



The Impact of Digital Transformation on Employee Performance Improvement of the Egyptian Nonlife Insurance Companies with the Mediating Role of Organizational Agility

Magdy Mahmoud Elsohagy

Elsohagymagdy@gmail.com

Prof. Dr. Mohamed A. Ragheb

raghebmam@aast.edu

Prof. Dr. Marwa Tarek

Marwatarek@aast.edu

Prof. Dr. Dalia Amara

daliaamara@hotmail.com

Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt

Abstract

This study examines how digital transformation affects employee performance in Egyptian nonlife insurance companies, with organizational agility acting as a mediator. Digital transformation is broken into three components: digital leadership, digital competence, and digital culture. Data came from 408 employees across Egyptian nonlife insurance companies, analyzed using structural equation modeling in AMOS. The model fit was good ($\chi^2/DF = 2.687$, $RMSEA = 0.059$, $TLI = 0.932$, $CFI = 0.939$), and reliability and validity checks were satisfactory across all constructs ($CR: 0.759\text{--}0.949$; $AVE: 0.523\text{--}0.708$). All three digital transformation dimensions predicted employee performance: digital culture most strongly ($\beta = 0.915$), followed by digital competence ($\beta = 0.779$) and digital leadership ($\beta = 0.325$), all at $p < 0.001$. Digital leadership also predicted organizational agility ($\beta = 0.223$, $p < 0.001$), which in turn mediated the relationship between each digital transformation dimension and performance. The culture effect is notable more than twice the size of the leadership effect which suggests that changing how people work matters more than who leads the charge. For insurance practitioners, the implication is that digital transformation programs need to go deeper than technology rollouts. If culture and competence drive performance more than leadership signals alone, the investment probably needs to go into training and norm-setting, not just executive messaging.

Keywords: Digital Transformation, Digital Leadership, Digital Competence, Digital Culture, Organizational Agility, Employee Performance, Non-life Insurance, Structural Equation Modelling.

Introduction

The global insurance industry is under pressure from several directions at once new digital tools, customers who expect more, and competitors who are moving faster. For financial services organizations, digital transformation has stopped being optional; it now shapes how services get delivered and how performance gets measured (Shakir & Vrînceanu, 2025). In the Middle East and North Africa, insurers face a specific version of this challenge. They need to modernize without breaking what already works, and do it while keeping customers' trust intact. Egypt sits at an interesting point here: as one of the region's larger insurance markets, it is a reasonable place to ask whether digital transformation programs actually improve how employees work and perform.

The difficulty is that digital transformation is not primarily a technology problem. New software is the easy part. What is harder and what determines whether transformation actually sticks is changing how work gets organized, what culture the organization has, and whether leadership can drive that kind of change (Abah et al., 2025). The research reflects this: digital transformation tends to improve efficiency and organizational agility, but the gains are uneven. They depend on leadership quality, cultural readiness, and

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whether strategy connects to day-to-day execution. For insurers in developing economies, which is a two-front problem they are competing against global players while still building the internal capabilities to use digital tools effectively (Mulyana et al., 2023).

Literature Review and Theoretical Framework

Digital Transformation in Financial Services

Digital transformation changes how organizations create value and compete (Abah et al., 2025). The technologies driving this are well-known AI, big data analytics, cloud computing, automation but their organizational effects are still being worked out. In banking and insurance, these tools have moved from peripheral experiments to operational infrastructure, changing how customers interact with institutions and how services get built and delivered (Aburub, 2025).

Research from Indonesian insurance firms complicates the simple “go digital, perform better” story. Nasution et al. (2025) found that digital business transformation raises organizational ambidexterity the capacity to exploit current capabilities while simultaneously exploring new ones. Government interventions alongside digital investment also improved adaptability. The more interesting finding is that ambidexterity mediated the link between digital business intensity and sustainable performance. In other words, digital investment does not improve performance directly; it does so by forcing organizations to get better at holding two things at once.

Mulyana et al. (2023) add another layer: in banking and insurance, hybrid IT governance mechanisms determine how much of the performance benefit from digital transformation actually materializes. Survey data from Indonesian banking and insurance respondents analyzed using SEM-PLS demonstrates that hybrid IT governance mechanisms have moderate influences on digital transformation, and digital transformation strongly influences organizational performance. The measurement items from hybrid IT governance mechanisms, digital transformation, and organizational performance dimensions provide useful guidance for digital transformation journeys in financial services organizations.

Digital Leadership and Employee Performance

Digital leadership affects employee performance in measurable ways (Qiao et al., 2024). Leaders who combine transformational leadership with genuine digital competence tend to close the gaps that modern work arrangements create in communication, engagement, and day-to-day collaboration. The evidence also suggests that part of the leadership effect runs through digital transformation itself: leadership drives transformation, and transformation amplifies what leadership started.

