The Moderator Effect of Financial Data Accuracy in Electronic Accounting Information Systems Towards Business Efficiency

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Abstracts

The accuracy of financial data within electronic accounting information systems plays a vital role in improving business efficiency. This paper investigates how the accuracy of data on financial information systems moderates the relationship between these systems and business efficiency. A questionnaire survey was applied to a sample of companies that specialise in the field of accounting information systems. The gathered data was analysed using partial least squares structural equation modelling. To be precise, financial data accuracy shows a higher positive return on electronic accounting information systems in the alignment of business capabilities. To achieve the highest possible level of automated accounting systems, financial information accuracy is crucial. Data analysis techniques and overall improvement of the accounting information systems industry can achieve this.

Keywords: financial data accuracy, electronic accounting information systems, business efficiency, moderator effect, mediator effect.

Introduction

With respect to electronic accounting information systems (EAIS), companies today increasingly recognise that the information produced by these systems must be accurate if they are to increase business efficiency. Reliable financial figures are essential in making effective decisions, preventing mistakes, and ensuring alignment with standards, factors that improve business results (Ghonim et al., 2022; Hristov et al., 2022; Karkošková, 2023). A key concern of this paper is the moderating role of the financial data of an EAIS on the link with organisational efficiency. Due to the EAISin functionality they offer, including financial information management, improved processes, and transparency, electronic accounting information systems are very crucial to modern enterprises (Smyth et al., 2024). EAIS, being tools that manage financial actions in the organisation and process the info in real-time, supply reports and position

the analytic tool at the top of these, are crucial for ensuring the accuracy of cash management (Buchholz et al., 2022). Nevertheless, their effectiveness, to a great extent, is closely linked to the correctness of the financial data records they update. Non-valid data may intrigue failure analyses, bad strategies, and lack of resource utilisation (Naimoli, 2024).

The literature has established that correct data is one critical aspect of the business and that it improves effectiveness. For example, good accuracy has been shown to be essential in outperforming financially, manoeuvring risk effectively, and ensuring more operational efficiency (Bassam et al., 2023; Liu et al., 2023). Proper financial data assists firms in making chips of more accurate forecasts, logistics of operating costs, and, what is also rather important, it helps to comply with regulatory requirements, thus reducing the chances of financial gunmen and scams (Arthur et al., 2024). In contrast, inaccurate data can have various side effects, such as the growth of financial sub-salvage, compliance infringements, and damage to reputation. The acknowledged essentiality of data accuracy is undebatable; however, no detailed research has ever been conducted on the moderating role this feature plays in the link between EAIS and business efficiency. This study sheds more light on this area by developing a research design that assesses how financial data (the accuracy of cost info) affects the usability of EAIS in increasing adequate business function. By taking data accuracy into account and focusing on the quality of financial data, we seek to find out the way the use of EAIS can affect business efficiency. The research question was tackled by collecting survey data from companies that deal with these accounting information systems. The PLS-SEM approach was used in the analysis, and this is a powerful method for studying complications of relation by variables (Ashraf & Ahmed, 2022; Guenther et al., 2023). The statistics expose that plotting financial data A-high or A-building strengthens the influence of EAIS on business effectiveness. It, therefore, underlines the importance of financial professionals in allocating financial health business efficiency. Settings are a priority to improve off-business business efficiency (Martínez-Martínez et al., 2022).

The structure of the present paper is as follows. The second section is devoted to the theoretical aspects and hypothesis formation, and it entails such issues as a thorough review of the records and frame of the study to a full extent. Research methodology is described in the next section (of Section 3), with emphasis on the data collection process and the methods of data analysis. The findings of the analysis are presented in Section 4, pinpointing the key outcomes and their implications. The final part of the paper, Section 5, evaluates the results relative to the existing literature, as well as the gaps in knowledge, and offers recommendations for higher accuracy of data implementation in EAIS. The paper concludes in Section 6 by summarising its main findings, pointing at some limitations that should be taken into consideration, and suggesting some future research directions.

Literature Review and Hypotheses Development

2.1. Financial Data Accuracy in Electronic Accounting Information Systems

Accuracy is the Touchstone of the financial data of an Electronically Autonomously Operating Account Information System (EAIS) that can give businesses the potential to make

