

# The Role of Digital Transformation Success in Change Management: An Applied Study on Elesely Group, Damietta Branch, Egypt

Submitted in May 2026

Accepted in June 2026

Published Online in June 2026

<https://doi.org/10.64190/abj.2026.45><https://aradojournal.org/>

Creative Commons Attribution-NonCommercial 4.0 (CC-BY-NC)

Omar Ahmed<sup>(\*)</sup>

Rahma Mohamed

Fatma Ahmed

Abdelrahman Ahmed

Dr. Mohammed Shehab Eldin

Dr. Hassan Zien ElFeky

Department of Management, Faculty of Business Administration, Deraya University, Egypt

## Abstract

*This study investigates the role of Digital Transformation Success (DTS) in shaping Change Management (CM) effectiveness within the Egyptian logistics and international trade sector. Drawing on the Technology-Organization-Environment (TOE) framework and the Resource-Based View (RBV), DTS is operationalized through three dimensions: Digital Transformation Strategy, Digital Technology Implementation, and Employee Digital Skills. CM is operationalized via the ADKAR model through five dimensions: Spread Awareness, Inspire Desire, Impart Knowledge, Improve Ability, and Reinforce Changes.*

*A cross-sectional quantitative design was adopted. A structured questionnaire was administered to 312 employees at Elesely Group's Damietta branch. Multiple regression analysis (SPSS) confirmed a statistically significant positive relationship:  $R = 0.434$ ,  $R^2 = 0.189$ ,  $F = 23.879$ ,  $p < 0.001$ . Digital Technology Implementation had the strongest predictive effect ( $B = 0.167$ ), followed by Employee Digital Skills ( $B = 0.146$ ) and Digital Transformation Strategy ( $B = 0.133$ ). All three sub-hypotheses were accepted.*

*Keywords: Digital Transformation, Change Management, TOE Framework, RBV, Egypt, Elesely Group, SPSS, Regression Analysis.*

## Literature Review and Theoretical Framework

### *Digital Transformation Success*

Digital Transformation Success (DTS) is achieved when an organization effectively leverages digital technologies to transform its processes, enhance employee per-

---

**\* Corresponding author:** Omar Ahmed, Department of Management, Faculty of Business Administration, Deraya University, Egypt, oa762527@gmail.com, <https://orcid.org/0009-0002-9593-780X>.

**Citation:** Omar, Ahmed, Mohamed, Rahma, Ahmed, Fatma & Ahmed, Abdelrahman. (2026). The Role of Digital Transformation Success in Change Management: An Applied Study on Elesely Group, Damietta Branch, Egypt. *ARADO Business Journal*, 1 (3), 67-80. <https://doi.org/10.64190/abj.2026.45>.

formance, and realize business goals while managing associated human and cultural changes. Table 1.1 synthesizes definitions from six prominent sources.

**Table 1.1: Definitions of Digital Transformation Success**

Author(s)	Key Definition Element
Sour (2023); Arasuraja (2024)	A systematic, strategic process for transitioning organizations to thrive digitally, yielding efficiency and customer satisfaction gains.
Ekal, Lakhal & Abed (2024)	Effective integration of digital technologies to fundamentally transform processes, models, and customer experiences.
Liu, Chen & Chou (2023)	A move toward a digital business model that exploits existing capabilities and explores new growth opportunities.
AL-Hinaai (2023)	Using digital technology to improve or create business processes, enhancing operational efficiency and effectiveness.
Vendraminelli et al. (2022)	A design-driven approach: understand current reality, define strategy, then execute concrete digital projects.
Abdulquadri et al. (2021)	A comprehensive plan outlining vision, objectives, and roadmap for leveraging digital technologies toward long-term competitiveness.

