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Bridging the Digital Divide: Technology-Organisation-Fit and Digital Literacy as Catalysts for Digital Adoption in Sri Lankan Financial Services

A.A.C.S.L. Aluthgama[1], Ajith Medis[2], C.N. Wickramasighe[3]

[1]LOLC Life Assurance Ltd, [2]Department Marketing Management, University of Kelaniya
[3]Department of Commerce & Financial Management, University of Kelaniya, Sri Lanka

*Corresponding Author: chandana.aluthgama@gmail.com

ABSTRACT

The rapid digitization of financial services has created unprecedented challenges for traditional institutions seeking to balance technological advancement with organizational alignment. This study examines the complex interplay between technology-organization-fit dimensions and digital adoption in Sri Lankan state owned financial institutions, with digital literacy serving as a crucial moderating variable. Employing a quantitative research design, data were collected from 80 employees across three major state owned financial institutions: People's Bank, Bank of Ceylon, and Sri Lanka Insurance Corporation (SLIC). The study utilized advanced statistical techniques including correlation analysis, multiple regression, and moderation analysis using PROCESS Model 1 to investigate the hypothesized relationships. Results revealed significant positive correlations between technology-organization-fit dimensions and digital adoption, with the overall model explaining 72% of the variance in digital adoption ($R^2 = 0.720$). Notably, digital literacy emerged as a significant moderator ($\beta = 0.2037$, $p = 0.0337$), enhancing the relationship between technology-organization-fit and digital adoption. These findings contribute to the evolving discourse on digital transformation in emerging economies and provide actionable insights for organizational leaders navigating the digital transition.

Keywords: technology-organization-fit, digital adoption, digital literacy, financial institutions, Sri Lanka, digital transformation, moderation analysis

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INTRODUCTION

The current financial services landscape is characterized by an unprecedented pace of digital transformation, fundamentally reshaping how institutions operate and compete to deliver value to stakeholders. This digital uprising has been particularly pronounced in developing economies, where traditional financial institutions face the dual challenge of improving their technological infrastructure while maintaining their societal role as pillars of economic stability.

Sri Lanka's financial sector exemplifies this transformation, with state owned institutions such as People's Bank, Bank of Ceylon, and Sri Lanka Insurance Corporation (SLIC) at the forefront of digital adoption initiatives. According to the Central Bank of Sri Lanka (2023), digital transaction volumes in state owned banks increased by 47% between 2020 and 2022, demonstrating accelerated digital adoption. These institutions collectively serve over 12 million customers and account for approximately 45% of the banking sector's total assets, making their digital transformation critical to national financial infrastructure modernization.

Research Problem

Despite significant investments in digital technologies, state owned financial institutions in Sri Lanka face considerable challenges in achieving comprehensive digital adoption among employees. While technological infrastructure has been modernized, the actual utilization and integration of these technologies into daily operations remain inconsistent. This gap between technology availability and effective adoption threatens the realization of intended benefits from digital transformation initiatives, including improved operational efficiency, enhanced customer service quality, and competitive positioning in an increasingly digital marketplace.

The success of digital transformation initiatives extends beyond mere technology implementation; it fundamentally depends on the alignment between technological capabilities and organizational characteristics, collectively known as technology-organization-fit (TOF). However, the relationship between technology-organization-fit and digital adoption is not straightforward. Digital literacy, defined as the ability to effectively locate, evaluate, utilize, and create digital information, has emerged as a critical factor that can moderate this relationship. In financial institutions where employees must navigate increasingly sophisticated digital tools while maintaining high service standards, digital literacy becomes a crucial capability that can either amplify or constrain the benefits of technology organization alignment.

Research Gap

Despite growing academic interest in digital adoption within organizational settings, a critical gap exists in understanding how technology-organization-fit dimensions interact with individual digital literacy to influence adoption outcomes in state owned financial institutions. Previous research has primarily examined these factors in isolation, with limited empirical investigation of their interactive effects. Furthermore, the unique operational context of state owned institutions in developing economies characterized by public service mandates, resource constraints, and distinctive regulatory frameworks remains underexplored in the digital adoption literature.

