The mediating role of organizational agility in the relationship between digital leadership and organizational excellence in Saudi SMEs

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Abstract

This study investigates the mediating role of organizational agility in the relationship between digital leadership and organizational excellence in Saudi small and medium-sized enterprises. The study was motivated by the growing importance of digital transformation and the increasing need for SMEs to strengthen their adaptability and competitive capacity within a rapidly changing business environment. A quantitative, deductive, and cross-sectional research design was adopted. Data were collected through a structured questionnaire from 352 managers, supervisors, department heads, team leaders, and decision-makers working in Saudi SMEs. The collected data were analyzed using Partial Least Squares Structural Equation Modeling to assess both the measurement model and the structural relationships among the study variables. The findings revealed that digital leadership has a significant positive effect on organizational agility and organizational excellence. The results also showed that organizational agility has a significant positive effect on organizational excellence. In addition, the indirect effect analysis confirmed that organizational agility mediates the relationship between digital leadership and organizational excellence. These findings indicate that digital leadership enhances organizational excellence not only directly, but also indirectly by strengthening the organization's ability to respond flexibly and effectively to environmental and strategic change. The study contributes to the understanding of how digital leadership and organizational agility jointly support excellence in SMEs. It also offers practical insight for SME leaders seeking to improve organizational performance by combining digital capability with adaptive organizational processes.

Keywords: Digital leadership; Organizational agility; Organizational excellence; Saudi SMEs; PLS-SEM.

1. Introduction

The accelerating pace of digital transformation has reshaped the way organizations compete, innovate, and sustain performance in increasingly dynamic markets. In this environment, leadership is no longer limited to traditional administrative coordination, but instead requires the ability to guide technological adaptation, support innovation, and align organizational capabilities with rapidly changing digital demands. Digital leadership has therefore emerged as a critical organizational capability that enables firms to navigate uncertainty, integrate technology into strategic decision-making, and foster adaptive organizational cultures that can respond effectively to disruption (Cahyadi & Magda, 2021). For small and medium-sized enterprises (SMEs), this issue is especially important because such firms often operate with limited resources, narrower margins for error, and greater exposure to market volatility than large organizations (Lathabhavan & Kuppusamy, 2024).

Within Saudi Arabia, the relevance of digital leadership has become even more pronounced under Vision 2030, which places strong emphasis on entrepreneurship, innovation, and the digital transformation of the private sector. Saudi SMEs are expected to play a central role in economic diversification and national competitiveness, yet many of them continue to face challenges related to digital readiness, leadership capacity, and organizational adaptability. Recent scholarship has shown that Saudi SMEs are operating in a period of significant transformation, where awareness, preparedness, and strategic capability are increasingly necessary for long-term survival and growth (Kayani & Alzaid, 2025). At the same time, the expanding digital economy requires SME leaders to move beyond conventional management approaches and adopt leadership behaviors that can foster innovation, flexibility, and resilience in complex environments (Tripathi & Singh, 2024).

A major outcome associated with such leadership is organizational excellence. Organizational excellence reflects an organization's ability to achieve superior and sustainable performance through effective leadership, efficient processes, innovation, and continuous improvement. It is not simply a matter of short-term efficiency, but a broader condition in which organizations align strategic intent, operational capabilities, and stakeholder value creation in a coherent and enduring manner (Al-Dhaafri & Alosani, 2022). In contemporary business settings, organizational excellence has become a key benchmark for firms seeking to strengthen competitiveness, improve service quality, and sustain their market position under conditions of uncertainty (Rahmati & Harfat, 2024). For SMEs, organizational excellence is particularly significant because it can provide a pathway for overcoming structural limitations and building stronger market credibility and performance outcomes (Raoof et al., 2021).

Although digital leadership is increasingly recognized as an important driver of organizational performance, its contribution to organizational excellence may not occur automatically or directly. Rather, the relationship may depend on intermediate organizational capabilities that enable firms to translate leadership practices into effective action and measurable outcomes. One of the most important of these capabilities is organizational agility. Organizational agility refers to the capacity of a firm to sense changes in its environment, respond quickly to emerging opportunities or threats, and reconfigure internal processes and resources in a timely and effective

manner. In digital and competitive environments, agility allows organizations to remain responsive, innovative, and strategically aligned even when market conditions shift rapidly (Gong & Ribiere, 2025). This capability is especially valuable for SMEs, whose survival often depends on their ability to adapt quickly with limited slack resources (Arsawan et al., 2022).

The theoretical relevance of organizational agility is supported by the dynamic capabilities' perspective, which argues that firms achieve sustained success not merely through static resources, but through the ability to integrate, build, and reconfigure competencies in response to environmental change. From this perspective, digital leadership can be understood as a strategic force that helps firms cultivate agility, while agility in turn enhances the organization's ability to achieve superior outcomes such as excellence, innovation, and resilience (Al Nuaimi et al., 2024). Prior research has linked digital leadership with agility-oriented organizational behavior and adaptive management practices in digital settings (Bellis et al., 2024). Other studies have also shown that organizational agility contributes meaningfully to business performance and organizational improvement, particularly in SMEs and digitally evolving contexts (Li, 2022).

Despite the growing interest in these constructs, there remains limited empirical research that integrates digital leadership, organizational agility, and organizational excellence within a single framework focused on Saudi SMEs. Existing studies have often examined digital leadership in relation to innovation or resilience, or have explored agility in connection with performance and transformation, but fewer studies have directly investigated whether organizational agility mediates the relationship between digital leadership and organizational excellence in this context (Albannai et al., 2026). This gap is important because understanding the mechanism through which digital leadership contributes to excellence can provide clearer theoretical insight and stronger practical guidance for SME leaders and policymakers in Saudi Arabia (Khalil et al., 2022).

