

The Effect of Psychological Characteristics, Professional Skills, Occupational Experience, and Rationality on Auditors' Competence and Perception

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Abstract: This study aimed to examine the effects of auditors' psychological characteristics, professional skills, occupational experience, and rationality on auditors' competence and perception. This applied, quantitative, cross-sectional, descriptive-correlational study was conducted among certified public accountants in Iran. Participants were selected using simple random sampling, and the required sample size was estimated using Cochran's formula. Of the distributed questionnaires, 301 complete and usable responses were included in the final analysis. Data were collected using a structured questionnaire consisting of demographic questions and standardized or researcher-developed items measuring psychological characteristics, professional skills, occupational experience, rationality, auditors' competence, and auditors' perception. Data were coded in Microsoft Excel and analyzed using SPSS and SmartPLS. Descriptive statistics and preliminary distributional analyses were performed, followed by evaluation of the measurement model in terms of indicator loadings, internal consistency, composite reliability, convergent validity, and discriminant validity. The hypothesized relationships were tested using partial least squares structural equation modeling. Structural model analysis showed that psychological characteristics significantly predicted auditors' competence ($\beta = 0.218$, $t = 4.192$, $p < .001$) and perception ($\beta = 0.241$, $t = 4.382$, $p < .001$). Professional skills had significant positive effects on competence ($\beta = 0.347$, $t = 6.088$, $p < .001$) and perception ($\beta = 0.263$, $t = 4.534$, $p < .001$). Occupational experience also significantly affected competence ($\beta = 0.194$, $t = 3.959$, $p < .001$) and perception ($\beta = 0.176$, $t = 3.520$, $p < .001$). Rationality significantly predicted competence ($\beta = 0.286$, $t = 5.296$, $p < .001$) and perception ($\beta = 0.331$, $t = 5.911$, $p < .001$). The model explained 68.4% of the variance in competence and 63.1% of the variance in perception. Auditors' competence and perception are jointly shaped by psychological, professional, experiential, and rational characteristics, with professional skills emerging as the strongest predictor of competence and rationality as the strongest predictor of perception. Strengthening these dimensions may improve auditors' professional effectiveness and judgment quality.

Keywords: Auditors, Psychological Characteristics, Professional Skills, Occupational Experience, Rationality, Competence, Perception

1. Introduction

Auditing is a professional activity in which technical competence, ethical judgment, cognitive evaluation, and accumulated experience converge to shape the quality of professional decisions. Although auditing standards, formal procedures, and regulatory frameworks define the institutional boundaries of audit work, the effectiveness of an auditor is also strongly dependent on individual characteristics that influence how evidence is interpreted, risks are assessed, professional skepticism is exercised, and judgments are translated into decisions. In contemporary audit environments, auditors are increasingly required to process

complex financial information, respond to changing client strategies, identify potential misstatements, evaluate internal controls, and maintain independence while simultaneously operating under organizational, economic, and interpersonal pressures. These conditions make it difficult to explain auditors' performance solely through formal qualifications or procedural knowledge. Instead, a more comprehensive understanding requires attention to psychological characteristics, professional skills, occupational experience, and rationality as interrelated factors that may influence both auditors' competence and their perception of professional situations. Prior research has shown that auditor behavior can vary according to client characteristics, strategic changes, organizational expectations, and individual professional responses, indicating that audit judgment is shaped through an interaction between situational demands and auditor-related factors [1]. Accordingly, understanding the personal and professional antecedents of auditors' competence and perception has become increasingly important for audit quality, professional development, and public trust in assurance services.

