Strategic Management Accounting
Volume 2, issue 3- Autumn 2025- pages 49-69
Home page: https://www.smajournal.ir/

The Relationship between Digital Literacy and the Performance of Accountants (Case Study: Tehran Province)

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OPEN ACCESS

Article type: Research Article

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Received: August 23, 2025
Accepted: November 1, 2025
Published: Autumn 2025

Citation: Hajian, A. and Hajian, M. (2025). The Relationship between Digital Literacy and the Performance of Accountants (Case Study: Tehran Province). *Strategic Management Accounting*, *2*(3),49 .69.

Publisher's Note: MSDS stays neutral with regard to jurisdictional claims in published material and institutional affiliations.

Abstract

In recent decades, digital transformation in accounting has created a novel context for revising work practices and enhancing the professional performance of accountants. This study addresses the gap between theoretical knowledge and the practical application of emerging accounting technologies, focusing on the role of digital literacy in improving accountants' performance. The research objective was to examine the effect of digital literacy on the performance of accountants in Tehran Province. A survey design was employed: a 31-item Likert questionnaire was developed and, using Cochran's formula, a sample of 139 practicing accountants was selected. The instrument's reliability was confirmed by Cronbach's alpha, and data were analyzed using appropriate statistical techniques. Findings indicate that competencies related to accounting software, emerging technologies, data analysis, and information management were significantly associated with enhanced accountants' performance, whereas digital literacy in the domain of cyber-threats did not show a statistically significant effect. Accordingly, improving digital literacy appears to be a viable pathway for elevating professional performance among accountants; these results can inform the design of targeted educational and managerial strategies to develop digital competencies within the accounting field.

Keywords: Digital Literacy, Digital Accounting, Cronbach's Alpha, Multiple Regression**.**

JEL Classification: M41, M15, C83, O33.

DOI: *https://doi.org/10.22034/smajournal.2025.542842.1126*

INTRODUCTION

Over the past decades, digital transformation has reshaped professional activities across domains, and accounting is among the fields experiencing fundamental change. Traditional manual recordkeeping and transactional processing are progressively replaced by integrated accounting packages, enterprise resource planning systems, cloud-based services, and advanced analytic tools. These technologies reallocate accountants' time from repetitive data-entry tasks toward higher-order activities such as data interpretation, forecasting, and strategic advisory services. Consequently, the construct of digital literacy — understood as the ability to locate, evaluate, use, and produce information using digital technologies, together with competencies in data analysis and information security — has emerged as a core professional requirement for contemporary accountants. The theoretical framework for this study integrates perspectives from technology adoption and human capital theory: digital competencies augment accountants' capacity to generate timely, accurate, and decision-relevant information, thereby improving individual and organizational performance. At the same time, the literature suggests that different dimensions of digital literacy (technical software skills, familiarity with emerging technologies, data-analysis ability, information-management skills, and cybersecurity knowledge) may have differential effects on performance outcomes.

METHODOLOGY

A quantitative, cross-sectional survey design was employed. The target population comprised practicing accountants in Tehran Province. Using Cochran's formula to determine a representative sample for the population size and desired precision, a sample of N = 139 accountants was obtained. Data were collected via a self-administered questionnaire composed of 31 Likert-type items (five-point scale: strongly agree to strongly disagree). The questionnaire measured seven constructs: familiarity with accounting software, familiarity with emerging technologies, data-analysis skills using digital tools, information-management and reporting skills, knowledge of data-protection principles, knowledge of cyber-threat countermeasures, and accountants' performance.