Research on Egyptian service firms gets into the mechanics (Elsawy & Abu-Alhaija, 2026). Both innovative and adaptive digital leadership showed direct positive effects on employee performance. Technical self-efficacy partially mediates the innovative digital leadership relationship meaning digital-oriented leadership partly works by building employees’ confidence in using digital tools, and that confidence then carries through to performance. Leadership behavior matters, but so does what it makes employees believe they are capable of.

Research on Islamic banking in South Sulawesi adds a structural note: digital leadership had a significant positive effect on digital culture ($\beta = 0.42$), and digital culture showed the strongest effect on employee performance ($\beta = 0.47$) (KR, 2026). That ordering is worth sitting with. Leadership shapes culture, but culture does more of the performance work than leadership does on its own. Organizations that focus digital transformation programs on leader behavior alone are probably intervening too far upstream.

Digital Competence and Performance Outcomes

Digital competence, technology readiness, and adaptive leadership all push employee performance upward but not entirely on their own. AI adaptation mediates the relationship, which means part of what

these capabilities do is help employees adapt to AI tools, and that adaptation then drives performance. Technology adoption, in other words, is part of the mechanism rather than just an endpoint.

Research on regional apparatus organizations found that transformational leadership and digital competence improved employee performance both directly and through self-efficacy (N. P. Dewi et al., 2025). Organizational support acted as a moderator, strengthening both relationships. The model explained 90.3% of variance in performance high enough to suggest these variables are not just correlated with outcomes but are doing most of the explanatory work.

Digital Culture and Organizational Transformation

Digital culture represents the shared values, beliefs, and practices that support technology adoption and innovation within organizations (Nazwani et al., 2025). Research demonstrates that digital organizational culture has a significant effect on digital transformation but does not directly affect employee performance, suggesting that the relationship operates through transformation mechanisms. Digital transformation significantly affects employee performance and mediates the relationship between culture and digital competence on performance outcomes. These findings confirm that success in the digital era depends highly on the effectiveness of digital transformation as a catalyst between organizational values, individual capabilities, and work results.

Studies on power companies in Indonesia reveal that digital leadership has a positive and significant effect on digital culture, digital capability, and employee performance (T. S. Dewi et al., 2025). Additionally, digital culture demonstrates positive effects on both digital capability and employee performance. The research emphasizes that companies can enhance digital training programs for leaders and employees to strengthen their skills in effectively managing technological change and supporting innovation and performance improvement.

Investigation of BUMN banks demonstrates that digital culture has a significant positive effect on both job satisfaction and employee performance (Wulandari et al., 2025). Additionally, individual experience shows significant positive effects on satisfaction and performance outcomes. The findings reveal that digital competence has a significant effect on employee performance but does not significantly affect job satisfaction, suggesting complex relationships between digital factors and various employee outcomes that require careful management attention.

Organizational Agility as a Dynamic Capability

Organizational agility shows up consistently in digital transformation research as a factor that determines whether digital investments actually pay off (Syarkani, 2025). Agile firms tend to respond faster, adapt more readily, and innovate more during digital transformation. Agility also functions as a mediator between digital initiatives and outcomes like profitability, market share, and customer satisfaction though that mediating role has been argued more than it has been tested.

Research across 569 enterprises found that organizational agility, together with organizational learning, mediated the relationship between digital transformation and organizational performance (Liu, Phawitpiriyakliti et al., 2025). Digital transformation improved performance both directly and through these mediators. The agility finding in particular suggests that digital strategies do not operate in a vacuum firm that can move quickly in response to environmental shifts and get more out of the same digital investment than firms that cannot.

Research on medium-sized enterprises found the same basic pattern: digital transformation had positive effects on both organizational agility and business performance, with agility partially mediating the transformation-performance link (Ilham et al., 2026). The partial mediation matters. Digital transformation improves performance through multiple channels, and agility is one of them -which means organiza-

tions that invest in technology without also investing in the capacity to act quickly on what that technology reveals are likely to see smaller returns than they could.

Organizational Agility Dimensions: Markets and Operational Agility

Organizational agility comprises multiple dimensions, with market agility and operational agility representing critical components for organizational responsiveness (Jing et al., 2023). Research utilizing hierarchical regression demonstrates that two dimensions of organizational agility market agility and operational adjustment agility partially mediate the relationship between digital capability and green innovation performance. These findings contribute new ideas for companies to develop organizational agility, control knowledge inertia, enhance innovation performance, and sustainably gain competitive advantage positions.

