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CEO Characteristics: Navigating Accounting Conservatism Via Technology And Information Investment

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Abstract: The study examined the influence of CEO characteristics, including educational background and gender, on accounting conservatism. The study used a quantitative approach. The population was in the banking sector from 2020 to 2022. The study selected 40 companies through purposive sampling, resulting in 120 observations data. The research collected data from audited financial and annual reports, available on www.idx.co.id. The data were analysed using path analysis facilitated by Smart PLS. The findings indicate that the CEO's educational background and gender do not influence accounting conservatism. CEOs with educational backgrounds in accounting and related fields negatively influence technology and information investment, as do female CEOs. Technology and information investment influence accounting conservatism. Interestingly, technology and information investment mediate between female CEOs and accounting conservatism, while educational background does not. Decision-makers in the banking sector can leverage these findings to design strategic decisions.
Keywords: Accounting Conservatism; CEO Characteristics; Digital Era; Technology and Information Investment.

Abstrak: Studi ini meneliti pengaruh karakteristik CEO, termasuk latar belakang pendidikan dan gender, terhadap konservatisme akuntansi. Penelitian ini menggunakan pendekatan kuantitatif dengan populasi di sektor perbankan dari 2020 hingga 2022. Sampel 40 perusahaan dipilih melalui *purposive sampling*, menghasilkan 120 data observasi. Data dikumpulkan dari laporan keuangan yang diaudit dan laporan tahunan, yang dapat diakses di www.idx.co.id. Analisis data dilakukan menggunakan *path analysis* dengan *Smart PLS*. Temuan menunjukkan bahwa latar belakang pendidikan dan jenis kelamin CEO tidak berpengaruh pada konservatisme akuntansi. CEO dengan latar belakang pendidikan di bidang akuntansi dan terkait memberikan pengaruh negatif pada investasi teknologi dan informasi, demikian juga CEO perempuan. Investasi teknologi dan informasi memengaruhi konservatisme akuntansi. Menariknya, investasi teknologi dan informasi berfungsi sebagai mediator antara CEO perempuan dan konservatisme akuntansi, sementara latar belakang pendidikan tidak. Para pengambil keputusan di sektor perbankan dapat memanfaatkan temuan ini untuk merancang keputusan strategis.
Kata Kunci: Era Digital; Investasi Teknologi dan Informasi; Karakteristik CEO; Konservatisme Akuntansi.

INTRODUCTION

In the contemporary landscape of global finance, the issue of accounting conservatism emerges as a critical concern, particularly in light of the looming threat of a global recession. The implications of a slowdown in global economic activities underscore businesses' need to adopt a proactive approach to financial reporting. As highlighted by the (International Monetary Fund, 2022), the prevailing uncertainties surrounding future economic conditions emphasise the crucial role of accounting conservatism in mitigating risks. Accounting conservatism plays a crucial role in risk mitigation, with its principle of prudence guiding companies away from imprecise resource management and allocation. During a global recession, conservatism in financial reporting assists companies in the early recognition of financial risks. Recognising more considerable losses or maintaining higher reserves aids companies in risk management. Companies with higher levels of accounting conservatism are better equipped to mitigate the impact of pandemics (Saputra & Munir, 2023). As long as accounting retains its pragmatic nature, conservatism will endure (Christensen, 2023). Consequently, the topic of accounting conservatism has piqued the interest of several researchers in recent years (Noh et al., 2023; Hou et al., 2023).

Extensive research has delved into the factors shaping accounting conservatism, contributing significantly to this body of knowledge. One particularly intriguing avenue of inquiry lies in the realm of CEO characteristics, encompassing the educational background and gender of these corporate leaders. CEOs with an accounting background exhibit a heightened sensitivity to their companies' critical financial issues (Ghardallou et al., 2020; Oehoedoe et al., 2023). Paradoxically, (Hu et al., 2017) propose that CEOs with such backgrounds tend to display lower levels of accounting conservatism. Nevertheless, an educational background in accounting can empower CEOs to diligently oversee the effectiveness and efficiency of a company's operations, thereby reducing aggressive accounting practices (Hou et al., 2023).

Furthermore, the impact of CEO gender on accounting conservatism is a multifaceted subject, with research presenting varying perspectives. Companies under the leadership of female CEOs tend to embrace a more conservative stance. The inclination is manifested through the maintenance of higher capital levels, a strategic move aimed at mitigating potential risks. The viewpoint gains further credence through corroborating evidence from other notable investigations (Alves, 2023; Witono et al., 2022). However, amidst this consensus, the research landscape consists of dissenting voices. Contrary to the prevailing narrative, (Ulviana, 2022) challenges the notion that CEO gender significantly influences accounting conservatism within companies. Thus, while certain studies point to a clear correlation between female leadership and accounting conservatism, the contrary findings of (Ulviana, 2022) emphasise the importance of considering a range of factors when exploring the intricate interplay between CEO characteristics and accounting conservatism.