Source: Compiled by the Researchers from the Literature Review (2026)

## 1- Dimension Selection (Literature Synthesis - 10 Studies)

**Table 1.2: Dimension Frequency Across 10 Studies - Independent Variable**

Dimension	Selected	Count	Notes
Digital Transformation Strategy	YES	8/10	Highest frequency; selected
Employee Digital Skills	YES	8/10	Highest frequency; selected
Digital Technology Implementation	YES	7/10	High frequency; selected
Digital Leadership	No	7/10	
Technological Infrastructure	No	6/10	
Digital Culture	No	5/10	

Source: Compiled by the Researchers from the Literature Review (2026)

## 2- Dimensions of Digital Transformation Success

**Table 1.3: Dimensions of Digital Transformation Success**

Code	Dimension	Role	Description
DTS	Digital Transformation Strategy	The Why	Structured plan outlining vision and roadmap for digital technologies; ensures strategic alignment with business goals (Abdulquadri et al., 2021; Ekal et al., 2024).
DT	Digital Technology Implementation	The What	AI, IoT, cloud, and machine learning deployed to transform processes and enable automation and data-driven insights (AL-Hinaai, 2023; Ekal et al., 2024).
EDS	Employee Digital Skills	The Who	Workforce competencies for effective digital technology use, bridging strategic intent and technological capability (Vendraminelli et al., 2022; Ekal et al., 2024).

Source: Compiled by the Researchers from the Literature Review (2026)

## Change Management

Change Management (CM) is a systematic approach for guiding organizations from current to desired future states through planning, communication, and engagement strategies that minimize resistance and ensure successful implementation (Ekal et al., 2024). The five ADKAR dimensions are operationalized as shown in Table 1.4.

**Table 1.4: Dimensions of Change Management (ADKAR Model, Hiatt, 2006)**

Code	Dimension	Description
A	Spread Awareness	Employees understand WHY the change is necessary, its difficulties, effectiveness, and goals (Galli, 2018; Bellantuono et al., 2021).
D	Inspire Desire	Employees genuinely want to participate, turning passive observers into active supporters of digital transformation (Galli, 2018).
K	Impart Knowledge	Employees know HOW to change; clear guidance converts abstract change into actionable, measurable steps (Bellantuono et al., 2021).
A	Improve Ability	Employees ARE ABLE to implement change; theoretical knowledge transforms into daily practical competence.
R	Reinforce Changes	New practices become embedded; peer and managerial support sustains the change over time (Moosa et al., 2022).

Source: Compiled by the Researchers from the Literature Review (2026)

## Relationship between DTS and Change Management

Research reveals a strong positive relationship when human, strategic, and technological elements are integrated. Ekal et al. (2024) and AL-Hinaai (2023) demonstrate that robust digital capabilities substantially influence CM outcomes. Sour (2023) and Pacolli (2022) confirm that structured programs and leadership correlate with higher adoption. However, Kakungulu (2024) and Pacolli (2022) warn that ignoring the human dimension leads to resistance and failure. The relationship is positive when all three elements align, and negative when organizations focus narrowly on technology.

## Theoretical Framework

This study integrates two theories: the Technology-Organization-Environment (TOE) framework (Tornatzky & Fleischer, 1990) and the Resource-Based View (RBV) (Barney, 1991). The TOE framework explains macro-level enabling conditions for DTS adoption - technological readiness, organizational readiness, and external pressures. The RBV explains how VRIN resources (skilled employees, flexible IT, data analytics) create lasting competitive advantages and sustained CM capabilities.

The theoretical integration operates through a two-stage mechanism: the TOE framework explains the macro-level enabling conditions that determine whether digital transformation adoption is possible (Stage 1: Launch Conditions), while the RBV explains how the resulting digital capabilities generate lasting organizational value and change management effectiveness (Stage 2: Value Creation). Together, they form a complete explanatory architecture - TOE explains the "how it begins," RBV explains the "why it sustains." Neither theory alone is sufficient: TOE without RBV cannot explain

why some digitally enabled organizations still fail to sustain change; RBV without TOE cannot explain why some resource-rich organizations fail to initiate transformation. For CM, the Organizational Change Capability Theory (Judge & Douglas, 2009) captures enterprise-level change leadership, governance, and competencies.

