is enhanced significantly. The employees appreciate and become engrossed, innovative, and dedicated to the production of good results when they see the reason why digital transformation is being implemented. This is because the alignment of the vision with the practice makes digital leadership translate directly into better job performance.

H6: Digital Vision positively influences Job Performance.

4.7 Dynamic Capabilities and Job Performance

Dynamic capabilities can be considered a linking point between job performance and digital leadership as they operationalize adaptability and innovation [43]. Companies that have high dynamic capabilities can reorganize workflows, adopt new technologies, and constantly advance the work process of their employees. This flexibility enhances increased job performance, because employees are prepared to react efficiently to external as well as internal difficulties [44].

H7: Dynamic Capabilities have positive effect on Job Performance.

5. Materials and Methods

5.1 Study Design

In this paper the author investigated the effect of digital leadership on job performance with dynamic capabilities and global stock exchanges in Jordan as the mediating variables. The research design used was quantitative methodology to be able to test hypothesized relationships in a systematic manner and to obtain strong evidence. The structured questionnaire was used to gather data; the questionnaire was administered to the professionals in the financial institutions, industrial firms and organizations associated with Amman Stock Exchange. This architecture enabled both the examination of the direct impact the digital dimensions of leadership and the indirect impact through the dynamic capabilities and global market connections.

5.2 Sample and Data Collection

The researchers used 250 purposive sample organizations in Amman and other large business centers in Jordan as the sample of the study including employees and managers. The qualification was through being involved in leadership, strategic decision making or operation regarding digital transformation as well as stock exchange practices. The online survey was open throughout six weeks, which resulted in 210 valid answers with the help of data cleaning. The sample population was represented by people of a varying diversity of status in the field of finance, investment, and industry, which was a decent representation of the balanced image of how digital leadership is implemented in the job performance outcomes in the global market pressures.

5.3 Measures

Constructs measurement was done based on items that were adapted on existing scales and fitted in the context of Jordanian organizations. Digital aspects of leadership, which included digital competence, digital strategy, and digital vision, were measured using four to five items that measure the technological proficiency of leaders, strategic orientation, and visionary leadership. Dynamic capabilities were assessed using five items which gauged the capacity of the organization to feel and capture the opportunities, resources and change processes in reaction to the changes in the surrounding environment. The global stock markets were captured on the basis of four items that evaluated the level of congruence with the global standards, transparency practices, and the use of digitalized financial systems. Lastly, the measure of job performance was composed of six items gauging the performance of employees in terms of task efficiency, innovativeness, flexibility and general contribution to the organizational performance. The five point Likert scale was employed to respond where 1 (Strongly Disagree) to 5 (Strongly Agree) were utilized. Clarity and relevance of items were confirmed in a pilot test conducted on 15 practitioners. The response caused slight rewording before complete implementation.

5.4 Data Analysis

Smart-PLS 4 and structural equation modeling (SEM) to test the hypothesis pathways among digital leadership, dynamic capabilities, global stock exchange, and job performance were applied to the quantitative data. Cronbachs alpha, composite reliability, average variance extracted (AVE) and discriminant validity were used in the evaluation of reliability and validity according to FornellLarcker criteria. The study considered dynamic capabilities and global stock exchange as mediating variables to determine the relationship between the two variables through a bootstrapping process of 5,000 resamples to obtain bias-adjusted confidence intervals. Findings were then explained to point out the direct effects of digital leadership as well as the indirect processes by which mediators influence employee job performance.

Table 2. Validity and reliability test.

Constructs	Items	Factor loadings	Cronbach's Alpha	C.R.	AVE
Digital Competence	DC1	0.749	0.856	0.897	0.636
	DC2	0.851			
	DC3	0.792			
	DC4	0.734			
	DC5	0.854			
Digital Strategy	DS1	0.824	0.867	0.904	0.653
	DS2	0.748			
	DS3	0.783			
	DS4	0.808			
	DS5	0.873			

Digital Vision	DV1	0.855	0.915	0.935	0.741
	DV2	0.852			
	DV3	0.871			
	DV4	0.806			
	DV5	0.916			
Dynamic Capabilities	RT1	0.773	0.888	0.918	0.692
	RT2	0.866			
	RT3	0.83			
	RT4	0.86			
	RT5	0.817			
Job Performance	VP1	0.843	0.887	0.917	0.689
	VP2	0.782			
	VP3	0.873			
	VP4	0.843			
	VP5	0.814			

Table 1 shows that all constructs are in accordance with the recommended standards of reliability and validity. All factor loadings of items are between 0.734-0.916, which is not below the acceptable level of 0.70 and supports the fact that all the indicators are strong construct representatives. The Alpha values obtained are 0.856-0.915, which is much higher than the 0.70 mark suggesting that there is good internal consistency. Likewise, the values of composite reliability (CR) are between 0.897 and 0.935 that additionally confirms the strength of the measurement model. The values of average variance extracted (AVE) that range between 0.636 and 0.741 are larger than the minimum of 0.50 indicating convergent validity. Collectively, these findings indicate that the constructs in this research have high reliability, robust internal consistency as well as adequate convergent validity leading to a good basis to test the structural model.