them viable in the industry. EAIS is becoming popular because it helps process and manage financial information, saves both time and money and enhances the quality of decision-making (Li et al., 2023). Speaking for the monitoring of financial reports required by authorities and at the same time boosting credibility and integrity of financial statements through maintenance of such data is also a major instance of the use of accurate financial data, where EAIS are utilised (Wang et al., 2024). Providing accurate financial data is of utmost importance in making critical decisions being taken in any organisation. High-quality data gives managers a basis upon which they can make optimum judgements, which results in better allocation of resources, proper strategic planning, and operational excellence (Awulor et al., 2022). Moreover, achieving accuracy in financial data lessens the chances of errors occurring in financial reports, an area that is highly litigious and has costly financial implications for a company (Beneish & Vorst, 2022; Chan & Liu, 2022). On the other hand, false data can lead to misunderstood actions, monetary asset losses, and a firm's poor reputation (Zhu et al., 2022). So, the goal of this first-stage EAIS is to eliminate the chances of unreliable and untrustworthy financial information by automating those processes traditionally being carried out by people, which leads to making errors, and at the same time facilitating the processing speed by making it a real-time operation (Bhadra et al., 2023). However, the extent of the contribution of correct data to the success of these systems in reaching the objective of reliable financial data is, to a large extent, dependent on the quality of the data type that is being inputted into the system. As the adage goes, "garbage in, garbage out" – if the data entered into an EAIS is inaccurate, the outputs generated by the system will also be flawed (Ellis, 2012; Sterman, 2002).

2.2. Importance of Data Accuracy for Business Business efficiency

The literature has established, using empirically based methods, the connection between the precision of financial data and enterprise business efficiency. It is only very natural. Therefore, data accuracy is closely connected to the upliftment of business efficiency and the prevention of risks and operational inefficiencies (Popovič et al., 2018). Correct information helps in budget formulation, projections of the outcome, and determination of the company's financial position. It also helps the jurisdiction to prepare a budget, specific purpose, and appropriate assertions that are instrumental in the reduction of the possibilities of error and fraud (Metzger, 2006). By all definitions, financial information plays a significant role; in other words, it can be described as the fact that it helps companies carry out efficient cash flow management, cost control, and overall business efficiency optimisation (Kaplan & Cooper, 1998). On the other hand, not only does the occurrence of errors raise the possibilities of drastic financial damage, disputes in compliance, and severe reputational damage, but they also tend to undermine the quality of information, which could then result in poor decision-making. They may even be in acute legal trouble later on (Ross, 1959). Inaccurate data can result in incorrect financial statements, which bewilder management and cause them to make poor strategic decisions. It also serves as a potential point of litigation (Best, 2004). In addition, misrepresenting financial information defrauds stakeholders, making the company lose its reputation and disempowering the confidence of shareholders (Jackson, 2004). Therefore, the necessity of accurate financial data for EAIS is very much evident. Even though all undeniably agree on the significant role of data correctness, a research gap exists, and no text is dedicated to studying it as the intervening variable in the relationship between EAIS and business efficiency. This study aims to bridge this

gap by investigating how financial data accuracy moderates the effectiveness of EAIS in enhancing business business efficiency.

2.3. Moderating Effect of Financial Data Accuracy

The moderating effect of financial data accuracy describes the strength of the relationship between EAIS integration and functional efficiency as an indicator of the quality of financial data within the electronic accounting information system. It is the correctness of financial information that increases the efficiency of an EAIS, such that with more accuracy, operation efficiency is increased further as a result of an improved effect on the function of these systems on business business efficiency (Ball, 2001). Like any other information system, FTIS efficiency has the potential to be negatively impacted by the lack of accuracy of financial data, as that nonconformity erodes the expected FTIS benefits, which consequently suppresses business business efficiency, as the model suggests (Paauwe, 2004). Several prevailing academic papers demonstrate the significance of data accuracy in increasing organisational effectiveness. Examples of benefits that may result from this enhancement include better business efficiency visibility, which may aid in better financial management, and improved efficiency in business operations, which leads to reduced costs (Peppard et al., 2007). Reliable data, to a great extent, enables an enterprise to scrutinise and monitor its financial health, detect looming issues and prevent them from becoming significant financial hurdles, and activate counter-measures as soon as a threat of financial frailty is discerned (Wright et al., 2015). However, the exact contribution of this factor to the association between EAIS and business efficiency needs further research. This study hypothesises that:

Hypothesis 1 (H1). EAIS–Financial data accuracy interrelation enforces a positive effect on business efficiency according to the following formula: when the accuracy of financial data increases, the positive impact of EAIS on business efficiency will also increase.

2.4. Mediating Effect of Financial Data Accuracy

The mediating role of financial data accuracy has to do with how it helps in the communication of the merits of EAIS to business efficacy. The reason is that EAIS, with the help of accurate financial data, can be made more functional and reliable. Hence, their overall efficacy can be improved conservatively, leading to better business outcomes (Jenkins et al., 2009). Receiving verifiable financial data ought to be a key output of EAIS so that the latter can be the tool to guide managers to effective decision-making and strategic planning (Moffitt & Vasarhelyi, 2013). A study that was conducted in this field indicated that if the data kept in the system are accurate, it also entails various business returns, for instance, better possibilities of making informed decisions, superior financial situation, and improved operational efficiency, among others (Allioui & Mourdi, 2023). Indeed, accurate financial data allow organisations to have reliable budgets, more dependable predictions, and other quantitative analyses, which in turn would be pivotal in making the right strategic fits and, in the end, fulfilling their long-term business strains (Sottile, 2023). In any case, this important role of financial data accuracy, to a significant degree, has yet to be explored in an appropriate method as to the position of an intermediary in the relationship between EAIS and business efficiency. This study proposes that:

Hypothesis 2 (H2). Financial data accuracy serves as the medium of information transfer in enhancing organisation efficiency, that is, stronger and specific support; data accuracy conforms to this medium.