### Conceptual Framework

The research model proposes that Digital Transformation Success - comprising Digital Transformation Strategy (H1.2), Employee Digital Skills (H1.1), and Digital Technology Implementation (H1.3) - exerts a direct positive influence on Change Management (H1) across all five ADKAR dimensions. The model was developed from literature review, identified research gaps, and the TOE-RBV theoretical foundation.

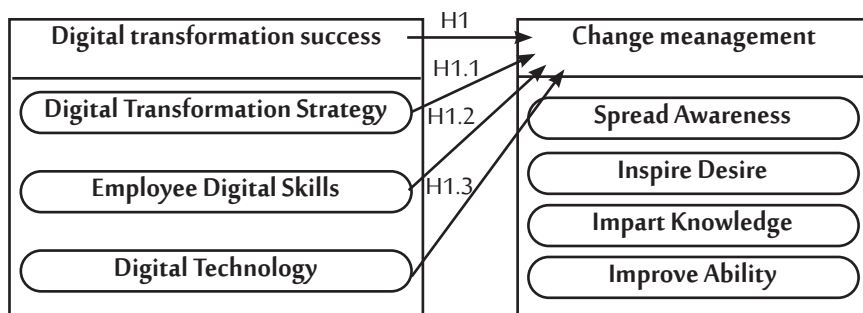


Figure 1: Research Model

## Introduction

### Background

Only one in five organizations succeed in realizing the true value of digital transformation (Morakanyane et al., 2020). The challenge is not merely technical-change is only complete when it is fully adopted and sustainable (Pacolli, 2022). These places change management at the heart of digital transformation strategy. This study examines how DTS influences CM effectiveness at Elesely Group, a leading Egyptian international trade and logistics company.

### Research Gaps

Table 2.1: Four Research Gaps Identified

Gap	Type	Description
G1	Contextual	Organizational structure and culture as moderators between DTS and CM remain underexamined across institutional environments.
G2	Industry Specificity	Logistics and international trade companies (e.g., Elesely Group) are largely neglected in prior literature.
G3	Geographical	Most empirical work concentrates on Western nations; developing economies, particularly Egypt, are underrepresented.
G4	Configurational	Synergistic interaction of DTS dimensions (strategy, technology, skills) on CM has not been holistically examined.

Source: Compiled by the Researchers from the Literature Review (2026)

### **Research Problem, Objectives and Hypotheses**

The central problem is the high failure rate of digital transformation initiatives, stemming from overemphasizing technology while neglecting the human element.

The main objective is to evaluate the overall impact of DTS on CM effectiveness.

The main hypothesis (H1) states: Digital Transformation Success has a statistically significant positive impact on Change Management.

Three sub-hypotheses:

H1.1: Employee Digital Skills;

H1.2: Digital Transformation Strategy;

H1.3: Digital Technology Implementation.

each posit a significant positive individual impact on CM.

### **Significance**

Theoretically, this study integrates TOE and RBV in an underexplored developing-economy logistics context. Practically, it provides a validated diagnostic instrument and actionable strategies for Egyptian organizations. For future research, it establishes an empirical baseline for comparative and longitudinal studies in the Egyptian logistics and international trade sector.

## **Research Methodology**

**Table 3.1: Research Methodology Summary**

Layer	Choice	Justification
Philosophy	Positivism	Objective hypothesis testing using measurable variables and statistical analysis (Saunders et al., 2019).
Approach	Deductive	Begins with TOE and RBV theories; tests hypotheses against empirical data (Creswell, 2014).
Design	Explanatory	Investigates causal mechanisms through which DTS dimensions influence CM outcomes.
Method	Quantitative	Structured questionnaire - 35 Likert-scale items; SPSS regression, reliability, and descriptive analysis (Zikmund et al., 2013).
Time Horizon	Cross-Sectional	Single data-collection point capturing a snapshot of current DTS-CM relationships.
Sampling	Simple Random	Representative, unbiased sample from all eligible Elesely Group Damietta employees (Taherdoost, 2016).