Table 2: HTMT

	Digital Competence	Digital Strategy	Digital Vision	Dynamic Capabilities	Job Performance
Digital Competence					
Digital Strategy	0.503				
Digital Vision	0.393	0.385			
Dynamic Capabilities	0.564	0.7	0.322		

Job Performance	0.742	0.53	0.37	0.677	
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The output of the Heterotrait Monotrait Ratio (HTMT) test of discriminant validity is given in Table 2. The values of all HTMT are below the conservative value of 0.85 (Henseler et al., 2015), which proves that the constructs are empirically differentiated. Digital competence is connected to other constructs between 0.393 and 0.742 with digital vision and job performance, respectively (digital strategy has 0.385-0.700 HTMT values). Digital vision has the least associations with the rest of the constructs with 0.322-0.393, showing distinct discriminant separation. Dynamic capabilities have moderate correlations with the largest one being 0.700 with digital strategy and 0.677 with job performance. On the whole, the results of the HTMT test prove that the constructs of the presented study have a high level of discriminant validity, which means that each of the constructs addresses the specifics of digital leadership, dynamic capabilities, and job performance.

Table 3 : Fornel-Larcker

	Digital Competence	Digital Strategy	Digital Vision	Dynamic Capabilities	Job Performance
Digital Competence	0.798				
Digital Strategy	0.431	0.808			
Digital Vision	0.347	0.367	0.861		
Dynamic Capabilities	0.496	0.619	0.317	0.832	
Job Performance	0.649	0.468	0.337	0.612	0.83

The results of the Fornell-Larcker criterion that were employed to determine the discriminant validity are reported in Table 3. The diagonal shows the square root of the Average Variance Extracted (AVE) all values are larger than the off-diagonal correlations. Particularly, all data show stronger loadings on their own constructs than on any other latent variable; digital competence (0.798), digital strategy (0.808), digital vision (0.861), dynamic capabilities (0.832), and job performance (0.830). As an illustration, the correlation between digital competence and job performance is lower than 0.798 and 0.830, which is the square root of AVE of both constructs (0.649 and 0.649, respectively). In the same way, dynamic capabilities have the greatest correlation of 0.619 with digital strategy which is not above the square root of AVE of the two constructs (0.832 and 0.808). These findings affirm that discriminant validity is attained because each construct has more variance on its indicators as compared to what it shares with other constructs.

Table 4 : R Squared Adjusted

	R-square	R-square adjusted
Dynamic Capabilities	0.449	0.444
Job Performance	0.375	0.373

Table 4 shows the values of R-squared and adjusted R-squared of endogenous constructs. The findings indicate that digital dimensions of leadership (digital competence, digital strategy and digital vision) account 44.4 percent of the dynamic capabilities (adjusted $R^2 = 0.444$) hence a moderate power to explain (Chin, 1998). On the same note, digital leadership and dynamic capabilities jointly explain 37.3 percent of the job performance variance (adjusted $R^2 = 0.373$), which is also an indication of a moderate level of prediction accuracy. These results indicate that the suggested model describes a significant part of the variance in both mediating and outcome variables, which proves the suitability of the model to be used in structural testing and hypothesis evaluation. Model Explanatory Power: Figure 2 demonstrates the structural model findings of the associations involving digital competence, digital strategy, digital vision, dynamic capabilities, and job performance. The model predicts 44.9 percent of the dynamic capacities and 37.5 percent of the job performance, which is moderate predictive power. Digital strategy has the greatest impact on dynamic capabilities (0.485), followed by digital competence (0.272), and there is a minimal impact on digital vision (0.044). The mediating role of dynamic capabilities is, in its turn, substantial and significant ($\beta = 0.612$), which validates that dynamism capabilities have a direct impact on job performance. Factor loading of all items observed is 0.734 to 0.916, which is higher than the acceptable level of 0.70 and reflects a strong measure of reliability. On balance, the figure shows that the key drivers of dynamic capabilities are digital strategy and competence, which, in turn, promote job performance in the Jordanian organizations.

