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THE EFFECT OF FINANCIAL SYSTEM DIGITALIZATION ON THE ACCURACY OF FINANCIAL STATEMENTS WITH HUMAN RESOURCE COMPETENCE AS A MODERATION VARIABLE AT BANK SUMUT

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ABSTRACT

This research aims to examine the impact of financial system digitalization on financial statement accuracy, with human resource competence serving as a moderating variable, at Bank Sumut. Utilizing a quantitative approach with a survey method, data was collected through a Likert scale questionnaire from 50 respondents consisting of key personnel in financial management. The analysis was performed using SEM-PLS to evaluate direct and moderating relationships. The results show that digitalization of financial systems significantly affects financial statement accuracy, confirming the positive influence of technology integration on reporting accuracy. However, the competence of human resources did not have a significant direct effect on the accuracy of financial reports. Furthermore, the moderating effect of human resource competence was found to be non-significant in strengthening the relationship between digitalization and financial reporting accuracy. These findings suggest that while digitalization plays a crucial role in improving financial reporting, the competence of human resources, although important, may not be a decisive factor in enhancing the impact of digitalization. This study contributes to understanding the role of technology in enhancing financial transparency and reporting accuracy, with implications for bank management and policymakers in the digital era.

Introduction

Digitizing the financial system in the banking industry is a strategic agenda because it encourages process automation, cross-unit data integration, transaction acceleration, and increased transparency through audit trails. From the perspective of accounting information systems, the implementation of an integrated system helps to reduce

duplication of inputs, improve data consistency, and strengthen system-based control so that the quality of the financial information produced is more traceable and verifiable (Romney & Steinbart, 2021). Conceptually, the quality of reporting information is also required to meet key qualitative characteristics, such as faithful representation, verifiability, and timeliness (International Accounting Standards Board / IASB, 2018). Therefore, the digitalization of the financial system is seen as having the potential to increase the accuracy of financial statements, especially in organizations which has high transaction volumes and complex reporting processes such as banking.

However, empirical evidence suggests that digitalization is not always directly proportional to reporting accuracy. The study of digital transformation emphasizes that the success of digitalization is not solely the adoption of technology, but a comprehensive change in business processes, data governance, control, and user behavior in utilizing the system (Vial, 2019; Verhoef et al., 2021). In banks, obstacles that often arise include imperfect inter-branch system integration, reliance on legacy systems, differences in operational standards between work units, and variations in infrastructure readiness; These conditions can trigger data inconsistencies, account misclassifications, reconciliation delays, and differences in numbers between units that ultimately reduce the accuracy of financial statements. In other words, digitization can produce "more and faster" data, but it is not necessarily "more precise" if the supporting factors are not yet strong.

This phenomenon is relevant for Bank Sumut as a regional bank that manages transactions across units/branches and faces digital readiness dynamics that are not always uniform. In the context of regional banks, the implementation of digitalization is expected to improve the accuracy of recording, strengthen system-based internal controls, and support accurate and timely reporting. However, in the digital transition phase, implementation challenges often arise—ranging from system integration, data quality and standardization, to user readiness. This emphasizes the need for a study that explains the mechanism by which digitalization impacts the accuracy of financial statements and what conditions make the impact stronger or weaker.

Theoretically, the relationship between the digitalization of the financial system and the accuracy of financial statements can be explained through the Technology Acceptance Model (TAM) and the Theory of Reasoned Action (TRA). TAM explained that the acceptance and use of technology is influenced by perceived usefulness and perceived ease of use, which shape attitudes and actual use of the system (Davis, 1989). In the context of reporting, if a digital system is perceived as useful (speeds up processes, facilitates reconciliation, reduces errors) and easy to use (clear workflow, adequate system support), then users are likely to use the system consistently and correctly; This consistency of use will improve the quality of inputs, reduce manual errors, and ultimately improve the accuracy of financial statements. TRA complements this explanation by asserting that behavior is influenced by intentions (behavioral intentions), while intentions are formed by attitudes and subjective norms (Fishbein & Ajzen, 1975). This means that in addition to technical aspects, behavioral factors and organizational norms (e.g. procedural compliance, leadership support, work culture) also determine whether digitalization truly results in accurate reporting.