Source: Compiled by the Researchers (2026)

### **Population, Sample and Data Collection**

The population (N = 1,100) comprises all eligible full-time employees at Elesely's Damietta branch directly involved in or affected by digital transformation. Using the Krejcie & Morgan (1970) formula (95% confidence, +/-5% margin), the required

sample was  $n = 285$ ; 312 valid responses were ultimately collected. Simple random sampling was chosen for representativeness, bias reduction, and statistical robustness. Data were collected via an Arabic-language Google Forms questionnaire during 2026. The 35-item instrument covered: (1) Demographic Profile; (2) DTS - 15 items (5 per dimension) on a 5-point Likert scale; and (3) CM - 20 items (4 per dimension) on a 5-point Likert scale, all adapted from Ekal et al. (2024).

### *Analysis Techniques and Ethics*

SPSS analysis followed five sequential steps: (1) Descriptive statistics; (2) Kolmogorov-Smirnov normality tests; (3) Pearson correlation validity tests; (4) Cronbach’s Alpha and Split-Half reliability tests; (5) Multiple regression for H1 and all sub-hypotheses. Ethical principles - voluntary participation, anonymity, confidentiality, academic purpose only, and risk minimization - were strictly observed throughout.

## **Results and Findings**

### *Demographic Profile*

**Table 4.1: Demographic Profile of Respondents (N = 312)**

Variable / Category	Freq.	%	Cumulative %
Gender: Male	146	46.8	46.8
Gender: Female	166	53.2	100.0
Marital: Single	161	51.6	51.6
Marital: Married	151	48.4	100.0
Position: Administrative Staff	45	14.4	14.4
Position: Department Manager	55	17.6	32.1
Position: Operations Team	46	14.7	46.8
Position: Technical Staff	48	15.4	62.2
Position: IT Specialist	54	17.3	79.5
Position: Other	64	20.5	100.0
Experience: < 1 year	88	28.2	28.2
Experience: 1-3 years	77	24.7	52.9
Experience: 4-6 years	77	24.7	77.6
Experience: > 6 years	70	22.4	100.0

Source: Field Survey Data by the Researchers (2026)

### *Normality and Descriptive Statistics*

**Table 4.2: Normality (Kolmogorov-Smirnov) and Descriptive Statistics**

Variable	KS Sig.	Mean	SD	Skew	Kurt.
Digital Transformation Success	.000	3.549	.370	-.256	-.107
Change Management	.005	3.581	.377	-.203	-.151

Source: Field Survey Data by the Researchers (2026)

Both variables show moderately positive perceptions (means = 3.55-3.58) and low variability (SD = 0.37), with approximately symmetric distributions. KS significance values < 0.05 indicate non-normal distribution; however, given N = 312 and the central limit theorem, parametric regression was justified (Field, 2018).

### Validity and Reliability

**Table 4.3: Validity and Reliability Summary**

Scale / Dimension	Item-Dim r Range	Cronbach's $\alpha$	Interpretation
Digital Transformation Strategy	0.321-0.540	0.717	Acceptable
Employee Digital Skills	0.391-0.515	0.690	Acceptable
Digital Technology Implementation	0.382-0.503	0.714	Acceptable
Overall DTS Scale	0.527-0.844	0.784	Acceptable
Spread Awareness	0.472-0.568	0.829	Good
Inspire Desire	0.507-0.578	0.826	Good
Impart Knowledge	0.458-0.537	0.832	Good
Improve Ability	0.417-0.544	0.824	Good
Reinforce Changes	0.418-0.567	0.884	Excellent
Overall CM Scale	0.394-0.862	0.869	Good

