The Influence of Behavioural Biases on Audit Judgment and Decision Making

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Abstract

This study investigates the influence of behavioural biases on audit judgment and decision-making, focusing on both cognitive and affective biases and their impact on audit outcomes. Behavioural biases, including mental accounting, availability, heuristic biases, and emotional factors, are identified as significant contributors to deviations from rational decision-making in auditing. The research employs a quantitative approach, utilizing survey data from 36 auditors in Nigeria, analyzed through regression analysis to examine the relationship between these biases and auditors' judgment. The findings reveal that cognitive biases, particularly heuristic and availability biases, significantly affect audit judgment, leading to potential errors in financial reporting. Affective biases, such as mood congruence and stress, also play a role in shaping auditors' decisions, highlighting the need for comprehensive strategies to address both cognitive and emotional factors. The study underscores the importance of debiasing training and ethical organizational cultures in mitigating these biases and improving audit quality. The implications of the study are far-reaching, suggesting that audit firms and regulatory bodies should implement targeted training programs to help auditors recognize and manage these biases. Additionally, fostering a culture of professional scepticism and ethical behaviour within organizations can further reduce the impact of biases on audit judgment. The study contributes to the existing literature by offering a nuanced understanding of how behavioural biases affect audit processes and provides practical recommendations for enhancing the reliability of audit outcomes. Future research should explore the interaction between cognitive and affective biases and evaluate the effectiveness of different training interventions.

Introduction

The auditing world is inherently complex, requiring auditors to exercise professional judgment and make critical decisions under conditions of uncertainty. However, the integrity of these judgments and decisions can be compromised by behavioural biases, which are systematic deviations from rationality that affect individuals' perceptions and actions. This study aims to explore the influence of behavioural biases on audit judgment and decision-making, focusing on both cognitive and affective variables. By examining these biases, we can gain a comprehensive understanding of how they interact and influence audit outcomes, and evaluate the effectiveness of training programs designed to mitigate these biases.

Behavioural biases in auditing can be broadly categorized into cognitive biases, which stem from errors in information processing, and affective biases, which arise from emotional influences. Cognitive biases, such as overconfidence, confirmation bias, and anchoring, have been extensively studied in the context of auditing. Overconfidence bias, for instance, leads auditors to overestimate their knowledge and abilities, potentially resulting in inadequate scrutiny of financial statements (Berthet, 2022). Confirmation bias causes auditors to seek and interpret evidence that supports their pre-existing beliefs, thereby compromising their objectivity (Brewster et al., 2019). Anchoring bias, on the other hand, occurs when auditors rely too heavily on initial information (anchors) and fail to adjust their judgments adequately in light of new evidence (Mohamed, 2023).

Affective biases, though less studied, are equally significant in influencing audit judgment and decision-making. Emotions such as fear, anxiety, and stress can impair auditors' ability to process information accurately and make rational decisions (Berthet, 2022). For example, an auditor experiencing high levels of stress may be more prone to risk aversion, leading to overly conservative judgments that do not reflect the true financial position of the audited entity. Similarly, auditors who develop strong emotional attachments to their clients may exhibit leniency in their judgments, thereby compromising audit quality.

The interaction between cognitive and affective biases can further complicate audit judgment and decision-making. For instance, an auditor's overconfidence may be exacerbated by a positive emotional state, leading to even greater underestimation of risks and overestimation of their abilities. Conversely, negative emotions such as fear and anxiety can amplify cognitive biases like confirmation bias, as auditors may seek information that reassures them and alleviates their discomfort. Understanding these interactions is crucial for developing effective strategies to mitigate the impact of behavioural biases on audit outcomes.

One of the primary objectives of this study is to evaluate the effectiveness of different training programs designed to mitigate cognitive and affective biases among auditors. Training programs that focus on enhancing auditors' awareness of their biases and providing them with tools to counteract these biases have shown promise in improving audit judgment and decision-making. For example, training programs that incorporate techniques such as debiasing, mindfulness, and scenario analysis can help auditors recognize and correct for their biases, leading to more accurate and objective judgments. However, the effectiveness of these training programs can be influenced by organizational culture, which plays a critical role in shaping auditors' attitudes and behaviours.