Psychological characteristics represent one of the major individual-level foundations of professional behavior because they influence how people perceive uncertainty, tolerate pressure, respond to ethical conflicts, interpret social cues, and regulate their judgments. Auditors frequently work in conditions characterized by time pressure, ambiguity, responsibility, and exposure to conflicting interests. Under such circumstances, individual psychological tendencies may affect the degree of persistence, confidence, emotional stability, independence, ethical sensitivity, and willingness to challenge questionable client representations. Psychological processes are especially important when formal audit evidence is incomplete or when several defensible interpretations are possible. In these situations, the auditor's internal cognitive and emotional characteristics can influence how information is framed and how professional alternatives are evaluated. Research in behavioral ethics has demonstrated that ethical conduct is vulnerable to social and psychological influences, including stereotype-related and interactional effects that may alter decision-making under specific contexts [2]. In the auditing profession, where professional judgment often involves interpersonal exchanges and potentially conflicting expectations, such findings reinforce the argument that psychological characteristics should be treated as a meaningful component of professional effectiveness rather than as peripheral personal attributes.

The ethical dimension of auditors' psychological functioning is particularly important because professional auditing requires individuals to resist self-interest, maintain objectivity, and recognize ethically relevant features of decision situations. Johari et al. emphasized that auditors' ethical orientation and threats to independence can influence ethical decision processes through the perceived moral intensity of professional situations [3]. This perspective indicates that auditors do not respond mechanically to ethical rules; rather, they interpret ethical situations through cognitive and psychological processes that determine whether an issue is recognized as morally significant and how competing interests are evaluated. Similarly, ethical awareness and ethical judgment have been identified as important antecedents of behavioral responses in organizational settings, particularly where individuals must decide whether to report or challenge questionable conduct [4]. For auditors, these processes are central to professional perception because the ability to identify risk, irregularity, or ethically problematic behavior depends not only on technical knowledge but also on the auditor's sensitivity to the meaning and implications of observed evidence. Consequently, psychological characteristics may influence auditors' competence by affecting self-regulation and judgment quality, while simultaneously shaping perception through the interpretation of ambiguous professional and ethical cues.

Professional skills constitute another fundamental determinant of auditors' effectiveness. Auditing is a knowledge-intensive occupation that requires mastery of accounting principles, auditing standards, analytical

procedures, documentation requirements, risk assessment, evidence evaluation, communication, and increasingly complex technological and regulatory environments. Professional skills therefore include not only technical knowledge but also the ability to apply that knowledge adaptively in different audit situations. An auditor may possess theoretical knowledge but still lack the professional ability to integrate evidence, recognize inconsistencies, communicate findings, or select an appropriate procedure in response to emerging risks. This distinction between possessing information and competently using it is central to professional auditing. Safari's study of auditors indicated that professional knowledge and ethics are related to audit quality and that the complexity of audit tasks can alter the practical consequences of these professional attributes [5]. Such findings underscore that professional competence is context dependent: as tasks become more complex, the auditor's ability to organize knowledge, apply judgment, and draw defensible conclusions becomes increasingly important.

Professional skills are also closely connected with ethics because technical proficiency without appropriate professional values may not produce high-quality audit outcomes. Mahdi Akhgar examined auditors' competence and professional ethics in relation to audit quality, emphasizing the importance of both professional capability and psychological factors such as self-esteem in explaining audit-related outcomes [6]. Similarly, Hosseini Ebrahimabadi linked professional ethics, financial intelligence, and creativity with productivity among auditing professionals, indicating that auditor effectiveness is multidimensional and may depend on the interaction between ethical, cognitive, and skill-oriented capacities [7]. These findings support a broader conceptualization of professional skills that extends beyond technical accounting proficiency. Skilled auditors must be capable of evaluating financial relationships, recognizing unusual patterns, adapting to changing client conditions, communicating concerns effectively, and maintaining professional standards even when confronted with incentives that may undermine independence or objectivity.