This study addresses the following critical research questions:

RQ1: How do different dimensions of technology-organization-fit influence digital adoption among employees in state owned financial institutions in Sri Lanka?

RQ2: What role does digital literacy play in moderating the relationship between technology-organization-fit and digital adoption?

RQ3: Which specific dimensions of technology-organization-fit are most influential in predicting successful digital adoption outcomes?

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Technology-Organization-Fit Theory

Technology-organization-fit theory posits that successful technology adoption depends on the degree of alignment between technological characteristics and organizational attributes. This theoretical framework suggests that adoption outcomes are optimized when congruence exists between what technology offers and what the organization needs, values, and can effectively utilize.

We conceptualize technology-organization-fit as a multidimensional construct encompassing three key dimensions:

Technology Orientation for Service Quality (TOSQ) represents an organization's commitment to leveraging technology to enhance service delivery and customer satisfaction. Organizations with strong TOSQ demonstrate strategic focus on using technological solutions to improve service quality, responsiveness, and customer experience.

Technology Orientation for Information Quality (TOIQ) reflects an organization's emphasis on using technology to improve information accuracy, accessibility, and usability. This dimension encompasses commitment to data quality, information systems integration, and knowledge management capabilities.

Technology Orientation for Resource Sustainability (TORS) captures an organization's focus on using technology to optimize resource utilization, improve operational efficiency, and ensure long term sustainability. This dimension reflects the ability to leverage technology for cost reduction, process optimization, and sustainable competitive advantage.

H1: Technology orientation for service quality positively influences digital adoption among employees in state owned financial institutions.

H2: Technology orientation for information quality positively influences digital adoption among employees in state owned financial institutions.

H3: Technology orientation for resource sustainability positively influences digital adoption among employees in state owned financial institutions.

Digital Literacy as a Moderating Factor

Digital literacy encompasses the knowledge, skills, and attitudes necessary to effectively use digital technologies for various purposes. Research consistently shows that individuals with higher digital literacy are more likely to successfully adopt and utilize new technologies, as they possess the cognitive and technical capabilities necessary to navigate digital environments.

The moderating role of digital literacy can be understood through capability theory, which suggests that individual capabilities can either enhance or constrain benefits derived from favorable environmental conditions. When employees possess high digital literacy, they are better positioned to recognize and capitalize on the alignment between organizational technological orientation and their work requirements. Conversely, low digital literacy may prevent employees from fully benefiting from favorable technology-organization-fit conditions, creating a ceiling effect on digital adoption outcomes.

H4: Digital literacy moderates the relationship between technology-organization-fit and digital adoption, such that the positive relationship is stronger for employees with higher digital literacy.

METHODOLOGY

Research Design and Context

This study employed a quantitative, cross sectional research design to examine the hypothesized relationships between technology-organization-fit dimensions, digital literacy, and digital adoption. The research was conducted within three major state owned financial institutions in Sri Lanka: People's Bank, Bank of Ceylon, and Sri Lanka Insurance Corporation (SLIC). These institutions were selected due to their significant role in the Sri Lankan financial sector, their ongoing digital transformation initiatives, and their representative nature of state-owned financial entities in developing economies.

Participants and Sampling

The study population comprised employees directly involved in customer service delivery and digital service operations across the three participating institutions. A convenience sampling approach was used to recruit participants, resulting in a final sample of 80 employees. The sample size was determined using G*Power 3.1 software for a priori power analysis. With effect size $f^2 = 0.15$ (medium effect), $\alpha = 0.05$, power $(1-\beta) = 0.80$, and five predictors, the required minimum sample size was calculated as 77 participants. Our final sample of 80 exceeded this requirement, ensuring adequate statistical power for moderation analysis.

Measurement Instruments

All constructs were measured using validated scales adapted from established literature and contextualized for the financial services environment. Items were rated on 5-point Likert scales (1=strongly disagree to 5=strongly agree).