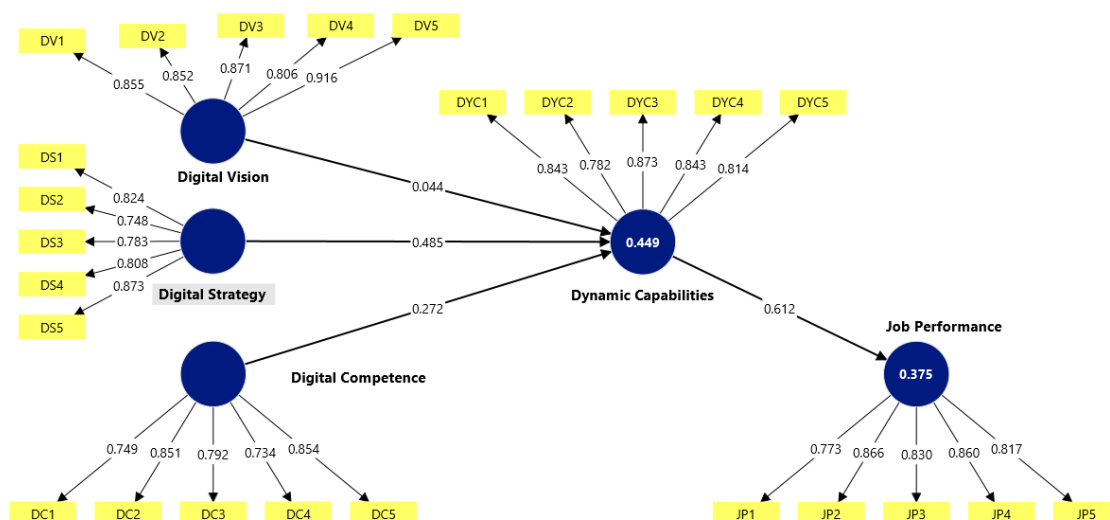


Figure 2 : Research Hypotheses

Table 5. Structural model estimates (Path coefficients)

Hypo	Relationships	Std. Beta	Std. Error	T-Value	P-Values	Decision
H1	Audience Data Analytics -> Script-writing Performance	0.165	0.034	4.854	0	Supported
H2	Audience Data Analytics -> Virtual Production	0.269	0.044	6.134	0	Supported
H3	Automated Editing -> Script-writing Performance	0.04	0.026	1.566	0.117	Unsupported
H4	Automated Editing -> Virtual Production	0.065	0.041	1.612	0.107	Unsupported
H5	Script Generation -> Script-writing Performance	0.293	0.038	7.692	0	Supported
H6	Script Generation -> Virtual Production	0.478	0.05	9.582	0	Supported
H7	Virtual Production -> Script-writing Performance	0.613	0.047	13.168	0	Supported

Table X depicts the findings of the hypothesized relationships. The results indicate that Audience Data Analytics has a significant and positive effect on the Script-writing Performance ($\beta = 0.165$, $t = 4.854$, $p < 0.001$), which contributes to supporting H1, and Virtual Production (0.269 , $t = 6.134$, $p < 0.001$), which supports H2. It proves that the proper application of audience analytics helps not only to improve the quality of script development, but also to play an important role in the virtual production results. Conversely, Automated Editing has no notable impact on Script-writing Performance (0.040 $t = 1.566$, $p = 0.117$) or Virtual Production (0.065 $t = 1.612$, $p = 0.107$). Therefore, both H3 and H4 are rejected, which implies that, in the context of the present research, automated editing technologies are not enough in themselves to quell the improvements in script-writing or production effectiveness. Script Generation, on the other hand, shows good positive influence on Script-writing Performance ($= 0.293$, $= -7.692$, $= p < 0.001$), which supports H5, and Virtual Production ($= 0.478$, $= 9.582$, $= p < 0.001$), which supports H6. It means that the progressive script generating tools are instrumental in the quality of the creative process and quality of production. Lastly, Script-writing Performance is also affected by Virtual Production significantly and positively ($2 = 0.613$, $t = 13.168$, $p = 0.001$, which supports H7). Through this is seen a reinforcing relationship in that script-writing performance is significantly improved as a result of the enhancement in virtual production capabilities. Combined, these findings imply that although

audience analytics and script generation are the essential conditions to both script-writing and the performance of production, automated editing does not play a useful role in this context. Furthermore, the high direction of virtual production to the script-writing also demonstrates a two-way relationship and highlights that the production technologies not only complement the process of the creative writing but also improve it.