Occupational experience constitutes a third important factor because auditing expertise develops partly through repeated exposure to diverse clients, industries, transactions, risk patterns, and judgment situations. Experience provides auditors with opportunities to transform explicit knowledge into practical schemas that facilitate pattern recognition, prioritization of evidence, and anticipation of potential problems. Over time, auditors may become more efficient in distinguishing relevant from irrelevant information, recognizing indicators of fraud or misstatement, and anticipating the behavioral strategies used by clients in complex reporting situations. Motamed Vaziri examined professional ethics, experience, and auditor independence in relation to the quality of audit work, emphasizing that experience operates alongside ethical and independence-related factors in shaping professional outcomes [8]. This suggests that experience should not be regarded merely as a demographic characteristic measured by years of service. Rather, it reflects accumulated professional exposure that may strengthen both competence and perception by allowing auditors to draw upon a broader repertoire of prior cases when interpreting new information.

The importance of occupational experience is especially evident in situations involving potentially fraudulent or strategically manipulated financial reporting. Amiri examined relationships among audit fees, auditor tenure, auditor independence, and fraudulent financial reporting, highlighting the relevance of auditor-related and engagement-related characteristics to the detection and control of problematic reporting behavior [9]. Experienced auditors may possess a stronger understanding of the incentives and contextual conditions that give rise to aggressive accounting choices, thereby improving their ability to detect inconsistencies and question management representations. However, experience alone may not necessarily guarantee superior outcomes. Its benefits depend on whether prior exposure is combined with continuous professional learning, ethical commitment, and rational

evaluation. If experience becomes routinized or produces excessive confidence, it may potentially reduce sensitivity to novel risks. Therefore, occupational experience is most likely to enhance competence and perception when it operates together with professional skills and reflective reasoning.

Rationality is another central construct in understanding auditors' judgments because auditing inherently requires the systematic comparison of evidence, alternatives, probabilities, risks, and consequences. Rationality in this context refers to the tendency to evaluate professional information through deliberate, analytical, evidence-based reasoning rather than relying predominantly on intuition, affective reactions, or unexamined assumptions. Audit judgments frequently require the integration of contradictory information and the assessment of whether evidence is sufficient and appropriate to support a conclusion. Rationality can therefore strengthen the quality of professional decisions by encouraging auditors to consider alternative explanations, evaluate the consistency of available evidence, and avoid premature closure. Rational decision-making is particularly important when auditors confront client pressure, ethical dilemmas, or strategic changes that may create incentives to accept convenient rather than well-supported explanations. Wu et al. showed that changes in clients' strategic behavior are associated with changes in auditor behavior, including audit adjustments and fees, illustrating that auditors must continuously interpret new information and adapt their responses to evolving client circumstances [1]. Such adaptation requires both professional knowledge and a rational framework for interpreting evidence.

The significance of rationality is also apparent in research concerning ethical behavior and professional judgment. Ethical action frequently requires auditors to evaluate the consequences of different alternatives while distinguishing professionally defensible reasoning from self-serving rationalization. Latan et al. demonstrated that ethical awareness and ethical judgment are relevant to decisions concerning whistleblowing and responses to misconduct [4]. Similarly, Johari et al. showed that the ethical decision-making process is shaped by ethical orientation and perceived moral intensity [3]. These findings suggest that rationality and ethical cognition are closely interconnected. Auditors who engage in systematic reasoning may be better positioned to identify the professional significance of an issue, recognize conflicts between personal interest and professional responsibility, and select actions that are consistent with evidence and ethical standards. Accordingly, rationality may contribute directly to auditors' competence by improving decision quality and to auditors' perception by strengthening the interpretation and organization of complex professional information.

The organizational and ethical environment within which auditors operate may further influence how psychological characteristics, skills, experience, and rationality are translated into behavior. Rahmanipour examined the influence of ethical work climate on work-related ethical behavior among auditors, showing that organizational conditions can support or constrain individual ethical conduct [10]. Hamid Al-Bazouni likewise investigated relationships among organizational ethics, job satisfaction, organizational commitment, and auditor turnover in Iraqi audit firms, illustrating that professional behavior is embedded within broader organizational and attitudinal processes [11]. These studies indicate that auditors' internal capacities cannot be completely separated from the environments in which they are exercised. Nevertheless, individual competence and perception remain crucial because auditors must interpret organizational expectations, respond to ethical climates, and make professional decisions even when institutional signals are ambiguous or conflicting.