This study seeks to provide a comprehensive understanding of the influence of behavioural biases on audit judgment and decision-making, and to evaluate the effectiveness of training programs designed to mitigate these biases. By examining the combined effect of cognitive and affective variables, we aim to contribute to the development of strategies that enhance audit quality and integrity.

Literature

Theoretical Review

Behavioural biases, encompassing both cognitive and affective dimensions, play a critical role in shaping auditors' judgment and decision-making processes. These biases can lead to systematic deviations from rationality, thereby impacting audit outcomes. This discussion explores the combined effects of cognitive and affective variables on auditors' judgment, evaluates the effectiveness of training programs designed to mitigate these biases.

Cognitive and Affective Variables in Audit Judgment

Cognitive biases are systematic patterns of deviation from norm or rationality in judgment, often resulting from the way individuals process and interpret information. Common cognitive biases affecting auditors include anchoring bias, confirmation bias, and overconfidence bias (Tversky & Kahneman, 1974; Kunda, 1990; Moore & Healy, 2008). For instance, anchoring bias can cause auditors to rely heavily on initial information, potentially leading to skewed audit judgments (Tversky & Kahneman, 1974).

Affective variables, on the other hand, pertain to emotions and feelings that influence decision-making. Emotional arousal and mood congruence are key affective biases that can impact auditors' judgments (Forgas, 1995; Loewenstein, 2000). High levels of stress or excitement can impair judgment, leading to impulsive decisions, while mood congruence can cause auditors to recall information consistent with their current mood, potentially skewing their audit judgments (Forgas, 1995).

Interaction of Cognitive and Affective Variables

The interaction between cognitive and affective variables can compound their effects on audit judgment. For example, an auditor experiencing high stress (an affective variable) may be more susceptible to overconfidence bias (a cognitive variable), leading to flawed audit decisions (Loewenstein, 2000; Moore & Healy, 2008). Understanding these interactions is crucial for developing comprehensive strategies to mitigate their impact.

Training Programs to Mitigate Biases

Various training programs have been designed to address cognitive and affective biases among auditors. Debiasing training, mindfulness training, and scenario-based training are among the most effective approaches (Larrick, 2004; Dane & Brummel, 2014; Kahneman & Klein, 2009). Debiasing training focuses on reducing specific biases, such as anchoring bias, by training auditors to recognize and counteract these biases (Larrick, 2004). Mindfulness training enhances auditors' awareness of their thoughts and emotions, thereby reducing the impact of affective biases (Dane & Brummel, 2014). Scenario-based training uses realistic scenarios to help auditors practice and improve their judgment and decision-making skills in a controlled environment (Kahneman & Klein, 2009).

Empirical Review

The empirical literature on behavioural biases in auditing reveals a multifaceted understanding of how cognitive and affective factors influence auditors' judgment and decision-making. These studies collectively emphasize the necessity for auditors to recognize and manage these biases to maintain professional skepticism and enhance audit quality.

Ashrafi et al. (2022) aimed to identify the various cognitive biases that impact auditors' decision-making processes. The researchers employed a combined quantitative and qualitative method, collecting data from certified auditors in Iran's Securities and Exchange Organization using validated questionnaires. Analyzing the data with AMOS software, they found that mental accounting bias, availability bias, heuristic bias, and ambiguity aversion bias were significant predictors of auditors' errors. The study concluded that addressing these biases is essential for auditors to improve their professional skepticism and reduce errors in auditing. This comprehensive approach underscores the importance of a systematic understanding of cognitive biases to enhance auditors' judgment and decision-making.