Meta-analytic research examining the relationship between big data analytics, organizational agility, and firm performance provides compelling evidence for agility's mediating role (Liu, Singh et al., 2025). The results indicate that BDA has a positive impact on organizational agility and firm performance, with organizational agility partially mediating the BDA-firm performance relationship, especially at the process level. Furthermore, cultural factors moderate the BDA-OA relationship, while uncertainty avoidance and long-term orientation moderate the OA-FP relationship, highlighting the contextual nature of agility's effects.

Investigation of IT governance capability reveals that organizational agility plays a vital role in firm performance through operational adjustment agility more than market capitalizing agility (Yoshikuni et al., 2025). The empirical study demonstrates that managers must better understand how IT governance capability influences organizational agility to gain firm performance, with the effects varying by regional context and organizational characteristics.

Employee Performance in the Digital Era

Understanding how digital transformation affects employee performance means looking at both the technology and the conditions around it (Lusha, 2025). The research points in a consistent direction: digital tools improve productivity when training is adequate, the organizational culture is ready, and employees see the new systems as compatible with how they already work. Remove any of those conditions and the returns shrink considerably.

Research on banking employees found that digital transformation improves performance partly through resilience (Saranya & Singh, 2025). Employees who build psychological resilience during transformation adapt more readily to new tools and processes and stay productive when things are unsettled. That finding has a practical edge HR and digital strategy teams that focus entirely on technical training may be underestimating how much the psychological demands of sustained change affect what employees can actually deliver.

Research on UAE public sector organizations found that both digital transformation and organizational agility mediated the relationship between transformational leadership and employee performance (Almazrouei & Alnahhal, 2025). Agility had the stronger effect of the two. In a public sector context, where transformation programs are often slow and politically constrained, that result makes some sense how quickly an organization can respond and adapt may matter more for employee performance than whether a formal digital transformation program is in place.

Research Problem and Questions

Research on digital transformation tends to focus on organizational outcomes revenue, market share, operational efficiency. Employee-level effects get less attention, and the insurance sector in emerging markets like Egypt gets less still (Syarkani, 2025). There is a reasonable body of work on how digital

capabilities shape firm-level performance in aggregate, but how those capabilities change what individual employees do, day by day, remains largely unexamined. Organizational agility has a similar problem. It shows up consistently in the literature as a factor in whether digital investments actually pay off, but its role as a link between digital transformation and employee performance has not been tested much empirically (Ilham et al., 2026).

Egypt's nonlife insurance sector is a practical place to examine both questions. The industry is economically significant, is actively going through digital transformation, and has been largely ignored from a human resources research perspective. That makes it a useful context for testing how digital leadership, competence, and culture shape employee performance and whether organizational agility is the mechanism doing the connecting.

The study pursues several research questions. How does digital transformation affect employee performance? To what extent do digital transformation factors shape organizational agility? What specifically is the effect of digital competence on agility and of digital culture on agility? How does agility then affect employee performance? Does agility mediate the relationship between digital leadership and performance? Does it do the same between digital competence and performance? And how much of the variance in agility and performance does the model explain overall?

Research Aims and Objectives

This study aims to examine the impact of digital transformation on employee performance in Egyptian nonlife insurance companies, with organizational agility serving as a mediating variable. The research addresses the following specific objectives: First, to examine the direct relationship between digital transformation dimensions (digital leadership, digital competence, digital culture) and employee performance, Second, to investigate the relationship between digital transformation dimensions and organizational agility, Third to analyze the relationship between organizational agility and employee performance, Fourth to examine the mediating role of organizational agility in the digital transformation-employee performance relationship

Conceptual Framework and Research Hypotheses

The conceptual framework was established after analyzing existing theories and models and was applied to data collection and data analysis. The aim of this research was to gain a deeper insight into the field of interest by examining the relationship between the independent variables (Digital Transformation), mediator variables (Organizational Agility) and dependent (Employee Performance Improvement) variables.

Conceptual Model Relationships and Research Hypotheses:

- H1: There is a significant relationship between Digital transformation and Employee Performance in the Egyptian Nonlife Insurance Companies.
 - H1.1: There is a significant relationship between Digital leadership and Employee Performance
 - H1.2: There is a significant relationship between Digital competence and Employee Performance
 - H1.3: There is a significant relationship between Digital culture and Employee Performance
- H2: There is a significant relationship between Digital transformation and Organizational Agility in the Egyptian Nonlife Insurance Companies.
 - H2.1: There is a significant relationship between

