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Analysis of Auditors' Self-Initiated Behaviors and Their Effect on Auditors' Ability to Detect Fraud

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ABSTRACT

Auditors' ability to detect fraud is influenced by various individual and professional factors, and auditors' self-initiated behaviors may constitute one of the factors associated with this ability. The present study aimed to identify the dimensions of auditors' self-initiated behaviors and examine their effect on auditors' ability to detect fraud. In terms of approach, the study was exploratory, and in terms of methodology, it employed a mixed-methods design. In the qualitative phase, the dimensions of self-initiated behaviors were identified using grounded theory through interviews with 16 experts and were subsequently validated using Delphi analysis. In the quantitative phase, data were collected from 395 auditors working in the auditing profession, and the research hypothesis was tested using structural equation modeling (SEM) and SmartPLS 3 software. The qualitative findings resulted in the identification of 4 categories, 12 components, and 82 basic themes. The quantitative findings also demonstrated that auditors' self-initiated behaviors had a positive and statistically significant effect on auditors' ability to detect fraud. In addition to extending the behavioral auditing literature, these findings emphasize the importance of considering auditors' behavioral dimensions in strengthening their ability to detect fraud.

Keywords: fraud detection ability, self-initiated behaviors, professional perceptions, contextual requirements, behavioral outputs.

Introduction

The detection of fraud constitutes one of the most consequential responsibilities associated with external auditing because fraudulent financial reporting can undermine the reliability of financial statements, impair stakeholders' decision-making, weaken confidence in capital markets, and ultimately damage the legitimacy of financial reporting systems. Although auditors are not expected to guarantee the absolute absence of fraud, their professional responsibilities require them to identify and appropriately respond to circumstances that indicate material misstatement arising from fraudulent activity. Accordingly, understanding the factors that strengthen an auditor's ability to recognize fraud indicators, evaluate fraud risks, pursue unusual evidence, and respond appropriately to suspicious financial information has become an important area of behavioral auditing research. Existing studies indicate that fraud detection is not determined solely by technical standards or formal audit procedures; rather, it is also affected by auditors' professional, cognitive, psychological, ethical, and behavioral attributes. Research on the determinants of independent auditors' fraud-detection ability has therefore increasingly emphasized the interaction

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between technical competence and human behavior in explaining why auditors facing similar audit evidence may differ substantially in recognizing and investigating fraudulent reporting risks (1, 2).

A central concept connecting auditors' behavioral characteristics to fraud detection is professional judgment. Auditing frequently requires decisions under conditions of incomplete information, uncertainty, conflicting evidence, materiality considerations, and managerial representations. Consequently, auditors cannot merely apply standards mechanically; they must interpret evidence and select among alternative courses of action through professional judgment. Early conceptualizations of accounting and auditing judgment emphasized that the quality of professional decisions depends on the systematic integration of available evidence, professional knowledge, contextual information, and individual judgment processes (3). Materiality assessment similarly illustrates how professional judgment can involve both technically grounded criteria and subjective interpretation, creating variation among auditors even when they evaluate comparable information (4). Subsequent research has treated professional judgment as a multidimensional phenomenon shaped by personal, professional, organizational, and environmental factors rather than as a purely technical capability (5). Professionalism itself can improve the quality of auditors' judgments by reinforcing responsibility, commitment to professional principles, and adherence to the broader purposes of auditing (6). These findings suggest that fraud detection should be examined not merely as a procedural outcome but as the result of auditors' active interpretation of evidence and their willingness to exercise informed professional judgment.

The cognitive foundations of auditing further reinforce the importance of individual behavioral characteristics. Auditors differ in how they perceive information, organize evidence, process ambiguity, respond to conflicting signals, and develop conclusions from audit findings. Research on auditors' cognitive styles has therefore attempted to identify patterns of cognition that influence professional performance and decision-making in audit engagements (7). More recent research has expanded this perspective by emphasizing the affective and neuropsychological foundations of audit judgment, suggesting that emotions and affective processes may interact with cognition in shaping auditors' evaluations and choices (8). Personality characteristics are also relevant because they can influence auditors' openness to contradictory evidence, persistence in investigation, tolerance of ambiguity, and skeptical evaluation of client representations. In particular, research indicates that personality traits and professional skepticism are meaningfully associated with audit quality, highlighting skepticism as a behavioral-cognitive mechanism through which individual characteristics may become reflected in audit outcomes (9). These streams of research collectively indicate that the effectiveness of fraud detection may depend partly on how auditors cognitively and behaviorally engage with their professional responsibilities.

Self-efficacy and other positive psychological resources provide another important explanation for variation in auditors' judgment and fraud-related performance. Auditors who perceive themselves as capable of addressing difficult professional problems may be more willing to investigate complex issues, persist when evidence is ambiguous, search for additional explanations, and challenge management when necessary. Goal orientation has been associated with auditors' judgment performance through the mediating role of self-efficacy, indicating that auditors' beliefs about their own capabilities can translate motivational orientations into improved professional judgment (10). Psychological capital and audit experience have likewise been examined as antecedents of professional judgment and decision-making quality, with professional skepticism functioning as an important contextual mechanism in this relationship (11). More directly related to fraud risk, auditor self-efficacy has been linked to fraud risk assessment through both radical and incremental forms of auditor creativity, suggesting that

confident auditors may use more innovative cognitive strategies when confronted with potential fraud indicators (12). Ethical idealism also appears to contribute to fraud-detection performance through conscientiousness, demonstrating that auditors' ethical orientations and personality-related tendencies can influence their effectiveness in identifying fraudulent activity (13). Thus, auditors who possess strong motivational resources may be more likely to move beyond minimum procedural compliance and actively pursue evidence necessary for detecting fraud.