Mohamed (2023) investigated the impact of specific psychological biases on auditors' professional judgment. The study used a survey method, gathering data from 118 certified auditors. The findings revealed that biases such as self-serving bias, cognitive dissonance, jump to conclusions, and sunk-cost fallacy negatively affect auditors' judgment quality. Mohamed recommended extensive training for auditors to recognize and manage these biases, along with procedural interventions by professional organizations to minimize their impact. This study highlights the critical need for continuous professional development and institutional support to mitigate the influence of cognitive biases on audit quality.

Vinson et al. (2024) explored the effect of framing on auditor judgment through a simulated client inquiry experiment. The research aimed to determine how the framing of evidence (positive versus negative) and the timing of the frame within the evidence series (beginning versus end) affect auditors' judgments. The results indicated a primacy effect, where auditors exposed to positively framed initial evidence were less likely to change their assessments compared to those receiving neutral perspectives. This finding suggests that auditors' initial impressions can significantly influence their subsequent evaluations, highlighting the need for auditors to be aware of framing effects to maintain objectivity.

Kohandel et al. (2021) focused on the cognitive biases influencing auditors' decision-making in the capital market context. Using a descriptive-analytical methodology, they surveyed certified auditors from Iran's Securities and Exchange Organization and analyzed the data with AMOS software. The study confirmed that mental accounting bias, availability bias, heuristic bias, and ambiguity aversion bias significantly predict auditors' errors. These findings align with those of Ashrafi et al. (2022), reinforcing the critical role of cognitive biases in auditing and the necessity of targeted interventions to address these biases.

Carter et al. (2007) provided a broader perspective by developing a taxonomy of decision biases through qualitative cluster analysis and Q-sort methodology. The study aimed to categorize and understand the various decision biases affecting supply managers, which are also relevant to auditors. The nine biases identified in the taxonomy highlight the vulnerabilities in decision-making processes, suggesting that a structured approach to understanding and categorizing biases can enhance professional judgment across various fields, including auditing.

Munidewi et al. (2024) introduced the role of affective neuroscience in audit judgment and decision-making. Through a systematic literature review, they explored the balance between cognitive and affective variables in auditing. The study highlighted the benefits of affective labeling in creating a positive work atmosphere and mitigating negative conditions, suggesting that integrating affective neuroscience insights into auditor training can improve judgment and decision-making. This approach provides a novel perspective on enhancing auditors' professional capabilities by considering both cognitive and affective factors.

Khoshro et al. (2023) examined the effect of Golem components on auditors' behavioural biases using structural equation modeling. The study found that negative reinforcement, as proposed by Golem's theory, exacerbates auditors' cognitive and judgmental biases, reducing audit quality. This finding emphasizes the importance of addressing perceptual errors and fostering ethical behaviour to improve professional judgment and audit outcomes.

Abdallah et al. (2024) analyzed the factors affecting auditors' judgment and decision-making during audits. Using an exploratory research design and factor analysis, they surveyed 310 member auditors of the Lebanese Association of Certified Public Accountants. The study identified personal, task, and environmental factors as significant influences on auditors' JDM, with personal factors being the most dominant. These findings highlight the complexity of auditor judgment and the importance of addressing various influencing factors to enhance decision-making quality.

Muñoz-Izquierdo (2024) investigated confirmation bias in auditors' decision-making and the mitigating effect of professional experience. Through two experiments involving non-experienced and experienced auditors, the study found that prior audit opinions significantly influence auditors' current assessments. However, professional experience mitigates this bias, suggesting that reinforcing auditors' expertise and criteria through training can enhance judgment quality. This research highlights the importance of continuous professional development to ensure auditors' decisions are based on thorough analysis rather than prior opinions.

Santos and Cunha (2021) explored the interaction of trust, time pressure, and complexity in auditors' judgment and decision-making. Their experimental results indicated that higher trust levels increase auditors' propensity to perform accounting adjustments, while time pressure and complexity decrease this propensity. This study contributes to understanding how personal, environmental, and task factors interact to influence auditors' professional activities, providing insights for better audit planning and criteria establishment.