Source: Field Survey Data by the Researchers (2026)

All item-to-dimension correlations exceeded the 0.30 threshold (Field, 2018), confirming construct validity. Regarding reliability, the Cronbach's  $\alpha$  for Employee Digital Skills (EDS) was 0.690 - marginally below the conventional 0.70 threshold but within the 0.65–0.70 range deemed acceptable in exploratory and cross-cultural research contexts (Nunnally, 1978; Hair et al., 2019). This value is further supported by a Split-Half (Spearman-Brown) coefficient of 0.779 for the overall DTS scale, indicating adequate internal consistency. The EDS items measure a multidimensional construct (general digital literacy, specialized roles, and team composition), and slight inter-item heterogeneity is theoretically expected and does not compromise construct validity. Split-Half reliability (Spearman-Brown): DTS = 0.779; CM = 0.851, confirming acceptable-to-good internal consistency across all constructs.

### Hypotheses Testing

**Table 4.4: Regression Results - All Hypotheses**

Code	Predictor	R	R <sup>2</sup>	B	F	Verdict
H1	DTS (all 3 dimensions)	0.434	0.189	Multi	23.879***	ACCEPTED
H1.1	Digital Transformation Strategy	0.279	0.078	0.194	26.260***	ACCEPTED
H1.2	Employee Digital Skills	0.303	0.092	0.214	31.425***	ACCEPTED
H1.3	Digital Technology Implementation	0.313	0.098	0.225	33.689***	ACCEPTED

p < 0.001 | Source: Field Survey Data by the Researchers (2026)

Main regression equation:  $CM = 2.991 + 0.133(DTS \text{ strategy}) + 0.146 (EDS) + 0.167(DT)$ . All three predictors are statistically significant ( $p < 0.001$ ), with Digital Technology Implementation yielding the strongest effect ( $B = 0.167$ ), followed by Employee Digital Skills ( $B = 0.146$ ) and Digital Transformation Strategy ( $B = 0.133$ ).

## Discussion

### *Main Hypothesis (H1)*

H1 was accepted ( $R = 0.434$ ,  $R^2 = 0.189$ ,  $F = 23.879$ ,  $p < 0.001$ ). The 18.9% explained variance confirms that DTS meaningfully drives CM effectiveness - consistent with Ekal et al. (2024), AL-Hinaai (2023), and Sour (2023). The TOE framework accounts for enabling conditions (technology, organization, environment), while the RBV explains how resulting VRIN resources translate into lasting CM capabilities. The  $R^2$  value of 18.9% warrants contextual interpretation: in behavioral and organizational research involving complex social phenomena such as digital transformation adoption,  $R^2$  values in the range of 15–25% are widely considered meaningful and theoretically acceptable (Hair et al., 2019; Cohen, 1992). Comparable studies in developing-economy digital transformation contexts report similar  $R^2$  values: Ekal et al. (2024) reported  $R^2 = 0.21$ , and Errida & Lotfi (2021) reported  $R^2 = 0.17$ , confirming that the remaining 81.1% of variance is attributable to contextual factors intentionally outside this study's scope - including organizational culture, digital maturity level, leadership style, and individual change readiness - which are identified as priority variables for future research.

### *Sub-Hypothesis H1.1 - Digital Transformation Strategy*

H1.1 accepted ( $R=0.279$ ,  $B=0.194$ ,  $F=26.260$ ,  $p<0.001$ ;  $R^2=7.8\%$ ). A well-defined strategy provides vision and resource allocation clarity, directly strengthening CM ability. The moderate correlation confirms strategy is necessary but insufficient alone - it requires complementary technology and skills to generate CM momentum. This supports Arasuraja (2024) and Abdulquadri et al. (2021).