Professional ethics training may also strengthen the application of auditors' psychological and professional resources. Pourfaraj reported on the effectiveness of professional ethics training for accounting and auditing experts in fulfilling social responsibility, with particular attention to job commitment [12]. Training that enhances awareness of professional responsibilities may improve auditors' capacity to connect technical decisions with their

wider social consequences. This is particularly relevant because auditing serves a public-interest function by contributing to the credibility of financial reporting and reducing information asymmetry among stakeholders. The social responsibility of auditors therefore extends beyond completing procedures; it involves maintaining standards of integrity, skepticism, and professional judgment that protect users of financial information. Sabouri et al., although focusing on the Pygmalion effect in a different organizational context, demonstrated the broader importance of expectations, perceptions, and behavioral responses in shaping professional and organizational outcomes [13]. Such mechanisms may also be relevant in auditing, where expectations from supervisors, clients, professional bodies, and colleagues can influence self-perception, motivation, and behavioral performance.

The relationship between auditors' personal attributes and their professional conduct is also apparent in studies focusing on creative accounting and ethically questionable financial practices. Javad Jafar examined the effect of external auditors' ethics on limiting creative accounting practices and emphasized the role of auditors' ethical characteristics in constraining reporting behaviors that may distort economic reality [14]. This relationship highlights the connection between perception and competence: auditors must first perceive that an accounting treatment is potentially misleading before they can competently challenge it. The capacity to detect such practices may depend on technical skill, prior occupational exposure, ethical sensitivity, and rational analysis. Similarly, Ramzi et al. examined ethical behavior, audit strength, and tax evasion across countries, indicating that stronger auditing and ethical behavior can have broader implications for compliance and institutional accountability [15]. These findings reinforce the importance of auditors as governance actors whose individual capacities may generate consequences beyond the audit engagement itself.

Recent research has further emphasized that the ethical challenges auditors encounter are socially complex and may involve conflict among professional expectations, organizational pressures, and interpersonal relationships. Samadi Farkharan et al. developed a hegemonic model for controlling auditors' social ethical conflicts, highlighting the multidimensional and socially embedded nature of ethical conflict in the auditing profession [16]. Such conflicts may place substantial demands on auditors' psychological resilience, reasoning capabilities, and professional judgment. Auditors who possess strong professional skills but limited psychological stability may find it difficult to apply their knowledge under pressure, whereas highly experienced auditors who rely excessively on routine may fail to recognize emerging risks. Likewise, rational analysis without adequate professional expertise may be insufficient because effective reasoning depends on the quality and relevance of the knowledge being evaluated. These considerations suggest that psychological characteristics, professional skills, occupational experience, and rationality should be examined simultaneously rather than independently.

The increasing complexity of the contemporary business environment provides an additional reason to adopt an integrated approach. Changes in corporate strategy, financial innovation, digitalization, regulatory expectations, and organizational structures have expanded the range of risks that auditors must evaluate. As client strategies evolve, audit responses may also change in terms of procedures, adjustments, effort, and pricing [1]. In this context, auditors must possess sufficient competence to select and implement appropriate responses and sufficient perceptual capability to recognize when a change in client behavior carries implications for audit risk. Competence refers to the ability to perform professional responsibilities effectively, whereas perception concerns the way auditors identify, interpret, and make sense of information and professional conditions. Although these constructs are conceptually related, they are not identical. An auditor may possess technical competence but interpret a situation inaccurately, or may correctly perceive a risk but lack the professional capability to respond effectively. Investigating both outcomes can therefore provide a more complete picture of auditor functioning.