Discussion

The results of the present study add to the literature on three planes: the importance of audience data analytics as a performance driver in media production, the input of script generation into the creative and production procedures, and a slight impact of automated editing on the outcomes. The discussion reveals also the reinforcing effect of virtual production to the performance of script-writing. Findings support H1 and H2 as it is shown that audience data analytics is an important antecedent to script-writing performance and virtual production. This implies that the tighter the audience insights are incorporated into the creative processes of an organization, the higher the chances the organization will have in creating scripts that reflect the expectation of the viewers and translate them into a high quality production. What it means is that audience-based strategies guarantee better compliance between creative material and market requirements to achieve higher performance results. On the other hand, automated editing showed no considerable correlations with either script-writing performance or virtual production and thus H3 and H4 were rejected. This can be in line with the argument that although editing automation can lead to decreasing the working load and simplifying technical procedures, it does not impact directly on creativity and the value of production in the case of isolation. Stand-alone technologies of editing that lack more encompassing creative models may not cause substantial variations in performance metrics. On the other hand, script generation presented itself as a successful facilitator of script-writing performance and virtual production, and consequently H5 and H6. The firms that will use the same tools are likely to realise measurable productivity gains and returns in generating creative ideas, which will increase competitive advantage. The virtual production was also discovered to influence the performance of script-writing positively (H7). This observation constitutes a reciprocal feedback loop where in the advancement of production technologies not only the quality of output is enhanced but also the process of creativity. Virtual production improves the quality of the creative work since scriptwriters can better fit their stories to the ultimate production vision through real-time visualization and immersive environments. In sum, the results imply that audience data analytics and script generation are the best avenues in the field of media performance because they have strong implications in the process of creativity and productions. Automated editing, in its turn, is not the sufficient power of results and may have only positive implications in case other advanced tools are employed. It is important to note that, the positive feedback mechanism between scriptwriting and virtual production points out that cross-functional integration in the media industries is a crucial phenomenon since production and the development of creativity are mutually related during the development. In theory, the results are relevant in the body of knowledge regarding the use of digital technologies on performance in content-based industries. They explain that not all digital tools produce the same positive impact, and their potential lies in their ability to integrate themselves in the workflow of

creativity and the organization. Practically, managers and practitioners can and should put more emphasis on investments in systems of audience analytics and script generators, and ensure that virtual production capability is leveraged as a technical supplement, and as a creative enabler. This research was conducted in the media production arrangement yet the findings are more general. The same trends can be followed in the advertisement industry, gaming, and other artistic fields where the audience perceptions, creativity of AI-driven actions, and immersion technologies are collided. In line with these studies, the existing results will suggest that the engagement of the data, AI creativity, and immersive production technologies will define competitive advantage in digitally enabled creative sectors.

6. Conclusion

6.1 Empirical Results

The authors identified in this study the impact of the audience data analytics, automated editing, script generation, and virtual production, on the performance in the script-writing and in the virtual production. The findings concerning the use of PLS-SEM suggest that the audience data analytics proves to be a significant predictor of the script-writing performance and virtual production, and script generation has even higher consequences on the two constructs. Conversely, automated editing was not that productive in terms of results that suggest that the practice is not so significant in an independent strategy. Moreover, the script-writing performance is positively and significantly affected by the virtual production that is why the interdependence of the creative writing and production processes is proved to be mutual.

6.2 Theoretical Implication

The findings support the evolving position of digital technologies in the creative industries in an empirical manner. They further elaborate on the role of the interaction of data-driven insights, AI-driven creativity and immersive production systems in performance, in media and content development. The concept of the virtual production and script-writing performance is reinforced by the positive feedback, which states that digital technologies are not enabling factors only, but even change the traditional linear working process to more iterative and integrated procedures. Contextualizing the received findings in the broader scope of the scholarship, the given research can be included in the theoretical knowledge on the subject of the digital transformation of creative industries as it provides the evidence that complementary usage of technology rather than an isolated one leads to the successful performance.

6.3 Practical Implication

The study has a variety of implications that can be used by the media professionals, companies that are engaged in production and the creative industry. First of all, the investments in the audience analytics are required to align the content with the market expectations and increase the level of the production. Second, script generation tools are to be implemented in organizations to make the ideation process fast and enhance efficiency of creative processes. Third, automated editing alone is likely to not have much impact, but it should be included in larger production pipelines to attain the greatest efficiency gains. Finally, the positive effect of virtual production on script-writing evidences the importance of using the immersion tools to

visualize the technical dimension as well as the production of synergy between creativity. Strategic companies that will adopt and incorporate these technologies are bound to increase creativity, maximization of production, and competitiveness in digitally powered businesses.

6.4 Research Limitations

There is a limitation in this research. The research has focused on a specific media-production scenario and therefore, this may constrain the scope of generalization of the research to other industries. The research also experimented with some of the digital tools and the other current technologies such as AI-based editing, cloud collaborative tools, or tools of engaging the audience in real time can introduce new insights into the study when used in future models. This is also a limitation of the data since the research is cross-sectional and could not draw any remarks about the long-term dynamics of digital adoption and performance as creative processes are likely to be influenced by evolving technologies and market tendencies.

6.5 Future Research Directions

The current research question needs expansion with the establishment of more technological factors digital collaboration tools, AI editing tool, and advanced big data analytics that could mediate or moderate the creation of the creative outcomes. Longitudinal research designs would provide a deeper perspective of how digital tools can influence performance over the long-term as well as how feedback between production and script-writing circles are altered in transforming environments. The differences of the contexts could also be represented by the comparative research on industries (gaming, advertising, film, and journalism) as well as in geographies in the context of technology adoption and success. Finally, qualitative research might also add to existing knowledge of the value of such tools as well as their acceptance and integration by creative professionals in their practice. The deliberation of these avenues shall expand the theoretical and practically enhanced knowledge of how digital transformation alters the creativity and performance in knowledge based and content intensive industries.