Ethical conduct is equally fundamental because fraud detection frequently places auditors in circumstances involving competing interests, client pressures, commercial considerations, confidentiality concerns, and potential consequences for professional relationships. Ethical behavior can affect audit quality directly and may also operate through auditors' perceptions of organizational support, implying that ethical conduct is partly embedded within the broader organizational environment in which auditors work (14). An organization's ethical culture may become particularly important when auditors experience time pressure, because ethical norms can help protect audit quality under conditions that might otherwise encourage procedural shortcuts or compromised professional judgment (15). Related evidence from professional service contexts also demonstrates that social responsibility orientations and Machiavellian tendencies can be associated with professionals' willingness to engage in questionable practices, highlighting the broader relevance of ethical personality and professional values to behavior involving financial reporting and compliance (16). In fraud-related engagements, such ethical orientations can be expected to affect whether auditors persist in investigating suspicious evidence, resist inappropriate client influence, and prioritize stakeholder interests over short-term interpersonal or economic benefits.

The organizational and task environment can, however, either encourage or inhibit such desirable behaviors. Audit engagements are typically conducted under deadlines, resource constraints, fee pressures, performance expectations, and formal review procedures. Dysfunctional audit behavior has long been associated with factors such as budget emphasis, leadership behavior, and the effectiveness of audit review, demonstrating that inappropriate organizational pressures may lead auditors to reduce audit effort or compromise required procedures (17). Time-budget pressure, auditor experience, and professional competence have also been shown to affect audit judgment, emphasizing that professional decisions are produced within demanding work environments rather than in isolation (18). More broadly, research on job demands indicates that excessive work demands may generate job anxiety and reduce employees' capacity for psychological detachment, thereby increasing the likelihood of counterproductive work behavior (19, 20). Applied to auditing, these findings are important because fraud detection often requires additional investigation precisely when auditors are already confronted with considerable workload and deadline pressures. Under such conditions, self-initiated efforts—including voluntary additional testing, persistent follow-up, active communication, and independent information seeking—may distinguish auditors who maintain high-quality investigation from those who restrict their activities to minimum required procedures.

Personality characteristics can further influence auditors' responses to such pressures and conflicts. Evidence indicates that professionalism, antisocial personality characteristics, and auditor overconfidence affect auditors' judgments when resolving auditor–management conflicts (21). Personality traits also influence the management of conflicts between auditors and clients, demonstrating that individual differences may shape how auditors negotiate disagreement, communicate concerns, and defend professional positions (22). At the darker end of the personality spectrum, research has associated dark personality traits with accountants' propensity toward accounting fraud, underscoring the importance of examining behavioral tendencies when explaining ethical or unethical financial conduct (23). Conversely, professionally beneficial traits may strengthen auditors' resistance to pressures that

impair judgment. For example, partner perfectionism has been examined in relation to audit quality through the mediating role of professional skepticism, indicating that certain dispositional characteristics can become productive when channeled through vigilant and questioning professional behavior (24). These findings highlight that auditors' observable professional actions are partly rooted in deeper personality, motivational, and ethical tendencies.

Fraud detection must also be considered in relation to the behavioral characteristics of management because auditors evaluate evidence produced within organizations whose executives may themselves influence reporting quality. Research concerning chief financial officers, for example, has demonstrated an association between CFO narcissism and financial reporting quality, illustrating that managerial personality may create distinctive financial reporting risks that auditors need to recognize and address (25). Such findings expand the behavioral perspective on auditing: auditors are not merely processing accounting numbers but interpreting financial evidence generated by individuals with different incentives, personalities, and behavioral tendencies. Detecting fraud therefore requires sensitivity to both quantitative anomalies and qualitative contextual signals. An auditor who voluntarily seeks additional explanations, critically examines unusual management behavior, communicates with multiple stakeholders, or extends procedures beyond routine requirements may be more capable of identifying patterns that are not evident through standardized procedures alone. From this perspective, self-initiated auditor behavior may represent an important mechanism linking professional awareness to effective fraud detection.

Professional learning and knowledge acquisition provide another foundation for proactive audit behavior. Auditing expertise develops not only through formal education and accumulated experience but also through observing how other professionals approach complex tasks, evaluate evidence, and articulate their reasoning. Recent evidence concerning observational learning suggests that cognitive process modeling and a supportive learning climate can enhance auditors' opportunities to learn from the reasoning processes of experienced colleagues (26). This is particularly relevant to fraud detection, where many warning signs are subtle and where recognition often depends on experience-based pattern identification rather than straightforward procedural rules. Auditors who actively seek feedback, observe skilled colleagues, exchange professional knowledge, and voluntarily participate in learning activities may gradually expand their repertoire of fraud-related cues and investigative strategies. Such behaviors reflect more than passive competence development; they represent discretionary engagement with professional growth and can therefore be conceptualized as part of a broader pattern of self-initiated professional behavior.

Within this behavioral perspective, self-initiated behaviors can be understood as auditor actions that originate from internal professional motivation and extend beyond passive compliance with assigned audit tasks. Such behaviors may encompass initiative in improving audit quality, persistent investigation of unresolved issues, voluntary knowledge development, active engagement with colleagues and stakeholders, responsiveness to emerging technologies, and sustained professional commitment under difficult circumstances. Existing auditing literature provides substantial evidence concerning separate antecedents or manifestations of such behavior, including professionalism, ethical culture, professional skepticism, self-efficacy, psychological capital, creativity, cognitive style, personality, organizational support, experience, and learning (9, 11, 12, 14, 26). However, examining these characteristics individually may not fully capture how auditors convert professional perceptions and contextual demands into spontaneous, discretionary actions during actual audit work. A broader behavioral framework is therefore needed to integrate the conditions that motivate auditors to act voluntarily and persistently in ways that may improve fraud detection.

Recent research has begun to move in this direction by examining auditors' self-development behavior and its relationship with fraud-detection ability, thereby demonstrating the value of focusing on auditor-initiated behavioral processes rather than relying exclusively on static personality traits or formal competence measures (2). Nevertheless, self-development represents only one possible manifestation of a wider domain of self-initiated conduct. Auditors may voluntarily engage in behaviors related to professional identification, ethical responsibility, quality improvement, stakeholder communication, technological adaptation, additional testing, independent review, evidence acquisition, and perseverance in resolving ambiguous issues. These behaviors can emerge from auditors' perceptions of their professional authority and responsibilities, from governance arrangements that institutionalize ethical and technical expectations, and from contextual demands associated with competition, client complexity, technological change, and resource limitations. Accordingly, conceptualizing auditors' self-initiated behaviors as a multidimensional construct may provide a more comprehensive explanation of how auditors translate professional attitudes into concrete actions that enhance their capacity to detect fraud.