The literature also suggests that professional behavior emerges from an interaction among ethical, cognitive, experiential, and organizational mechanisms rather than from a single isolated determinant. Research on audit quality has emphasized competence, ethics, experience, independence, and knowledge [5, 6, 8], while behavioral studies have highlighted ethical orientation, awareness, moral intensity, and judgment [3, 4]. Other studies have identified organizational ethics, commitment, social responsibility, creativity, and work climate as relevant to auditor-related outcomes [7, 10-12]. At the same time, evidence concerning fraudulent reporting, creative accounting, and tax-related behavior demonstrates that the effectiveness of auditing has important consequences for the integrity of financial systems [9, 14, 15]. These strands of literature collectively support the need for a structural model capable of examining the simultaneous contribution of multiple auditor characteristics to key professional outcomes.

Despite these advances, relatively limited research has integrated psychological characteristics, professional skills, occupational experience, and rationality within a single explanatory framework focused simultaneously on auditors' competence and perception. Existing studies often examine ethics, independence, experience, knowledge, or organizational climate separately, making it difficult to determine the comparative contribution of different auditor characteristics when they are considered together. Furthermore, recent behavioral research suggests that ethically relevant conduct may be influenced by subtle psychological and social mechanisms, including interpersonal expectations and stereotype-related processes [2], while broader organizational research has shown that expectations can shape behavior and performance through perceptual mechanisms [13]. These findings strengthen the rationale for examining auditors through an integrated psychological-professional model rather than relying exclusively on traditional technical variables. Such an approach may help explain why auditors with similar formal qualifications can differ in their judgments, interpretations, and professional effectiveness.

Understanding these relationships also has practical implications for audit firms, professional associations, and educational institutions. If professional skills represent the strongest basis for competence, training systems should emphasize applied judgment, technical updating, and problem-solving rather than relying exclusively on formal credentials. If rationality has an important role in auditors' perception, professional development may need to incorporate analytical reasoning, evidence evaluation, and cognitive debiasing. If psychological characteristics significantly contribute to both competence and perception, recruitment and development practices may benefit from greater attention to resilience, ethical sensitivity, self-regulation, and professional confidence. Finally, if occupational experience independently contributes to these outcomes, organizations should create mechanisms through which experiential knowledge can be transformed into explicit learning through mentoring, case-based training, and reflective practice. Such measures may strengthen both individual auditor performance and the institutional credibility of auditing.

Therefore, the aim of the present study was to examine the effects of auditors' psychological characteristics, professional skills, occupational experience, and rationality on auditors' competence and perception.

2. Methods and Materials

This study employed a quantitative, cross-sectional, descriptive-correlational research design and used structural equation modeling (SEM) to examine the relationships among psychological characteristics, professional skills, occupational experience, rationality, auditors' competence, and auditors' perception. The research was applied in purpose and survey-based in terms of data collection. The statistical population consisted of certified public accountants practicing in Iran. Because the study aimed to investigate the structural relationships among

several latent constructs simultaneously, a questionnaire-based approach was considered appropriate for collecting standardized quantitative data from a relatively large group of professional auditors. Participants were selected using simple random sampling to provide eligible members of the target population with an equal probability of inclusion and to reduce systematic selection bias. The required sample size was determined using Cochran's sample size formula, which is commonly employed to estimate an adequate sample size for survey research involving large populations. Based on this procedure and the requirements of the proposed statistical analyses, 350 certified public accountants were selected as the study sample. Data were collected through the distribution of standardized and researcher-developed questionnaires among the selected participants. Participation was voluntary, and respondents were informed that the information obtained through the questionnaires would be analyzed collectively and used exclusively for research purposes. The demographic section of the questionnaire collected information regarding respondents' gender, occupational position, educational level, work experience, and type of professional activity. These characteristics were included to provide a comprehensive description of the sample and to facilitate interpretation of the findings within the professional context of auditing and accounting.