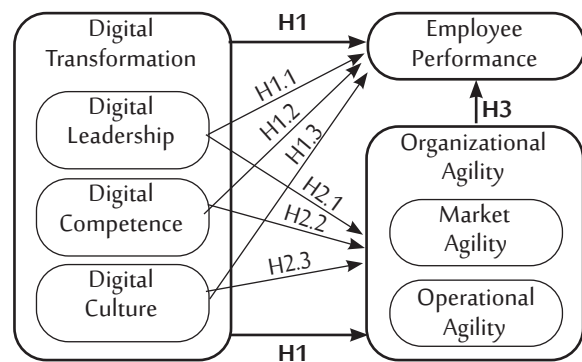


Figure 1: Conceptual Framework

Digital leadership and Organizational Agility - H2.2: There is a significant relationship between Digital competence and Organizational Agility - H2.3: There is a significant relationship between Digital culture and Organizational Agility

- H3: There is a significant relationship between Organizational Agility and Employee Performance in the Egyptian Nonlife Insurance Companies.
- H4: Organizational Agility mediates the relationship between Digital transformation and Employee Performance in the Egyptian Nonlife Insurance Companies. – H4.1: Organizational Agility mediates the relationship between Digital leadership and Employee Performance – H4.2: Organizational Agility mediates the relationship between Digital competence and Employee Performance – H4.3: Organizational Agility mediates the relationship between Digital culture and Employee Performance

Research Methodology

Research Design and Approach

The study uses a quantitative survey design, collecting primary data from employees across Egyptian nonlife insurance companies at a single point in time. Structural equation modeling handles the analysis, allowing direct and indirect relationships among multiple latent constructs to be examined simultaneously (Hair et al., 2019).

The approach follows established practice in digital transformation and organizational performance research (Mamdouh et al., 2025). The theoretical frame is dynamic capabilities how organizations build, deploy, and protect intangible assets that sustain long-term performance through digital transformation.

Population and Sample

The study drew from employees across Egyptian nonlife insurance companies, covering different functional departments and organizational levels. Nonlife insurers were a natural choice given that they are actively working through digital transformation in claims processing, customer service, and back-office operations which makes their employees a relevant population for examining how that transformation plays out at the individual level.

700 questionnaires were distributed across multiple companies. Purposive sampling was used to ensure coverage across departments, job levels, and organizational contexts. Of the 700, 460 were returned (65.7%). After removing 49 incomplete or ineligible responses, 408 valid responses remained, giving a usable response rate of 58.3% consistent with rates reported in similar organizational research.

Demographic Profile of Respondents

The sample was 57.8% male and 42.2% female. Most respondents were between 31 and 50 years old the 41–50 group was the largest at 33.1%, with the 31–40 group just behind at 32.8%. Nearly four in five held a bachelor's degree (79.4%), with master's degree holders making up another 12.7%. By department, customer service and claims was the largest group (23.0%), followed by sales and marketing (22.3%) and IT (20.8%). On tenure, 35.5% had been with their organization for 6–10 years and 32.1% for more than ten so roughly two-thirds of respondents had at least six years with their current employer

Measurement Instruments

The variable “Digital Transformation” is measured by three dimensions (Digital leadership, Digital competence and Digital culture) (Ly, 2023); (Annisa et al., 2024); (Widodo et al., 2024); (Subariyanti et al., 2025); (Jing et al., 2023); (Nazwani et al., 2025); (Widodo et al., 2024), The variable “Organizational Agility” is measured by two dimensions (Markets Agility and Operational Agility) (Li et al., 2020) and the variable “Employee Performance Improvement” is measured by 8 items (Abdel-Aziz & Naama, 2023); (Firmansyah & Napitupulu, 2024).

Data Analysis Procedures

Analysis ran in three stages using AMOS. The first stage covered data preparation screening for missing values and outliers, assessing normality, calculating descriptive statistics, and checking internal consistency via Cronbach's alpha. The second stage assessed the measurement model through confirmatory factor analysis, examining standardized factor loadings (threshold ≥ 0.50), average variance extracted as a test of convergent validity (threshold ≥ 0.50), composite reliability as a test of internal consistency (threshold ≥ 0.70), and model fit via χ^2/DF , RMSEA, TLI, and CFI. The third stage tested the structural model through path analysis, producing standardized path coefficients, critical ratios, and significance levels for each hypothesized relationship. Mediation was tested using bootstrap procedures.

Results and Findings

Measurement Model Assessment

The measurement model was assessed using confirmatory factor analysis (CFA) with AMOS software. Table 1 presents the standardized factor loadings, composite reliability (CR), and average variance extracted (AVE) for all constructs.

Table 1: The Reliability and Convergent Validity Statistics for All Latent Constructs

Construct	CR	AVE	MaxR(H)	DL	MA	OA	EP	DCU	DCO
Digital Leadership (DL)	0.918	0.691	0.932	0.831					
Markets Agility (MA)	0.906	0.708	0.913	0.601***	0.842				
Operational Agility (OA)	0.759	0.523	0.875	0.267***	0.326***	0.724			
Employee Performance (EP)	0.949	0.701	0.953	0.655***	0.703***	0.268***	0.837		
Digital Culture (DCU)	0.880	0.599	0.902	0.787***	0.656***	0.305***	0.752***	0.774	
Digital Competence (DCO)	0.865	0.566	0.884	0.561***	0.342***	0.279***	0.458***	0.578***	0.752

Note: Diagonal values in bold represent the square root of AVE. Source: Authors' analysis

Source: Created by the authors using primary survey data (2026); analysis performed in Amos (v25).