Accordingly, this study aims to examine the mediating role of organizational agility in the relationship between digital leadership and organizational excellence in Saudi SMEs. By doing so, it contributes to the literature on digital transformation, dynamic capabilities, and SME development, while also offering context-specific insight relevant to Saudi Arabia's broader economic transformation agenda. The study further seeks to clarify how leadership in the digital age can be converted into organizational advantage through agility, thereby helping SMEs pursue sustainable excellence in an increasingly competitive environment (Al Khasabah, 2025).

2. Literature Review

2.1 Theoretical discussion

This study is grounded in the dynamic capabilities' perspective, which provides an appropriate theoretical lens for explaining how firms respond to volatile environments through adaptive and reconfigurable capabilities. In rapidly changing markets, organizations can no longer rely only on static resources or routine operational strengths. Instead, they must develop the ability to sense environmental changes, seize

emerging opportunities, and transform internal processes in ways that sustain competitiveness and performance over time. This logic is particularly relevant in digitally evolving business environments, where leadership decisions and organizational responsiveness determine whether firms are able to convert technological change into meaningful organizational outcomes (Al Nuaimi et al., 2024).

Within this perspective, digital leadership can be understood as a strategic capability that enables firms to guide transformation, support digital initiatives, and align organizational priorities with technological opportunities. Digital leadership goes beyond using digital tools. It reflects the leader's ability to create a digital vision, encourage experimentation, build technological readiness, and motivate employees to embrace new ways of working. In contemporary organizations, digital leaders play a central role in reducing uncertainty, accelerating strategic adaptation, and shaping organizational behaviors that are compatible with innovation and change. This role has become increasingly important in SMEs, where leadership has a more direct influence on strategy, resource allocation, and organizational direction because structures are leaner and decision-making is often concentrated among a smaller number of managers or owners (Cahyadi & Magda, 2021).

The importance of digital leadership has been increasingly emphasized in recent literature on organizational transformation and adaptive management. Digital leadership has been linked to higher innovation capacity, stronger resilience, and improved organizational adaptability in contexts shaped by technological disruption. It supports the development of a work environment in which rapid learning, strategic flexibility, and digital coordination are possible. In this sense, digital leadership is not only a leadership style but also a mechanism through which organizations become better equipped to respond to digital disruption and strategic uncertainty (Albannai et al., 2026). This is particularly significant in SMEs, where the ability to make timely adjustments often determines whether firms can sustain competitiveness under resource constraints (Lathabhavan & Kuppusamy, 2024).

A key organizational outcome associated with digital leadership is organizational agility. Organizational agility refers to the capacity of a firm to adapt rapidly to changes in the environment, revise priorities, reconfigure internal processes, and respond effectively to market demands. Agility reflects more than operational flexibility. It embodies an organization's ability to remain strategically responsive while preserving performance and continuity. In the context of dynamic capabilities, agility can be viewed as one of the most important manifestations of an organization's adaptive strength. It allows firms to convert external turbulence into opportunities for renewal and improved performance (Gong & Ribiere, 2025). For SMEs, organizational agility is especially important because these firms usually face stronger environmental pressures and fewer buffering resources than large organizations. Agile SMEs can respond to technological change, shifting consumer demands, and competitive pressures more quickly than firms that rely on rigid procedures and slow decision-making. Previous research has shown that agility in SMEs is influenced by strategic flexibility, innovation, and organizational responsiveness, all of which help firms adjust effectively to dynamic market conditions (Arsawan et al., 2022). Agility is therefore

not only an operational attribute but also a strategic capability that can strengthen the effect of leadership on broader organizational outcomes.

The final construct in this study is organizational excellence. Organizational excellence refers to the sustained ability of an organization to achieve superior results through high-quality leadership, effective processes, stakeholder focus, innovation, and continuous improvement. It reflects a multidimensional outcome in which organizations achieve not only performance efficiency but also strategic alignment and long-term sustainability. Organizational excellence has become increasingly important in competitive sectors because it signals that an organization is capable of consistently delivering value while adapting to internal and external demands (Al-Dhaafri & Alosani, 2022). In SMEs, organizational excellence is particularly meaningful because it reflects the firm's ability to overcome structural constraints and maintain competitive relevance through strong internal capabilities and strategic direction (Raoof et al., 2021).

The dynamic capabilities perspective offers a strong explanation for the relationships among digital leadership, organizational agility, and organizational excellence. Digital leadership enables organizations to anticipate digital changes and direct internal adaptation. Organizational agility reflects the organization's capacity to act on this direction in a flexible and responsive manner. Organizational excellence represents the higher-order outcome achieved when leadership and agility combine to support strategic success, innovation, and continuous improvement. In this way, agility serves as a bridge between leadership and excellence because leadership alone may not generate superior outcomes unless the organization has the capacity to respond effectively to change (Li, 2022). This theoretical logic is highly relevant in the Saudi SME context. Saudi Arabia's Vision 2030 has intensified the need for digitally capable, adaptive, and competitive SMEs. This means that leadership quality alone is insufficient unless it is accompanied by organizational capabilities that allow firms to translate strategic intent into flexible action and sustained excellence. The present study therefore adopts the dynamic capabilities perspective to explain how digital leadership can strengthen organizational excellence through the mediating mechanism of organizational agility in Saudi SMEs (Kayani & Alzaid, 2025).

2.2 Hypotheses development

Digital leadership has become increasingly central to organizational success in the digital era because it enables leaders to manage technological change, inspire innovation, and build strategic alignment in uncertain environments. In SMEs, the influence of leadership is often direct and highly visible due to leaner structures and faster decision cycles. As a result, digital leadership can strongly affect the way the organization adapts, performs, and progresses toward excellence. Leadership that encourages digital integration, experimentation, and data-informed decision-making can enhance process quality, employee responsiveness, and strategic coherence, all of which are essential dimensions of organizational excellence (Khalil et al., 2022). Organizational excellence is often achieved when leadership can align people, processes, and strategic priorities in a way that supports continuous improvement and superior performance. Digital leadership contributes to this process by creating a

supportive digital culture, enhancing communication, and encouraging innovative work behaviors that strengthen overall performance.