Instrument reliability was assessed using Cronbach's alpha; subscale alphas ranged from $\alpha = 0.778$ to $\alpha = 0.823$ (software = 0.823; emerging technologies = 0.809; data analysis = 0.796; information management = 0.802; data protection = 0.778; cyber-threats = 0.784; performance = 0.815), indicating satisfactory internal consistency. Prior to inferential analyses, variable distributions were examined for normality (Shapiro–Wilk and Kolmogorov–Smirnov tests and skewness/kurtosis indices); results supported the use of parametric techniques. All statistical analyses were conducted in SPSS, including Pearson correlation to evaluate bivariate associations and multiple linear regression to assess the unique and combined predictive effects of the digital literacy dimensions on accountants' performance. Model diagnostics (e.g., multicollinearity, residual analysis) were performed to validate regression assumptions.

RESULTS

Descriptive results indicated a demographically varied sample. Bivariate correlation analysis revealed statistically significant, positive associations between performance and several digital-competency dimensions: familiarity with accounting software ($r = 0.621$, $p < 0.001$), familiarity with emerging technologies ($r = 0.587$, $p < 0.001$), data-analysis skills ($r = 0.542$, $p = 0.001$), information-management skills ($r = 0.559$, $p < 0.001$), and data-protection knowledge ($r = 0.511$, $p = 0.003$). The relationship between familiarity with cyber-threat countermeasures and performance was small and did not reach conventional significance ($r = 0.215$, $p = 0.058$). A simultaneous multiple regression model including the six digital-literacy predictors accounted for a substantial portion of variance in accountants' performance: $R = 0.732$, $R^2 = 0.536$ ($F(6, 132) = 24.315$, $p < 0.001$). In the adjusted model, the following predictors exhibited significant standardized effects (β) and p-values:

accounting software ($\beta = 0.285$, $p < 0.001$), emerging technologies ($\beta = 0.241$, $p < 0.001$), information management ($\beta = 0.228$, $p = 0.001$), data analysis ($\beta = 0.209$, $p = 0.002$), and data protection ($\beta = 0.174$, $p = 0.010$). Familiarity with cyber-threat countermeasures remained non-significant in the multivariate context ($\beta = 0.062$, $p = 0.127$). Multicollinearity diagnostics (VIF) fell within acceptable limits, and residual analyses did not indicate serious violations of homoscedasticity or normality of errors. Taken together, the results demonstrate that five dimensions of digital literacy make unique and meaningful contributions to predicting accountants' performance in this sample, while explicit knowledge of cyber-threat countermeasures does not predict performance once other competencies are accounted for.

CONCLUSION

Based on the study's findings, digital transformation in accounting has a substantial positive effect on accountants' performance. The results indicate that competencies such as familiarity with accounting software, knowledge of emerging technologies, ability to analyze financial data using digital tools, and skills in information management and digital reporting are all significantly and positively associated with accountants' performance. The multiple regression model shows that these variables jointly explain 53.6% of the variance in performance, and the correlation coefficient ($r = 0.732$) denotes a strong relationship between these factors and performance. Conversely, familiarity with cyber-threat countermeasures did not have a significant effect on accountants' performance. This lack of effect may reflect insufficient planning for cybersecurity training or a shortage of practical, hands-on awareness in this area. In light of these findings and given the broad importance of digital skills for improving the quality of accounting services it is recommended that organizations and educational institutions offer specialized programs and comprehensive workshops on emerging accounting technologies. Continuous updating of accounting curricula to strengthen digital literacy and the integration of relevant topics into coursework is particularly important. Moreover, running seminars and practical training courses to enhance technical capabilities—especially in the use of accounting software and digital data analysis—can help narrow the gap between theoretical knowledge and practical application. Finally, future research should identify and examine the specific factors that influence accountants' digital literacy in order to develop optimal strategies for improving accountants' performance in the digital era.

Contribution of Authors

The authors jointly contribute to the preparation and publication of the article.

Ethical Approval

Informed written consent was obtained from individuals for the publication of their anonymous information in this study.

Sponsor

This study had no sponsor.

Conflict of Interest

The authors of this article declared no conflict of interest regarding the authorship or publication of this article.

Acknowledgements

We would like to thank all those who helped us collect data for their cooperation and responsiveness.

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