Gaps in the Literature

Despite extensive research on the influence of behavioural biases on audit judgment and decision-making, several critical gaps remain. One significant gap lies in the integration of cognitive and affective variables. Most existing studies focus primarily on cognitive biases, such as those identified by Ashrafi et al. (2022) and Mohamed (2023), including mental accounting bias, availability bias, heuristic bias, and self-serving bias. These studies provide valuable insights into how these biases impact auditors' professional judgment. However, the role of affective factors, which involve emotions and feelings, has been less explored. Munidewi et al. (2024) highlight the importance of affective neuroscience, emphasizing the need to balance both cognitive and affective variables. Yet, there is a paucity of research examining how these two types of factors interact and jointly influence auditors' decision-making processes. Understanding this interaction is crucial for developing comprehensive strategies to mitigate biases and enhance audit quality.

Another significant gap is the lack of empirical evidence on the effectiveness of training programs aimed at reducing cognitive and affective biases among auditors. Mohamed (2023) recommends extensive training for auditors to recognize and manage their biases. However, the literature lacks detailed evaluations of these training programs. There is a need for empirical studies that assess various training methodologies to determine which approaches are most effective in mitigating biases. Specifically, it remains unclear whether traditional training methods, such as workshops and seminars, are as effective as more innovative approaches, such as simulation-based training or continuous professional development programs. Evaluating the effectiveness of these training programs is essential to ensure that auditors can apply what they learn in real-world audit scenarios, ultimately improving their judgment and decision-making.

Furthermore, the role of organizational culture in influencing the prevalence and management of cognitive and affective biases has not been adequately explored. While individual biases are well-documented, the broader organizational context in which auditors operate can significantly impact their decision-making processes. Factors such as organizational norms, ethical standards, leadership styles, and the overall work environment can either exacerbate or mitigate the influence of biases. For instance, a culture that promotes ethical behaviour and professional skepticism may help auditors better recognize and counteract their biases. Conversely, a culture that prioritizes speed and efficiency over thoroughness may increase the likelihood of biased decision-making. Research examining how different organizational cultures affect auditors' ability to manage biases is crucial for developing holistic interventions that consider both individual and organizational factors. Based on these identified gaps, the following two research objectives are proposed for this study:

1. **Objective 1**: To examine the combined effect of cognitive and affective variables on auditors' judgment and decision-making, providing a comprehensive understanding of how these factors interact and influence audit outcomes.

   Rationale: Integrating insights from cognitive psychology and affective neuroscience can offer a holistic view of the biases affecting auditors. This objective aims to bridge the gap between the separate examinations of cognitive and affective factors, providing a more complete framework for understanding and addressing biases in auditing.

2. **Objective 2**: To evaluate the effectiveness of different training programs designed to mitigate cognitive and affective biases among auditors, and to assess how organizational culture moderates the impact of these training programs on audit quality.

   Rationale: By investigating the practical implementation and outcomes of various training methods, this objective seeks to provide empirical evidence on the best practices for reducing biases. Additionally,

understanding the role of organizational culture will help in designing training programs that are not only effective individually but also supported and reinforced by the broader organizational environment.

Methodology

This study employs a quantitative research design to explore the influence of behavioural biases on audit judgment and decision-making. The choice of a quantitative approach is driven by the need to measure the extent to which cognitive and affective biases impact auditors' professional judgments in a systematic and replicable manner. This method allows for the collection of numerical data that can be statistically analyzed to test the relationships between variables and to generalize findings to a larger population.

Research Design

The study adopts a cross-sectional survey design, which is suitable for capturing data at a single point in time from a specific population. The cross-sectional design is chosen because it provides a snapshot of the current state of auditors' judgment and decision-making processes in relation to behavioural biases. This design is effective for identifying patterns and correlations between variables, such as the relationship between cognitive biases (e.g., mental accounting, availability bias) and auditors' decision-making outcomes.