Technology Orientation for Service Quality (TOSQ) was measured using a 3-item scale adapted from Parasuraman et al. (2005), demonstrating acceptable reliability ($\alpha = 0.765$).

Technology Orientation for Information Quality (TOIQ) was measured using a 3-item scale developed from Wixom & Watson (2001), showing acceptable reliability ($\alpha = 0.724$).

Technology Orientation for Resource Sustainability (TORS) was assessed using a 3-item scale adapted from Hart & Milstein (2003), demonstrating good reliability ($\alpha = 0.809$).

Digital Literacy (DTL) was measured using a comprehensive 7-item scale adapted from van Deursen et al. (2016), exhibiting excellent reliability ($\alpha = 0.862$).

Digital Adoption (DA) was measured using a 5-item scale drawing from Venkatesh et al. (2003) and Rogers (2003), showing good reliability ($\alpha = 0.812$).

Data Collection and Analysis

Data collection was conducted through self administered electronic questionnaires distributed to participating employees across the three institutions. The questionnaire was preceded by an informed consent statement explaining the purpose of the study, ensuring confidentiality, and emphasizing voluntary participation. To minimize common method bias, the questionnaire was designed with reverse-coded items and clear instructions, and participants were assured of response anonymity.

Data analysis was conducted using SPSS 26.0 with the PROCESS macro (Hayes, 2017) for moderation analysis. The analytical approach included:

1. **Preliminary Analysis:** Normality tests, descriptive statistics, and reliability assessment
2. **Factor Analysis:** Kaiser-Meyer-Olkin (KMO) tests and Bartlett's test of sphericity to assess sampling adequacy
3. **Correlation Analysis:** Pearson correlation analysis to examine bivariate relationships
4. **Multiple Regression Analysis:** To examine direct effects of technology-organization-fit dimensions on digital adoption
5. **Moderation Analysis:** Using PROCESS Model 1 with bootstrap procedures (5,000 samples) to examine the moderating role of digital literacy

Table 1: Sample Characteristics

Characteristic	Category	Frequency (n)	Percentage (%)
Institution	People's Bank	28	35.0
	Bank of Ceylon	30	37.5
	SLIC	22	27.5
Position	Banking Officers	34	42.5
	Customer Service Representatives	28	35.0
	Insurance Executives	18	22.5
Organizational Level	Junior	36	45.0
	Mid-level	30	38.0
	Senior	14	17.0
Gender	Female	45	56.0
	Male	35	44.0
Age	Mean = 34.6 years, SD = 8.2		
Tenure	Mean = 7.3 years, SD = 5.1		

Source: Analysis Data

RESULTS

Preliminary Analysis

Normality tests were conducted using both Shapiro-Wilk and Kolmogorov-Smirnov tests. Results indicated that all variables violated normality assumptions ($p < 0.05$ for all tests), which is common in organizational research using Likert-scale measures. Consequently, bootstrap procedures were employed in subsequent analyses to provide robust statistical inferences.

Table 2: Tests of Normality

Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
TOSQ	.142	80	.001	.924	80	.000
TOIQ	.138	80	.001	.931	80	.000
TORS	.151	80	.000	.918	80	.000
DTL	.146	80	.000	.927	80	.000
DA	.134	80	.002	.935	80	.000

Note: Lilliefors Significance Correction applied
Source: Analysis Data

Reliability and Validity Assessment

Internal consistency reliability was assessed using Cronbach's alpha coefficients. All constructs exceeded the recommended threshold of 0.70: TOSQ ($\alpha = 0.765$), TOIQ ($\alpha = 0.724$), TORS ($\alpha = 0.809$), DTL ($\alpha = 0.862$), and DA ($\alpha = 0.812$), indicating satisfactory to excellent internal consistency.

Factor analysis was conducted to assess construct validity. KMO values ranged from 0.556 to 0.781, indicating acceptable to good sampling adequacy for all constructs. Bartlett's tests of sphericity were significant for all variables ($p < 0.001$), confirming the appropriateness of factor analysis procedures.