Data were collected using a structured questionnaire composed of two major sections. The first section contained general demographic and professional questions concerning gender, occupational position, educational attainment, years of professional experience, and type of professional activity. The second section consisted of specialized items designed to measure the principal constructs of the conceptual model, including psychological characteristics, professional skills, occupational experience, rationality, auditors' competence, and auditors' perception. Standardized questionnaire items were used whenever an appropriate established measure was available, while researcher-developed items were incorporated where necessary to adequately operationalize dimensions specific to the objectives and professional context of the present study. The specialized items were structured using an appropriate Likert-type response format so that participants could indicate the extent of their agreement with or endorsement of each statement. Higher scores represented greater levels of the corresponding construct. Following completion of data collection, the questionnaires were screened for completeness and response consistency. Responses were subsequently coded numerically and entered into Microsoft Excel, where initial data organization, coding, calculation of variable scores, and preparation of the database were performed before transferring the final dataset to the statistical software. Because the research model included multiple latent variables measured through several observed indicators, the measurement properties of the constructs were assessed before examining the hypothesized structural relationships. Accordingly, indicator reliability, internal consistency reliability, convergent validity, and discriminant validity were considered in evaluating the adequacy of the measurement model. Internal consistency was assessed using reliability indices such as Cronbach's alpha and composite reliability, while convergent validity was evaluated through indicator loadings and average variance extracted. Discriminant validity was examined to establish that the constructs represented empirically distinguishable dimensions and that measures intended to represent one construct were sufficiently distinct from those representing other variables in the model.

Data analysis was conducted using Microsoft Excel, SPSS, and SmartPLS. After collecting the completed questionnaires, responses were coded and quantified in Microsoft Excel and subsequently imported into the statistical software for analysis. The analytical procedure consisted of both descriptive and inferential stages. Descriptive statistics were first calculated to summarize the demographic and professional characteristics of the respondents and to provide an overview of the distributions of the main study variables. Frequencies and percentages were used to describe categorical characteristics, whereas measures such as the mean and standard

deviation were used to summarize continuous and composite variables. Preliminary screening was conducted to identify missing values, potential data-entry errors, and unusual observations. The Kolmogorov–Smirnov test was also used as part of the assessment of the distributional characteristics of the variables. Inferential analyses were subsequently performed to evaluate the hypothesized relationships incorporated into the conceptual model. Structural equation modeling was employed as the primary analytical approach because it permits simultaneous estimation of multiple relationships among latent constructs while accounting for measurement error. The partial least squares structural equation modeling approach was implemented using SmartPLS, whereas SPSS was used for preliminary, descriptive, and complementary statistical analyses. Before testing the structural hypotheses, the measurement model was evaluated by examining the reliability and validity of the constructs. After establishing satisfactory measurement quality, the structural model was assessed through indicators including path coefficients, associated significance statistics, coefficients of determination, effect-related measures, and relevant predictive and model-quality criteria. The magnitude and direction of the estimated path coefficients were used to determine the effects of psychological characteristics, professional skills, occupational experience, and rationality on auditors' competence and perception. Statistical significance was evaluated using the appropriate inferential criteria, and the results of the structural model were interpreted in accordance with the proposed research hypotheses and conceptual framework.

3. Findings and Results

A total of 301 completed and usable questionnaires were included in the final statistical analysis. Regarding gender, 167 respondents (55%) were male and 134 (45%) were female, indicating a relatively balanced gender distribution with a modest predominance of male auditors. All 301 respondents (100%) were active members of the Iranian Association of Certified Public Accountants and were professionally engaged in independent auditing activities. With respect to occupational position, 97 respondents (32%) were audit supervisors, 104 (35%) were audit managers, and 100 (33%) were audit partners. Thus, the participants were almost evenly distributed across the three principal professional positions, providing representation from different levels of responsibility within the auditing profession. In terms of professional experience, 25 participants (8%) had less than 6 years of work experience, 75 (25%) had between 6 and 10 years, 150 (50%) had between 11 and 15 years, and 51 (17%) had more than 15 years of professional experience. Therefore, the majority of participants possessed substantial occupational experience, with approximately two-thirds having more than 10 years of professional experience. Regarding educational attainment, 51 respondents (17%) held a bachelor's degree, 191 (63%) held a master's degree, and 59 (20%) held a doctoral degree. The educational profile therefore indicated a highly qualified professional sample, as 83% of respondents held postgraduate qualifications.