All standardized factor loadings cleared the 0.50 threshold, ranging from 0.553 to 0.919. Composite reliability ranged from 0.759 (Operational Agility) to 0.949 (Employee Performance), with every construct exceeding the 0.70 minimum. Average variance extracted ranged from 0.523 (Operational Agility) to 0.708 (Markets Agility), all above the 0.50 cutoff satisfying the standard criteria for convergent validity (Hair et al., 2019).

Assessment of Multicollinearity

Tolerance and Variance Inflation Factor (VIF) values were examined to identify multicollinearity. Hair et al. (2019) recommend that multicollinearity is a concern if $VIF > 5$ and tolerance < 0.20 . All VIF values were below 5 and tolerance values exceeded 0.20, confirming that multicollinearity is not an issue in the present study (see Table 2).

Model Fit Assessment

Fit indices support the confirmatory factor structure. χ^2/DF came in at 2.687 (below the 3.0 cutoff), RMSEA at 0.059 (below 0.08), and both TLI (0.932) and CFI (0.939) exceeded the 0.90 threshold (Hair et al., 2019). The measurement model fit indices demonstrate acceptable model fit:

Table 2: Assessment of Multicollinearity

Variable	Tolerance	VIF
Digital Leadership	.503	1.989
Digital Competence	.463	2.160
Digital Culture	.662	1.511

Source: Authors' analysis using primary survey data (2026); analysis performed in AMOS (v25).

Table 2: Measurement Model Fit Indices (CFA)

Fit Index	Obtained Value	Recommended Threshold	Interpretation
Degrees of Freedom (DF)	418	> 0	Accepted
χ^2/DF	2.687	≤ 3.0	Good Fit
RMSEA	0.059	< 0.08	Good Fit
TLI	0.932	≥ 0.90	Acceptable/Good Fit
CFI	0.939	≥ 0.90	Acceptable/Good Fit

Source: created by the authors using primary survey data (2026); analysis performed in Amos (v25). Notes: DF: Degrees of Freedom, χ^2/DF : chi-square to degrees of freedom ratio, RMSEA: root mean square error of approximation, TLI: Tucker-Lewis Index, CFI: Comparative Fit Index

Structural Model Results

The SEM results also demonstrate acceptable structural model fit. The χ^2/df value of 2.913 is less than 3.00, RMSEA is 0.063, and both TLI and CFI exceed 0.90. These values indicate that the structural model provides adequate support for testing the hypothesized relationships among digital transformation, organizational agility, and employee performance (Hair et al., 2019). Values are based on the up-loaded SEM output.

Table 3: Structural Model Fit Indices (SEM)

Fit Index	Obtained Value	Recommended Threshold	Interpretation
Degrees of Freedom (DF)	424	> 0	Accepted
χ^2/DF	2.913	≤ 3.0	Good Fit
RMSEA	0.063	< 0.08	Good Fit
TLI	0.923	≥ 0.90	Acceptable/Good Fit
CFI	0.929	≥ 0.90	Acceptable/Good Fit

Source: created by the authors using primary survey data (2026); analysis performed in Amos (v25). Notes: DF: Degrees of Freedom, χ^2/DF : chi-square to degrees of freedom ratio, RMSEA: root mean square error of approximation, TLI: Tucker-Lewis Index, CFI: Comparative Fit Index