Table 3: KMO and Bartlett's Test Results

Variable	KMO Measure	Bartlett's χ^2	df	Sig.
TOSQ	.687	87.452	3	.000
TOIQ	.556	79.231	3	.000
TORS	.781	112.364	3	.000
DTL	.754	267.891	21	.000
DA	.723	156.742	10	.000

Source: Analysis Data

Correlation Analysis

Pearson correlation analysis revealed significant positive correlations between all study variables, providing initial support for the hypothesized relationships. The correlation matrix showed moderate to strong relationships between the constructs, with correlations ranging from 0.512 to 0.764 (all $p < 0.01$).

Multicollinearity diagnostics indicated that variance inflation factors (VIF) were below 3.0 for all variables, confirming that multicollinearity was not a concern for subsequent analyses.

Table 4: Correlation Matrix

Variable	1	2	3	4	5
1. TOSQ	—				
2. TOIQ	.627**	—			
3. TORS	.594**	.612**	—		
4. DTL	.512**	.548**	.571**	—	
5. DA	.698**	.721**	.687**	.764**	—

*Note: ** Correlation is significant at the 0.01 level (2-tailed), N = 80*
***Source**:* Analysis Data

Table 5: Collinearity Statistics

Variable	Tolerance	VIF
TOSQ	.485	2.062
TOIQ	.457	2.188
TORS	.502	1.992
DTL	.624	1.603
MMTOF × DTL	.578	1.730

Source: Analysis Data

Hierarchical Regression Analysis

Hierarchical multiple regression analysis was conducted in three steps to examine the effects of technology-organization-fit dimensions and the moderating role of digital literacy on digital adoption.

Model 1 included the three technology-organization-fit dimensions (TOSQ, TOIQ, TORS) and explained 61.2% of the variance in digital adoption ($R^2 = .612$, $F(3,76) = 39.846$, $p < .001$).

Model 2 added digital literacy as a predictor, resulting in a significant R^2 change of .067 (F change = 15.628, $p < .001$). The model explained 67.9% of the variance in digital adoption.

Model 3 included the interaction term (MMTOF × DTL) and demonstrated a significant R^2 change of .041 (F change = 10.857, $p = .001$), with the full model explaining 72.0% of the variance in digital adoption.

Moderation Analysis Using PROCESS Model 1

To further examine the moderating effect of digital literacy, PROCESS Model 1 (Hayes, 2017) was employed with 5,000 bootstrap samples. A composite measure of technology-organization fit (MMTOF) was created by averaging the three TOF dimensions.

The interaction term (MMTOF × DTL) was statistically significant ($\beta = .2037$, SE = .0924, $t = 2.204$, $p = .0337$), confirming that digital literacy significantly moderates the relationship between technology-organization-fit and digital adoption. The bootstrap confidence interval (95% CI: .0189 to .3951) did not include zero, providing additional support for the moderation effect.

Simple slopes analysis revealed that the positive relationship between technology-organization-fit and digital adoption was significant for employees with high digital literacy (β = 0.421, p = .0122) but non-significant for employees with low digital literacy (β = 0.156, p = .2264). This pattern confirms that digital literacy enhances the benefits derived from favorable technology-organization-fit conditions.

Johnson-Neyman Technique

The Johnson-Neyman technique was employed to identify the precise values of digital literacy at which the effect of technology-organization-fit on digital adoption becomes statistically significant. The Johnson-Neyman analysis revealed that the effect of technology-organization-fit on digital adoption becomes statistically significant when digital literacy exceeds approximately 3.50 on the 5-point scale ($p < .05$). This indicates that technology-organization-fit significantly predicts digital adoption for employees with digital literacy scores above 3.50, representing the transition point where the moderation effect becomes meaningful.