This conceptualization is also important because fraud detection is unlikely to depend on any single attribute. Professional judgment provides the evaluative mechanism through which evidence is interpreted (3, 5); skepticism encourages critical assessment of evidence (9, 24); self-efficacy and psychological resources support persistence and creative problem solving (11, 12); ethical orientations reinforce independence and responsibility (13, 14); and organizational conditions determine whether such dispositions can be expressed despite time, budgetary, and workload pressures (15, 17). The critical issue, therefore, is how these diverse influences become translated into actual auditor behavior. Self-initiated behavior provides a potentially useful explanatory bridge because it focuses on what auditors voluntarily do when confronted with professional demands: whether they seek further evidence, challenge questionable explanations, update procedures, communicate concerns, invest additional effort, or continue investigating until a convincing conclusion is reached.

Despite the expansion of behavioral auditing research, an important gap therefore remains in the integrated identification of the dimensions constituting auditors' self-initiated behaviors and in the empirical assessment of whether this multidimensional behavioral construct improves auditors' ability to detect fraud. Prior studies have generated valuable evidence concerning professional judgment, materiality assessments, professionalism, cognitive styles, personality traits, skepticism, self-efficacy, ethical conduct, organizational pressures, learning, and fraud-related capabilities (4, 6-8). Yet these factors are often investigated separately, limiting understanding of the broader behavioral architecture through which auditors actively respond to complex engagement conditions. An exploratory mixed-method approach can address this limitation by first deriving the dimensions of self-initiated auditor behavior from expert knowledge and professional experience and then evaluating whether the resulting construct predicts fraud-detection ability in a larger auditor sample. Such an approach can extend behavioral auditing literature by shifting attention from isolated personal attributes toward an integrated model of professional perceptions, governance structures, contextual performance requirements, and spontaneous behavioral outputs.

Accordingly, the present study aimed to identify the dimensions and components of auditors' self-initiated behaviors and to examine their effect on auditors' ability to detect fraud.

Methods and Materials

In terms of purpose, the present study is applied/developmental, while in terms of approach, it is exploratory and employs a mixed-methods design. In the qualitative phase, grounded theory and interviews with experts were used

to identify the components of auditors' self-initiated behaviors, which were subsequently confirmed through Delphi analysis. In the quantitative phase, a researcher-developed Auditors' Self-Initiated Behaviors Questionnaire and the standardized questionnaire developed by Fullerton and Durtschi (2004) were used to measure auditors' ability to detect fraud, and the research hypothesis was tested by integrating data obtained from the two instruments.

The qualitative population consisted of academic experts and auditing specialists who were selected through purposive and snowball sampling until theoretical saturation was achieved; ultimately, 16 experts participated in the interviews. The quantitative population consisted of auditors working in the auditing profession. Because no official statistics regarding the population were available, the population was considered unlimited. Using Cochran's formula, the required sample size was determined to be 384 participants. A total of 460 questionnaires were distributed, of which 402 were returned and 395 were deemed suitable for analysis. The research hypothesis was tested using the partial least squares (PLS) method.

Given the absence of a coherent framework for auditors' self-initiated behaviors, the qualitative phase employed grounded theory based on Glaser's (1992) approach and in-depth, unstructured interviews with experts. A total of 16 interviews were conducted. Although preliminary indications of theoretical saturation emerged after the eighth interview, the interviewing process continued until the sixteenth interview, at which point no new concepts were added to the data. Subsequently, axial and selective coding were conducted, and the conceptual model of the study was developed. In the quantitative phase, the identified components were validated using Delphi analysis and served as the basis for developing the researcher-made Auditors' Self-Initiated Behaviors Questionnaire. The effect of auditors' self-initiated behaviors on auditors' ability to detect fraud was then tested using partial least squares structural equation modeling (PLS-SEM).

As explained previously, because no standardized questionnaire was available for measuring auditors' self-initiated behaviors, grounded theory analysis based on Glaser's (1992) approach was employed. The resulting questionnaire comprises four subscales—professional perceptions, professional governance constructs, contextual performance requirements, and spontaneous behavioral outputs—and consists of 12 items rated on a five-point Likert scale.

To measure auditors' ability to detect fraud, the standardized questionnaire developed by Fullerton and Durtschi (1992), comprising 10 items, was used. The questionnaire items are scored on a five-point Likert scale.

Findings and Results

To provide an overview of the characteristics of the statistical sample, the demographic information of the study participants is presented in Table 1.

Table 1. Demographic Characteristics of the Study Participants

Variable	Qualitative Phase: Criterion	Frequency	Percentage	Quantitative Phase: Criterion	Frequency	Percentage
Gender	Male	14	87.50%	Male	296	75.00%
	Female	2	12.50%	Female	99	25.00%
Total		16	100.00%		395	100.00%
Age	Up to 45 years	3	18.75%	Up to 45 years	74	18.75%
	46–55 years	7	43.75%	46–55 years	173	43.75%
	Over 56 years	6	37.50%	Over 56 years	148	37.50%
Total		16	100.00%		395	100.00%
Work Experience	Less than 15 years	3	18.75%	Less than 15 years	123	31.25%
	More than 15 years	13	81.25%	More than 15 years	272	68.75%
Total		16	100.00%		395	100.00%

In the qualitative phase, grounded theory analysis was initially used to identify the components of auditors' self-initiated behaviors. For this purpose, three stages of coding—open coding, selective coding, and axial coding—were employed to identify the dimensions of the phenomenon under investigation within a theoretical framework.

Accordingly, based on the analysis and coding of the conducted interviews, 4 categories, 12 components, and 82 conceptual codes were derived from the three-stage interview analysis and coding process, as presented in Table 2.