However, TAM-TRA also implies that the utilization of digital systems is greatly influenced by individual capacity. At this point, HR competence is a crucial factor. Human Capital Theory looks at competence (knowledge, skills, experience) as "capital" that

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improves the quality of individual and organizational performance (Becker, 1964). In the context of digital financial systems, human resource competencies include understanding of accounting standards and internal policies, digital literacy, the ability to operate the system (input–post–reconciliation–reporting), and analytical skills to validate data and detect anomalies. Competent human resources can improve accuracy directly through precision and validation, while strengthening the effectiveness of digitalization because they are able to utilize system features (control, trail audit, automation) correctly and consistently.

Based on this description, this study confirms that there is a gap that needs to be bridged. First, at the theoretical gap level, many studies still treat digitalization as a technical factor that "automatic" improves the quality/accuracy of reporting, even though the TAM–TRA framework shows that system output is largely determined by acceptance, intention, and usage behavior (Davis, 1989; Fishbein & Ajzen, 1975). Second, at the research gap level, testing the relationship between the digitalization of the financial system and the accuracy of financial statements in the context of regional banks is still limited, even though their operational characteristics and digital readiness are different from those of large banks. Third, there is still relatively limited research that explicitly tests HR competencies as a moderation variable that explains "when" digitization is effective in improving accuracy—not just testing the direct influence of competencies (Becker, 1964; Vial, 2019). This gap is important to close so that research not only answers "does digitalization have an effect", but also explains "why" and "under what conditions" the influence becomes strong.

By closing the gap, this research is expected to contribute: (1) conceptual, namely clarifying the role of human resource competencies as a reinforcement of digitalization-accuracy relationships based on the logic of TAM-TRA and Human Capital Theory (Becker, 1964; Davis, 1989; Fishbein & Ajzen, 1975); and (2) contextual, namely providing empirical evidence on Bank Sumut as a regional bank that faces the challenges of implementing digitalization that is distinctive (Vial, 2019; Verhoef et al., 2021). Practically, the results of the research can be the basis for recommendations to improve reporting accuracy through strengthening the implementation of digitalization (integration, system control, data quality) and user competency development.

Based on these theoretical arguments and gaps, the objectives of this study are: (1) to analyze the influence of financial system digitalization on the accuracy of financial statements; (2) analyzing the influence of human resource competencies on the accuracy of financial statements; and (3) examining the role of human resource competencies in moderating the influence of financial system digitalization on the accuracy of financial statements at Bank Sumut. Thus, the research hypothesis is formulated as follows:

H1: Financial System Digitalization has a Positive Effect on Report Accuracy Finance.

H2: Human resource competence has a positive effect on the Accuracy of Financial Statements.

H3: HR competence strengthens (moderates) the positive influence of Digitalization Financial System to the Accuracy of Financial Statements.

Research Method

This study uses a quantitative approach with a survey method to analyze the influence of financial system digitalization on the accuracy of financial statements, with human resource competence as a moderation variable. The research data was collected through a questionnaire with a Likert scale of 1–5 (1 = strongly disagree to 5 = strongly agree) which was disseminated to respondents who were directly involved in financial management and reporting activities.

The population in this study is all employees in the finance and accounting department at Bank Sumut with a total of 50 people. The sampling technique used is a saturated sample, that is, all members of the population are used as a research sample, so that the number of samples analyzed is equal to the number of population, namely 50 respondents. The use of saturated samples was carried out because the number of population is relatively small and all members of the population meet the criteria as relevant data sources according to the purpose of the study.

The data analysis technique used Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) to test the relationship between variables in the research model, both the direct influence and the moderation effect. The analysis was carried out through the evaluation of the measurement model (outer model) to ensure the validity and reliability of the indicators, as well as the evaluation of the structural model (inner model) to test the path coefficient, determination value (R^2), and significance of hypothesis testing using the bootstrapping procedure. The moderation test was carried out by establishing the interaction variable between the digitalization of the financial system and the competence of human resources to determine their role in strengthening the influence on the accuracy of financial statements.

Results and Discussion

Adopt a quantitative approach with the aim of testing the relationships between the variables that have been formulated. The model used is SEM SmartPLS, which aims to test the relationship between the variables in the research model, namely Financial System Digitization (X), HR Competency (Z), and Financial Statement Accuracy (Y):

1. Covergent Validity Test
   a. Loading Factor (stage 1)

The results of the phase 1 Loading Factor test show that there is still 1 invalid indicator, the outer loading value < 70, namely the Z2 indicator, then the indicator is removed and the Outer Model phase 2 test is carried out.