Investments in technology and information have become imperative in the digital era, particularly for the financial sector, such as banks. The benefits of information technology in the banking sector extend beyond the banks themselves. Consumers can save transaction time and experience simplified service usage through digitisation (Sloboda, 2019; Ayodele et al., 2023; Wang et al., 2022). The pandemic has underscored the role of information technology in banking (Pawlowska & Staniszewska, 2023). Investments in information technology can enhance profitability and sustainable innovation, aid in achieving operational efficiency, and mitigate the risk of bankruptcy (Gaudio et al., 2020; Chhaidar et al., 2022; Ali et al., 2020;(Oduro et al., 2023). (Jaimuk et al., 2019) revealed that technology and information positively impact accounting conservatism. Companies venturing into or developing new technologies operate in conditions of uncertainty, making conservative accounting practices more prudent (Mirza & Ahsan, 2019). Conversely, in situations with high investment opportunities, companies may be more optimistic about recognising the potential profits from those investments and, thus, tend to be less conservative. (Hou et al., 2023) indicated that companies with better monitoring technology access are inclined to be less conservative in their financial reporting.

CEO characteristics also influence investments in information technology. Executives play a crucial role in strategic decision-making, including determining the extent of investments in technology and information. The CEO's level of education influences strategic management accounting, which focuses on using accounting information to support organisational decision-making (Kalkhouran et al., 2017). CEOs with accounting backgrounds may bring a different perspective to technology investments. They are likely to consider risk, ROI assessment, and investment priorities. Research has demonstrated that CEOs with business education backgrounds exhibit higher and more stable cash reserves.

In contrast, CEOs with technology backgrounds tend to be more aggressive in their investments, leading to significant investment losses (Mun et al., 2020). IT professionals generally need to gain the skills to integrate technology with business. Business considerations, rather than technical ones, drive IT investments. On the other hand, research reveals that CEOs with financial education backgrounds negatively influence technology innovation (Gao et al., 2023). Female CEOs have promoted and encouraged technology innovation, ranging from small changes to significant transformations (Han et al., 2019). Female CEOs tend to engage in overinvestment when making investment decisions (Ullah et al., 2021). This contrasts with studies (Mo & Lee, 2022) and (Ullah et al., 2020) that suggest female CEOs suppress investments to an efficient level. The influence of CEOs with accounting, economics, and business backgrounds, as well as CEO gender, on technology and information investments still requires confirmation.

This research aims to address a research gap by confirming the impact of a CEO's educational background and gender on accounting conservatism in the banking sector. This study aims to confirm the upper echelon theory by Hambrick & Mason (1984) suggests that top executive's personal traits, including values, backgrounds, experiences, and perspectives, shape their decision-making and influence the company's strategies. Additionally, the study explores information technology investments as a mediating factor in the relationship between CEO characteristics and accounting conservatism. The inclusion of technology as a research variable responds to the research recommendations of (Hejranijamil et al., 2020). The role of technology and information in accounting conservatism is also aligned with agency theory (Jensen & Meckling, 1976). Investments in information technology can be used to identify, measure, and manage risks more effectively, encouraging companies to adopt more conservative accounting practices to reduce conflicts of interest.

Based on this research background, the research questions are formulated: (1) Does the CEO's educational background influence accounting conservatism? (2) Does CEO gender influence accounting conservatism? (3) Does the CEO's educational background influence technology and information investment? (4) Does technology and information investment influence accounting conservatism? (5) Does CEO gender influence technology and information investment? (6) Does the CEO's educational background influence accounting conservatism mediated by technology and information investment? (7) Does CEO gender influence accounting conservatism mediated by technology and information investment?

This study contributes to the understanding of the influence of CEO educational background and gender on accounting conservatism and the impact of technology investments, which are relevant in the face of global uncertainty. The research findings can assist banking companies in risk management and making better strategic decisions.

THEORETICAL REVIEW

This research is grounded in agency theory, which highlights the inherent interests between agents and principals (Jensen & Meckling, 1976). This theory emphasises the need to minimise agency conflicts when management possesses better information about the company's operations than the shareholders. In the context of accounting conservatism, agency theory can explain that shareholders want to ensure that financial reports accurately reflect the company's performance and associated risks. However, management tends to have incentives to report higher profits, as it can increase their compensation or provide a more positive image of the company. Accounting conservatism aims to address this agency conflict by requiring management to be more conservative in recognising revenue or gains while recognising losses or expenses quickly. Consequently, accounting conservatism creates more cautious and potentially slightly pessimistic financial reports, which can offer additional protection to shareholders against the risk of being "overstated" (reporting excessively high profits).

In information technology (IT) investments, agency theory provides valuable insights into the dynamics between company owners and managerial decision-makers. As posited by agency theory (Jensen & Meckling, 1976), the inherent differences in interests between these two stakeholders can give rise to agency problems, thereby shaping the trajectory of investments in IT. This theory suggests that when agency problems arise, companies may find themselves at the crossroads of either overinvesting or underinvesting in IT resources. Overinvestments might be driven by managerial motivations to accrue greater power or control within the organisation, potentially fueling a desire for expanded decision-making authority. On the other hand, underinvestment may occur as a strategic choice to sidestep additional efforts that come with more substantial IT implementations. Agency problems significantly influence the decision-making processes related to IT investments, highlighting the intricate interplay between organisational stakeholders and the implications for strategically allocating resources in the technology domain (Dong et al., 2021).