2.5. Theoretical Background and Conceptual Framework

This article utilises a resource-based view (RBV) perspective to build a theoretical junction and concluding remarks of the study, which shows a direction that a company's resources and competence can play a crucial role in gaining market sovereignty and achieving a company's top business efficiency (Litvinenko et al., 2023). EAIS and some financial data correctness are, on the other hand, seen as very vital resources that can be considered indispensable because they enable the good management of financial information in the organisation's strategies or decision-making (Allioui & Mourdi, 2023; Miragaia et al., 2024). Taking the RBV approach, resources like those that are VRIN (valuable, rare, inimitable, non-substitutable) create a sustainable competitive advantage (Purba et al., 2023). Internal management and information systems, on the other hand, including the financial data and modern technology to support them, can also be seen as such resources. This system can offer companies an opportunity to operate more effectively and efficiently, which, in the end, improves their business efficiency. The synergy of EAIS and the use of accurate financial data portrays the significance of this factor on organisational effectiveness, as good financial reports present important insights into management (Shamali, 2023). The research reviewed suggests the critical position of financial data correctness within the electronic accounting information system for enterprise accuracy. In this research domain, however, we still need to learn crucial evidence about the mechanisms of accentuating or mitigating the effect of data quality on business efficiency, among other factors. This article closes this research gap by investigating these phenomena. It gives a reference for decision-makers on strategic planning to apply an accompanying company management strategy with a high level of money data accuracy to boost the productivity of their EAIS and improve the business efficiency of the entire business. The following conceptual framework and the hypothesised relationships are shown in Fig. 1.

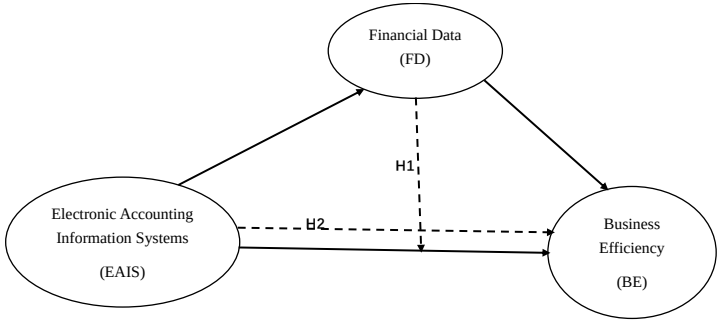

Fig. 1. Conceptual framework

Research Method

3.1. Measurement

The financial data accuracy, the electronic accounting information systems (EAIS), and the business efficiency were the primary variables, which were analysed using the required structured questionnaire survey. Respondents described their level of agreement with each of the items on the survey through an item-by-item scoring of questions 1-18 (strongly disagree to strongly agree, respectively, on a 6-point Likert scale). A six-point scale was selected to encourage respondents to support the statements by removing neutral options. Thus, this neutralisation would minimise a bias that people might have toward the neutral answer (Mutyavaviri et al., 2024). The accuracy of the financial data was the independent variable, which was surveyed using six mirror-like items borrowed from previous research works (Chen & Xiong, 2024). These items covered three aspects: precision of the companies' financial data, reliability, and consistency. The EAIS variables incorporated seven reflective items of Liu and Fu (2024) and Hesami et al. (2024) - these covered the confirmation and the effectiveness of EAIS in the optimisation of financial transactions, improvisation of data management, and development of decision-making components. Business efficiency, with a focus on the profit target achievement, growth in sales, and growth in profits, was the dependent variable, which was measured by formulating five items from Alarussi and Gao (2023).

3.2. Data Collection and Sampling

Information was gathered among companies that specialised in accounting information systems, which were identified by the industry directories and professional networks. A purposive random sampling method was used, and the selection of companies was based on these criteria: (i) actively working, (ii) achieved one major project recently, and (iii) participation was voluntary. A list of potential respondents was categorised at first, and these companies were later contacted via electronic mail or telephone, where the representatives introduced the project's aims and objectives and encouraged them to join the research. Of all the companies (600 total number) that were contacted, the overwhelming majority (350) agreed to take part in the survey, and 183 respondents gave useable answers, which was approximately 52.3% of the final response rate.