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	Report Accuracy Finance (Y)	System Digitization Finance (X)	HR Competencies (Z)
X1		0.857	
X2		0.916	
X3		0.848	
X4		0.867	
X5		0.799	
Y1	0.870		
Y2	0.785		
Y3	0.829		
Y4	0.809		
Y5	0.875		
Z1			0.752
Z2			0.666
Z3			0.930
Z4			0.779
Z5			0.801

The results of the Loading Factor test phase 2 show that all indicators are valid, namely the outer loading value >70, as seen in the table below.

	Accuracy of Financial Statements (Y)	Digitalization of the Financial System (X)	HR Competence (Z)
X1		0.857	
X2		0.916	
X3		0.848	
X4		0.867	
X5		0.799	
Y1	0.870		
Y2	0.785		
Y3	0.829		
Y4	0.809		
Y5	0.876		
Z1			0.748
Z3			0.931
Z4			0.780
Z5			0.799

b. Average Variance Extracted (AVE)

The results of the AVE test in this study showed that the entire construct had an AVE value above the minimum recommended threshold. The AVE value of each construct is in the range of 0.669 to 0.737, as shown in the results of data processing using SmartPLS 4. This indicates that the indicators used are able to adequately and consistently represent the measured construct.

	Average variance extracted (AVE)
Accuracy of Financial Statements (Y)	0.696
Digitalization of the Financial System (X)	0.737
HR Competence (Z)	0.669

2. Discriminant Validity

Discriminant validity testing is performed to ensure that each latent construct in the research model is completely empirically different from the other. With the fulfillment of discriminant validity, it can be ensured that there is no overlap of meanings between constructs, so that each variable measures a unique and specific concept. The Discriminant validity test is carried out by looking at the Cross Loading value of each indicator.

a. Cross Loading

The results of the Cross Loading test in this study showed that the results of all indicators met the valid criteria. The test table can be seen as follows:

	Report Accuracy Finance (Y)	System Digitization Finance (X)	Competencies HR (Z)	Remarks
X1	0.329	**0.857**	-0.060	Valid
X2	0.304	**0.916**	-0.112	Valid
X3	0.302	**0.848**	-0.085	Valid
X4	0.222	**0.867**	0.096	Valid
X5	0.219	**0.799**	-0.016	Valid
Y1	**0.870**	0.327	-0.109	Valid
Y2	**0.785**	0.301	-0.127	Valid
Y3	**0.829**	0.247	-0.094	Valid
Y4	**0.809**	0.247	-0.158	Valid
Y5	**0.876**	0.246	-0.319	Valid
Z1	-0.014	0.018	**0.748**	Valid
Z3	-0.242	-0.127	**0.931**	Valid
Z4	-0.113	0.031	**0.780**	Valid
Z5	-0.097	0.064	**0.799**	Valid

3. Construct Rebility Test

The construct reliability test was carried out to assess the level of internal consistency of indicators in measuring latent constructs in the research model. In the SEM-PLS approach, construct reliability is generally evaluated using Cronbach's Alpha, Composite Reliability, and Composite Reliability rho_a (ρa). A construct is declared reliable if Cronbach's Alpha and Composite Reliability values exceed the minimum limit of 0.70 (Hair et al., 2019).

a. Cronbach's alpha

The results of the reliability test based on Cronbach's Alpha in this study can be seen as follows.

	Cronbach's alpha	Remarks
Accuracy of Financial Statements (Y)	0.891	Relief
Digitalization of the Financial System (X)	0.911	Relief
HR Competence (Z)	0.862	Relief

The test results showed that all constructs in the study model had Cronbach's Alpha values between 0.862 and 0.911, which was above the threshold of 0.70. This indicates that the level of internal consistency of the construct is very good (reliebel). Thus, the indicators in each construct are correlated with each other and consistently measure the same concept.

b. Composite reliability

The results of the reliability test based on Composite reliability in this study can be seen as follows.

	Composite reliability (rho_c)	Remarks
Accuracy of Financial Statements (Y)	0.920	Relief
Digitalization of the Financial System (X)	0.933	Relief
HR Competence (Z)	0.889	Relief

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The Composite Reliability test results for all variables exceeded the recommended threshold >0.70. These findings indicate that the constructs in the study have high reliability and stability in explaining the variance of the indicators.