Table 2. Identification of the Components of Auditors' Self-Initiated Behaviors

Selective Coding (Categories)	Main Components	Themes Extracted from the Interviews
Professional Perceptions	Sense of Organizational Belonging and Identity	Identification with the mission of the audit firm; Willingness to enhance the firm's credibility and reputation; Sense of belonging to the professional community; Acting as an ambassador for the firm's brand; Loyalty to organizational values and culture; Active participation in the development of professional knowledge
Professional Perceptions	Awareness of Professional Authority	Understanding one's role as a pillar of corporate governance; Sense of responsibility for investors' trust; Awareness of the power of the audit opinion in decision-making; Understanding one's position as a financial judicial officer; Recognition of the ability to create added value; Understanding the influence of auditing on the credibility of the capital market; Sense of duty to enhance transparency in the business environment
Professional Perceptions	Perception of the Consequences of Actions	Assessment of the legal risks associated with audit opinions; Anticipation of the effect of audit reports on securities prices; Understanding the relationship between work quality and personal professional reputation; Sense of responsibility for preventing financial scandals; Anticipation of recognition from colleagues based on qualitative performance; Assessment of the effect of professional reputation on career prospects; Understanding the consequences of failure to properly fulfill professional responsibilities
Professional Governance Constructs	Institutionalized Ethical Norms	Commitment to honesty and integrity; Demonstration of objectivity throughout the audit process; Social accountability toward stakeholders; Professional commitment beyond contractual requirements; Moral courage in disclosing material matters; Protection of privacy and confidentiality of information; Avoidance of actual and apparent conflicts of interest
Professional Governance Constructs	Standardized Frameworks	Designing risk-based audit programs; Mastery of financial reporting standards; Implementation of internal control protocols; Collection of sufficient and persuasive audit evidence; Issuance of audit opinions supported by documented justification; Comprehensive documentation of audit procedures; Evaluation of complex financial software and systems
Professional Governance Constructs	Accountable Oversight Mechanisms	Continuous quality inspections of performance; Effective feedback systems for improving audit procedures; Active accountability to regulatory bodies; Utilization of findings from disciplinary reviews; Constructive interaction with audit committees; Rigorous implementation of professional codes of conduct; Transparent reporting of potential violations
Contextual Performance Requirements	Competitive Environmental Pressures	Managing quality expectations and budget constraints; Maintaining independence of judgment despite economic incentives; Competing to attract clients with strong corporate

		governance; Adapting to pressures arising from emerging technologies; Responding to threats of substitution by competitors; Providing high-quality services under pressure from declining audit fees; Adapting to the increasing expectations of stakeholders
Contextual Performance Requirements	Inherent Complexity of the Business Entity	Auditing risks associated with complex management estimates; Addressing challenges associated with innovative financial instruments; Designing audit tests for international business entities; Assessing going concern under conditions of economic uncertainty; Detecting and investigating complex related-party transactions; Auditing major mergers and acquisitions; Evaluating the appropriateness of complex accounting practices
Contextual Performance Requirements	Technology and Process Innovation	Mastery of artificial intelligence tools for analyzing entire datasets; Application of data-mining techniques for pattern recognition; Use of advanced software for testing internal controls; Automation of repetitive audit procedures; Use of natural language processing tools; Analysis of unstructured data during audit engagements
Spontaneous Behavioral Outputs	Initiative in Quality Enhancement	Proposing plans to improve internal controls; Performing additional tests to provide enhanced assurance; Enthusiasm for detecting hidden anomalies; Insistence on clarifying material events; Persistence in obtaining supplementary documentation; Independent review of team members' work; Taking initiative in updating audit procedures
Spontaneous Behavioral Outputs	Extra-Professional Interaction with Stakeholders	Conducting educational sessions for the audit committee; Transparent communication with regulatory bodies regarding sensitive findings; Providing value-creating managerial analyses to the board of directors; Voluntarily mentoring junior auditors; Voluntary interaction with internal auditors; Providing additional reports to enhance transparency; Establishing effective communication with predecessor auditors
Spontaneous Behavioral Outputs	Persistence and Continuity of Commitment	Allocating work hours beyond formal requirements to ensure reporting accuracy; Persistent follow-up to obtain management explanations; Resistance to time pressure while maintaining professional standards; Perseverance in resolving complex accounting issues; Maintaining professional curiosity and a commitment to seeking the truth; Following issues through to a final and satisfactory resolution; Maintaining commitment under stressful and high-pressure working conditions

Delphi analysis serves as a link between the qualitative and quantitative phases because, by evaluating the reliability of the dimensions of the developed model, it enables the model components to be operationalized through the intended research instruments within the target population in the quantitative phase. In the present study, Delphi analysis was used to assess the reliability of the components of the proposed model.

Table 3. Delphi Analysis of the Identified Components

Model	Category	Main Component	Round 1 Mean	Round 1 Agreement Coefficient	Round 2 Mean	Round 2 Agreement Coefficient	Result
Auditors' Self-Initiated Behavior Model	Professional Perceptions	Sense of organizational belonging and identity	5.32	0.69	5.71	0.79	Confirmed
	Professional Perceptions	Awareness of professional authority	5.30	0.65	5.40	0.71	Confirmed
	Professional Perceptions	Perception of the consequences of actions	5.25	0.89	6.03	0.90	Confirmed
	Professional Governance Constructs	Institutionalized ethical norms	5.22	0.89	6.17	0.91	Confirmed
	Professional Governance Constructs	Standardized frameworks	5.39	0.65	5.58	0.84	Confirmed
	Professional Governance Constructs	Accountable oversight mechanisms	5.44	0.89	6.03	0.91	Confirmed
	Contextual Performance Requirements	Competitive environmental pressures	5.84	0.67	6.17	0.78	Confirmed
	Contextual Performance Requirements	Inherent complexity of the business entity	6.03	0.82	6.11	0.84	Confirmed
	Contextual Performance Requirements	Technology and process innovation	5.33	0.67	5.40	0.72	Confirmed
	Spontaneous Behavioral Outputs	Initiative in quality enhancement	5.08	0.67	6.22	0.77	Confirmed
	Spontaneous Behavioral Outputs	Extra-professional interaction with stakeholders	5.34	0.81	5.95	0.87	Confirmed
	Spontaneous Behavioral Outputs	Persistence and continuity of commitment	5.33	0.67	5.40	0.72	Confirmed