3.3. Respondents' Background

The profile of the respondents highlighted that the majority - about 90 (49.2%) - were from companies whose core business activities were software development for accounting, whilst there were 93 (50.8%) who were employees of businesses, mainly operating under currency risk management. The participants had a different scope of management with regard to the kind of authority they had; 60 (32.8%) were principals, 40 (21.9%) were general managers, 35 (19.1%) were managing directors, 30 (16.4%) were chief executives, and the rest were the proprietors. Most respondents had wide-ranging business knowhow, with 120 (65.6%) thereof with over 15 years of experience, 35 (19.1%) with 5-10-year experience, 20 (10.9%) with 11-15 years of experience, and the remaining pool with less than five years of experience in the airline management industry. Since all the companies that participated were based in the US, there was a unique distribution regarding the region of coverage: 100 companies (54.6%) operated in states,

60 companies (32.8%) operated nationwide, and 23 of them (12.6%) had international business operations. In terms of the business activities pursued, 54.6% undertook software development, financial data analysis was the specialisation for 30.1%, and consulting in this aspect came as a requirement in 15.3% of the businesses. Being conscious of the probable impacts of the company sector, area of coverage of business, and sector of primary business concern on business efficiency determinants, the researchers made a multi-level analysis supported by (a data source; Kock & Hadaya, 2019). The findings of the analysis showed that while business types may be significant ($\beta = 0.02$, $p = 0.41$), so are operating areas ($\beta = 0.05$, $p = 0.22$) and main business focus ($\beta = 0.10$, $p = 0.08$), pointing to the fact that these factors do not influence individual business efficiency predictors.

3.4. Statistical Power and Common Method Bias

The square root of the inverse method was used to cross-verify if the sample size was capable enough to yield over 80% of statistical power (Kock & Hadaya, 2019). The sample size was estimated assuming a 0.05 significance level, 0.80 power level, and an absolute significant path coefficient of 0.195 to be 170. Therefore, 183 responses were taken as recommended in the Aguinis et al., 2018 study. In order to control for potential common experience methods, Harman's single factor and a full collinearity test were (conducted (Jakobsen & Caspersen, 2016; Kock, 2018). Harman's single-factor test revealed that the factor that explained the greatest amount of variance was the first amongst others, which lay within the upper limit of 0.40, as proposed by Joo et al. (2023). Furthermore, the full collinearity test showed that AFVIF was around 1.205, which is still below the recommended level (3.3). Therefore, no common method bias was influential.

Data Analysis

The data was analysed through PLS-SEM with the help of WarpPLS 7.0 for several reasons. This research is an environment to feature the estimation of the significance of moderating and mediating roles of financial data accuracy in e-accounting information systems (Rahahle et al., 2024). Also, the model is formulated with a formative variable of business effectiveness, which makes the method of Partial Least Squares Structural Equation Modelling (PLS-SEM) suitable (Wang et al., 2023). In the same way, it is necessary to evaluate latent variables' scores for the latter studies, as Ringle et al. (2023) asserted. The model is considered complex because it includes moderators and mediators in addition to the independent and dependent variables (Assaker & O'Connor, 2023). Starting with the data analysis, the model was validated by evaluating both reflective and formative components of the model. This was then followed by confirming the structural model and conducting a mediation/moderation analysis.

4.1. Measurement Model Assessment

The reflective variables testing of the e-accounting information systems and financial data accurateness were checked for reliability and validity. To verify the reliability of the factors, we computed Cronbach's alpha, composite reliability, and Dijkstra-Henseler Rho_A. The loadings for Cronbach's alpha and Dijkstra-Henseler Rho_A should not exceed 0.7. Furthermore, the CR

must fall into the indicated range of 0.70 to 0.90, as given by Legate et al. (2023), Cáceres-Matos et al. (2023) and Gyamera et al. (2023). Table 1 demonstrates that Cronbach's alpha, the CR, and Dijkstra-Henseler Rho_A have surpassed the required criteria, thereby validating the internal consistency of the variables. An assessment was conducted to determine the reliability of the indicators. The results indicated that the factor loadings were greater than 0.50, with a p-value of < 0.05, except for one item (FD5). However, the item was kept due to its substantial p-value of $p < 0.05$, low cross-loading (less than 0.3), and strong loadings of the other items that met the CR cut-off point (Udayamalee et al., 2023). The results provided evidence for the dependability of the reflecting factors.