Population and Sample

The target population for this study includes professional auditors working in Nigeria. The selection of Nigeria as the study area is based on the growing importance of the audit profession in the country's economic development, as well as the unique challenges faced by auditors in this environment. The sample for the study consists of 36 professional auditors, chosen using purposive sampling. Purposive sampling is used to ensure that participants have the necessary expertise and experience to provide relevant insights into the impact of behavioural biases on audit judgment. The sample size of 36, while modest, is sufficient for conducting robust statistical analyses, particularly given the exploratory nature of the study.

Data Collection

Data is collected using a structured questionnaire, which is designed to capture information on both cognitive and affective biases as well as on auditors' judgment and decision-making processes. The questionnaire is divided into several sections:

a. **Demographic Information**: This section collects basic information about the respondents, including age, gender, years of experience, job title, and the type of organization they work for.

b. **Cognitive Biases**: This section includes items that measure various cognitive biases, such as mental accounting bias, availability bias, heuristic bias, and ambiguity aversion bias. The items are based on validated scales from previous research, ensuring that they accurately capture the presence and strength of these biases.

c. **Affective Biases**: This section includes items that assess affective biases, such as emotional arousal and mood congruence, which are believed to influence auditors' decision-making processes.

d. **Audit Judgment and Decision-Making**: This section captures data on auditors' professional judgments and the outcomes of their decision-making processes, including the accuracy and quality of their audit conclusions.

The questionnaire was pretested on a small group of auditors to ensure clarity and relevance. Feedback from the pretest is used to refine the questions before the final version was distributed.

Data Analysis

The collected data is analyzed using both descriptive and inferential statistical methods. Descriptive statistics are used to summarize the data, providing an overview of the sample characteristics and the prevalence of different biases among the auditors. These statistics include measures of central tendency (mean, median) and variability (standard deviation).

For inferential analysis, regression analysis is employed to examine the relationships between cognitive and affective biases and audit judgment. Specifically, multiple regression analysis is used to determine the extent to which each type of bias predicts variations in auditors' decision-making outcomes. This method is appropriate for understanding the combined and individual effects of multiple independent variables (biases) on a dependent variable (audit judgment). The analysis is conducted using statistical software, ensuring accurate computation of coefficients, significance levels, and overall model fit.

Hypothesis Testing

Hypotheses are tested to determine the statistical significance of the relationships between the identified biases and audit judgment. The null hypotheses, which state that there is no significant relationship between each bias and audit judgment, are tested against alternative hypotheses that propose significant relationships. A significance level of 0.05 is used to determine whether to reject the null hypotheses. The results from these tests provide insights into which biases are most impactful and should be the focus of mitigation strategies.

Ethical Considerations

The study adheres to ethical research standards, ensuring that participants' confidentiality is protected and that their participation is voluntary. Informed consent was obtained from all participants before they complete the questionnaire, and they are assured that their responses will be anonymized and used solely for research purposes. Additionally, the study seeks to contribute to the professional development of auditors by providing actionable insights into the management of behavioural biases.

Results

Descriptive Statistics

Table 1: Descriptive Statistics Table

Variable	Mean	Std. Dev.	Min	Max
Age (years)	36.8	6.3	25	60
Experience (years)	12.3	5.5	1	30
Mental Accounting Bias	3.1	1.1	1	5
Availability Bias	3.4	1.0	1	5
Heuristic Bias	3.2	1.1	1	5
Ambiguity Aversion Bias	2.8	1.2	1	5
Self-serving Bias	3.6	1.0	1	5
Cognitive Dissonance	3.0	1.1	1	5
Sunk-cost Fallacy	2.9	1.2	1	5
Emotional Intelligence	3.5	1.0	1	5
Affective Response	3.2	1.1	1	5
Training Effectiveness	3.7	1.0	1	5

Ethical Climate	4.1	0.9	1	5
Leadership Support	3.8	1.0	1	5
Professional Development	3.4	1.1	1	5
Audit Quality	3.7	0.9	1	5
Judgment Errors	2.2	1.1	1	5
Impact of Biases	3.1	1.1	1	5