The Upper Echelon Theory, initially proposed by (Hambrick & Mason, 1984), posits that individuals occupying top executive positions bring personal characteristics. These characteristics encompass values, backgrounds, experiences, and particular perspectives. These characteristics, in turn, influence how they make decisions and impact the strategies within the company. The Upper Echelon Theory is the foundation for this research to explain CEO characteristics, including educational background and gender. This theory supports the understanding that a CEO's characteristics, such as education and gender, can play a crucial role in shaping their perspectives, values, and decisions, which can, in turn, affect the strategies and actions of the companies they lead. Consequently, this research employs this theory to elucidate how CEO characteristics can influence the relationship between investment in information technology and accounting conservatism.

The agency theory framework highlights information asymmetry as a central concern, where executive management and shareholders possess varying access to information. This asymmetry can lead to conflicts of interest and adverse outcomes for shareholders. In an attempt to address this issue, the educational background of a CEO becomes a critical factor, as it directly influences their ability to navigate financial information and make decisions that align with shareholder interest. The CEO's educational background in accounting, finance, economics, and business is argued to be particularly advantageous in reducing information asymmetry. This is supported by the upper-echelon theory, which posits that

CEOs bring their characteristics, including educational qualifications, into the decision-making process. (Hambrick & Mason, 1984) noted that CEO characteristics are pivotal in shaping corporate strategies and actions.

Previous research has shown a positive influence on CEOs with educational backgrounds in accounting or finance (Hou et al., 2023). CEOs with such qualifications are better equipped to implement accounting conservatism practices, characterised by a cautious approach to financial reporting, emphasising prudence and risk mitigation. CEOs with knowledge in accounting, finance, economics, and business are more likely to adopt conservative accounting practices, thereby acting as a safeguard against aggressive actions that may benefit management at the expense of shareholders. CEOs with strong accounting, finance, economics, and business foundations possess enhanced analytical skills and a deeper understanding of financial reports. This heightened competence enables them to scrutinise financial data more effectively, identify potential risks, and implement accounting conservatism as a proactive measure. These CEOs contribute to a corporate environment by prioritising transparency and accountability and protecting shareholder interests.

Based on the theory, prior research, and logical reasoning, the following hypothesis can be formulated:

H1: CEOs with educational backgrounds in accounting, finance, economics, and business have a positive influence on accounting conservatism practices.

Agency theory explains that conflicts of interest between executive management and shareholders are unavoidable (Jensen & Meckling, 1976). This fundamental premise sets the stage for exploring the relationship between CEO gender, fiduciary responsibilities, and the ensuing impact on corporate practices. Irrespective of gender, CEOs are entrusted with the paramount duty of safeguarding shareholder interest. However, recognising gender as a determinant factor underscores the multifaceted nature of executive decision-making. This viewpoint aligns seamlessly with the upper-echelon theory, posited by (Hambrick & Mason, 1984). CEOs' characteristics, including gender, exert a discernible influence on their decision-making processes and, consequently, shape the overarching strategies of the organisation.

Prior research has revealed that female CEOs positively impact accounting conservatism (Alves, 2023; Witono et al., 2022). These studies illuminate the positive impact of female CEOs on accounting conservatism practices. Female CEOs exhibit a distinct approach to risk management, characterised by heightened vigilance in identifying and addressing potential losses at an early stage. Their inclination towards maintaining more enormous reserves serves as a proactive strategy, creating a financial buffer that can mitigate unforeseen challenges. By emphasising meticulous scrutiny of financial landscapes, female leaders play a pivotal role in assisting companies to recognise and navigate risks more effectively. This penchant for risk mitigation aligns seamlessly with widely acknowledged attributes of long-term focus and stability often attributed to women in leadership roles. In organisations, this means instilling confidence and strategic foresight that transcend short-term fluctuations. Based on theory, previous research, and logical reasoning, the following hypothesis can be formulated:

H2: Female CEOs have a positive influence on accounting conservatism.

Agency theory assumes that shareholders may have interests that differ from those of managers making investment decisions (Jensen & Meckling, 1976). Based on the upper echelon theory, the characteristics and backgrounds of individuals in top executive positions, such as CEOs, play a significant role in corporate decision-making (Hambrick & Mason, 1984). CEOs with educational backgrounds in accounting or finance negatively influence technology innovation (Gao et al., 2023). The logical reasoning behind this finding is inherent skill sets and perspective differences. CEOs with financial backgrounds may prioritise short-term financial gains over long-term technology and information investments, reflecting their predisposition towards managing risks through a financial lens rather than embracing innovation.

(Harymawan et al., 2020) also revealed that CEOs with an accounting background invest less in long-term projects, such as technology, which require significant capital expenditure. The logical underpinning of this phenomenon stems from the accounting-centric focus of these CEOs, predisposing them to prioritise financial aspects and risk considerations associated with immediate returns rather than committing resources to ventures with more extended gestation periods. Based on theory, previous research, and logical reasoning, the following hypothesis can be formulated:

H3: CEOs with educational backgrounds in accounting, finance, economics, and business have a negative influence on technology and information investment.