Prior studies have reported that leadership in digitally enabled settings contributes positively to organizational effectiveness and performance outcomes. This suggests that digital leadership may serve as an important antecedent of excellence, especially in organizations that are actively pursuing transformation and capability development (Chatterjee et al., 2023). In addition, studies on digital and adaptive leadership have emphasized that digitally capable leaders are better positioned to guide firms toward higher quality outcomes, greater strategic responsiveness, and broader organizational advancement (Al-Romeedy, 2024). In the Saudi SME context, this relationship is especially relevant because many SMEs are expected to modernize, innovate, and strengthen competitiveness under the broader national transformation agenda. Leaders who can strategically direct digital change may therefore help their organizations move toward higher levels of excellence. Based on this reasoning, the following hypothesis is proposed:

H1: Digital leadership has a significant positive effect on organizational excellence in Saudi SMEs.

Digital leadership is also expected to have a strong positive effect on organizational agility. Digital leadership encourages responsiveness, strategic flexibility, and openness to change, which are key foundations of agility. Leaders who understand digital technologies and can align them with organizational goals are more likely to foster adaptive structures and faster decision-making processes. They can also encourage cross-functional coordination, flexible communication, and learning-oriented behaviors that help organizations respond more effectively to environmental turbulence (Bellis et al., 2024). The literature increasingly supports the view that digital leadership enhances organizational agility by shaping a culture of adaptability and promoting dynamic responses to change.

Digitally capable leaders help organizations monitor external developments, integrate digital tools into operations, and adjust internal processes in ways that improve responsiveness. This makes agility one of the most immediate organizational outcomes of digital leadership. Studies have shown that digital leadership is associated with improved adaptive management practices and stronger agility-related outcomes in modern organizations (Beth & Setzler, 2024). Other recent research has similarly demonstrated that digital leadership supports agility, innovation, and resilience in contexts characterized by rapid change and uncertainty (Albannai et al., 2026). In SMEs, this effect may be even stronger because leadership decisions are more tightly connected to daily operations and strategic execution. When leaders promote digital thinking and flexible organizational responses, SMEs may be able to adjust faster to technological disruption and changing market expectations. Therefore, the following hypothesis is proposed:

H2: Digital leadership has a significant positive effect on organizational agility in Saudi SMEs.

Organizational agility is further expected to positively influence organizational excellence. Agile organizations are better able to sense change, adjust priorities, redesign processes, and maintain strategic responsiveness in complex environments. These capabilities contribute directly to excellence because they support efficiency, innovation, customer responsiveness, and continuous improvement. In dynamic markets, organizational excellence is increasingly dependent on the ability to remain adaptive without losing strategic focus. Agility therefore becomes an important driver of sustained superior performance rather than merely a short-term survival mechanism (Shakhour et al., 2021). The empirical literature supports this link by showing that organizational agility improves business performance, operational adjustment, and strategic effectiveness across different sectors. Agile firms are often more capable of improving internal coordination and translating environmental awareness into actionable responses that enhance results.

In SMEs, agility is particularly valuable because it helps firms compensate for resource limitations through faster learning and more flexible deployment of available capabilities. Studies have found that organizational agility is positively related to performance improvement and adaptive organizational outcomes in SMEs and other dynamic organizational settings (Arshad et al., 2024). Additional work has also shown that agility strengthens the effect of organizational capabilities on performance and supports broader organizational improvement (Rafi et al., 2022). Since organizational excellence depends on responsiveness, strategic alignment, and effective execution, firms with higher agility should be better able to achieve and sustain excellence. Based on this logic, the following hypothesis is proposed:

H3: Organizational agility has a significant positive effect on organizational excellence in Saudi SMEs.

Beyond these direct relationships, the present study argues that organizational agility mediates the relationship between digital leadership and organizational excellence. This mediation logic is rooted in the dynamic capabilities' perspective. Digital leadership provides the strategic vision, digital orientation, and adaptive direction needed for transformation, but organizational excellence is more likely to be achieved when these leadership capabilities are translated into flexible and responsive organizational action. Organizational agility represents the mechanism through which leadership intent becomes operationally effective and strategically valuable (Al Khasabah, 2025). This logic is supported by recent studies showing that organizational agility often functions as an intervening capability between leadership, digital transformation, and organizational outcomes. When leaders promote digital change, they create the conditions for faster responses, more flexible processes, and improved coordination. These agility-related responses then contribute to higher performance and stronger excellence outcomes.

Research on digital transformation and firm outcomes has increasingly highlighted the mediating role of agility in connecting leadership or technology-related antecedents with organizational success (Syarkani, 2025). Similarly, studies on digital leadership have emphasized that the value of leadership is often realized through intermediate organizational mechanisms such as agility, work engagement, culture, or digital

capability rather than through a simple direct pathway alone (Karafakıoğlu & Fındıklı, 2024). In the Saudi SME setting, this mediating role is especially plausible because SMEs must respond rapidly to digital and competitive pressures while simultaneously trying to improve performance and excellence. Digital leadership may help build the organizational conditions necessary for such responsiveness, but it is the organization's agility that allows leadership to be converted into sustained excellence. Accordingly, the following hypothesis is proposed:

H4: Organizational agility mediates the relationship between digital leadership and organizational excellence in Saudi SMEs.

Figure 1 presents the conceptual framework of the study. The framework proposes that digital leadership has a direct effect on organizational excellence and an indirect effect through organizational agility. It also assumes that digital leadership positively influences organizational agility, while organizational agility positively influences organizational excellence. Therefore, Figure 1 illustrates the hypothesized relationships among the three main constructs and provides the conceptual basis for the empirical testing of the study hypotheses.