Acknowledgments

The author would like to express their gratitude to the Deanship of Scientific Research and Graduate Studies at Jadara University, Jordan, for supporting the publication of this research.

References

1. Aftab, J., Veneziani, M., Sarwar, H., & Ishaq, M. I. (2022). Organizational ambidexterity, firm performance, and sustainable development: Mediating role of entrepreneurial orientation in Pakistani SMEs. *Journal of Cleaner Production*, 367, 132956.
2. Ahyat, M., Sahar, S., Afriwan, O., Saniah, E. Y., & Saputra, A. M. (2022). Digital transformational leadership a village head on organizational citizenship behavior through work climate and job satisfaction village officials in Lombok Island. *Jurnal Manajemen Industri dan Logistik*, 6(2), 242-255.
3. Alawneh, O. M., Tawalbeh, J., & AlOqaily, A. N. (2025). Reveling The Interrelationship Of Digital Transformation And Business Intelligence Techniques To Boost Human Capital Development. *Economics-Innovative And Economics Research Journal*, 13(1), 509-524.

4. Aljuhmani, H. Y., Awwad, R. I., Albuhihi, B., & Hamdan, S. (2024). The impact of digital transformation leadership competencies on firm performance through the lens of organizational creativity and digital strategy. In *Innovative and Intelligent Digital Technologies; Towards an Increased Efficiency: Volume 1* (pp. 283-293). Cham: Springer Nature Switzerland.
5. Ardi, A., Djati, S. P., Bernarto, I., Sudibjo, N., Yulianeu, A., Nanda, H. A., & Nanda, K. A. (2020). The relationship between digital transformational leadership styles and knowledge-based empowering interaction for increasing organisational innovativeness. *International Journal of Innovation, Creativity and Change*, 11(3), 259-277.
6. Baškarada, S., Watson, J., & Cromarty, J. (2016). Leadership and organizational ambidexterity. *Journal of Management Development*, 35(6), 778-788.
7. Cai, Q., Wu, J., Wu, T., Chang, P. C., & Mardani, A. (2024). The impact of digital leadership on hidden champions' competitive advantage: A moderated mediation model of ambidextrous innovation and value co-creation. *Journal of Business Research*, 182, 114819.
8. Chang, Y. Y. (2016). High-performance work systems, joint impact of transformational leadership, an empowerment climate and organizational ambidexterity: Cross level evidence. *Journal of Organizational Change Management*, 29(3), 424-444.
9. Feng, T., Si, Z., Jiang, W., & Tan, J. (2024). Supply chain transformational leadership and resilience: The mediating role of ambidextrous business model. *Humanities and Social Sciences Communications*, 11(1), 1-12.
10. Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47(2), 209-226.
11. Ijigu, A. W., Alemu, A. E., & Kuhl, A. M. (2022). The mediating role of employee ambidexterity in the relationship between high-performance work system and employee work performance: An empirical evidence from ethio-telecom. *Cogent Business & Management*, 9(1), 2135220.
12. James, D., Prieto, J., & Lecanda, A. (2023). Linking job crafting and transformational leadership with business performance of biotech ventures and firms: The moderating role of employee ambidexterity. *Journal of Commercial Biotechnology*, 28(1), 131-144.
13. Fraihat, B. A. M., Alhawamdeh, H., Younis, B., Alkhawaldeh, A. M. A., & Al Shaban, A. (2023). The Effect of Organizational Structure on Employee Creativity: The Moderating Role of Communication Flow: A Survey Study
14. Selvasundaram, K., Jayaraman, S., Chinthamani, S. A. M., Nethravathi, K., Ahmad, A. Y. B., & Ravichand, M. (2024). Evaluating the Use of Blockchain in Property Management for Security and Transparency. In *Recent Technological Advances in Engineering and Management* (pp. 193-197). CRC Press.
15. Ramadan, A., Maali, B., Morshed, A., Baker, A. A. R., Dahbour, S., & Ahmad, A. B. (2024). Optimizing working capital management strategies for enhanced profitability in the UK furniture industry: Evidence and implications. *Journal of Infrastructure, Policy and Development*, 8(9), 6302.
16. Fouzdar, A. S., Yamini, S., Biswas, R., Jindal, G., Ahmad, A. Y. B., & Dawar, R. (2024). Considering the Use of Blockchain for Supply Chain Authentication Management in a