### *Sub-Hypothesis H1.2 - Employee Digital Skills*

H1.2 accepted ( $R = 0.303$ ,  $B = 0.214$ ,  $F = 31.425$ ,  $p < 0.001$ ;  $R^2 = 9.2\%$ ). This confirms the human element is nearly as influential as technology itself. Consistent with Social Cognitive Theory (Bandura, 1986) and Ekal et al. (2024), employees who develop self-efficacy through peer observation and positive outcomes are more likely to adopt and reinforce change. This also aligns with the Organizational Change Capability Theory's emphasis on change competencies (Judge & Douglas, 2009).

### *Sub-Hypothesis H1.3 - Digital Technology Implementation*

H1.3 accepted ( $R = 0.313$ ,  $B = 0.225$ ,  $F = 33.689$ ,  $p < 0.001$ ;  $R^2 = 9.8\%$ ) - the strongest individual predictor. Actual deployment of AI, IoT, and cloud creates visible change

in daily work, naturally generating ADKAR Awareness and Desire. This aligns with AL-Hinaai (2023) and Pacolli (2022). The ranking  $DT > EDS > DTS$  mirrors TOE-RBV logic and warrants deeper explanation. Digital Technology Implementation ( $B = 0.225$ ) emerges as the strongest predictor because actual technological deployment generates immediate, tangible visibility of change in daily operations - naturally activating the first two ADKAR stages (Awareness and Desire) without requiring explicit management intervention (AL-Hinaai, 2023; Pacolli, 2022). Employee Digital Skills ( $B = 0.214$ ) rank second, reflecting the RBV proposition that workforce digital competencies constitute VRIN resources that translate technological capability into sustained organizational performance. Digital Transformation Strategy ( $B = 0.133$ ), while the weakest individual predictor, remains statistically significant and theoretically essential as the governance mechanism ensuring coherence between technology deployment and skill development. This differential pattern is consistent with Liu et al. (2023) and Pacolli (2022), who similarly found technology deployment effects to exceed strategic planning effects in short-to-medium term change management outcomes.

## **Conclusion and Recommendations**

### ***Conclusion***

This study provides robust empirical support for a positive relationship between DTS and CM. All four hypotheses were accepted. Digital Technology Implementation is the strongest driver ( $B = 0.225$ ), followed by Employee Digital Skills ( $B = 0.214$ ) and Digital Transformation Strategy ( $B = 0.133$ ). The integrated TOE-RBV framework proved valid and applicable for developing-economy logistics organizations. Collectively, the three dimensions explain 18.9% of CM variance - practically meaningful and theoretically grounded.

### ***Recommendations***

#### **1- Prioritize Technology Deployment**

Adopt a Pilot-to-Scale model: launch one high-impact tool (AI logistics routing or IoT tracking) in one department, document gains, then scale organization-wide. Embed new tools into daily workflows through dashboards, mobile approvals, and automated data entry. Assign a Technology Adoption Lead per department to bridge tool availability and practical employee use.

#### **2- Build Continuous Digital Skill Capability**

Create a Digital Champions Network of 15-20 peer coaches assigned to no more than 20 colleagues each. Link a Digital Competency section in annual appraisals to bonus eligibility. Run 30-minute weekly Skill Sprints focused on one specific digital task, with sessions recorded for asynchronous access.

### 3- **Establish a Change Management Office**

Charter a cross-functional team (IT, HR, Operations, senior leadership) with authority to pause rollouts when readiness is insufficient. Administer the ADKAR quarterly dashboard and intervene when any dimension falls below 3.5 out of 5. Institute weekly Win Sharing where one department presents a documented digital adoption success.

### 4- **Activate Strategy as a Dynamic Alignment Tool**

Produce a one-page strategy document covering vision, three measurable objectives, technology roadmap, and required resources. Cascade it into per-department Digital Maps answering: which tool, which skill, how will daily work improve? Conduct biannual Strategy Pulse Checks using the validated DTS scale.