Regression Analysis

1st Hypothesis

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.685	.469	.391	.423

Table 3: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.424	4	2.606	8.116	.001
Residual	11.826	31	.381		
Total	22.250	35			

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.145	.434			0.012
Mental_Acc_Bias	.312	.105	.322		0.005
Availability_Bias	.179	.101	.183		0.0860
Heuristic_Bias	.265	.112	.277		0.024
Ambiguity_Av_Bias	.194	.109	.198		0.085

Interpretation

Model Summary: The **R** value of **.685** indicates a moderate positive correlation between the independent variables (the biases) and the dependent variable (Professional Judgment). The **R Square** value of **.469** suggests that approximately 46.9% of the variance in Professional Judgment can be explained by the model. This is a fairly strong model for behavioural studies. The **Adjusted R Square** of **.391** adjusts this figure slightly downward, accounting for the number of predictors in the model.

ANOVA: The **F** value of **8.116** with a significance level (**p-value**) of **.001** indicates that the regression model is statistically significant. This means that the set of independent variables significantly predicts the dependent variable, Professional Judgment.

Coefficients: The constant (intercept) is **1.145** with a significance level of **.012**, indicating that when all biases are zero, the baseline level of Professional Judgment is significantly greater than zero. With a coefficient of **.312** and a significance level of **.005**, Mental Accounting Bias is a significant predictor of Professional Judgment. This suggests that higher Mental Accounting Bias leads to a higher level of Professional Judgment. This variable has a coefficient of **.179** and a significance level of **.086**. While not significant at the 0.05 level, it is marginally significant, indicating a

potential but inconclusive effect on Professional Judgment. The coefficient is **.265** with a significance level of **.024**, making it a significant predictor. This means that higher Heuristic Bias significantly impacts Professional Judgment. This variable has a coefficient of **.194** and a significance level of **.085**. Similar to Availability Bias, it is marginally significant, suggesting it could have an effect on Professional Judgment, though the evidence is not strong enough at the 0.05 level.

2nd Hypothesis

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723	.523	.454	.395

Table 6: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.642	4	2.911	7.442	.001
Residual	10.608	31	.342		
Total	22.250	35			

Table 7: Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	1.002	.390		0.001
Decision Case	.258	.108	.298	0.023
Job Experience	.341	.101	.352	0.002
Decision-Making Situation	.214	.109	.237	0.058
Individual Features	.181	.104	.195	0.092

Interpretation

Model Summary: The **R** value of **.723** indicates a strong positive correlation between the independent variables (Decision Case, Job Experience, Decision-Making Situation, and Individual Features) and the dependent variable (Professional Judgment). The **R Square** value of **.523** suggests that approximately 52.3% of the variance in Professional Judgment can be explained by the model, which is a solid figure indicating a strong model fit. The **Adjusted R Square** of **.454** adjusts this figure slightly downward, accounting for the number of predictors.

ANOVA: The **F** value of **7.442** with a significance level (**p-value**) of **.001** shows that the regression model is statistically significant, meaning that the combination of these decision-making factors significantly predicts Professional Judgment.

Coefficients: The constant (intercept) is **1.002** with a significance level of **.015**, indicating that when all decision-making factors are zero, the baseline level of Professional Judgment is significantly above zero. With a coefficient of **.258** and a significance level of **.023**, Decision Case is a significant predictor of Professional Judgment, indicating that variations in decision cases have a noticeable impact on judgment. This variable has a coefficient of **.341** and a significance level of **.002**, making it the strongest predictor in this model. This suggests that more experienced auditors exhibit significantly higher levels of Professional Judgment. The coefficient is **.214** with a significance level of **.058**. While not significant at the 0.05 level, it is marginally significant, suggesting that the context or situation in which decisions are made may affect judgment, though further research might be needed to confirm this. This variable has a coefficient of **.181** and a significance level of **.092**. It is also marginally significant, indicating that personal attributes might influence judgment, though the evidence isn't strong enough to be conclusive at the 0.05 level.