Table 1: Reliability of the Reflective Variables

Construct	Cronbach's alpha	CR	Dijkstra-Henseler Rho_A	Factor loading	Cross loading	P value
Financial Data Accuracy (FDA)	0.709	0.811	0.711			
				(0.694)	-0.227	< 0.001
				(0.675)	0.116	< 0.001
				(0.698)	0.048	< 0.001
				(0.750)	-0.109	< 0.001
				(0.578)	0.221	< 0.001
Business Efficiency (BE)	0.714	0.808	0.739			
				(0.528)	0.117	< 0.001
				(0.534)	0.139	< 0.001
				(0.786)	-0.093	< 0.001
				(0.798)	-0.094	< 0.001
				(0.470)	0.166	< 0.001
				(0.708)	-0.092	< 0.001

In the absence of any formative VIFs, a zero value of the Fornell-Larcker criterion was computed, and a zero value of the Fornell-Larcker criterion was reached. A regression of reflective variables with Sumit's micro ATM network influences was done. The VIF results were all below the threshold, which is taken as an indication of no severe collinearity being present on any of the concentration metrics. The Fornell-Larcker criterion and full collinearity VIFs were both upheld by the reflective variables, showing no mutual interdependence. Ratios created by the square root of the average variance extracted and the correlations involving that latent variable, as given by Dirgiatmo (2023), are shown in Table 2. In Table 2, the square roots of the average variances extracted from the latent variables LQ and LP were greater in value than the square roots of all other values in the same column. The overall VIFs for the collinearity all range below the threshold of 3.3, which clearly indicates that there is no collinearity. The second step was to compute the measurement model, which dealt with weight measures of the formative variable and check if the indicators show collinearity and are significant (Becker et al., 2023). Table 3 illustrates the measurement model for the assessment of the formative variable.

Table 2: Validity of the Reflective Variables

	FDA	BE	EAIS	Full collinearity VIFs
FDA	(0.681)	0.150	0.268	1.097
BE	0.150	(0.875)	0.443	1.329
EAIS	0.268	0.443	(0.650)	1.261

Both factors were weighted positively, with two having the best weight of 0.385 and the other five having weights of 0.376. These weights are different than zero. Consequently, the smallest p-value was associated with the variable of inaugural entrepreneurship, that is, 0.05. The formative variable had no VIF more than 2.5. Hence, this meets the criterion set by Sanni (2023). There is vast empirical evidence that the use of collinearity VIF to check for multicollinearity is considered a simplistic diagnostic procedure (Streukens & Leroi-Werelds, 2023). The mean VIF for the full collinearity was 1.261, which was less than 3.3, the cut-off point proposed by Kock. The results met these conditions; hence, the measurement model for the formative variable was good enough. Table 3 shows the variables used in this study, such as the weight, p-value, VIF, and Full collinearity VIF, by using SEM PLS.

Table 3: Evaluation of the Measurement Model for the Formative Variable

Variable	Weight	p-value	VIF	Full collinearity VIF
Business Efficiency (BE)	0.382	< 0.001	2.063	1.261
BE2	0.385	< 0.001	2.149	
BE3	0.376	< 0.001	1.932	

Structural model examination comprised lateral collinearity, the explanatory triad value, self-relevance, and that of the relationship in the model was determined and measured using the coefficients of determination: R2 and Q2 introduced by Rasouli et al. (2023). The variance inflation factor (VIF) average was calculated as 1.033, while AVIF and AFVIF values of 1.033 and 1.192 resulted, respectively. The VIF score for both AVIF and AFVIF scores was below 3.3, indicating the absence of multicollinearity among the factors (Ali et al., 2024). The business efficiency path coefficient was statistically significant at the level ($p < 0.05$), and together with R^2, both ratio and significance indicate quite a reliable level of predictive power (Legate et al., 2023). The Stone-Geisser Q^2 as an extra estimator for the prediction was provided (Jhantasana, 2023). The structural model provided a Stone-Geisser Q^2 (Cross-Validation Redundancy) value of 0.202, which is a relatively large score and indicates a certain degree of predictive capability. The result value of Simpson's paradox was 1.000, being able to surpass the lower limit of 0.7 proposed by Ivanov et al. (2024).

4.2 Structural Model Assessment

The examination of the structural model included examining for lateral collinearity, determining the significance and relevance of the relationship in the structural model, and calculating the coefficients of determination (R^2) and predictive relevance (Q^2) using the methodology outlined by Batra (2024). The study investigated lateral collinearity by calculating the average block variance inflation factor (AVIF) and AFVIF values. The AVIF value was 1.033, and the AFVIF value was 1.192. Both values were below the cut-off point of 3.3, indicating that there were no collinearity difficulties in the study. The path coefficient of business efficiency was statistically significant ($p < 0.05$) with a R^2 value of 0.256, indicating a moderate level of predictive accuracy (Mishra et al., 2023). In addition, the Stone-Geisser Q^2 is added as an additional metric for evaluating predictive relevance (Nadella, 2023). The structural model exhibited a Stone–Geisser Q^2 (cross-validated redundancy) value of 0.252, indicating a significant level of predictive capability. The model's Simpson's paradox ratio was 1.000, which exceeded the minimum threshold of 0.7 set by Nadella (2023).