Upper echelon theory states that top executive management characteristics significantly influence company outcomes, encompassing the strategic decisions to enhance organisational performance (Hambrick & Mason, 1984). Within this context, CEO characteristics, including gender, emerge as influential factors in shaping technology and information investment. Concurrently, agency theory provides valuable insights into the investment decision-making processes, highlighting the potential conflicts of interest between shareholders and managers (Jensen & Meckling, 1976).

Previous research has indicated that companies led by female CEOs tend to invest less in technology and information (Mo & Lee, 2022; Ullah et al., 2020). The risk inherent in these leaders can be traced to diverse perspectives and approaches to decision-making, reflecting a blend of caution and prudence. By their unique perspectives, female CEOs introduce a different risk calculus into decision-making, ultimately influencing the organisation's strategic direction in technology and information. Drawing on the theoretical foundations of the upper echelon theory, coupled with the insights gleaned from previous research and logical reasoning, a hypothesis can be formulated:

H4: Female CEOs have a negative influence on technology and information investment.

Agency theory by (Jensen & Meckling, 1976) assumes differences in interest between shareholders and managers. Shareholders desire conservative information to reduce risk, while managers may be inclined to provide optimistic information to increase their compensation. The fundamental misalignment of interests emphasises the possible conflicts in decision-making procedures, particularly in investment matters. Expanding on this theoretical groundwork, incorporating technology and information into the corporate environment becomes a crucial element influencing the development of accounting conservatism.

Previous research has shown that technology and information positively impact accounting conservatism (Mirza & Ahsan, 2019; Jaimuk et al., 2019). This is attributed to the enhanced capabilities of advanced technology and information systems, enabling management to identify risks and measure them swiftly. Therefore, as outlined by agency theory, integrating technology and information serves as a mechanism to bridge the interest gap between shareholders and managers. Advanced technological tools empower management to fulfil shareholders' desire for conservative information by providing a more accurate and timely assessment of risks. This aligns with the fundamental principle that greater transparency and risk awareness contribute to a more conservative reporting stance. Based on theory, previous research, and logical reasoning, the following hypothesis can be formulated:

H5: Technology information investment has a positive influence on accounting conservatism.

Based on agency theory, differences in interests between management and shareholders result in information asymmetry (Jensen & Meckling, 1976). The knowledge possessed by CEOs with backgrounds in accounting or finance can influence their actions. Their decisions, informed by their educational background, may inadvertently exacerbate the existing disparities between management and shareholders. This aligns with the upper-echelon theory, which posits that the characteristics of top management play a role in decision-making (Hambrick & Mason, 1984).

Previous research has demonstrated the influence of CEOs with backgrounds in accounting and finance on technology and information technology investment (Gao et al., 2023; Harymawan et al., 2020). These investigations have illuminated the nuanced relationship between executive expertise in financial domains and strategic decisions about technological investments within organisations. Additionally, the influence of technology and information investment on accounting conservatism has been rigorously examined in prior research (Mirza & Ahsan, 2019; Jaimuk et al., 2019). This evidence suggests a linkage between educational background, technology and information investment, and accounting conservatism. CEOs with a foundation in accounting and related fields, influenced by information asymmetry as postulated by agency theory, are likely to mediate in these relationships. Based on theory, previous research, and logical reasoning, the following hypothesis can be formulated:

H6: CEOs with backgrounds in accounting, management, finance, and business influence accounting conservatism through technology and information investment.

In the framework of agency theory, the misalignment of interests between management and shareholders results in information asymmetry (Jensen & Meckling, 1976). The knowledge wielded by CEOs with backgrounds in accounting or finance and related fields can influence their behaviour, a phenomenon in line with the tenets of the upper-echelon theory. This theory underscores that top management characteristics affect corporate decisions and strategies (Hambrick & Mason, 1984).

Previous research has revealed the influence of female CEOs on technology and information investment (Mo & Lee, 2022; Ullah et al., 2020) and the impact of technology and information investment on accounting conservatism (Mirza & Ahsan, 2019; Jaimuk et al., 2019). Investing in technology and information is a pivotal strategy to elevate a company's transparency, monitoring capabilities, and accountability. The infusion of advanced technological systems can streamline data processing, improve access to critical information, and fortify mechanisms for overseeing various aspects of organisational performance. This technological advancement enhances communication and reporting structures, fostering an environment of openness and clarity. Based on theory, prior research, and logical reasoning, the following hypothesis can be formulated:

H7: Female CEOs influence accounting conservatism through technology and information investment.