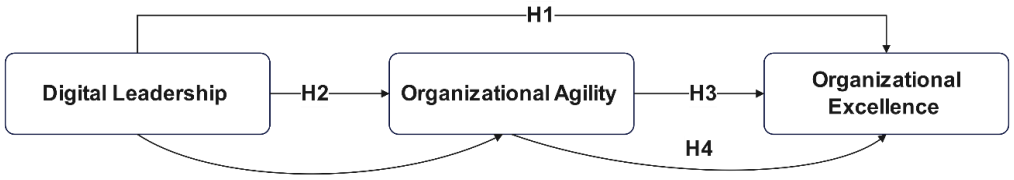

Figure 1: Conceptual Framework

3. Methodology

This study adopted a quantitative, deductive, and cross-sectional survey design to examine the mediating role of organizational agility in the relationship between digital leadership and organizational excellence in Saudi SMEs (Al Nuaimi et al., 2024). The quantitative design was appropriate because the study aimed to test a theory-driven model using structured empirical data collected from organizational respondents (Bellis et al., 2024). The deductive approach was suitable because the study relied on prior theory and literature to develop and test predefined hypotheses rather than generate new theory inductively (Cahyadi & Magda, 2021). The research population comprised managers, supervisors, department heads, team leaders, and other decision-makers working in Saudi SMEs. The population frame was based on 1,600,000 registered SMEs in Saudi Arabia. This setting was especially relevant because SMEs are central to the country's economic diversification agenda and are increasingly expected to strengthen digital readiness, adaptability, and competitiveness under Vision 2030 (Kayani & Alzaid, 2025).

The required sample size was determined using the Krejcie and Morgan table. The result was cross-verified using the Thompson formula. Both methods indicated a minimum target sample of 384 respondents. A stratified random sampling technique was used, with stratification by region and industry sector to improve representativeness across Saudi SMEs (Tripathi & Singh, 2024). For the empirical analysis reported in this paper, the final usable sample consisted of 352 completed questionnaires. Data were collected using a structured self-administered questionnaire distributed through both electronic and manual channels. The questionnaire consisted of four sections. The first section collected demographic information, including gender, age, educational level, job position, work experience, company size, and business sector. The remaining sections measured the study constructs using a five-point Likert scale ranging from 1 for strongly disagree to 5 for strongly agree. The use of a structured questionnaire was appropriate for examining leadership, agility, and organizational outcomes in dynamic SME environments (Arsawan et al., 2022).

Digital leadership was measured using 12 items adapted from AlAjmi (2022). Organizational agility was measured using 6 items adapted from AlTaweel and Al-Hawary (2021). Organizational excellence was measured using 11 items adapted from Abdelaziz (2023). The use of previously validated scales strengthened the content relevance of the instrument and improved comparability with prior empirical work on digital leadership and organizational agility (Gong & Ribiere, 2025). The questionnaire was reviewed to ensure clarity, contextual relevance, and linguistic appropriateness for respondents working in Saudi SMEs. Minor wording refinements were made to improve clarity and consistency. This process supported the content validity of the instrument and improved the overall quality of the data collection procedure (Held et al., 2025).

The reliability and validity of the measures were assessed before testing the structural relationships. Internal consistency was examined using Cronbach's alpha and composite reliability. Convergent validity was assessed through factor loadings and average variance extracted. Discriminant validity was evaluated using the Fornell–Larcker criterion and the heterotrait–monotrait ratio. These procedures are appropriate in studies involving related organizational constructs such as digital leadership and organizational agility (Al Khasabah, 2025). The data were analyzed using SmartPLS. Partial Least Squares Structural Equation Modeling was employed to assess both the measurement model and the structural model. This technique was selected because it is suitable for models involving latent variables, mediation effects, and prediction-oriented analysis in dynamic organizational settings (Shakhour et al., 2021). In the present study, PLS-SEM was used to estimate path coefficients, assess explanatory power, and test the mediating effect of organizational agility between digital leadership and organizational excellence (Albannai et al., 2026).

4. Findings

This section presents the empirical findings of the study in a structured manner. It begins by reporting the descriptive results for the main study variables in order to provide an initial overview of respondents' perceptions of digital leadership, organizational agility, and organizational excellence. It then proceeds to the assessment

of the measurement model by examining reliability and validity indicators to confirm that the study constructs were measured appropriately. After that, the section reports the structural model results, including the direct effects among the study variables and the mediating effect of organizational agility. Through these analyses, this section provides the statistical evidence used to evaluate the proposed hypotheses and determine whether the conceptual model is supported in the context of Saudi SMEs.

Table 1 presents the normality test results for the three main constructs of the study, namely digital leadership, organizational agility, and organizational excellence. The assessment of normality is important because it provides an initial indication of whether the data distribution falls within acceptable statistical limits before proceeding to further analysis. In this study, the accepted range for skewness is commonly considered to be between -2 and +2, while the accepted range for kurtosis is also generally considered to be between -2 and +2. Based on these criteria, the results indicate that all three constructs fall within the acceptable range. For digital leadership, the skewness value was -0.608 and the kurtosis value was 0.216, both of which are well within the accepted limits. For organizational agility, the skewness value was -0.454 and the kurtosis value was -0.276, which also indicate an acceptable distribution. Similarly, organizational excellence recorded a skewness value of -0.441 and a kurtosis value of -0.235, remaining comfortably within the recommended thresholds. These results show that the data are approximately normally distributed and do not suffer from serious deviations from normality. Therefore, the findings of Table 1 confirm that the dataset is suitable for subsequent statistical procedures and further model assessment.