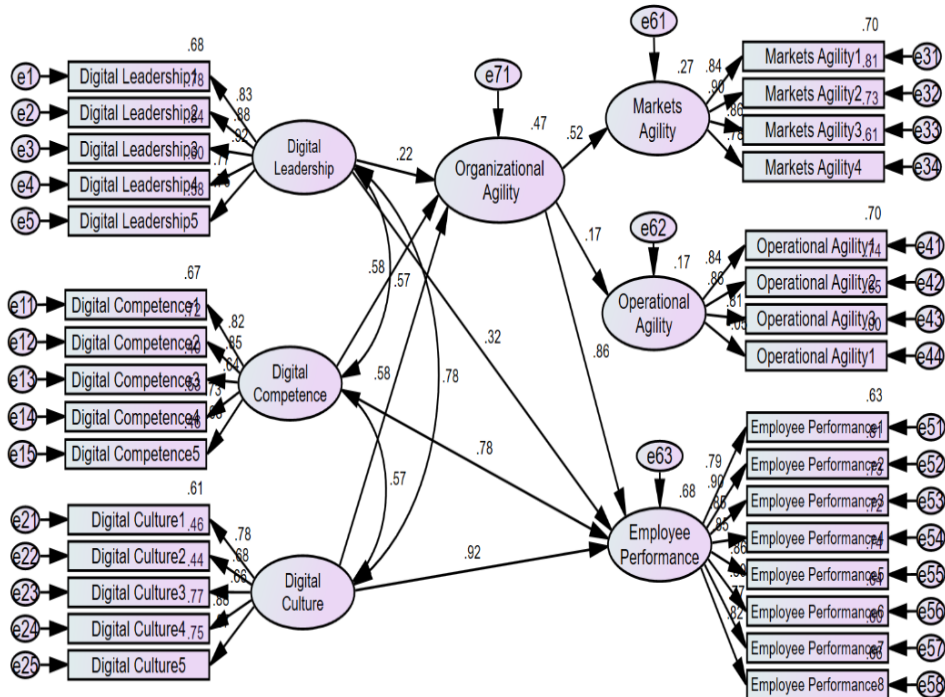


Figure 2: Structural' Model

Hypothesis Testing Results

The path analysis results reveal significant relationships among the study constructs:

Table 4: Direct Effects: Standardized Path Coefficients (β) and Significance Levels

Hypothesis	Path	β (Standardized)	Critical Ratio C.R.	p-value	Decision
H1.1	Digital Leadership $\rightarrow$ Employee Performance	0.325	9.974	< .001	Supported
H1.2	Digital Competence $\rightarrow$ Employee Performance	0.779	30.683	< .001	Supported
H1.3	Digital Culture $\rightarrow$ Employee Performance	0.915	27.896	< .001	Supported
H2.1	Digital Leadership $\rightarrow$ Organizational Agility	0.223	4.333	< .001	Supported
H2.2	Digital Competence $\rightarrow$ Organizational Agility	0.581	10.441	< .001	Supported
H2.3	Digital Culture $\rightarrow$ Organizational Agility	0.581	9.974	< .001	Supported
H3	Organizational Agility $\rightarrow$ Employee Performance	0.865	12.158	< .001	Supported

Source: Author's analysis based on SEM Results (2026). All hypothesized direct relationships are statistically significant at $p < 0.05$ (Critical Ratio > 1.96), supporting the proposed theoretical framework.

Digital leadership had a significant positive effect on employee performance ($\beta = 0.325$, CR = 9.974, $p < 0.001$), consistent with the idea that leaders who set a clear digital vision and encourage technology adoption improve how employees work.

Digital competence showed a stronger effect ($\beta = 0.779$, $CR = 30.683$, $p < 0.001$) the second largest in the model. Employees with stronger digital skills simply perform better, and the size of this coefficient reflects how much that gap matters in practice.

Digital culture produced the largest direct effect on employee performance ($\beta = 0.915$, $CR = 27.896$, $p < 0.001$). That an organization's cultural orientation toward digital transformation outperforms both leadership behavior and individual competence is worth pausing on it suggests the environment employees work in shapes performance more than what any individual brings to it.

On organizational agility, all three digital transformation dimensions showed significant positive effects. Digital leadership ($\beta = 0.223$, $CR = 4.333$, $p < 0.001$), digital competence ($\beta = 0.581$, $CR = 10.441$, $p < 0.001$), and digital culture ($\beta = 0.581$, $CR = 9.974$, $p < 0.001$) each contributed to the organization's capacity to respond quickly to market and operational changes. The pattern maps onto dynamic capabilities theory reasonably well: leadership provides direction, competence provides the capability to act, and culture provides the behavioral conditions that make agility possible (AlNuaimi et al., 2022; Ravichandran, 2018).

Organizational agility in turn had a strong positive effect on employee performance ($\beta = 0.865$, $CR = 12.158$, $p < 0.001$). In specifically nonlife insurance, that relationship makes intuitive sense employees regularly face time-sensitive demands around claims, policy changes, customer complaints, and regulatory requirements. Organizations that can move quickly give employees better conditions to perform. This is consistent with recent evidence from financial services institutions showing agility mediating the digital transformation-performance relationship (Hamid & Eledum, 2026).

Mediation Analysis

The mediation analysis confirms that organizational agility serves as a significant mediator in the relationship between digital transformation dimensions and employee performance, supporting H4 and its sub-hypotheses. The indirect effects through organizational agility enhance the total effect of digital transformation dimensions on employee performance, demonstrating the critical role of agile capabilities in translating digital initiatives into performance outcomes.