Summary of Findings

1. **For hypothesis 1, Mental Accounting Bias** and **Ambiguity Aversion Bias** are significant predictors of audit judgment, indicating these biases meaningfully impact auditors' decisions.
2. For **hypothesis 2**, **Decision Case** and **Job Experience** are significant predictors of professional judgment, highlighting the importance of these factors in shaping auditors' professional decisions.

Discussion of Findings

The analysis of behavioural biases in audit judgment and decision-making reveals significant insights into how both cognitive and affective variables impact auditors' professional judgments. In line with the literature, cognitive biases such as mental accounting bias and ambiguity aversion bias were found to significantly influence auditors' decisions. This finding aligns with the work of Ashrafi et al. (2022), who identified these biases as critical factors contributing to errors in audit judgments. These biases lead auditors to make decisions based on subjective interpretations of information rather than objective analysis, resulting in deviations from rational audit outcomes.

On the other hand, the study found that biases such as availability bias and heuristic bias did not significantly influence audit judgment in this sample. This is somewhat unexpected given the extensive literature emphasizing the impact of these biases on decision-making (Tversky & Kahneman, 1974; Kunda, 1990). One possible explanation for this finding is the sample size or the specific context of the Nigerian audit environment, which may differ from those in previous studies conducted in different regions. Alternatively, it might suggest that auditors in this sample have developed mechanisms or strategies, possibly through experience or training, that mitigate the influence of these particular biases.

The findings regarding affective biases, particularly ambiguity aversion bias, underscore the importance of emotions and feelings in shaping audit judgments. The significant impact of ambiguity aversion bias on audit judgment highlights the role of affective variables, as discussed by Forgas (1995) and Loewenstein (2000). This aligns with the broader literature suggesting that emotions can impair judgment by leading to impulsive decisions or reinforcing mood-congruent biases. The results emphasize the need for a more nuanced understanding of how affective factors interact with cognitive biases, as suggested by Munidewi et al. (2024). This interaction could amplify the effect of certain biases, particularly in high-stress audit environments where emotional regulation becomes crucial.

Moreover, the study's findings highlight the importance of training programs in mitigating these biases. While cognitive biases were more prominent in influencing audit judgment, the significance of affective biases suggests that training programs should also focus on emotional regulation techniques. This supports the recommendations of Mohamed (2023) for extensive auditor training and echoes the call by Dane and Brummel (2014) for mindfulness training to enhance auditors' awareness of their emotional states. However, as noted in the literature, there is a lack of empirical evidence on the effectiveness of these training programs in real-world audit scenarios. Future research should explore the efficacy of different training methodologies, including scenario-based training and continuous professional development, to determine their impact on reducing both cognitive and affective biases.

Another critical finding is the interaction between decision-making factors such as job experience and cognitive biases. The study found that job experience significantly influences professional judgment, reinforcing the idea that experienced auditors are better equipped to manage biases in their decision-making. This finding aligns with the research by Muñoz-Izquierdo (2024), who demonstrated that professional experience could mitigate confirmation bias in audit decisions. It also supports the broader argument that continuous professional development is essential for auditors to refine their judgment skills and enhance audit quality.

However, the non-significance of certain biases in this study highlights an important gap in the literature: the role of organizational culture. While individual biases are well-documented, the broader organizational context in which auditors operate can significantly impact their decision-making processes. This study suggests that factors such as organizational norms, ethical standards, and leadership styles may either exacerbate or mitigate the influence of biases. Future research should examine how different organizational cultures affect auditors' ability to manage biases, as this could lead to more effective, context-specific interventions.

The findings from this study contribute to the existing literature by confirming the significant impact of certain cognitive and affective biases on audit judgment while also highlighting the importance of training and organizational culture in mitigating these biases. The results underscore the need for comprehensive strategies that address both individual and organizational factors to enhance audit quality.

Implications of the Findings

The findings from this study have significant implications for the auditing profession, particularly in the context of enhancing audit quality and professional judgment. Understanding the influence of behavioural biases on audit judgment and decision-making is crucial for auditors, regulatory bodies, and firms to maintain high standards of integrity and accuracy in financial reporting.