4.3 Model Fit and Quality Indices

The additional model fit and quality items for PLS-SEM are generated by cutting them down. Furthermore, the initial model fit and quality with PLS-SEM are characterised by the indices that Kock determined in 2010 and 2020. The Tenenhaus GoF is 0.319, which is considered to be a medium-level point. The suppression statistic, which measures the strength of statistical suppression, is exceeding the threshold of 0.7 and is approximately 1.000. SRMR is a metric that provides information on how well the model is evaluating the residuals. It was found that the model was within the specified range, with the Root Mean Square Residual (SMAR) ascertained to be 0.100. The value of the SMAR, which quantifies the average discrepancy on the measurement, is calculated to be 0.092; it is below the cut-off 0.1 value. The chi-squared test with 77 degrees of freedom yields a standardised value of 2.495, with the p-value for these statistics being less than 0.001. The standard score difference count ratio (STDCR) is 0.936, as the value does exceed the bottom limit of 0.7. In the same way, the indicator of standard score difference sum ratio (STDSR) reads 0.838, where even passing the value of 0.7. It has been demonstrated that the insightful and definite prediction ability and prediction accuracy of the model were considerably achieved.

4.4 Moderation Analysis

Moderation analysis has a one-tailed value, ensuring new information about the research is generated. The hypothesis becomes convincing and positively credible if the p-value is way less than or equal to 0.05 (Mateu et al., 2024) And the t-ratio test ratio is between ±1.645 (Kock & Hadaya, 2018), which is often the case in research. Table 4 shows the path EAIS→ND statistically significant at a significant level, which indicates a negative relationship between the formative and behavioural elements. Thus, the relationship indicated by H2 was articulated, as the formative variable emerged as a significant indicator that the behavioural change did not take place. The moderating effect size was measured using the methodology based on Kenny's guidelines, in which the f^2 values of 0.05, 0.01, and 0.25 are respectively seen as small, medium, and very large. The following Figure 2 shows the low and high values of the moderator variable and data point by standardised scales

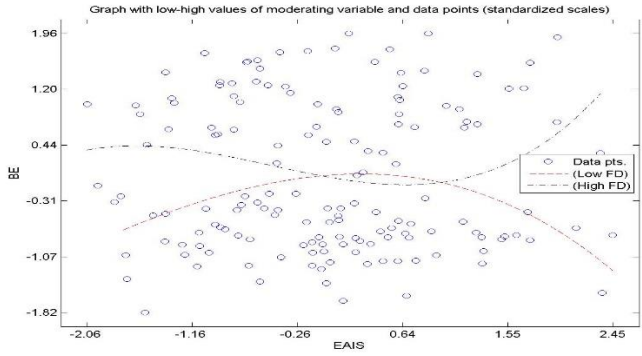

Figure 2 Standardized scales of the moderator

The above figure, as we see, shows the bothe effect low and high for the moderator at one time. Figure 3 separates the low and the high effects to show clear respect for the moderator in each level of effect.

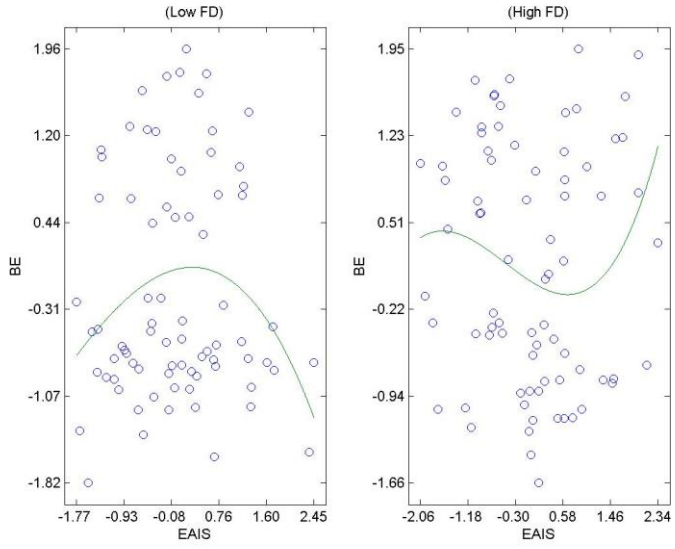

Figure 3 Low and high effect of the moderator

The moderator effect plays a major role in this study, so we should see this effect in all damnation following Figure 4 shows the moderator effect in a 3d graph.