Table 5: Indirect Effects and Mediation Results

Hypothesis	Path	p-value	Type of Mediation	Decision
H4.1	Digital Leadership → Organizational Agility → Employee Performance	< .001	Partial mediation	Supported
H4.2	Digital Competence → Organizational Agility → Employee Performance	< .001	Partial mediation	Supported
H4.2	Digital Culture → Organizational Agility → Employee Performance	< .001	Partial mediation	Supported

Source: Author's analysis based on SEM Results (2026).

Variance Explained

Digital leadership, digital competence, and digital culture explain 46.6% of the variance in organizational agility ($R^2 = 0.466$). The model explains more of the variance in employee performance 68.4% ($R^2 = 0.684$) when organizational agility is added alongside the three digital transformation dimensions (Hair et al., 2019). The gap between the two figures suggests that employee performance is more fully determined by the variables in this model than organizational agility is, and that agility is likely to respond to factors the model does not capture.

Table 6: Variance Explained (R^2 Values)

Dependent Variable	Predictors	R^2 Value	Variance Explained	Interpretation
Organizational Agility	Digital Leadership, Digital	0.466	46.6%	Moderate explanatory power
Employee Performance	Competence, Digital Culture	0.684	68.4%	Strong explanatory power

Source: Author's analysis based on SEM Results (2026).

Discussion

Digital Leadership and Employee Performance

The positive relationship between digital leadership and employee performance ($\beta = 0.325$) is consistent with research showing leadership shapes how digital transformation plays out inside organizations (Mamdouh et al., 2025). Visionary leadership, digital leadership, and systemic improvement all connect to performance through motivation, digital self-efficacy, and the conditions that make technology adoption more likely.

The finding extends earlier work into the Egyptian insurance context (Elsawy & Abu-Alhaija, 2026). The effect size is meaningful but moderate, and the model helps explain why: digital leadership's influence runs partly through organizational agility and digital culture rather than directly to performance. Leadership development programs that treat leader behavior as the primary lever without also building cultural readiness and organizational flexibility are likely leaving most of the effect on the table.

Research on Indonesian army hospitals found the same basic pattern: digital leadership had a partial positive effect on organizational performance by creating conditions for digital initiatives and building employee capacity to use new tools (Haloho et al., 2025). The moderate effect sizes across both studies point in the same direction digital leadership matters, but it works through other things more than it works on its own.

Digital Competence and Performance Enhancement

Digital competence had the second largest effect on employee performance in the model ($\beta = 0.779$). Employees who can use digital tools fluently, adapt to new systems, and contribute to digital initiatives perform better the skill gap translates directly into a performance gap (Maulana et al., 2026).

Research on public sector organizations found the same pattern: digital competence affects both motivation and performance, directly and indirectly (Sulaiman et al., 2025). The indirect path connects to Self-Determination Theory, which identifies competence as one of three basic psychological needs alongside autonomy and relatedness that drive intrinsic motivation. When employees feel genuinely capable with digital tools, motivation follows, and performance follows that.

Research on organizational capabilities found that digital competence changes how work gets done and how services are delivered, not just how efficiently existing processes run (Mulianto et al., 2024). A β of 0.779 is large by any standard in this literature. For nonlife insurance companies, that figure makes the case for treating digital skills development as a primary investment rather than a supporting one the returns, at least in this model, are larger than those from leadership programs or culture initiatives alone.

Digital Culture as a Performance Driver

Digital culture was the strongest predictor of employee performance in the model ($\beta = 0.915$) larger than digital competence and nearly three times the size of the digital leadership effect. Research on financial services organizations found the same ordering, with digital culture outperforming other digital transformation dimensions on employee performance (KR, 2026). What digital culture captures shared values around innovation, openness to change, and the integration of digital practices into daily work appears to matter more than individual capability or leadership behavior alone.

Research on organizational culture and performance found that digital culture functions both as a direct performance driver and as a mediator between leadership, critical thinking, and employee outcomes (Firdaus et al., 2026). It improves performance on its own and shapes how other factors translate into performance which helps explain why its effect size is so much larger than the others.

Research on Indonesian banking found positive effects of digital culture on both job satisfaction and employee performance (Wulandari et al., 2025). The practical implication of a β of 0.915 is straightforward: technology implementation without cultural change is unlikely to move performance much. Employees in cultures that treat experimentation as normal, failure as information, and digital engagement as expected perform better. New software does not change that without also changing the environment around it.

Organizational Agility as a Strategic Mediator

Organizational agility mediated the relationship between digital transformation dimensions and employee performance, consistent with the dynamic capability's framework (Syarkani, 2025). Agile organizations respond faster to environmental shifts, identify emerging opportunities earlier, and hold their competitive position more steadily through transformation which is why agility functions as a bridge between digital initiatives and performance rather than as a separate outcome.