4. Validate the Fit Model

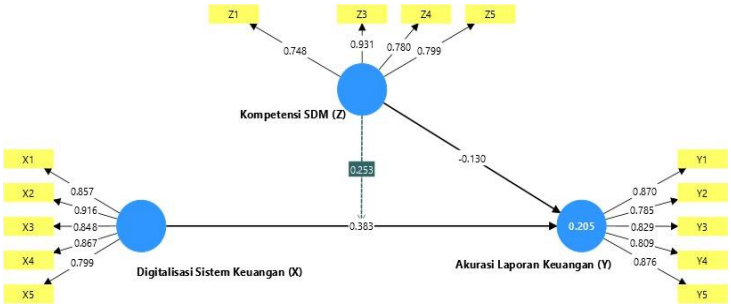
Fit model evaluation is used as an additional indicator to assess whether the model built as a whole can well represent the data. The following are the results of the fit model test obtained.

	Saturated model	Estimated model
SRMR	0.085	0.085
NFI	0.782	0.783

Based on the fit model output, the SRMR value obtained is 0.085, which indicates that the fit model is at an adequate or marginal level. In the context of SEM-PLS, SRMR serves as a complementary indicator, as PLS focuses more on prediction than on "perfect fit" as in covariance-based SEM. An NFI value of 0.783 indicates a relatively low number (generally, an NFI ≥ 0.90 is considered good). Low NFI can occur in SEM-PLS, especially when the sample size is small (n=50), the number of indicators is large, and there is model complexity or interaction (moderation).

5. Significance Test/ Direct Hypothesis and Moderation

The results of the SEM-PLS model test aim to test the significance of direct relationship and moderation in this study. The following is a graph of the results of the model in this study.



The following are the results of the bootstrapping test for the direct influence and the influence of moderation in this study.

	Original sample (O)	T statistics (|O/STDEV|)	P values	Remarks
Digitization of Financial Systems (X) -> Accuracy of Financial Statements (Y)	0.383	2.814	0.002	Accepted
HR Competency (Z) -> Financial Statement Accuracy (Y)	-0.130	0.595	0.276	Rejected
HR Competency (Z) x Financial System Digitization (X) -> Financial Statement Accuracy (Y)	0.253	1.370	0.085	Rejected

The results of the bootstrapping test for direct influence in this study show that there are significant and insignificant pathways, namely:

1) The Effect of Financial System Digitalization on the Accuracy of Financial Statements (H1) has a t-statistic value = 2.814 and p-value = 0.002, which shows a significant positive influence, and means that the hypothesis is accepted. This indicates that the Digitalization of the Financial System has a significant influence on the Accuracy of Financial Statements.
2) The Effect of HR Competency on the Accuracy of Financial Statements (H2) with t-statistic = 0.595 and p-value = 0.276 which shows an insignificant influence, and the hypothesis is not accepted. This shows that HR Competence does not have a direct effect on the Quality of Financial Statements in this model.
3. The effect of interaski/moderation of Financial System Digitalization x HR Competency on the Accuracy of Financial Statements has a p-value of > 0.05 (0.085), which shows that the influence of moderation is not significant, and bararti (H3) is rejected. This means that HR Competence does not strengthen the Digitalization of the Financial System towards the Accuracy of Financial Statements.

Conclusion

The digitalization of the financial system has a significant positive influence on the accuracy of financial statements. The application of digital technology in financial processes has been proven to increase accuracy and efficiency in data management and reporting, which ultimately contributes to higher accuracy of financial statements. This indicates that the better the digitization of the system implemented, the more accurate the financial reports produced.

However, HR competence did not show a significant influence on the accuracy of financial statements in this study. Although high HR competencies should improve data management and system usage, the results of this study show that competency factors alone are not enough to guarantee the accuracy of reports. Other factors, such as the quality of the systems implemented, internal policies, and compliance with procedures, may have a greater influence on ensuring the accuracy of financial statements. Furthermore, although HR competence acts as a moderator between the digitalization of the financial system and the accuracy of financial statements, the influence of moderation found in this study is not significant. This indicates that while HR competencies are important, their influence in strengthening the relationship between digitalization and the accuracy of financial statements is still limited, and other factors may be more decisive in maximizing the results of digitalization
system.

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The model used in this study focuses on testing the relationship between financial system digitalization, human resource competence, and financial report accuracy. Although this model already includes direct relationships and
Moderation, it is still possible that other variables not included in the model may affect the accuracy of the financial statements, such as external factors (e.g., regulations or macroeconomic conditions) or other internal factors (e.g., management policies or procedural compliance levels). Therefore, to gain a more comprehensive understanding, future research models should be expanded by adding relevant control variables that may affect the relationships being tested.
Overall, these findings show that digitalization has a major role in improving the accuracy of financial statements, although the competence of HR as a moderator factor does not have a significant effect. This research suggests to focus more efforts on improving the technology and systems used, although human resource competencies remain important to maximize the potential of digitalization.

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