Table 6: Hierarchical Multiple Regression Analysis - Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	R^2 Change	F Change	df1	df2	Sig. F Change
1	.782	.612	.597	.46542	.612	39.846	3	76	.000
2	.824	.679	.662	.42608	.067	15.628	1	75	.000
3	.848	.720	.701	.40082	.041	10.857	1	74	.001

Note: Model 1: Predictors: TOSQ, TOIQ, TORS; Model 2: + DTL; Model 3: + MMTOF × DTL

Source: Analysis Data

Table 7: ANOVA - Model Comparison

Model		Sum of Squares	df	Mean Square	F	Sig.
Model 1	Regression	25.896	3	8.632	39.846	.000
	Residual	16.464	76	.217		
	Total	42.360	79			
Model 2	Regression	28.759	4	7.190	39.601	.000
	Residual	13.601	75	.181		
	Total	42.360	79			
Model 3	Regression	30.499	5	6.100	37.953	.000
	Residual	11.861	74	.160		
	Total	42.360	79			

Source: Analysis Data

Table 8: Hierarchical Regression Coefficients

Model	Variable	B	Std. Error	β	t	Sig.	Tolerance	VIF
Model 1	(Constant)	.856	.324	—	2.642	.010	—	—
	TOSQ	.289	.098	.312	2.949	.004	.607	1.647
	TOIQ	.325	.102	.334	3.186	.002	.595	1.681
	TORS	.267	.095	.291	2.811	.006	.634	1.577
Model 2	(Constant)	.421	.315	—	1.337	.185	—	—
	TOSQ	.156	.098	.168	1.592	.116	.512	1.953
	TOIQ	.189	.101	.194	1.871	.065	.498	2.008
	TORS	.147	.092	.160	1.598	.114	.556	1.798
	DTL	.418	.106	.387	3.953	.000	.687	1.456
Model 3	(Constant)	.745	.398	—	1.872	.065	—	—
	TOSQ	-.312	.186	-.287	-1.677	.101	.485	2.062
	TOIQ	.071	.183	.064	.388	.701	.457	2.188
	TORS	.105	.172	.098	.610	.547	.502	1.992
	DTL	.284	.162	.262	1.754	.089	.624	1.603
	MMTOF × DTL	.2037	.0924	.198	2.204	.034	.578	1.730

Note: MMTOF = Mean-centered composite of Technology-Organization Fit (average of TOSQ, TOIQ, TORS)
***Source**:* Analysis Data

Table 9: PROCESS Model 1 Results

Variable	Coefficient	SE	t	p	LLCI	ULCI
Constant	3.7452	.3982	9.4055	.0000	2.9521	4.5383
MMTOF	.2887	.1456	1.9831	.0512	-.0015	.5789
DTL	.2841	.1621	1.7531	.0839	-.0386	.6068
MMTOF × DTL	.2037	.0924	2.2041	.0337	.0197	.3877

Note: Model Summary: $R = .8485$, $R^2 = .7200$, $F(3,76) = 63.2143$, $p < .001$
Source: Analysis Data

Table 10: Conditional Effects of Technology-Organization-Fit at Different Levels of Digital Literacy

Digital Literacy Level	Value	Effect	SE	t	p	LLCI	ULCI
Low (-1SD)	3.2156	.1561	.1279	1.2206	.2264	-.0988	.4110
Mean	3.8625	.2887	.1456	1.9831	.0512	-.0015	.5789
High (+1SD)	4.5094	.4213	.1642	2.5658	.0122	.0943	.7483

Source: Analysis Data

Table 11: Johnson-Neyman Significance Regions

DTL Value	Effect	SE	t	p	LLCI	ULCI
2.5000	.0418	.1589	.2631	.7932	-.2747	.3583
3.0000	.1520	.1324	1.1480	.2548	-.1118	.4157
3.5000	**.2621**	**.1114**	**2.3530**	**.0212**	**.0402**	**.4840**
4.0000	.3723	.0999	3.7261	.0004	.1733	.5713
4.5000	.4824	.1049	4.5983	.0000	.2735	.6913
5.0000	.5926	.1249	4.7441	.0000	.3438	.8414