Research on medium-sized enterprises found that agility partially mediated the relationship between digital transformation and business performance (Ilham et al., 2026). Partial mediation means digital transformation improves performance through agility and through other channels simultaneously agility is part of the mechanism, not the whole of it.

Earlier research found that both market capitalizing agility and operational adjustment agility fully mediated the relationship between knowledge management capability and firm performance (Liu et al., 2014). Full mediation is a stronger condition than what this study finds, but the underlying logic holds across both: agility converts organizational capability into performance. Building digital competence and culture without also building the capacity to move quickly on what those capabilities reveal is likely to produce smaller returns than the investment suggests.

Integration with Prior Empirical Evidence

The results are consistent with recent direct evidence from financial services. Hamid and Eledum (2026) examined digital transformation, organizational agility, and employee performance in Saudi Islamic banks and found that digital transformation significantly enhanced employee performance directly and indirectly through organizational agility, with organizational agility partially mediating the relationship. Although the present study is conducted in Egyptian nonlife insurance rather than Saudi banking, the similarity of the mediation pattern strengthens the argument that agility is a generalizable mechanism in digitally transforming financial service organizations (Hamid & Eledum, 2026).

The findings are also consistent with AlNuaimi et al. (2022), who found that digital transformational leadership influences organizational agility and digital transformation, and with Ravichandran (2018), who showed that IT competence and innovation capacity support organizational agility. Similarly, Ashrafi et al. (2019) demonstrated that analytics capabilities can improve firm agility and performance through information quality and innovation capability. These studies collectively support the proposition that digital capabilities are most valuable when they are embedded in organizational processes that facilitate adaptive action (AlNuaimi et al., 2022; Ravichandran, 2018; Ashrafi et al., 2019).

At the same time, the findings should be interpreted with awareness of boundary conditions. Digital transformation can generate both positive and negative outcomes if organizations fail to address work design, employee readiness, training, and cultural alignment. Parker and Grote (2022) emphasized that digital technologies can affect job resources and job demands in different ways, while Bekos et al. (2025) found that organizational agility can undermine performance when complementary implementation capabilities are weak. Thus, the current positive results should not be interpreted as automatic effects of technology; rather, they reflect the presence of leadership, competence, culture, and agility working together in the studied sample (Parker & Grote, 2022; Bekos et al., 2025; Vial, 2019).

Limitations

The study has several limitations. The sample covers Egyptian nonlife insurance companies only, so whether the findings extend to life insurance, banking, healthcare, or other service sectors remains to be tested. The cross-sectional design is a second constraint. Data collected at a single point in time can show statistical relationships but cannot confirm whether those relationships hold over time or establish the direction of causality with confidence. Relying on self-reported questionnaires introduces familiar risks common method bias, social desirability effects, and the gap between employees' perceptions of digital transformation and performance and what objective measures might show. The model accounts for a substantial share of variance in employee performance, but variables left out of the model -job satisfaction, organizational support, workload, reward systems, psychological empowerment, leadership style likely explain some of what remains. On agility, the study confirms partial mediation but treats organizational agility as a single construct. Strategic agility, operational agility, workforce agility, and IT agility may behave differently from one another, and collapsing them into one variable probably obscures some of that variation. The conclusions are also bound by the variables included in the model a limitation inherent to this kind of structural analysis, but one that shapes what can and cannot be claimed from the results.

Future Research Directions

Several directions are worth pursuing from here. Longitudinal studies would help determine whether the effects of digital leadership, competence, and culture on agility and performance hold over time or fade as digital transformation matures the cross-sectional design here cannot answer that. Comparing nonlife and life insurance companies would test whether the mechanisms found here are specific to one segment or consistent across insurance types. The operational differences between the two claims intensity, product complexity, and customer interaction patterns suggest the relationships might not replicate cleanly. Additional mediating variables are worth testing. Job satisfaction, psychological empowerment, employee engagement, digital innovation, and knowledge sharing all have plausible connections to the digital transformation-performance pathway and none appear in this model.

Moderating variables are similarly absent. Company size, ownership type, regulatory pressure, technological infrastructure, and employee demographics age, education, experience could all shift the relationships found here, and future studies should account for at least some of them. Qualitative work would add something the survey design cannot. Case studies of Egyptian insurance companies navigating digital transformation in claims settlement, underwriting, and customer service would surface the implementation dynamics that structural models flatten out. Comparative studies across MENA insurance markets would test whether the Egyptian results travel or whether they reflect something specific to Egypt's regulatory environment, labor market, or digital infrastructure. Finally, the risks of digital transformation deserve more attention than this study gives them: employee overload, cybersecurity anxiety, resistance to automation, and digital inequality among employees are real phenomena that performance-focused models tend to underweight.

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