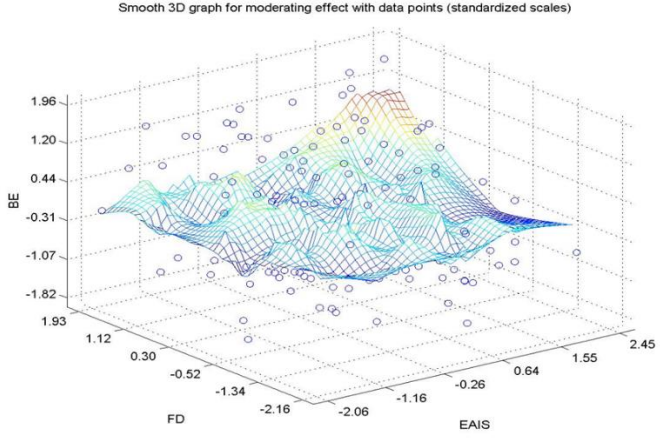

Figure 4 Moderator effect shown in 3d graph

The result showed that the effect size of moderation Type*EAIS->BE, where $f^2 = 0.026$, is large.

Table 4 hypothesis results

Number	Hypothesis	Standard Beta	Standard Error	p-value	t value	f^2	Decision
H1	FDA* EAIS->BE	-0.134	0.076	0.040	-1.763	0.026	Rejected (different sign)

The results of the moderating effects were succinctly shown in a dedicated graph (Fig. 5) for simplification. The diagram depicts the varying and considerable impact of the correctness of financial data on the relationship between electronic accounting information systems and business efficiency.

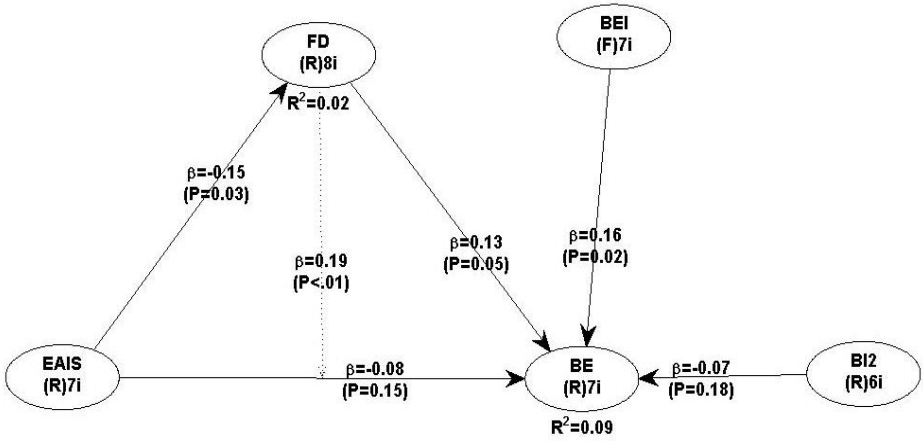

Figure 5 Conceptual model results

The relationship between the implementation of electronic accounting information systems (EAIS) and business efficiency is stronger for companies with low financial data accuracy compared to those with high financial data accuracy. This is indicated by the steeper slope of the low financial data accuracy line in the EAIS->BE relationship. Furthermore, there was an upward movement of the line representing organisations with low financial data accuracy, indicating that when these companies incorporated more electronic accounting information systems, their company efficiency improved. In contrast, the slope of organisations with excellent financial data accuracy decreased in a left-to-right direction, indicating a negative correlation. Companies that have a high level of accuracy in their financial data experience a decrease in the impact of electronic accounting information systems on business efficiency. The outcome refuted hypothesis H1 by demonstrating a robust positive correlation between electronic accounting information systems and corporate efficiency, particularly in cases where the accuracy of financial data is low.

4.5 Mediation Analysis

The bootstrap test was used to do mediation analysis. Mediation is said to occur if the ascertainable EAIS->FD->BE effect is statistically significant at a significance level ≤ 0.05 of≥ 1.96. Meanwhile, to confirm the mediating effect, also termed the bias-corrected bootstrap confidence interval about the population mediating effect (Preacher & Hayes, 2008), it should be free from zero. Table 5 results give the information that the rating for the path coefficients (EAIS -> BE) is equal to beta = 0.119 at a significance level (p) of 0.024 ($p < 0.05$) and a t-value that exceeds 1.96. Consequently, the effect size has a minor effect of 0.027. Bootstrap test for indirect effect of the CI with 0.018 (LL) and 0.135 (UL), respectively, concludes no mediation since the intervals do not contain zero. This indicates that the correctness of financial data plays a mediator role in the relationship between electronic accounting information systems and business efficiency, and thus hypothesis H2 is substantiated. Assuring the form of mediation involves the extraction of required information with the aim of analysing the magnitude of the direct effect (Montoya, 2023). On the other hand, Table 5 presents that the direct EAIS effect is beta = 0.135, the t-value that is higher or equal to 1.645, and the p-value that is within the significance level, which is 0.039 ($p < 0.05$) (Shuliakouskaya, 2023). Therefore, this shows the strong direct relationship as initially suggested by Hashim et al. (2023).