Table 1: Normality test

Items	N	Skewness	Kurtosis
DL	352	-0.608	0.216
OA	352	-0.454	-0.276
OE	352	-0.441	-0.235

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

Table 2 presents the summary of the descriptive analysis for the three main study constructs: digital leadership, organizational agility, and organizational excellence. Descriptive analysis is used to identify the general level of respondents' perceptions toward each construct based on the mean and standard deviation values. In interpreting the mean scores for a five-point Likert scale, values from 1.00 to 2.33 are generally considered low, values from 2.34 to 3.67 are considered moderate, and values from 3.68 to 5.00 are considered high. Based on this accepted range, digital leadership recorded a mean of 3.686, indicating a high level. Organizational agility obtained a mean of 3.595, which falls within the moderate level, although it is close to the upper boundary of that category. Organizational excellence also showed a mean of 3.512, reflecting a moderate level. In terms of dispersion, the standard deviation values ranged from 0.851 to 0.944, indicating a reasonable level of consistency in respondents' answers. Overall, the results suggest that digital leadership was perceived more strongly

than the other two constructs, while organizational agility and organizational excellence were viewed at a moderate level among the surveyed SMEs.

Table 2: Summary of Descriptive Analysis

Items	N	Mean	Std. Deviation
DL	352	3.686	0.851
OA	352	3.595	0.912
OE	352	3.512	0.944

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

Figure 2 presents the evaluation of the measurement model for the study constructs, namely digital leadership, organizational agility, and organizational excellence. The figure illustrates the relationships between each latent construct and its observed indicators, together with the internal consistency of the constructs. In assessing the measurement model, indicator loadings are generally expected to meet the accepted threshold, while reliability values should also remain above the recommended minimum level. As shown in the figure, the indicators were appropriately linked to their respective constructs, and the overall measurement properties were satisfactory. This suggests that the items used in the model were sufficiently reliable and suitable for representing the underlying constructs. Overall, Figure 2 provides visual support for the adequacy of the measurement model and confirms that the study variables were measured appropriately for the subsequent structural model assessment.

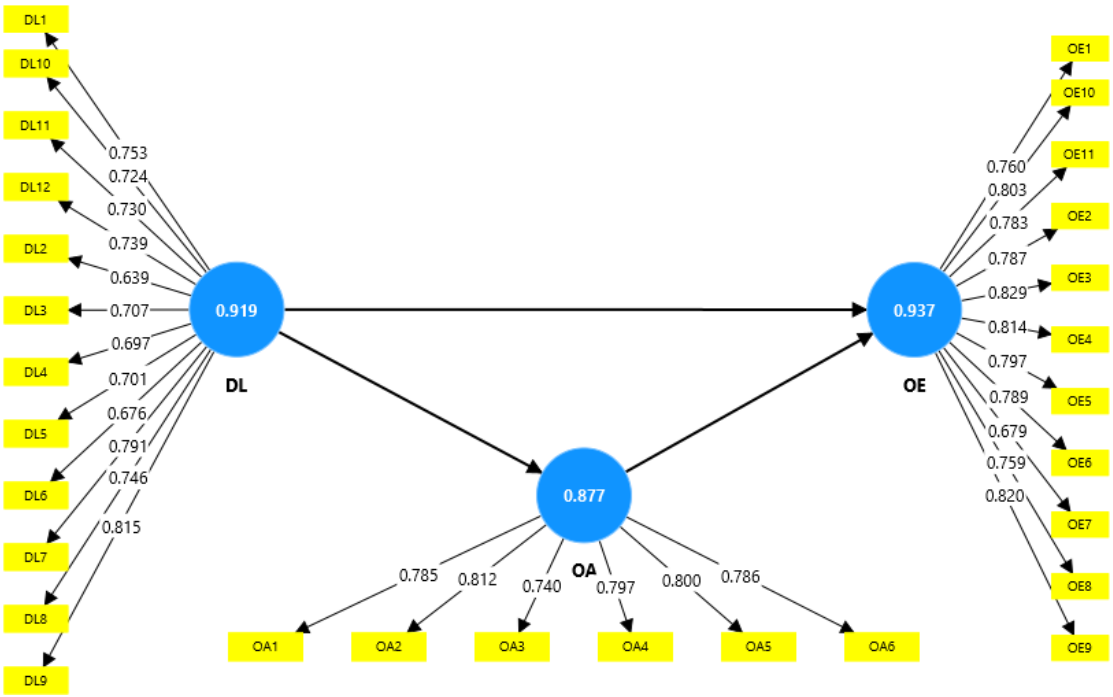

Figure 2: Evaluation of Measurement Model (First and final order)

Table 3 presents the results of the measurement model assessment for digital leadership, organizational agility, and organizational excellence. In evaluating indicator reliability, the accepted threshold for outer loadings is generally 0.70 or higher, although values between 0.60 and 0.70 may still be considered acceptable when the overall construct reliability and validity remain strong. The results show that most item loadings met or were close to the recommended threshold, with values ranging from 0.639 to 0.829, indicating acceptable indicator reliability overall. For digital leadership, the item loadings ranged from 0.639 to 0.815, while the construct achieved a Cronbach's alpha of 0.919, composite reliability of 0.921, and AVE of 0.530. These values exceed the commonly accepted minimum levels of 0.70 for Cronbach's alpha and composite reliability and 0.50 for AVE, confirming adequate internal consistency and convergent validity. Organizational agility also demonstrated strong measurement properties, with loadings ranging from 0.740 to 0.812, a Cronbach's alpha of 0.877, a composite reliability of 0.878, and an AVE of 0.620. Likewise, organizational excellence showed item loadings between 0.679 and 0.829, with Cronbach's alpha of 0.937, composite reliability of 0.938, and AVE of 0.615, indicating high reliability and sufficient convergent validity. Although a few items such as DL2, DL6, and OE7 were slightly below the preferred threshold of 0.70, they remained within an acceptable range and did not weaken the quality of the constructs because the overall reliability and AVE values were above the recommended levels. Overall, the results of Table 3 confirm that the measurement model achieved acceptable reliability and convergent validity and was suitable for further structural model analysis.