METHODS

This study is quantitative. The population consists of companies in the banking sector from 2020 to 2022. The sample was determined using purposive sampling, resulting in a final sample size of 42 companies or 120 observations. The criteria for sample selection are presented in **Table 1.**

Table 1. Sample Selection Criteria

No.	Sample Criteria	Number of Companies
1.	Banking sector companies listed on the Indonesia Stock Exchange for the period 2020 to 2022	46 companies
2.	Companies that did not publish annual reports and financial statements for the period 2020 to 2022	One company
3.	Companies that did not provide the necessary data for the research	Five companies
	Total Sample Size	40x3 = 120 data observation

Sources: Authors, 2023

This research employs secondary data, specifically audited financial reports and annual reports of banking sector companies, which were publicly available on the official website of the Indonesia Stock Exchange (www.idx.co.id) from 2020 to 2022.
The study encompasses four variables, including the dependent variable, accounting conservatism; independent variables encompassing CEO education background and CEO gender; and a mediating variable, technology and information investment. The operational definitions, measurements, scales, and reference variables are presented in **Table 2.**

Table 2. Variable and Operational Definition

No.	Variable	Operational Definition	Measurement	Scale
1.	Accounting Conservatism	A company seeks to guarantee that uncertainties and risks in the business environment have been comprehensively considered in response to the inherent uncertainty.	$\text{CONACC} = \frac{(\text{NIO} + \text{DEP} - \text{CFO})x(-1)}{Total\ Asset}$ CONTACT: Accounting Conservatism NIO: Net Income DEP: Depreciation	Ratio

No.	Variable	Operational Definition	Measurement	Scale
			CFO: Cash Flow from Operating Activities (Dewi & Andriyani, 2023)	
2.	Educational Background CEO	It refers to the specific academic qualifications, degrees, and fields of study that the CEO has pursued and obtained during their formal education	1: Accounting, Business Management, Finance, otherwise: 0 (Ghardallou et al., 2020; Oehoedoe et al., 2023)	Nominal
3.	Gender CEO	It refers to whether the individual holding the Chief Executive Officer position within an organisation is male or female	1: Female CEO, 0: Male CEO (Alves, 2023; Witono et al., 2022)	Nominal
4.	Technology & Information Investment	It refers to the allocation of financial resources and efforts by an organisation to acquire, develop, implement, and maintain information technology systems and their training.	Natural log from the total cost of hardware, software, and education training (Purwita & Subriadi, 2019)	Ratio

The collected data was analysed using Smart PLS. This analytical tool was chosen due to the highly complex nature of the constructed model involving mediating variables. Smart PLS can test relationships with mediating variables in a single stage. Integrating different measurement scales, such as nominal and ratio, into a single model further strengthens the rationale for analysing data with Smart PLS. The following is the research model.

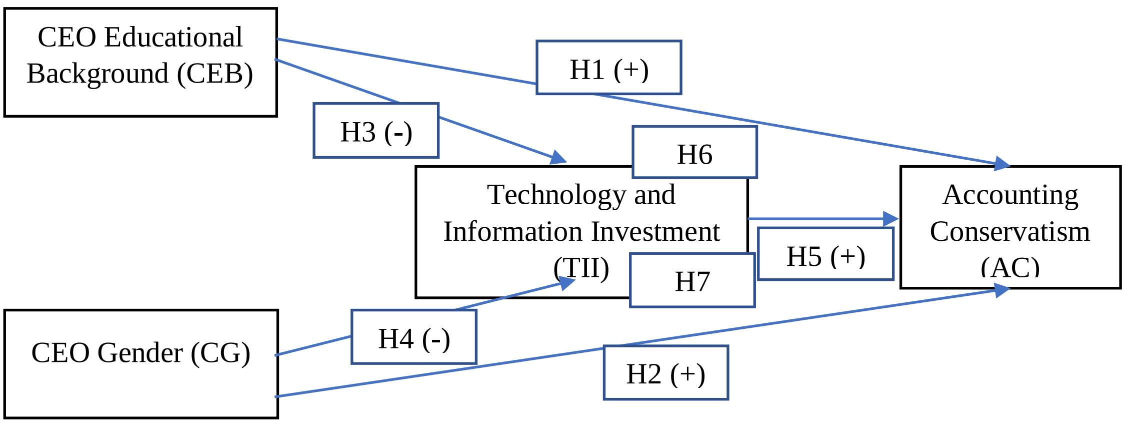

Figure 1. Research Model
Source: Authors, 2023

RESULTS

The descriptive analysis test results, presented in **Table 3**, illustrated a detailed description of the distribution of research data.

Table 3. Descriptive Statistical Analysis

Variable	N	Minimum	Maximum	Mean	Mode	Std. Deviation
AC	120	-1.865	3.259	2.417		0.405
CEB	120	0.000	1.000		1.000 (96)	0.400
CG	120	0.000	1.000		0.000 (107)	0.311
TII	120	19.000	29.000	24.517		2.449

Valid N (listwise): 120
Source: Data processing, 2023

Table 3 shows, the accounting conservatism variable has a mean value of approximately 2.417. The minimum value is -1.865, and the maximum is 3.259, showing that the data range from negative to positive. The standard deviation of 0.405 suggests that the data points are relatively close to the mean, indicating low variability. The CEO educational background variable is a dummy variable (0 or 1). The mode of 1.000, with a total of 96 (80 per cent), suggests that most CEO educational backgrounds are in accounting, finance, or business management. The standard deviation of 0.400 indicates some variability in the data, but it is relatively moderate. The CEO gender variable is also a dummy (0 or 1). The mode of 0.000, with a total of 107 (89 per cent), indicates that the remaining 11 per cent of the CEOs in the sample are female. The standard deviation of 0.311 suggests some variation in gender representation among CEOs. The technology information investment variable represents an investment measure from 19 to 29 with a mean of 24.517. The standard deviation of 2.449 shows some variability in the investment levels.
Figure 2 shows the path diagram for the PLS (Partial Least Squares) testing.