In the present study, to assess validity, the Content Validity Ratio (CVR) was calculated based on Lawshe's (1975) formula, where (CVR=(n_e-N/2)/(N/2)), (n_e) represents the number of experts indicating agreement, and (N) represents the total number of experts (Lawshe, 1975). To determine consensus, the three criteria proposed by Hsu and Sandford (2007) were applied: (1) achieving a CVR ≥ 0.70 for all components, which was achieved in the second round; (2) reducing the standard deviation of scores to below 0.50; and (3) achieving saturation of qualitative opinions, defined as less than a 5% change in proposed revisions. The results indicated that the mean CVR increased from 0.72 in the first round to 0.82 in the second round, and all components reached a minimum agreement coefficient of 0.70—the critical value for 15 experts according to Lawshe's table—indicating that a strong consensus had been achieved (von der Gracht, 2012). Furthermore, the Group Degree of Agreement Index (GDI = 0.91), calculated using the method of Obraskes (2018), confirmed a high level of consistency among the experts' opinions.

The structural equation modeling procedure was conducted by first evaluating model fit—including measurement model fit, structural model fit, and overall model fit—and subsequently testing the research hypothesis.

Table 4. Results of Convergent Validity and Reliability of the Study's Latent Variables

Latent Variables	Cronbach's Alpha (α > 0.70)	Composite Reliability (CR > 0.70)	Average Variance Extracted (AVE > 0.50)
Professional Perceptions	0.857	0.914	0.782
Contextual Performance Requirements	0.938	0.961	0.890
Spontaneous Behavioral Outputs	0.975	0.984	0.953
Auditors' Self-Initiated Behaviors	0.973	0.976	0.775
Professional Governance Constructs	0.907	0.941	0.843
Auditors' Ability to Detect Fraud	0.976	0.979	0.825

Given that the acceptable threshold for both Cronbach's alpha and composite reliability is 0.70, and according to the findings presented in Table 4 these criteria reached appropriate values for all latent variables, the reliability of the study's measurement models can be confirmed. Furthermore, given that the acceptable threshold for AVE is 0.50 and, according to Table 4, the AVE values for the latent variables exceeded this threshold, the convergent validity of the study is confirmed. Discriminant validity constitutes the third criterion for assessing measurement model fit. As shown in Table 5, the square roots of the average variance extracted for the latent variables, located along the main diagonal of the matrix, are greater than the correlations between the corresponding constructs shown below and to the right of the main diagonal.

Table 5. Fornell–Larcker Matrix for Assessing Discriminant Validity

Latent Variables	1	2	3	4	5	6
Professional Perceptions	0.884					
Contextual Performance Requirements	0.476	0.944				
Spontaneous Behavioral Outputs	0.581	0.571	0.976			
Auditors' Ability to Detect Fraud	0.485	0.602	0.552	0.908		
Auditors' Self-Initiated Behaviors	0.557	0.683	0.674	0.584	0.880	
Professional Governance Constructs	0.437	0.540	0.400	0.541	0.552	0.918

The fit of the structural model was subsequently evaluated. After assessing the validity and reliability of the measurement model, the structural model was evaluated based on the relationships among the latent variables. In the present study, two criteria—the coefficient of determination ((R^2)) and predictive relevance ((Q^2))—were used. (R^2) is a criterion that indicates the extent to which an exogenous variable explains variance in an endogenous variable. As shown in Figure 1, (R^2) values were calculated for the endogenous constructs of the study, confirming the adequacy of the structural model fit. In addition, the (Q^2) criterion was used to evaluate the model's predictive power. Based on the results reported in Table 6, it can be concluded that the model possesses strong predictive power.

Table 6. Coefficient of Determination ((R^2)) and Predictive Relevance ((Q^2)) Values

Research Variables	(Q^2)	(R^2)
Professional Perceptions	0.510	0.734
Contextual Performance Requirements	0.671	0.967
Spontaneous Behavioral Outputs	0.763	0.949
Auditors' Ability to Detect Fraud	0.737	0.524
Auditors' Self-Initiated Behaviors	0.690	—
Professional Governance Constructs	0.600	0.907

After establishing the adequacy of both the measurement and structural components of the research model, the Goodness-of-Fit (GOF) criterion was employed to assess the overall fit of the model.

Table 7. Overall Model Fit Results

Communality	(R^2)	GOF
0.845	0.767	0.805

Given the obtained GOF value of 0.805, the overall model demonstrates a highly satisfactory level of fit.