### ***Limitations and Future Research***

Limitations include: (1) moderating variables (culture, leadership, size) excluded from scope; (2) findings specific to Elesely's Damietta branch only; (3) cross-sectional design captures associative and predictive relationships but cannot establish definitive causal direction - all hypothesis language should be interpreted as predictive rather than causal, and longitudinal replication is necessary to establish temporal ordering; (4) self-reported data subject to social desirability bias. Future research should: (1) examine moderating and mediating variables; (2) adopt longitudinal designs; (3) replicate across all 17 Elesely branches and other sectors; (4) combine quantitative and qualitative methods for richer mechanism insights.

## References

- Abdulquadri, A., Mogaji, E., Kieu, T. A., & Nguyen, N. P. (2021). Digital transformation in financial services provision. *Journal of Enterprising Communities*, 15 (2), 258-281.
- AL-Hinaai, S. (2023). Change management in digital transformation. *Proceedings of ICLAMP*, (pp. 45-56).
- Arasuraja, G. (2024). Organizational change management in digital transformation. *Global Perspectives in Management*, 2 (2), 12-21.
- Bandura, A. (1986). *Social Foundations of thought and Action*. Prentice-Hall.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17 (1), 99-120.
- Bryman, A., & Bell, E. (2015). *Business Research Methods*. (4<sup>th</sup> ed.). Oxford University Press.
- By, R. T. (2005). Organisational change management: A critical review. *Journal of Change Management*, 5 (4), 369-380.
- Clegg, S. (1979). *The theory of Power and Organisation*. Routledge and Kegan Paul.
- Collis, J., & Hussey, R. (2014). *Business Research*. (4<sup>th</sup> ed.). Palgrave Macmillan.
- Creswell, J. W. (2014). *Research Design*. (4<sup>th</sup> ed.). SAGE Publications.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of IT. *MIS Quarterly*, 13v (3), 319-340.
- De-Pablos-Heredero, C. (2020). *Digital Transformation and Organizational Change*. Springer.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited, *American Sociological Review*, 48 v (2), 147-160.
- Ekal, R. A., Lakhal, A., & Abed, E. A. (2024). The impact of digital transformation on change management. *Webology*, 21 (1), 16-37.
- Errida, A., & Lotfi, B. (2021). Determinants of organizational change management success. *International Journal of Engineering Business Management*, 13.
- Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics*. (5<sup>th</sup> ed.). Sage.
- George, D., & Mallery, P. (2006). *SPSS for Windows Step by Step*. (6<sup>th</sup> ed.). Pearson.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. (8<sup>th</sup> ed.). Cengage Learning.
- Hiatt, J. M. (2006). *ADKAR: A Model for Change*. Prosci Learning Center Publications.

- Judge, W. Q., & Douglas, T. J. (2009). Organizational change capacity. *Journal of Organizational Change Management*, 22 (6), 635-649.
- Kakungulu, S. J. (2024). The role of change management in digital transformation. *Eurasian Experiment Journal*, 5 (2), 40-43.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30 (3), 607-610.
- Liu, D., Chen, S., & Chou, T. (2023). Resource fit in digital transformation. *Management Decision*, 59 (11), 2693-2712.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2 (1), 71-87.
- Moosa, V., Khalid, A. H., & Mohamed, A. (2022). Intellectual landscape of change management research. *Management Research Review*, 45 (8), (pp. 1044-1059).
- Morakanyane, R., O'Reilly, P., McAvoy, J., & Grace, A. (2020). Determining digital transformation success factors. *Proceedings of HICSS2020*. (pp. 4356-4365).
- Pacolli, M. (2022). Importance of change management in digital transformation sustainability. *IFAC-PapersOnLine*, 55 (39), 276-280.
- Pallant, J. (2020). *SPSS Survival Manual*. (7<sup>th</sup> ed.). Open University Press.
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students*. (8<sup>th</sup> ed.). Pearson.
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business*. (7<sup>th</sup> ed.). Wiley.
- Sour, O. (2023). Navigating digital transformation with effective change management. *MECAS Review*, 19 (2), 28-42.
- Taherdoost, H. (2016). Sampling methods in research methodology. *IJARM*, 5 (2), 18-27.
- Tornatzky, L. G., & Fleischer, M. (1990). *The Processes of Technological Innovation*. Lexington Books.
- Vendraminelli, L., MacCawley, A., & Mendez, D. (2022). A framework for assessing digital skills. *Journal of Petroleum Science and Engineering*, 208, 109312.
- Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading Digital*. Harvard Business Review Press.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Methods*. (9<sup>th</sup> ed.). Cengage Learning.