Table 3: Construct Reliability and Validity – Initial and Final Model measurements

	Loading	**Cronbach's alpha**	**Composite reliability**	**Average variance extracted (AVE)**
DL1	0.753	0.919	0.921	0.530
DL10	0.724			
DL11	0.730			
DL12	0.739			
DL2	0.639			
DL3	0.707			
DL4	0.697			
DL5	0.701			
DL6	0.676			
DL7	0.791			
DL8	0.746			

DL9	0.815			
OA1	0.785	0.877	0.878	0.620
OA2	0.812			
OA3	0.740			
OA4	0.797			
OA5	0.800			
OA6	0.786			
OE1	0.760	0.937	0.938	0.615
OE10	0.803			
OE11	0.783			
OE2	0.787			
OE3	0.829			
OE4	0.814			
OE5	0.797			
OE6	0.789			
OE7	0.679			
OE8	0.759			
OE9	0.820			

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

Table 4 presents the heterotrait-monotrait ratio of correlations for digital leadership, organizational agility, and organizational excellence. The HTMT criterion is used to assess discriminant validity by determining whether the constructs in the model are empirically distinct from one another. In general, HTMT values should be below 0.90, while some studies adopt a more conservative threshold of 0.85. Based on these accepted ranges, the results indicate that discriminant validity was successfully established among all constructs in the study. The HTMT value between digital leadership and organizational agility was 0.758, the value between digital leadership and organizational excellence was 0.700, and the value between organizational agility and organizational excellence was 0.765. All of these values are clearly below the threshold of 0.90, and they also remain below the stricter threshold of 0.85. This indicates that each construct is sufficiently distinct from the others and that there is no serious issue of overlap between the latent variables. Therefore, the findings of Table 4 confirm that the study achieved acceptable discriminant validity and that the constructs can be treated as separate dimensions in the subsequent structural model analysis.

Table 4: The heterotrait-monotrait ratio of correlations (HTMT)

	DL	OA	OE
DL			
OA	0.758		
OE	0.700	0.765	

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

Table 5 presents the latent variable correlations using the Fornell–Larcker criterion to assess discriminant validity among digital leadership, organizational agility, and organizational excellence. According to the accepted rule, the square root of the average variance extracted for each construct should be greater than its correlations with the other constructs in the model. This indicates that each construct shares more variance with its own indicators than with other latent variables. In Table 5, the diagonal values represent the square roots of the AVE, which are 0.828 for digital leadership, 0.887 for organizational agility, and 0.885 for organizational excellence. These values are all higher than the corresponding inter-construct correlations. Specifically, digital leadership correlated with organizational agility at 0.663 and with organizational excellence at 0.638, both of which are lower than its diagonal value of 0.828. Likewise, organizational agility had a correlation of 0.776 with organizational excellence, which is also lower than its diagonal value of 0.887 and the diagonal value of organizational excellence at 0.885. These results indicate that each construct is empirically distinct from the others and that the model satisfies the Fornell–Larcker criterion. Therefore, Table 5 provides additional evidence that discriminant validity was successfully established for the study constructs.

Table 5: Latent Variable Correlations (Fronell-Lacer criteria)

	DL	OA	OE
DL	0.828		
OA	0.663	0.887	
OE	0.638	0.776	0.885

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

Figure 3 presents the path model significance results for the relationships among digital leadership, organizational agility, and organizational excellence. The figure illustrates the direct paths proposed in the structural model and shows that all relationships were positive and statistically significant. In structural model assessment, a path is generally considered significant when the corresponding probability level is below the accepted threshold. As shown in the figure, digital leadership had a significant positive effect on organizational agility and organizational excellence, while organizational agility also had a significant positive effect on organizational excellence. The figure further shows the explanatory power of the endogenous constructs within the model, indicating that the proposed framework achieved a satisfactory level of prediction. Overall, Figure 3 provides visual support for the structural model and confirms that the hypothesized relationships among the study variables were empirically supported.