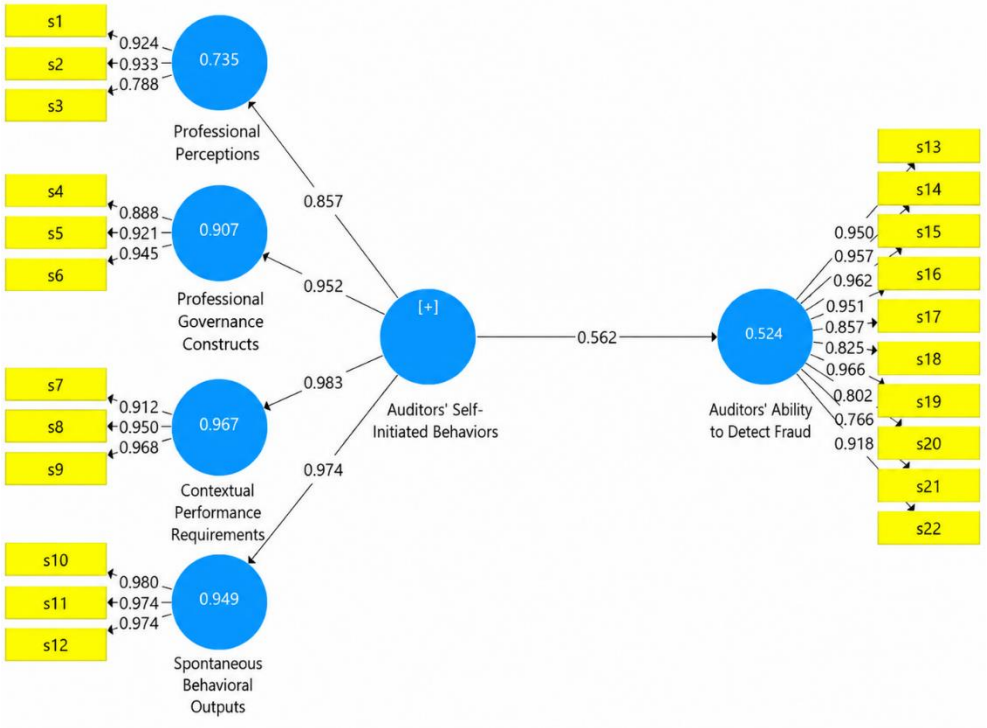

Figure 1. Structural Model of the Research Hypothesis with Standardized Factor Loadings

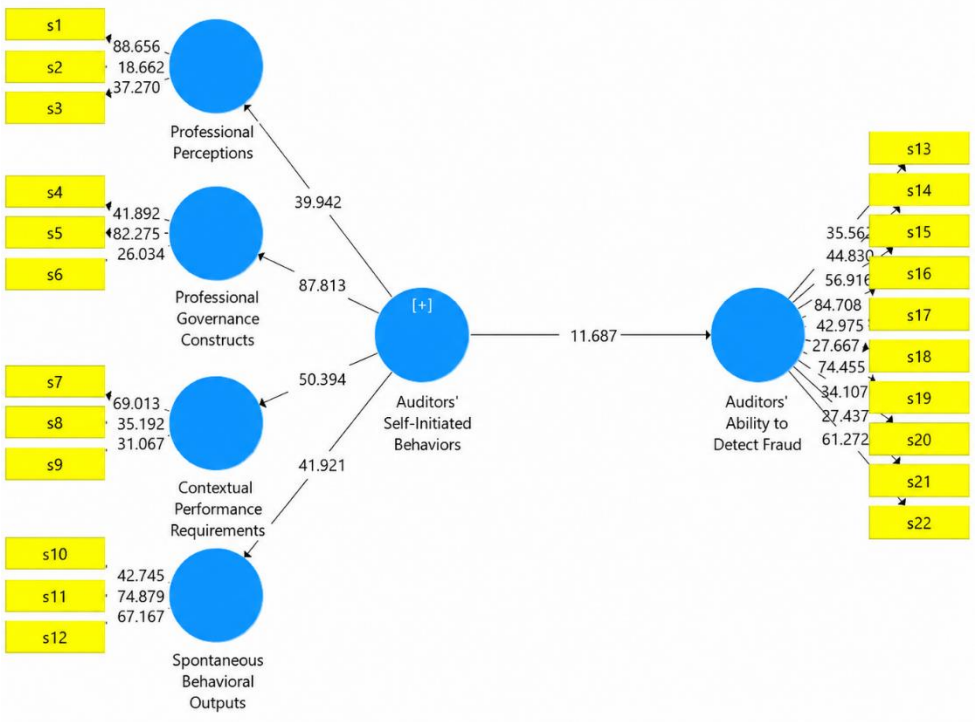

Figure 2. Structural Model of the Research Hypothesis with t-Statistics

As shown in Figures 1 and 2, the standardized coefficient (path coefficient) indicates that auditors' self-initiated behaviors have a positive and statistically significant effect on auditors' ability to detect fraud. Specifically, the path coefficient is positive and equal to 0.562, while the t-statistic is 11.687. Because the t-statistic exceeds the critical value of 1.96, the research hypothesis is supported.

Discussion and Conclusion

The present study was conducted to identify the dimensions of auditors' self-initiated behaviors and to examine their effect on auditors' ability to detect fraud. The qualitative findings resulted in the identification of four overarching categories—professional perceptions, professional governance constructs, contextual performance requirements, and spontaneous behavioral outputs—comprising 12 main components and 82 basic themes. The quantitative findings subsequently confirmed that auditors' self-initiated behaviors had a positive and statistically significant effect on auditors' ability to detect fraud. More specifically, the standardized path coefficient from auditors' self-initiated behaviors to fraud-detection ability was 0.562, with a t-value of 11.687, indicating a statistically significant relationship. In addition, the coefficient of determination for auditors' ability to detect fraud was $R^2 = 0.524$, suggesting that the model explained a substantial proportion of the variance in fraud-detection ability. The predictive relevance value for this construct was also strong ($Q^2 = 0.737$), further supporting the explanatory and predictive usefulness of the proposed model. Collectively, these findings indicate that fraud detection should not be viewed exclusively as a function of technical knowledge or formal audit procedures; rather, it is also significantly influenced by the manner in which auditors perceive their professional responsibilities, respond to contextual pressures, internalize governance expectations, and voluntarily engage in behaviors extending beyond minimum task requirements.

The first qualitative category, professional perceptions, consisted of a sense of organizational belonging and identity, awareness of professional authority, and perception of the consequences of action. This finding suggests that auditors' behavior is partly shaped by how they define their professional role and understand the broader consequences of their judgments. Auditors who perceive themselves as responsible for protecting investor confidence, enhancing market transparency, maintaining the reputation of the audit profession, and contributing to effective corporate governance may be more motivated to investigate suspicious evidence thoroughly and resist premature closure of audit procedures. This interpretation is consistent with research emphasizing the role of professionalism in improving auditors' professional judgment (6). It is also aligned with evidence showing that professional judgment in auditing is influenced by the auditor's interpretation of responsibility, available evidence, and the consequences of alternative decisions (3, 5). Materiality judgments likewise involve professional discretion and subjective interpretation, indicating that auditors' perceptions of significance and consequences play an important role in audit decision-making (4). Therefore, when auditors possess a stronger professional identity and clearer awareness of the consequences associated with their judgments, they may be more likely to treat fraud detection as a substantive professional obligation rather than merely a procedural requirement.