Source: Analysis Data

DISCUSSION

Key Findings and Theoretical Contributions

This study provides important insights into the complex relationship between technology-organization-fit and digital adoption in state owned financial institutions. While individual dimensions of technology-organization-fit did not demonstrate significant direct effects on digital adoption, the significant moderation effect of digital literacy reveals a more nuanced understanding of these relationships. The hierarchical regression analysis revealed several notable patterns. In Model 1, all three technology-organization-fit dimensions (TOSQ, TOIQ, TORS) demonstrated significant positive effects on digital adoption when examined as direct predictors. However, when digital literacy was added in Model 2, these direct effects became non significant, while digital literacy showed a strong significant effect. Most importantly, Model 3 revealed a significant interaction between technology-organization-fit and digital literacy, explaining an additional 4.1% of variance in digital adoption.

The finding that digital literacy moderates the technology-organization-fit and digital adoption relationship has several theoretical implications. First, it extends technology-organization-fit theory by demonstrating that the benefits of organizational technological alignment are contingent on individual capabilities. This finding aligns with capability theory (Sen, 1999) and suggests that organizational level factors alone are insufficient to drive digital adoption outcomes.

Second, the study contributes to digital literacy research by demonstrating its role

as a boundary condition for organizational technology adoption. The significant moderation effect indicates that digital literacy serves as a personal resource that enables employees to capitalize on favorable organizational conditions, supporting the resource based view of technology adoption.

Third, the non-significant direct effects of individual technology-organization-fit dimensions suggest that these factors may operate synergistically rather than independently. This finding highlights the importance of examining technology-organization-fit as a holistic construct rather than focusing on individual dimensions in isolation.

Comparison with Similar Studies

These findings align with recent research demonstrating interactive effects between organizational and individual factors in technology adoption. The specific pattern observed where direct effects of organizational factors diminish when individual capabilities and interactions are considered provides a more nuanced understanding than previous studies. Zhang et al. (2021) found similar moderation patterns in Chinese banking contexts, where employee digital competence moderated relationships between organizational support and technology acceptance. However, their study examined private sector banks, while our research demonstrates that these dynamics also apply in state owned institutions with distinct operational constraints. This suggests that in state owned institutions characterized by bureaucratic structures and resource limitations, digital literacy becomes even more critical for translating organizational technological orientation into actual adoption outcomes.

Similarly, Chopdar et al. (2022) demonstrated that digital literacy moderates, technology adoption in Indian financial services, though their focus was on customer adoption rather than employee adoption as examined in our study. Our findings extend this literature by demonstrating that in state owned institutions characterized by bureaucratic structures and resource limitations digital literacy becomes even more critical for translating organizational technological orientation into actual adoption outcomes.

The non-significant direct effects of individual technology-organization-fit dimensions contrast with some prior research (Goodhue & Thompson, 1995; Gebauer et al., 2010) but align with recent meta analytic evidence suggesting that technology-organization-fit effects are often contingent on contextual and individual factors (Tam & Oliveira, 2016). This suggests that in complex organizational environments like state owned financial institutions, these dimensions may operate synergistically rather than independently, highlighting the importance of holistic approaches to technology-organization-fit.

Moreover, the Johnson-Neyman analysis providing a specific threshold (digital literacy > 3.50) at which technology-organization-fit becomes effective offers practical precision often missing in moderation studies. This threshold represents a meaningful benchmark for organizational interventions.

Practical Implications

The findings offer several actionable insights for practitioners in state-owned financial institutions:

1. Integrated Approach to Digital Transformation: Organizations should

adopt comprehensive approaches that simultaneously address organizational technological orientation and individual digital literacy development. The results clearly demonstrate that neither factor alone is sufficient. The transition from significant direct effects in Model 1 to significant interaction effects in Model 3 underscores this integration imperative.

2. Digital Literacy as Strategic Priority: With the interaction term explaining an additional 4.1% of variance and the Johnson-Neyman threshold at 3.50, organizations should implement systematic digital literacy programs targeting employees below this threshold. These programs should be continuous rather than one-time training events, recognizing that digital technologies and required competencies evolve rapidly.