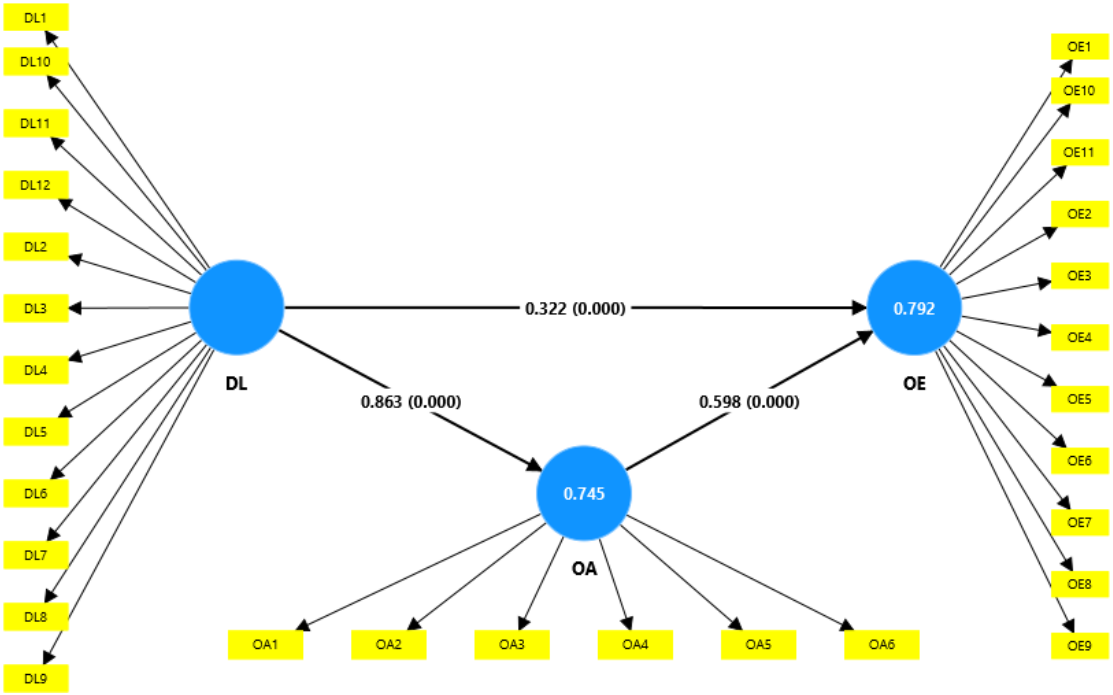

Figure 3: Path Model Significance Results

Table 6 presents the coefficient of determination (R^2)and adjusted (R^2)values for the endogenous constructs, namely organizational agility and organizational excellence. The coefficient of determination is used to assess the explanatory power of the structural model by showing the proportion of variance in each dependent construct explained by its predictor variables. In general, R^2values of 0.75, 0.50, and 0.25 are commonly interpreted as substantial, moderate, and weak explanatory power, respectively. Based on this accepted range, the results indicate that the model has a high level of explanatory power. Organizational agility recorded an R^2value of 0.745 and an adjusted R^2value of 0.745, which indicates that digital leadership explains a substantial proportion of the variance in organizational agility. Organizational excellence recorded an R^2value of 0.794 and an adjusted R^2value of 0.792, showing that digital leadership and organizational agility together explain a substantial proportion of the variance in organizational excellence. The very small difference between the $R^2$and adjusted R^2values also suggests that the model is stable and not inflated by unnecessary predictors. Overall, the findings in Table 6 confirm that the structural model has strong explanatory power and is effective in predicting the endogenous constructs included in the study.

Table 6: Coefficient of Determination (R^2)

	R-square	**R-square adjusted**
OA	0.745	0.745
OE	0.794	0.792

OA: Organizational Agility; OE: Organizational Excellence

Table 7 presents the results of the direct hypothesis testing for the relationships among digital leadership, organizational agility, and organizational excellence. In structural model assessment, a hypothesis is generally considered supported when the path coefficient is meaningful, the t-statistic exceeds 1.96, and the p-value is less than 0.05. Based on these accepted criteria, all three direct hypotheses in the study were supported. The first relationship, from digital leadership to organizational agility, recorded a beta value of 0.863, a t-statistic of 39.039, and a p-value of 0.000, indicating a strong and statistically significant positive effect. The second relationship, from digital leadership to organizational excellence, showed a beta value of 0.838, a t-statistic of 38.102, and a p-value of 0.000, which also confirms a strong significant positive effect. The third relationship, from organizational agility to organizational excellence, produced a beta value of 0.598, a t-statistic of 10.594, and a p-value of 0.000, indicating another significant positive effect. Among the three paths, the strongest direct effect was observed between digital leadership and organizational agility, followed closely by the effect of digital leadership on organizational excellence. Although the effect of organizational agility on organizational excellence was comparatively lower, it still remained statistically strong and meaningful. Overall, the findings in Table 7 confirm that all direct relationships proposed in the conceptual model were supported, and therefore all direct hypotheses were accepted.

Table 7: Direct Hypotheses

Hypotheses	Beta	Sample Mean (M)	SD	T statistics	P values	Decision
DL -> OA	0.863	0.865	0.022	39.039	0.000	Accepted
DL -> OE	0.838	0.839	0.022	38.102	0.000	Accepted
OA -> OE	0.598	0.597	0.056	10.594	0.000	Accepted

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

Table 8 presents the result of the indirect hypothesis testing, which examines the mediating role of organizational agility in the relationship between digital leadership and organizational excellence. In mediation analysis, an indirect effect is considered statistically significant when the t-statistic is greater than 1.96 and the p-value is less than 0.05. Based on these accepted criteria, the results indicate that the indirect path from digital leadership to organizational excellence through organizational agility is statistically significant. The path recorded a beta value of 0.517, a sample mean of 0.516, a standard deviation of 0.049, a t-statistic of 10.487, and a p-value of 0.000. These values clearly show that organizational agility significantly transmits the effect of digital leadership to organizational excellence. The positive beta coefficient further indicates that higher levels of digital leadership contribute to greater organizational agility, which in turn enhances organizational excellence. Since the indirect relationship is statistically significant, the mediation hypothesis is supported and accepted. Overall, the findings in Table 8 confirm that organizational agility plays an important mediating

role in explaining how digital leadership influences organizational excellence in Saudi SMEs.

Table 8: Indirect Hypothesis

Hypotheses	Beta	Sample Mean (M)	SD	T statistics	P values	Decision
DL -> OA -> OE	0.517	0.516	0.049	10.487	0.000	Accepted

DL: Digital Leadership; OA: Organizational Agility; OE: Organizational Excellence

5. Discussion

The findings of this study provide strong support for the proposed model and show that digital leadership plays a central role in enhancing both organizational agility and organizational excellence in Saudi SMEs. The results indicate that digital leadership exerts a significant positive effect on organizational agility, which suggests that digitally capable leaders help SMEs become more responsive, flexible, and adaptive in dynamic business environments. This result is consistent with the view that digital leadership strengthens an organization's ability to sense change, respond to uncertainty, and coordinate internal adaptation more effectively (Albannai et al., 2026). It also aligns with the argument that leadership in digitally transforming organizations is no longer limited to technological support alone, but extends to shaping strategic responsiveness and adaptive behavior across the organization (Bellis et al., 2024).