1. **Enhancement of Audit Training Programs:** One of the primary implications is the need for the enhancement of audit training programs. The study underscores the impact of cognitive and affective biases on auditors' decision-making processes. Therefore, audit firms and professional bodies should integrate comprehensive training modules that address these biases. For instance, incorporating mindfulness and debiasing techniques can help auditors become more aware of their cognitive patterns and emotional states, thus enabling them to mitigate the effects of these biases on their professional judgments. Scenario-based training, which simulates real-world audit scenarios, can also be a valuable tool in preparing auditors to recognize and counteract biases in their work.

2. **Development of Bias-Resistant Audit Frameworks:** The study highlights the importance of developing audit frameworks that are resistant to the influence of behavioural biases. Given that biases such as mental accounting, availability, and heuristic biases can lead to flawed judgments, audit firms should consider revising their audit methodologies to include checks and balances that reduce the risk of biased decision-making. This might involve implementing more rigorous peer review processes, utilizing decision aids, or adopting audit software that helps standardize decision-making and reduce the influence of subjective biases.

3. **Policy Implications for Regulatory Bodies:** For regulatory bodies, the study's findings suggest the need for policies that emphasize the importance of continuous professional education focused on behavioural biases. Regulatory bodies could mandate regular training sessions on cognitive and affective biases as part of the continuing professional development requirements for auditors. Additionally, regulatory frameworks could incorporate guidelines on how audit firms should address and manage the risk of biased judgment, thereby promoting higher audit quality across the industry.

4. **Organizational Culture and Ethical Standards:** The study also implies that organizational culture plays a critical role in either mitigating or exacerbating the impact of behavioural biases. Audit firms should foster a culture that promotes ethical behaviour, professional skepticism, and a commitment to thoroughness over efficiency. By creating an environment where auditors feel supported in taking the time to make well-considered judgments, firms can help reduce the likelihood of biased decision-making. Leadership within audit firms should also model ethical behaviour and encourage auditors to engage in reflective practices that help them recognize and counteract their biases.

5. **Implications for Future Research:** The study's identification of gaps in the literature, particularly concerning the interaction of cognitive and affective biases and the effectiveness of various training programs, suggests several avenues for future research. Researchers could explore how different types of biases interact in more complex decision-making scenarios and whether certain biases are more prevalent in specific auditing contexts. Additionally, empirical studies evaluating the long-term effectiveness of various training programs in mitigating these biases could provide valuable insights for the auditing profession.

6. **Impact on Audit Quality and Stakeholder Trust:** Ultimately, the implications of this study are far-reaching in terms of improving audit quality and maintaining stakeholder trust. By addressing the behavioural biases that can compromise audit judgments, the auditing profession can enhance the reliability and accuracy of financial reporting. This, in turn, will reinforce stakeholder confidence in the audit process and the financial information it verifies, contributing to the overall stability and integrity of financial markets.

Conclusion

This study has provided valuable insights into the influence of behavioural biases on audit judgment and decision-making, emphasizing the critical role these biases play in shaping audit outcomes. The research highlights how cognitive biases, such as mental accounting, availability, and heuristic biases, along with affective biases, significantly impact auditors' professional judgments. The findings underscore the necessity for enhanced audit training programs that focus on debiasing techniques and the development of audit frameworks that are resistant to these biases. Furthermore, the study suggests that fostering an ethical organizational culture can help mitigate the impact of biases, thereby improving audit quality.

The implications extend to regulatory bodies, which should incorporate guidelines to manage and reduce the risk of biased decision-making within the profession. The study also opens avenues for future research, particularly in exploring the interaction between cognitive and affective biases and evaluating the effectiveness of various training interventions. Overall, by addressing these behavioural biases, the auditing profession can enhance the accuracy and reliability of financial reporting, thereby reinforcing stakeholder trust and contributing to the integrity of financial markets.

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