Table 1. Descriptive Statistics and Distributional Characteristics of the Study Variables

Variable	Mean	SD	Minimum	Maximum	Skewness	Kurtosis	K-S Statistic	p
Psychological characteristics	3.68	0.57	2.08	4.92	-0.31	-0.18	0.048	.094
Professional skills	3.89	0.51	2.39	4.96	-0.42	0.21	0.043	.200
Occupational experience	3.76	0.56	2.15	4.95	-0.27	-0.11	0.051	.083
Rationality	3.83	0.53	2.29	4.97	-0.36	0.14	0.046	.156
Auditors' competence	3.94	0.49	2.46	4.96	-0.45	0.29	0.044	.183
Auditors' perception	3.79	0.52	2.27	4.93	-0.33	0.08	0.049	.091

As shown in Table 1, the mean scores of all six principal variables were above the midpoint of the five-point measurement scale, suggesting that the respondents generally reported relatively favorable levels of the characteristics examined in the study. Auditors' competence had the highest mean score ($M = 3.94$, $SD = 0.49$), followed by professional skills ($M = 3.89$, $SD = 0.51$), rationality ($M = 3.83$, $SD = 0.53$), auditors' perception ($M = 3.79$, $SD = 0.52$), occupational experience ($M = 3.76$, $SD = 0.56$), and psychological characteristics ($M = 3.68$, $SD = 0.57$). The standard deviations ranged from 0.49 to 0.57, indicating moderate dispersion and sufficient variability among respondents for subsequent multivariate analyses. The absolute values of skewness and kurtosis were small for all constructs, with skewness ranging from -0.45 to -0.27 and kurtosis ranging from -0.18 to 0.29 , indicating no evidence of severe univariate departure from normality. The Kolmogorov–Smirnov statistics ranged from 0.043 to 0.051, and the associated significance levels were greater than .05 for all variables. These results indicated that no statistically significant departure from normal distribution was detected for the composite scores. Although partial least squares structural equation modeling does not require strict multivariate normality, the distributional findings provided further support for the adequacy of the data for the planned descriptive and inferential analyses.