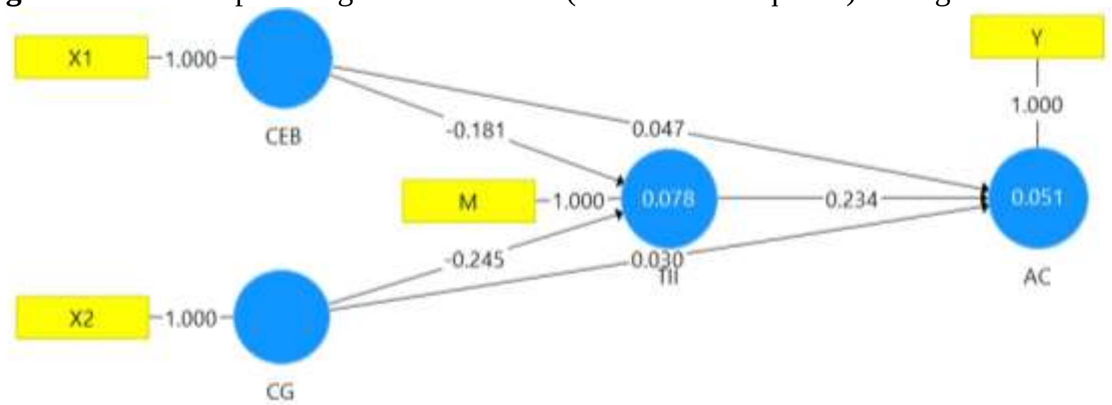

Figure 2. PLS Algorithm
Source: Smart PLS 3.0

A value of one (1.000) within a variable signifies that the indicators within the tested variable have a substantial impact. The direct effect coefficient of CEO educational background is 0.047, signifying that educational backgrounds in accounting, finance, economics, or business management react positively to accounting conservatism practices. The direct effect coefficient of CEO gender is 0.030, indicating that female CEOs react positively to accounting conservatism practices. The direct effect coefficient of CEO educational background is -0.181, signifying that educational backgrounds in accounting, finance, economics, or business management react negatively to technology and information investment. The direct effect coefficient of CEO gender is -0.245, suggesting that female CEOs react negatively to technology and information investment. The direct effect coefficient of technology and information investment is 0.234, indicating a positive relationship between technology investment and accounting conservatism.

The R-squared value for the accounting conservatism variable is 5.1 per cent, meaning that 5.100 per cent of the variance in accounting conservatism can be explained by the CEO's educational background, CEO gender, and technology information investment. The remaining 94.900 per cent is described by unexamined variables in this study. The R-squared value for the technology and information investment variable is 7.800 per cent, indicating that the CEO's educational background and CEO gender can explain 7.800 per cent of the variance in technology and information investment, with the remaining 92.800 per cent being accounted for by other variables not studied within this research. These R-squared values are categorised as weak.

The results of the path coefficients from the PLS Bootstrapping test are presented in **Table 4** as follows.

Table 4. Hypothesis Testing

Hypothesis	Path coefficient	P-value	f-square	Conclusion
H1. Educational Background CEO→ Accounting Conservatism	0.047	0.234	0.002	H1. rejected
H2. Gender CEO → Accounting Conservatism	0.030	0.274	0.001	H2. rejected
H3. Educational Background CEO→ Technology & Information Investment	-0.181	0.010*	0.034	H3. accepted
H4. Gender CEO→ Technology & Information Investment	-0.245	0.007*	0.063	H4. accepted
H5. Technology & Information Investment → Accounting Conservatism	0.234	0.045*	0.053	H5. accepted
H6. Educational Background CEO→ Technology & Information Investment → Accounting Conservatism	-0.042	0.112	-	H6. rejected
H7. Gender CEO→ Technology & Information Investment → Accounting Conservatism	-0.057	0.091**	-	H7. accepted

Notes: * significance at 5 per cent level
** significance at 10 per cent level
Sources: Data processed, 2023

DISCUSSION

The research results indicate no significant influence of CEO educational background on the practice of accounting conservatism, thus rejecting H1. This implies that CEOs with educational backgrounds in accounting, economics, finance, or business management do not have a significant tendency to apply conservative practices in a company's financial reports. These findings contradict previous research that revealed a significant influence of CEOs with educational backgrounds in accounting and related fields on accounting conservatism practices (Hu et al., 2017; Hou et al., 2023; Atwa et al., 2023; Ason et al., 2021). However, this finding aligns with the results of the research conducted by (Witono et al., 2022).