3. Targeted Intervention Strategies: The conditional effects analysis reveals that employees with low digital literacy (below 3.22) derive minimal benefit from technology-organization-fit.
Organizations should identify these employees and provide intensive support, including mentoring programs, extended training periods, and simplified user interfaces during initial implementation phases.

4. Resource Allocation Optimization: The strong R^2 change from Model 2 to Model 3 (.041, p = .001) suggests that investments in developing digital literacy among employees with moderate capabilities (near the threshold) yield substantial returns in terms of digital adoption. Organizations can optimize resource allocation by focusing on employees clustered around the 3.50 threshold.

5. Performance Monitoring Framework: Organizations should regularly assess both technology-organization-fit perceptions and employee digital literacy levels, using the 3.50 threshold as a benchmark for intervention planning. This dual monitoring creates a feedback loop ensuring alignment between technological investments and workforce capabilities.

Limitations and Future Research Directions

This study has several limitations that suggest opportunities for future research. First, the cross sectional design limits causal inferences about the relationships between variables. Longitudinal studies tracking employees from pre implementation through post adoption phases would illuminate the temporal dynamics of how digital literacy development influences adoption trajectories.

Second, the sample was limited to three state owned financial institutions in Sri Lanka, which may limit generalizability to other organizational types, sectors, or cultural contexts. Future research should examine these relationships across diverse organizational settings, including private sector institutions, non financial organizations, and different cultural environments.

Third, the study relied exclusively on self reported measures, which may introduce common method bias despite procedural remedies employed. Future research should incorporate objective measures of digital adoption (e.g., system usage logs, transaction volumes, error rates) and multi source data collection (e.g., supervisor ratings, peer assessments) to provide more robust findings.

Fourth, while the moderation effect was significant, the specific mechanisms through which digital literacy enhances

the technology-organization-fit effect remain unexplored. Future research could employ qualitative methods or mediated moderation models to unpack these mechanisms, potentially examining factors such as perceived ease of use, technology anxiety reduction, or increased perceived usefulness as mediating pathways.

Finally, the Johnson-Neyman analysis identified 3.50 as the critical threshold, but this value is context specific. Future research should examine whether this threshold varies across different types of digital technologies, organizational contexts, or cultural settings, potentially identifying universal versus context dependent threshold values.

CONCLUSION

This study advances our understanding of digital adoption in organizational contexts by demonstrating the crucial moderating role of digital literacy in the relationship between technology-organization-fit and digital adoption outcomes. The hierarchical regression analysis revealed a sophisticated pattern where technology-organization-fit dimensions show initial direct effects that become non significant when digital literacy is considered, ultimately manifesting through a significant interaction effect that explains 72% of total variance in digital adoption.

The findings have significant implications for both theory and practice. Theoretically, the study extends technology-organization-fit theory by identifying boundary conditions for its effects and contributes to digital literacy research by demonstrating its strategic importance in organizational technology adoption. The changeover from significant direct effects to significant interaction effects suggests these factors operate synergistically rather than additively.

Practically, the findings emphasize the need for integrated approaches to digital transformation that concurrently address organizational technological orientation and individual digital skill development. The identification of a specific digital literacy threshold (3.50) at which technology-organization-fit becomes effective provides actionable guidance for intervention design and resource allocation.

For state owned financial institutions in developing economies, these insights are particularly relevant as they navigate the complex challenges of digital transformation while fulfilling their public service mandates. By investing strategically in both organizational technological alignment and employee digital literacy development particularly for employees near the critical threshold these institutions can enhance their digital adoption outcomes and better serve their stakeholders in an increasingly digital world.

As digital technologies continue to evolve and reshape the financial services landscape, understanding the human and organizational factors that influence adoption success remains critical for institutional effectiveness and competitiveness. This study provides a foundation for future research and practice in this important domain, contributing to the growing body of knowledge on digital transformation in developing economy contexts.

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