Table 5 presents that the direct EAIS effect

Path	Coefficient (β)	p-value	t value	Lower Level (LL)	Upper Level (UL)	Effect Size (f^2)	Decision
EAIS -> FDA	0.135	< 0.001	2.495	0.018	0.135	0.027	Supported
FDA -> BE	0.119	0.039	1.963	0.027	0.135	0.026	Supported
EAIS -> BE	0.135	< 0.001	2.495	0.018	0.135	0.027	Supported

The findings of the study indicated that financial data accuracy somewhat mediates the association between electronic accounting information systems and business efficiency.

Discussion

Two aspects of the correlation found in the data are specified: the former, which is direct; the latter, which, meanwhile, is indirect and depends on the correctness of financial data. The full findings of the study are presented in Table 5. Though we designed the initial argument with ready-for-growth companies in mind, the results have discovered that the negative effect of inaccurate financial data has more impact on the relationship of EAIS and efficiency in non-ready growth companies rather than financially accurate companies. Hence, the proclaimed hypothesis H1 is albumen. However, an additional interrelation, which states that the better the accuracy of financial data, the closer the connection between EAIS and business efficiency, would often be very feasible in organisations of the study. The effect could be explained by the context-specific attributes of the operational entity, in which detailed financial information is either hard to reach or gets low financial priority. Such a situation could lead organisations to tune in to their well-developed EAIS skills and internal resources to improve their business performance, yet indicating a stronger correlation between EAIS and business efficiency.

Besides, our results prove that the increase in financial data attributes (correctness), to some extent, acts as a mediator in reinforcing the relationship between EAIS and efficiency, thereby confirming hypothesis 2.

Moreover, if companies have one extra EAIS, they are presumed to deliver a commercial accomplishment of increasing all-business efficiency by 0.259 units compared with other companies. On the other hand, even including financial data correctness, the analysis shows that the activity of companies with the extra unit of EAIS will result, among other things, in a 0.124 unit augment in business efficiency. This is because the alignment of composes to ambiguity accuracy of financial data helps in reducing the impact of EAIS on business efficiency. On the other hand, the results often reveal that financial data accuracy is an important mediator. The use of accurate and specific financial data in EAIS enhances the efficiency and dependability characteristic of the system, giving rise to improved financial outcomes. For example, the improvement in the quality of financial data use allows a firm to streamline the decision-making process, better allocate resources, and improve all operations, hence, business efficiency. In addition, such data intimates that the claims presented in the literature regarding the effect of data accuracy on the relationship between EAIS and company performance are invariably the case.

Table 6 Results of Mediating Analysis

Hypothesis	Std. Beta	Standard Error	p-value	t value	f^2	95% Confidence Interval (bias-corrected)	Decision
						LL	UL
H2: Innov->FD-BE	0.124	0.054	0.011	2.296	0.027	0.018	0.135
Total effect	0.259	0.074	≤ 0.001	3.500	0.057	-	-
Direct effect	0.135	0.076	0.039	1.771	0.030	-	-

Note: t-value ≥ 1.96 for the two-tailed test (mediation effect) and t-value ≥ 1.645 for the one-tailed test (direct effect) with a confidence level of 0.95.

Contributions

6.1. Implications and Practical Contributions

The forthcoming part of the article will disclose the implications of the findings on the management level. The study provides evidence that emphasises the importance of harmonising the accuracy of financial data with the EAIS focus in order to get the best performance and establish a strong correlation between EAIS and the efficiency of the organisation. Organisations must be strategic in establishing flexible approaches that ensure that their EAIS initiatives are appropriately guided by the established financial data processes to ensure that the organisation enjoys enhanced efficiency. In addition, emphasis on data quality is essential for many organisations.

6.2. Theoretical Contributions

According to precise knowledge of the benefits of accurate financial data, companies may find it easy to meet future challenges and ensure that a good performance level is maintained. Senior executives play a key role in ensuring there is suitable communication, efficient data gathering systems, and point persons, as well as their financial data management teams, for the purpose of reducing risks during the introduction of EAIS. Moreover, policymakers would likely be able to apply the results to their dilemmas and responses to financial data transparency and EAIS.

Conclusion

Proper implementation of EIA can be done through state policies, financial aids, and industrialisation standards, which can promote Enterprise Authentication Information Systems (EAIS), thereby increasing the efficiency of the government. There are multiple ways in which the current study can be enhanced. This analysis specifically excludes the consideration of client heterogeneity and different types of EAIS. The existing understanding can be deepened by enhancing the model through an investigation into how various types of clients and EAIS (Enterprise Artificial Intelligence Systems) influence the impact of financial data accuracy on the link between EAIS and business efficiency. Furthermore, studying the factors that drive organisations to implement effective or ineffective financial data accuracy strategies can yield valuable insights into the consequences of financial data correctness. Additional research should investigate additional factors that can influence and regulate the relationship between EAIS and success, such as the geographic regions in which organisations operate or the amount of employees' EAIS capacity.

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