## Appendix A: Research Questionnaire

### *The Role of Digital Transformation Success in Change Management*

Response Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

#### ***PART 1A: Digital Transformation Strategy (DTS)***

Code	Statement	1	2	3	4	5
DTS-1	My company provides employees with resources to acquire the right digital skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTS-2	My company's digital transformation strategy can fundamentally change business processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTS-3	My company's digital transformation strategy can improve employees' experience and satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTS-4	My company's digital transformation strategy can improve innovation capabilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTS-5	My company's digital transformation strategy can improve business decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### ***PART 1B: Employee Digital Skills (EDS)***

Code	Statement	1	2	3	4	5
EDS-1	We advance continuous learning in digital technologies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EDS-2	The balance between general and specialized digital roles is adequate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EDS-3	We can assemble teams with the right mix of skills for each digital project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EDS-4	Employees understand both business operations and digitalization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EDS-5	The organization provides resources for employees to acquire digital skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### ***PART 1C: Digital Technology Implementation (DT)***

Code	Statement	1	2	3	4	5
DT-1	My company uses artificial intelligence (AI).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DT-2	My company uses big data and data analytics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DT-3	My company uses the Internet of Things (IoT).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DT-4	My company uses social media and collaboration technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DT-5	My company uses cybersecurity technologies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### ***PART 2A: Spread Awareness***

Code	Statement	1	2	3	4	5
CMA-1	I understand the reasons for change in the company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMA-2	I understand the difficulties of change within the company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMA-3	I know how effective the change in the company is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMA-4	I am aware of the goals of change in the company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART 2B: Inspire Desire**

Code	Statement	1	2	3	4	5
CMD-1	I am excited to be part of this change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMD-2	There are great opportunities for me in the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMD-3	I support the implementation of digital transformation in the company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMD-4	I will benefit from the change towards digital transformation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART 2C: Impart Knowledge**

Code	Statement	1	2	3	4	5
CMK-1	I have the necessary skills to cope with the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMK-2	I understand how my work relates to the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMK-3	I have sufficient clarity about the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMK-4	I have the necessary knowledge to cope with the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART 2D: Improve Ability**

Code	Statement	1	2	3	4	5
CMA-A1	I can adapt to the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMA-A2	I can positively contribute to the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMA-A3	I will be able to perform better due to the changes being made.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMA-A4	I have the ability to perform at the level that the change requires.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART 2E: Reinforce Changes**

Code	Statement	1	2	3	4	5
CMR-1	My team members support the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMR-2	My manager supports the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMR-3	My doubts and uncertainties have been addressed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CMR-4	I will personally grow because of this change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART 3: Demographic Information**

1. Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female		2. Marital Status: <input type="checkbox"/> Single <input type="checkbox"/> Married	
3. Job Position:		4. Years of Experience:	
<input type="checkbox"/> Administrative Staff	<input type="checkbox"/> Department Manager	<input type="checkbox"/> Less than 1 year	
<input type="checkbox"/> Operations Team	<input type="checkbox"/> Technical Staff	<input type="checkbox"/> 1-3 years	
<input type="checkbox"/> IT Specialist	<input type="checkbox"/> Other: .....	<input type="checkbox"/> 4-6 years	
		<input type="checkbox"/> More than 6 years	

Source: Adapted from Ekal, Lakhali, & Abed (2024)