- Secure and Transparent Way. In *Recent Technological Advances in Engineering and Management* (pp. 259-264). CRC Press.
17. Feng, Y., Ahmad, S. F., Chen, W., Al-Razgan, M., Awwad, E. M., Ayassrah, A. Y. B. A., & Chi, F. (2024). Design, analysis, and environmental assessment of an innovative municipal solid waste-based multigeneration system integrating LNG cold utilization and seawater desalination. *Desalination*, 117848.
 18. Zhang, L., Ahmad, S. F., Cui, Z., Al Razgan, M., Awwad, E. M., Ayassrah, A. Y. B. A., & Shi, K. (2024). Energy, exergy, hermoeconomic analysis of a novel multi-generation system based on geothermal, kalina, double effect absorption chiller, and LNG regasification. *Desalination*, 117830.
 19. Iqbal, S., Tian, H., Muneer, S., Tripathi, A., & Ahmad, A. Y. B. (2024). Mineral resource rents, fintech technological innovation, digital transformation, and environmental quality in BRI countries: An insight using panel NL-ARDL. *Resources Policy*, 93, 105074.
 20. Geetha, B. T., Gnanaprasuna, E., Ahmad, A. Y. B., Rai, S. K., Rana, P., & Kapila, N. (2024, March). Novel Metrics Introduced to Quantify the Level of Circularity in Business Models Enabled by Open Innovation. In *2024 International Conference on Trends in Quantum Computing and Emerging Business Technologies* (pp. 1-6). IEEE.
 21. Geetha, B. T., Kafila, K., Ram, S. T., Narkhede, A. P., Ahmad, A. Y. B., & Tiwari, M. (2024, March). Creating Resilient Digital Asset Management Frameworks in Financial Operations Using Blockchain Technology. In *2024 International Conference on Trends in Quantum Computing and Emerging Business Technologies* (pp. 1-7). IEEE.
 22. Naved, M., Kole, I. B., Bhope, A., Gautam, C. S., Ahmad, A. Y. B., & Lourens, M. (2024, March). Managing Financial Operations in the Blockchain Revolution to Enhance Precision and Safety. In *2024 International Conference on Trends in Quantum Computing and Emerging Business Technologies* (pp. 1-6). IEEE.
 23. Jurksiene, L., & Pundziene, A. (2016). The relationship between dynamic capabilities and firm competitive advantage: The mediating role of organizational ambidexterity. *European Business Review*, 28(4), 431-448.
 24. Juvika, J., & Ardi, A. (2023). The influence of digital transformational leadership on organizational performance through intellectual capital mediation and innovation factors at PT. XYZ. *Jurnal Ekonomi*, 12(3), 869-876.
 25. Kartoyo, S. H., Ardi, A., & Berlianto, M. P. (2023). The relationship of digital transformational leadership on employee performance with the mediation effect of knowledge management and innovation work behavior in retail company. *Enrichment: Journal of Management*, 13(4), 2668-2677.
 26. Kozcu, G. Y., & Özmen, Ö. (2021). Effects of transformational leadership on organizational change management and organizational ambidexterity. *Global Journal of Economics and Business Studies*, 10(20), 15-25.
 27. Liu, Y., Wang, W., & Chen, D. (2019). Linking ambidextrous organizational culture to innovative behavior: A moderated mediation model of psychological empowerment and transformational leadership. *Frontiers in Psychology*, 10, 2192.
 28. Ly, B. (2024). The interplay of digital transformational leadership, organizational agility, and digital transformation. *Journal of the Knowledge Economy*, 15(1), 4408-4427.

29. Majumdarr, S., Dasgupta, S. A., Hassan, Y., Behl, A., & Pereira, V. (2024). Linking digital transformational leadership, symmetrical internal communication with innovation capability: A moderated mediation model. *Journal of Knowledge Management*.
30. Matsunaga, M. (2024). Transformational leadership in a digital era. In *Employee Uncertainty Over Digital Transformation: Mechanisms and Solutions* (pp. 85-138). Singapore: Springer Nature Singapore.
31. Philip, J. (2021). Viewing digital transformation through the lens of transformational leadership. *Journal of Organizational Computing and Electronic Commerce*, 31(2), 114-129.
32. Primahendra, R., Purba, J. T., Ugut, G. S. S., & Budiono, S. (2024). The influence of transformative learning, affective commitment, digital transformation, capability dynamic, ambidexterity, and education policy toward educational leadership: A case from Indonesia. *Revista de Gestão Social e Ambiental*, 18(8), 1-26.
33. Purba, M. S., Ardi, A., & Berlianto, M. P. (2023). The influence of digital transformational leadership on job performance: Job satisfaction and affective commitment as the intervening variables. *Enrichment: Journal of Management*, 13(5), 2735-2742.
34. Putra, I., & Syahrul, L. (2023). The effect of digital literacy and transformational leadership on employee performance mediated by innovative work behavior at the Padang city population and civil registration service. *Enrichment: Journal of Management*, 12(6), 5014-5022.
35. Restuputri, D. P., Septira, A. P., & Masudin, I. (2023). The role of creative leadership to improve organizational performance through organizational ambidexterity in creative-based SMEs. *IEEE Transactions on Engineering Management*, 71, 8857-8869.
36. Sanggyu, K. (2023). Are only p-values less than 0.05 significant? A p-value greater than 0.05 is also significant! *Journal of Lipid and Atherosclerosis*, 12(2), 89-95.
37. Shao, Z., Wang, Q., & Li, X. (2019). Transformational leadership and digital creativity: The mediating roles of creative self-efficacy and ambidextrous learning.
38. Siachou, E., & Gkorezis, P. (2018, April). Empowering leadership and organizational ambidexterity: A moderated mediation model. *Evidence-based HRM: A Global Forum for Empirical Scholarship*, 6(1), 94-116.
39. Susilawati, D. M. (2021). Transforming the digital leadership to improve public service performance in the COVID-19 outbreak. *Economic Annals-XXI*, 188(3-4), 31-38.
40. Topcuoglu, E., Kobanoglu, M. S., Kaygin, E., Karafakioglu, E., Erdogan, S. U., Torun, B. T., & Oktaysoy, O. (2023). The improving role of digital leadership in the impact of social loafing on job performance. *International Journal of Organizational Leadership*, 12(1), 22-40.
41. Trieu, H. D., Nguyen, P. V., Tran, K. T., Vrontis, D., & Ahmed, Z. (2024). Organisational resilience, ambidexterity and performance: The roles of information technology competencies, digital transformation policies and paradoxical leadership. *International Journal of Organizational Analysis*, 32(7), 1302-1321.
42. Veiga, P. M., Ferreira, J. J., Zhang, J. Z., & Liu, Y. (2024). Exploring the connections: ambidexterity, digital capabilities, resilience, and behavioral innovation. *Journal of Computer Information Systems*, 1-13.