The identification of professional perceptions is also compatible with research on auditors' cognitive and psychological characteristics. Cognitive styles influence the way auditors organize and interpret evidence, process uncertainty, and reach conclusions (7). Similarly, affective and psychological processes can shape audit judgment and decision-making by influencing attention, risk perception, and responses to ambiguous professional situations (8). Professional perceptions may therefore function as an interpretive framework through which auditors assign

meaning to audit evidence and decide whether additional action is warranted. The present findings are also consistent with evidence that psychological capital, experience, and professional skepticism are associated with higher-quality professional judgment and decision-making (11). When auditors perceive themselves as professionally competent, responsible, and consequential actors within financial reporting systems, they may demonstrate greater confidence and persistence in challenging management explanations and examining unusual transactions. This interpretation is further supported by findings that goal orientation can enhance auditors' judgment performance through self-efficacy (10). Thus, professional perceptions appear to provide a cognitive-motivational foundation for the voluntary and persistent behaviors that facilitate fraud detection.

The second category identified in the qualitative phase was professional governance constructs, comprising institutionalized ethical norms, standardized frameworks, and accountable oversight mechanisms. This finding indicates that self-initiated behavior does not arise in a vacuum; rather, it develops within a professional infrastructure that establishes acceptable conduct, reinforces accountability, and specifies standards for evidence collection, reporting, independence, and documentation. Institutionalized ethical norms may encourage auditors to prioritize integrity, objectivity, confidentiality, and stakeholder responsibility even when doing so requires additional effort or generates conflict with clients. The importance of this dimension is consistent with findings showing that auditors' ethical behavior contributes to audit quality and may be strengthened through perceived organizational support (14). Similarly, ethical idealism has been linked with fraud-detection ability through conscientiousness, indicating that deeply internalized ethical values can translate into greater attentiveness and responsibility in fraud-related situations (13). The present findings therefore suggest that professional governance mechanisms do more than impose formal compliance; they may cultivate behavioral conditions under which auditors voluntarily engage in higher-quality actions.

The role of professional governance constructs can also be understood through the importance of ethical culture and quality-control mechanisms under pressure. Audit environments commonly expose professionals to time constraints, budgetary limitations, client demands, and commercial pressures. Previous research has shown that ethical culture can protect audit quality under time pressure by discouraging behavior that sacrifices professional standards for efficiency (15). Conversely, dysfunctional audit behavior may be associated with budget emphasis, leadership practices, and weaknesses in audit review processes (17). These findings correspond closely to the present study's identification of accountable oversight mechanisms and standardized professional frameworks. Effective quality inspection, professional feedback, interaction with audit committees, disciplinary accountability, and adherence to professional codes of conduct may strengthen auditors' willingness to continue investigating potential irregularities even when competing organizational pressures encourage procedural reduction. The findings concerning social responsibility and Machiavellianism in professional decision-making further demonstrate that ethical orientations influence professionals' responses to financial and compliance-related dilemmas (16). Accordingly, the governance context surrounding auditors may either reinforce or suppress self-initiated professional conduct, with important implications for fraud detection.

The third category, contextual performance requirements, included competitive environmental pressures, the inherent complexity of business entities, and technology and process innovation. This finding highlights that auditors increasingly work within complex environments in which traditional audit procedures may be insufficient for identifying sophisticated forms of fraudulent reporting. Competitive pressure, fee constraints, rapidly changing technologies, complex estimates, related-party transactions, financial instruments, mergers and acquisitions, and

multinational operations all impose cognitive and procedural demands on auditors. In such circumstances, effective fraud detection requires auditors to adapt, expand their investigative strategies, and exercise professional judgment rather than depend exclusively on standardized routines. This result is supported by research showing that time-budget pressure, experience, and competence influence audit judgment (18). It is also consistent with evidence that excessive job demands can generate anxiety and contribute to counterproductive work behaviors through impaired psychological recovery and detachment (19, 20). In an audit setting, demanding contextual conditions may therefore reduce fraud-detection effectiveness unless auditors possess sufficient initiative, resilience, and professional commitment to maintain audit quality.

Technological innovation within the contextual requirements category is particularly important because fraud detection increasingly requires auditors to engage with large datasets, advanced information systems, data-mining techniques, artificial intelligence, automated testing, and unstructured information. Although technology can improve coverage and analytical efficiency, its effectiveness ultimately depends on auditors' willingness and ability to use it proactively. Self-initiated auditors may be more inclined to learn new analytical tools, experiment with alternative procedures, and use technological resources to identify anomalies that would otherwise remain undetected. This interpretation is compatible with the broader evidence that auditors' cognitive characteristics and professional competencies affect how they process complex information (7). In addition, observational learning and supportive learning climates can facilitate auditors' acquisition of sophisticated reasoning processes and improve professional development (26). Consequently, the technological environment may create opportunities for improved fraud detection, but realizing those opportunities requires active learning and voluntary behavioral engagement from auditors.

The fourth qualitative category, spontaneous behavioral outputs, comprised initiative in quality enhancement, extra-professional interaction with stakeholders, and persistence and continuity of commitment. This category arguably represents the most direct behavioral manifestation of the study's central construct. It includes such actions as performing additional audit tests, seeking supplementary documentation, independently reviewing colleagues' work, improving audit procedures, communicating proactively with audit committees and regulators, mentoring junior auditors, following up persistently on management explanations, and maintaining professional curiosity despite stress and time pressure. These behaviors can increase the probability that suspicious transactions or inconsistencies will receive sufficient investigation before an audit conclusion is reached. The present results therefore suggest that the distinction between technically competent auditing and highly effective fraud detection may partly depend on whether auditors voluntarily extend their efforts beyond minimum procedural requirements.

This interpretation is supported by prior evidence linking auditor self-efficacy with fraud risk assessment through both incremental and radical creativity (12). Auditors who feel capable of addressing difficult tasks may be more willing to propose alternative procedures, search for unconventional explanations, and persist when initial audit evidence is inconclusive. Similarly, the finding that professional skepticism mediates the relationship between partner perfectionism and audit quality suggests that dispositional tendencies can produce improved audit outcomes when expressed through vigilant and questioning behaviors (24). Research has also shown that personality traits and professional skepticism are associated with auditor quality (9). Collectively, these studies support the present finding that active, self-generated behavioral responses are important mechanisms through which auditors' psychological and professional attributes become translated into fraud-detection performance.