The strong relationship between digital leadership and organizational agility can be interpreted in light of the Saudi SME context. SMEs in Saudi Arabia operate in an environment characterized by digital transformation pressures, increasing competition, and the strategic demands of Vision 2030. Under such conditions, leaders who promote digital thinking, encourage the use of technology, and support rapid decision-making are more likely to cultivate agility within their firms. This interpretation is consistent with prior studies showing that digital leadership contributes to adaptive management capability and strengthens organizational responsiveness in change-oriented settings (Beth & Setzler, 2024). It is also supported by work suggesting that digital leadership helps firms translate technological opportunities into operational flexibility and innovative action (Fatima & Masood, 2024).

The findings also demonstrate that digital leadership has a significant positive effect on organizational excellence. This result suggests that digital leadership contributes directly to superior organizational outcomes by improving strategic alignment, encouraging innovation, and supporting continuous improvement. In practical terms, the result implies that SMEs with stronger digital leadership are more likely to achieve higher levels of effectiveness and excellence because their leaders are better able to align people, processes, and technological resources around organizational goals. This interpretation is in line with evidence showing that digital leadership contributes to higher-quality organizational outcomes and improved performance in transformation-oriented environments (Khalil et al., 2022). It also agrees with prior research

emphasizing that leadership capability is one of the key foundations of organizational excellence in both public and private sector settings (Lasrado & Kassem, 2021).

Another important finding of the study is that organizational agility has a significant positive effect on organizational excellence. This means that firms that are more agile are better positioned to achieve high organizational standards because they can respond more effectively to environmental change, adjust internal priorities, and maintain performance under dynamic conditions. This result is theoretically meaningful because it shows that excellence is not only a function of leadership or internal efficiency, but also depends on the organization's ability to remain adaptive and strategically responsive. This interpretation is consistent with research arguing that organizational agility is a key mechanism through which firms sustain performance and maintain competitiveness in uncertain environments (Gong & Ribiere, 2025). It also matches empirical evidence showing that agility contributes directly to stronger organizational outcomes in SMEs and similar business contexts (Arshad et al., 2024).

The mediation result provides one of the most important contributions of the study. Organizational agility was found to mediate the relationship between digital leadership and organizational excellence, which means that part of the effect of digital leadership on excellence operates through the organization's adaptive capability. This finding suggests that digital leadership alone is not enough to produce excellence unless it is translated into flexible and responsive organizational processes. In other words, digital leaders create the strategic and cultural conditions for change, but agility is the mechanism that enables those conditions to generate superior outcomes. This interpretation is highly consistent with the dynamic capabilities' perspective, which emphasizes that organizational success depends on the ability to reconfigure capabilities in response to changing environments (Al Nuaimi et al., 2024). It is also supported by earlier work that identified organizational agility as a mediating capability linking strategic and digital factors to organizational outcomes (Al Khasabah, 2025).

The mediation finding is especially important for Saudi SMEs because these firms often face resource constraints and cannot rely on scale alone to sustain competitiveness. Instead, they need leadership that can build adaptive capacity and make the organization more capable of responding quickly to change. The present results suggest that digital leadership contributes to excellence not only by directly influencing organizational direction, but also by strengthening the internal agility required for effective execution. This conclusion is consistent with the argument that SMEs need both leadership capability and adaptive organizational mechanisms in order to succeed under digital transformation pressures (Held et al., 2025). It also reflects findings that strategic flexibility and agility are critical for SME survival and improvement in dynamic environments (Arsawan et al., 2022).

More broadly, the findings reinforce the relevance of digital leadership in contemporary organizational settings. They suggest that digital leadership should be viewed as a strategic capability rather than merely a managerial style. In digitally evolving SMEs, leadership influences not only the adoption of technology but also the capacity of the organization to become more agile and to pursue excellence through innovation, responsiveness, and continuous improvement. This interpretation is in line with recent

research showing that digital leadership can serve as a driver of adaptability, innovation, and organizational resilience (Lathabhavan & Kuppusamy, 2024). It also supports the view that digital leadership becomes especially valuable when organizations operate in complex and rapidly changing environments that demand flexible strategic responses (Daradkah et al., 2024).

Overall, the discussion confirms that the proposed model offers a meaningful explanation of how digital leadership contributes to organizational excellence in Saudi SMEs. The direct effects show that digital leadership and organizational agility are both important determinants of excellence, while the mediation result clarifies the process through which leadership is converted into superior organizational outcomes. These findings therefore provide a useful theoretical and practical contribution by showing that excellence in SMEs is not achieved only through digital direction from leaders, but through the development of organizational agility as a bridging capability. This conclusion supports the broader literature on agility-driven organizational improvement and excellence in dynamic business settings (Shakhour et al., 2021).

6. Conclusion

This study examined the mediating role of organizational agility in the relationship between digital leadership and organizational excellence in Saudi SMEs. The findings showed that digital leadership has a significant positive effect on organizational agility and organizational excellence, while organizational agility also has a significant positive effect on organizational excellence. In addition, the results confirmed that organizational agility mediates the relationship between digital leadership and organizational excellence, indicating that digital leadership contributes to superior organizational outcomes both directly and indirectly through enhanced organizational responsiveness and flexibility. These findings highlight the importance of digital leadership as a strategic capability in the SME context. They also show that organizational excellence is not achieved only through leadership direction, but also through the organization's ability to adapt, respond, and reconfigure itself in the face of changing business conditions. In the Saudi context, this conclusion is particularly relevant because SMEs are expected to play an increasingly important role in economic diversification, competitiveness, and digital transformation. From a practical perspective, the study suggests that SME leaders should invest not only in digital tools and technologies, but also in building agile structures, flexible processes, and adaptive organizational cultures. Strengthening these areas can help firms translate leadership capability into sustained excellence. Despite its contributions, the study was limited to a cross-sectional design and focused only on Saudi SMEs. Future research may extend this model by examining other sectors, additional mediating or moderating variables, and longitudinal designs to provide deeper insight into how digital leadership shapes organizational outcomes over time.

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