43. Wu, T., Chen, B., Shao, Y., & Lu, H. (2021). Enable digital transformation: Entrepreneurial leadership, ambidextrous learning and organisational performance. *Technology Analysis & Strategic Management*, 33(12), 1389-1403.
44. Yang, H., Peng, C., Du, G., Xie, B., & Cheng, J. S. (2023). How does ambidextrous leadership influence technological innovation performance? An empirical study based on high-tech enterprises. *Technology Analysis & Strategic Management*, 35(6), 737-751.
45. Yamin, T., & Murwaningsari, E. (2023). Exploring the interplay between digital technology, transformational leadership and agility for enhancing organisational performance. *Business Ethics and Leadership*, 7(4), 73-88.
46. Sharabati, A.-A. A., Awawdeh, H. Z., Sabra, S., Shehadeh, H. K., Allahham, M., & [Sixth Author]. (2024). The role of artificial intelligence on digital supply chain in industrial companies: Mediating effect of operational efficiency. *Uncertain Supply Chain Management*. <https://doi.org/10.5267/j.uscm.2024.2.016>
47. Atta, A. A. B., Ahmad, A. Y. A. B., Allahham, M. I., Sisodia, D. R., & Singh, R. R. (2023). Application of machine learning and blockchain technology in improving supply chain financial risk management. In *Proceedings of the International Conference on Contemporary Computing and Informatics (IC3I 2023)*. IEEE. <https://doi.org/10.1109/IC3I59117.2023.10397935>
48. Sharabati, A.-A. A., Rehman, S. U., Malik, M. H., Sabra, S., & Al-Sager, M. (2024). Is AI biased? Evidence from FinTech-based innovation in supply chain management companies. *International Journal of Data and Network Science*. <https://doi.org/10.5267/j.ijdns.2024.2.005>
49. Aljabari, M., Althuwaini, S., Bouguerra, A., Sharabati, A.-A. A., & Allahham, M. (2024). The impact of digital marketing strategies on innovation: The mediating role of AI: A critical study of SMEs in the KSA market. *International Journal of Data and Network Science*. <https://doi.org/10.5267/j.ijdns.2024.7.006>
50. Bataineh, A. Q., Abu-AlSondos, I. A., Almazaydeh, L., El Mokdad, S. S., & Allahham, M. (2023). Enhancing natural language processing with machine learning for conversational AI. In *IET Conference Proceedings*. IET. <https://doi.org/10.1049/icp.2024.0492>
51. Sharabati, A.-A. A., Allahham, M., AbuSaimeh, H., Ahmad, A. Y. B., & Sabra, S. (2023). Effects of artificial integration and big data analysis on economic viability of solar microgrids: Mediating role of cost benefit analysis. *Operational Research in Engineering Sciences: Theory and Applications*. <https://doi.org/10.31181/oresta/060318>
52. Daoud, M. K., Sharabati, A.-A., Samarah, T., Alqurashi, D., & Alfityani, A. (2024). Optimizing online visibility: A comprehensive study on effective SEO strategies and their impact on website ranking. *Journal of Infrastructure, Policy and Development*, 8(7). <https://doi.org/10.24294/jipd.v8i7.4860>
53. Bani Ahmad, A. Y. A., Allahham, M., Almajali, W. I., Ayasrah, F. T., & Sabra, S. (2024). Smart logistics services: How artificial intelligence transforms decision-making. In *2024 25th International Arab Conference on Information Technology (ACIT 2024)*. IEEE. <https://doi.org/10.1109/ACIT62805.2024.10876978>