The importance of persistence and stakeholder interaction is further reinforced by research on auditor–client conflicts. Professionalism, overconfidence, and antisocial personality characteristics can influence how auditors resolve conflicts with management (21), while broader personality traits have been shown to affect conflict management in auditor–client relationships (22). Fraud investigations frequently create precisely such conflictual conditions because management may resist requests for additional evidence, dispute auditors' interpretations, or attempt to minimize the significance of irregular transactions. Auditors who display sustained professional commitment and remain willing to pursue unresolved issues are therefore more likely to obtain sufficient evidence. Conversely, auditors with less adaptive behavioral tendencies may accept incomplete explanations or reduce investigative effort. Evidence that dark personality traits can increase accountants' tendencies toward fraudulent behavior further underscores the relevance of behavioral characteristics to financial misconduct and professional responses to it (23). At the management level, CFO narcissism has also been associated with financial reporting quality, suggesting that auditors must remain attentive to behavioral as well as accounting-related risk indicators when evaluating fraud risk (25).

The central quantitative finding—that auditors' self-initiated behaviors positively and significantly affect their ability to detect fraud—is especially consistent with the study by Nemati Roshan et al., which showed that auditors' self-development behavior is related to their fraud-detection ability (2). Self-development can be understood as one manifestation of the broader self-initiated behavioral construct identified in the present study. The current findings extend this perspective by demonstrating that proactive professional behavior includes not only self-development but also professional identification, governance-related behavior, adaptation to contextual demands, quality-enhancing initiative, stakeholder interaction, and sustained commitment. The findings are also consistent with the conceptual model proposed for factors affecting independent auditors' ability to detect financial statement fraud, which emphasized the multidimensional nature of fraud-detection capability (1). Therefore, the present model contributes to the literature by integrating previously dispersed psychological, professional, organizational, and contextual factors into a coherent behavioral framework.

Taken together, the findings indicate that auditors' fraud-detection ability emerges from the interaction between professional cognition and professional action. Technical knowledge and experience remain necessary, but they may not be sufficient when fraud indicators are subtle, evidence is ambiguous, or organizational pressures discourage further investigation. Self-initiated behaviors appear to provide a behavioral pathway through which professionalism, self-efficacy, ethics, skepticism, learning, and contextual adaptation are converted into concrete audit actions. This conclusion is compatible with evidence concerning professionalism and judgment (6), self-efficacy and auditor creativity (12), ethical conduct (13, 14), professional skepticism (9, 24), and observational learning (26). The model developed in the present study therefore broadens the behavioral auditing perspective by suggesting that what auditors voluntarily choose to do—particularly when minimum compliance would be easier—can materially influence their ability to detect fraud.

The present study has several limitations that should be considered when interpreting its findings. First, the qualitative model was developed on the basis of interviews with a relatively limited number of experts, and although theoretical saturation was achieved, the identified dimensions may still reflect characteristics of the professional and institutional environment in which the participants worked. Second, the quantitative data were collected using self-report questionnaires, which may be affected by social desirability, common-method variance, or respondents' subjective assessments of their own professional behavior and fraud-detection capability. Third, because the study

employed a cross-sectional design, the observed relationships cannot establish definitive causal direction over time. Fourth, the population of auditors was treated as unlimited because reliable official statistics were unavailable, which may constrain the precision of population-level generalization. Finally, although the proposed model demonstrated satisfactory reliability, validity, explanatory power, and predictive relevance, fraud detection is a complex outcome that can also be influenced by client characteristics, audit-firm size, industry specialization, engagement risk, regulatory environments, audit technologies, and team-level factors that were not explicitly incorporated into the present model.

Future studies are recommended to replicate and extend the proposed model across different audit environments, countries, regulatory systems, and types of audit firms to determine whether the four-dimensional structure of auditors' self-initiated behaviors remains stable across institutional contexts. Longitudinal and experimental research could also be used to establish whether changes in self-initiated behavior actually lead to subsequent improvements in fraud-detection performance. Researchers may examine mediating mechanisms such as professional skepticism, self-efficacy, moral courage, psychological capital, creativity, organizational identification, and professional commitment, as well as moderating factors such as time-budget pressure, workload, ethical climate, leadership style, audit-firm culture, technological readiness, and client complexity. Future research could further employ behavioral experiments, fraud-detection simulations, archival performance indicators, supervisor ratings, and actual audit outcomes rather than relying exclusively on self-report measures. Comparative research between junior and senior auditors, internal and external auditors, public and private audit organizations, and industry specialists and generalists may also clarify whether the effects of self-initiated behavior vary by professional role and experience. Finally, further research should examine how emerging technologies, including artificial intelligence, advanced analytics, and automated audit platforms, interact with auditors' proactive behavioral tendencies in identifying increasingly sophisticated forms of fraud.

Audit firms and professional bodies should incorporate the development of self-initiated professional behavior into recruitment, training, performance evaluation, promotion, and quality-management systems. Training programs should go beyond technical standards and explicitly develop professional curiosity, persistence, proactive communication, ethical courage, independent evidence seeking, problem solving, and willingness to perform additional procedures when fraud indicators remain unresolved. Audit firms should create organizational conditions in which auditors can raise concerns, request additional evidence, challenge management explanations, consult specialists, and extend necessary procedures without fearing inappropriate penalties for exceeding budgets or deadlines. Supervisors should recognize and reward quality-enhancing initiatives rather than evaluating performance primarily through time and cost measures. Structured mentoring, observational learning, case-based fraud exercises, technology training, and systematic feedback can also strengthen auditors' capacity to convert professional knowledge into proactive behavior. At the institutional level, audit regulators and professional associations can incorporate behavioral competencies into continuing professional development programs and quality-control guidance, thereby encouraging a professional culture in which initiative, accountability, persistence, ethical conduct, and active fraud investigation are treated as integral components of high-quality auditing.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

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Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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