An argument substantiating this lack of significant influence stems from the proportion that accounting conservatism practices may be more intricately linked to the CEO's experiential background, as posited by (Faulkner et al., 2021). Despite CEOs receiving formal education in fields like accounting, economics, finance, or business management, this suggests that their approach to accounting conservatism is more decisively shaped by hands-on experience and practical exposure to financial decision-making. The implication is that real-world involvement holds greater influence than academic training in determining how CEOs navigate accounting practices. Practical experiences are more significant in moulding their perspectives on accounting conservatism than their formal educational backgrounds.

Additionally, the nuance of accounting decisions should be acknowledged. Accounting practices within an organisation are seldom dictated solely by the CEO. Various stakeholders, such as the Chief Financial Officer (CFO), contribute significantly to formulating financial reporting strategies (Yu, 2021). The CFOs role in financial decision-making processes introduces a layer of complexity, where collaborative efforts and diverse perspectives contribute to the final accounting practices observed in a company. In many instances, the CFO is directly responsible for shaping a company's accounting practices and financial reporting policies. Consequently, the diminished significance of the CEO's educational background in conservative accounting practices may stem from the CFO's more dominant and specialised role in financial decision-making processes. This underscores that conservative accounting practices are a product of interaction and collaboration among various stakeholders within the company rather than being solely dictated by one individual, namely the CEO.

Furthermore, the research results indicate no significant influence of CEO gender on accounting conservatism, thus rejecting H2. This means that female CEOs are similar in applying accounting conservatism practices to male CEOs. These findings are inconsistent with previous research that found an influence of female CEOs on accounting conservatism (Alves, 2023; Witono et al., 2022; Hintz, 2023). The variation in results may be attributed to the proportion of female CEOs in the banking sector, which statistically stands at around 11 per cent. However, (Ulviana, 2022) supports these research findings by revealing no significant influence of CEO gender on the practice of conservative accounting in companies. The underrepresentation of female CEOs may serve as a factor contributing to the non-significance of the influence exerted on decision-making processes, including accounting conservatism practices. Several studies indicate that female CEOs influence business decisions when their proportion reaches 30 per cent (IFC, 2020; Winata et al., 2021). When the proportion falls below this percentage, the impact exerted becomes non-significant.

The results indicate that the lack of a significant influence of CEO gender on accounting conservatism poses a notable departure from established theoretical frameworks. In particular, this outcome contradicts the predictions of agency theory, as articulated by (Jensen & Meckling, 1976), which posits that CEOs are expected to implement accounting conservatism practices to mitigate conflicts of interest and curb potential opportunistic behaviour. According to agency theory, conservative accounting serves as a mechanism to align the interests of managers and shareholders, fostering transparency and accountability.

Moreover, these findings diverge from the expectations set forth by the upper echelon theory, as proposed by (Hambrick & Mason, 1984). The upper echelon theory posits that top management characteristics, including gender, are crucial in shaping organisational strategies and decisions. In this context, the unexpected lack of influence of CEO gender on accounting conservatism challenges the assumptions of the upper echelon theory, which suggests that the demographic characteristics of the top executives should impact financial reporting practices.

The results of hypothesis testing unequivocally demonstrate a negative influence of CEO educational background on technology information investment; hence, H3 is accepted. This result indicates that CEOs with backgrounds in accounting, finance, and related fields tend to distribute fewer resources toward investments in information technology. This pattern aligns with findings from earlier research endeavours, including those conducted by (Gao et al., 2023) and (Harymawan et al., 2020).

The inclination toward diminished investment in information technology among CEOs with accounting backgrounds can be ascribed to their more traditional orientation, emphasising the financial and accounting facets of the company. In contrast to counterparts with diverse educational backgrounds, these CEOs may demonstrate heightened prudence in allocating resources beyond the conventional financial realm, particularly in information technology. This cautious approach may arise from a prioritisation of financial stability and a potential belief that investments in information technology could carry greater risks or have less immediate ties to financial performance. CEOs with educational backgrounds in accounting, finance, and related fields often prioritise the allocation of corporate resources in areas they perceive as more familiar and quantifiable, such as investments in financial aspects that yield more readily measurable outcomes, such as profit and financial growth.

The research findings shed additional light on a significant aspect related to the impact of female CEOs on technology and information investment, confirming the acceptance of H4. This observed trend aligns with earlier investigations, such as those conducted by (Mo & Lee, 2022) and (Ullah et al., 2020), demonstrating a consistent pattern across various studies. A more nuanced comprehension of this influence emerges when examining the unique decision-making patterns of female CEOs. Studies exemplified by (Pavlova & Gvetadze, 2023) underscore a prevalent inclination among female leaders toward risk aversion. This risk-averse orientation becomes apparent in their strategic approach to resource allocation, particularly in their hesitancy, especially in initiatives requiring significant initial financial commitments. The hesitation of female CEOs to allocate considerable financial resources to technology investments can be attributed to various factors. One potential factor is the prudent approach to risk management, a characteristic often linked with female leadership. Additionally, the perceived high-risk nature of technology and information investments and the substantial initial capital required may contribute to a more conservative stance among female CEOs.