54. Ahmad, A. Y. A. B., Allahham, M., Almajali, W. I., Ayasrah, F. T., & Sabra, S. (2024). From interaction to action: How user input shapes logistics and decisions in Jordan's e-industry. In 2024 25th International Arab Conference on Information Technology (ACIT 2024). IEEE. <https://doi.org/10.1109/ACIT62805.2024.10877225>
55. C. Verma, V. P, N. Chaturvedi, U. U, A. Rai and A. Y. A. Bani Ahmad, "Artificial Intelligence in Marketing Management: Enhancing Customer Engagement and Personalization," *2025 International Conference on Pervasive Computational Technologies (ICPCT)*, Greater Noida, India, 2025, pp. 397-401, doi: 10.1109/ICPCT64145.2025.10940626.
56. N. Parihar, P. Fernandes, S. Tyagi, A. Tyagi, M. Tiwari and A. Y. A. Bani Ahmad, "Using Machine Learning to Enhance Cybersecurity Threat Detection," *2025 International Conference on Pervasive Computational Technologies (ICPCT)*, Greater Noida, India, 2025, pp. 387-391, doi: 10.1109/ICPCT64145.2025.10939232.
57. .A. Bani Ahmad, P. Sarkar, B. Goswami, P. R. Patil, K. Al-Said and N. Al Said, "A Framework for Evaluating the Effectiveness of Explainability Methods in Deep Learning," *2025 International Conference on Pervasive Computational Technologies (ICPCT)*, Greater Noida, India, 2025, pp. 426-430, doi: 10.1109/ICPCT64145.2025.10939073.
58. Alhawamdeh, H., Abdel Muhsen Irsheid Alafeef, M., Abdel Mohsen Al-Afeef, M., Alkhawaldeh, B. Y., Nawasra, M., Al_Rawashdeh, H. A. A., ... & Al-Eitan, G. N. (2024). The relationship between marketing capabilities and financial performance: the moderating role of customer relationship management in Jordanian SMES. *Cogent Business & Management*, 11(1), 2297458.
59. Alamad, T., Alrawashedh, N. H., Alhawamdeh, H., Harahsheh, A. A., Zraqat, O., Hussien, L. F., ... & Alkhawaldeh, B. Y. (2024). The Impact of Strategic Leadership on Strategic Performance in Higher Education Institutions: The Mediating Role of Change Management.
60. Alhawamdeh, H., Alkhawaldeh, B. Y., Zraqat, O., & Alhawamdeh, A. M. (2024). Leveraging Business Intelligence in Organizational Innovation: A Leadership Perspective in Commercial Banks. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 14(1), 295-309.
61. Alhawamdeh, A. M., Al-habash, M. A., Zraqat, O., Hussien, L. F., Taha, I. B., Alhawamdeh, H., & Alkhawaldeh, B. Y. (2023). The Effect of Religious and Ethnic Values on Executive Compensation in Jordanian Firms. *KEPES*, 21(3), 604-622.
62. Alkhawaldeh, B. Y. S., Alhawamdeh, H., Almarshad, M., Fraihat, B. A. M., Abu-Alhija, S. M. M., Alhawamdeh, A. M., & Ismaeel, B. (2023). The effect of macroeconomic policy uncertainty on environmental quality in Jordan: Evidence from the novel dynamic simulations approach. *Jordan Journal of Economic Sciences*, 10(2), 116-131.
63. Al-Afeef, M. A. M., Fraihat, B. A. M., Alhawamdeh, H., Hijazi, H. A., AL-Afeef, M. A., Nawasr, M., & Rabi, A. M. (2023). Factors affecting middle eastern countries' intention to use financial technology. *International Journal of Data & Network Science*, 7(3).
64. Alhawamdeh, H., Al-Saad, S. A., Almasarweh, M. S., Al-Hamad, A. A. S., Ahmad, A. Y., & Ayasrah, F. T. M. (2023). The role of energy management practices in sustainable

- tourism development: a case study of Jerash, Jordan. *International Journal of Energy Economics and Policy*, 13(6), 321-333.
65. Mansour, O., Allahham, M., Almagharbeh, B., Al-Hawamleh, A., & Kanaan, A. (2025). Impact of e-business innovation on customer engagement: The mediating role of user experience. In 2025 1st International Conference on Computational Intelligence Approaches and Applications (ICCIAA 2025) - Proceedings. IEEE. <https://doi.org/10.1109/ICCIAA65327.2025.11013042>
66. Abu-Alhaija, A. S., Allahham, M., Alsawaha, A., Almagharbeh, B. K., & Alsharif, N. A. (2025). Crisis logistics: The role of disaster relief in supply chain risk management for emergency response. *International Journal of Innovative Research and Scientific Studies*, 8(3). <https://doi.org/10.53894/ijirss.v8i3.6605>