Fundamentally, the documented impact of female CEOs on technology and information investments unveils a distinctive decision-making dynamic within this leadership cohort. It emphasises the interplay between gender and strategic resource allocation, providing insight into careful and risk-aware tendencies that influence the financial decisions of female CEOs, particularly in the realm of investment in technology and information. The literature has demonstrated that women's inherent tendency toward risk aversion supports these findings (Shropshire et al., 2021). When women avoid risk, it is because their risk-taking leads to less rewarding consequences (Morgenroth et al., 2022).

Women make decisions more thoughtfully, which may balance out men's aggressive decision-making (Coelho, 2022). This tendency manifests as a means to protect the organisation's interests through less risky choices. Gender bias and stereotypes entrenched within organisational culture can influence perceptions regarding women's interest in and the importance of technology. This can lead to lower evaluations of ideas or technological initiatives women propose, diminishing the likelihood of investment support in technology and information.

The agency theory explains that shareholders may have different interests than managers making investment decisions (Jensen & Meckling, 1976). According to the upper echelon theory, the characteristics of top executives, including the CEO's education and gender, play a role in the company's decision-making processes (Hambrick & Mason, 1984), including decisions related to technology and information investment. The fifth hypothesis in this study is that technology and information investment have positively influenced accounting conservatism, which is accepted based on hypothesis testing.

This discovery aligns with prior research that underscores the role of investment in information and technology in supporting accounting conservatism practices (Mirza & Ahsan, 2019; Jaimuk et al., 2019). Financial institutions, particularly banks, may channel their investments toward advanced risk analysis technology. Banks can enhance their ability to precisely evaluate credit risk and monitor their credit portfolios using sophisticated data analysis and predictive modelling tools. By leveraging technology that facilitates more effective monitoring, banks gain the capability to identify risks at earlier stages, mitigating potential losses and safeguarding their financial health. This strategic allocation of resources toward technological advancement enables banks to stay ahead in risk management, responding proactively to emerging challenges in the financial landscape. Integrating innovative technology in risk analysis becomes a critical enabler for accounting conservatism practices within the banking sector. It is contributing to the overall resilience and stability of financial institutions. This research implies that banking institutions should consider increasing their investments in technology and information to support accounting conservatism practices, which can aid in managing risks and maintaining financial health.

The mediation analysis results provide insightful nuances regarding the interplay among CEO characteristics, technology and information investment, and accounting conservatism. In contrast to H6, which posited that technology and information investment would mediate the relationship between CEO educational background and accounting conservatism, the findings suggest that such mediation is not evident. However, a divergent narrative emerges about H7, implying that technology and information investment can mediate the relationship between CEO gender and accounting conservatism. At a significance level of 10 per cent, the mediation analysis indicates female CEOs' crucial role in influencing technology and information investment decisions. This influence, in turn, has observable impacts on accounting conservatism practices. It is noteworthy that the observed mediating effect is negative. This implies that the influence of female CEOs contributes to a reduction in investment in technology and information, and the lower investment impacts the reduced level of accounting conservatism in banking.

The overall research findings yield practical implications. CEOs with backgrounds in accounting, finance, and related fields are shown to have a negative effect on technology and information investment. In this scenario, companies should consider policies or incentives that encourage CEOs to take more proactive steps in allocating resources for these investments, given the importance of technology and information investment as a supportive factor for accounting conservatism.

CONCLUSION

The research findings conclude that CEO characteristics, including educational background and gender, do not significantly influence accounting conservatism but affect technology and information investment. CEOs with backgrounds in accounting, finance, and related fields have a negative impact on technology and information investment. Female CEOs also have a negative impact on technology and information investment. Additionally, technology and information investment were found to have a positive influence on accounting conservatism. Technology and information investment can mediate the relationship between CEO characteristics, specifically gender, and accounting conservatism, but it does not mediate the relationship between educational background and accounting conservatism.

The research results emphasise several key points. The lack of a significant influence of an accounting educational background on accounting conservatism indicates that more than education alone is needed to encourage CEOs to behave conservatively. The absence of an influence of female CEOs on accounting conservatism may be due to the limited representation of women in CEO positions, which is only around 11 per cent. Another important finding is that technology and information investment positively impact accounting conservatism. Technology investment was also found to mediate the relationship between CEO characteristics and accounting conservatism, albeit only concerning gender. This highlights the critical role that technology should play in the concerns of top management in order to enhance company performance.

The findings of this research yield strategic decision recommendations. Concentrating on developing leaders with specific educational backgrounds may not necessarily contribute to enhancing accounting conservatism. Management should contemplate alternative criteria for leadership selection and development. While the gender of the CEO does not directly impact accounting conservatism, management is advised to remain attentive to its influence on decisions related to investments in technology and information investments. Enhancing investments in technology and information emerges as an effective strategy to support accounting conservatism. Management can adjust budget allocations and resource distribution to reinforce these initiatives. Emphasising the pathway through investments in technology and information may yield greater advantages in achieving accounting conservatism than solely considering the CEO's educational background or gender-related factors.

This study has limitations, including not considering other relevant variables, such as economic conditions, and not discussing the impact of conventional versus Islamic banking characteristics. Future research could address these limitations. Furthermore, future research may regress technology and information investment in previous years against current levels of accounting conservatism, given that the impact of technology and information investment should be realised in the future.

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