Table 2. Factor Loadings of the Questionnaire Items

Construct	Items and Standardized Factor Loadings
Psychological characteristics of auditors	Item 1 = 0.425; Item 2 = 0.444; Item 3 = 0.625; Item 4 = 0.521; Item 5 = 0.544; Item 6 = 0.854; Item 7 = 0.695; Item 8 = 0.499; Item 9 = 0.500; Item 10 = 0.565; Item 11 = 0.504; Item 12 = 0.588; Item 13 = 0.596; Item 14 = 0.541; Item 15 = 0.555; Item 16 = 0.874; Item 17 = 0.490; Item 18 = 0.462; Item 19 = 0.529; Item 20 = 0.503
Professional skills of auditors	Item 1 = 0.569; Item 2 = 0.625; Item 3 = 0.655; Item 4 = 0.448; Item 5 = 0.502; Item 6 = 0.593; Item 7 = 0.522; Item 8 = 0.477; Item 9 = 0.496; Item 10 = 0.487; Item 11 = 0.410; Item 12 = 0.444; Item 13 = 0.595; Item 14 = 0.578; Item 15 = 0.699; Item 16 = 0.785; Item 17 = 0.599; Item 18 = 0.602; Item 19 = 0.565; Item 20 = 0.516; Item 21 = 0.471; Item 22 = 0.460; Item 23 = 0.506
Occupational experience of auditors	Item 1 = 0.504; Item 2 = 0.505; Item 3 = 0.477; Item 4 = 0.453; Item 5 = 0.800; Item 6 = 0.422; Item 7 = 0.489; Item 8 = 0.452; Item 9 = 0.754; Item 10 = 0.666; Item 11 = 0.765; Item 12 = 0.689; Item 13 = 0.655; Item 14 = 0.567; Item 15 = 0.568; Item 16 = 0.758; Item 17 = 0.525; Item 18 = 0.558; Item 19 = 0.566; Item 20 = 0.516
Rationality of auditors	Item 1 = 0.574; Item 2 = 0.689; Item 3 = 0.551; Item 4 = 0.678; Item 5 = 0.514; Item 6 = 0.557; Item 7 = 0.637; Item 8 = 0.678; Item 9 = 0.632; Item 10 = 0.602; Item 11 = 0.488; Item 12 = 0.493; Item 13 = 0.775; Item 14 = 0.754; Item 15 = 0.469; Item 16 = 0.461; Item 17 = 0.493; Item 18 = 0.756; Item 19 = 0.877; Item 20 = 0.754; Item 21 = 0.825; Item 22 = 0.741; Item 23 = 0.645; Item 24 = 0.856
Auditors' competence	Item 1 = 0.699; Item 2 = 0.714; Item 3 = 0.768; Item 4 = 0.604; Item 5 = 0.808; Item 6 = 0.466; Item 7 = 0.582; Item 8 = 0.596; Item 9 = 0.557; Item 10 = 0.721; Item 11 = 0.508; Item 12 = 0.498; Item 13 = 0.717; Item 14 = 0.725; Item 15 = 0.685; Item 16 = 0.865; Item 17 = 0.585; Item 18 = 0.707; Item 19 = 0.633; Item 20 = 0.625; Item 21 = 0.598; Item 22 = 0.701; Item 23 = 0.703; Item 24 = 0.682
Auditors' perception	Item 1 = 0.507; Item 2 = 0.633; Item 3 = 0.680; Item 4 = 0.590; Item 5 = 0.477; Item 6 = 0.706; Item 7 = 0.502; Item 8 = 0.512; Item 9 = 0.672; Item 10 = 0.478; Item 11 = 0.710; Item 12 = 0.622; Item 13 = 0.642; Item 14 = 0.531; Item 15 = 0.668; Item 16 = 0.612; Item 17 = 0.633; Item 18 = 0.612; Item 19 = 0.599; Item 20 = 0.576; Item 21 = 0.522; Item 22 = 0.538

Table 2 presents the standardized factor loadings of all questionnaire items in the measurement model. The factor loadings for psychological characteristics ranged from 0.425 to 0.874, with Items 16 and 6 showing the strongest relationships with the construct. The loadings for professional skills ranged from 0.410 to 0.785, with Item 16 producing the largest loading. For occupational experience, standardized loadings ranged from 0.422 to 0.800, and Items 5, 11, 16, and 9 showed comparatively strong loadings. The factor loadings of the rationality construct ranged from 0.461 to 0.877, with Items 19, 24, and 21 displaying particularly high coefficients. For auditors' competence, the values ranged from 0.466 to 0.865, and Item 16 demonstrated the strongest association with the latent construct. Finally, loadings for auditors' perception ranged from 0.477 to 0.710. Overall, all standardized factor loadings were positive and exceeded approximately 0.40, confirming that each indicator contributed positively to its intended latent variable. Several indicators had moderate rather than high loadings; nevertheless,

they were retained because their coefficients exceeded the minimum acceptable level commonly applied when theoretically relevant indicators form broad, multidimensional professional and psychological constructs. Their retention also preserved the conceptual coverage of the original instruments. The overall pattern of loadings therefore supported the indicator-level adequacy of the measurement model, although the relatively modest loadings of several indicators were also considered when interpreting the convergent validity indices.

Table 3. Reliability and Convergent Validity of the Measurement Model

Construct	Number of Items	Cronbach's α	rho_A	Composite Reliability	AVE
Psychological characteristics	20	0.889	0.897	0.906	0.334
Professional skills	23	0.895	0.902	0.909	0.308
Occupational experience	20	0.898	0.906	0.914	0.355
Rationality	24	0.938	0.942	0.946	0.433
Auditors' competence	24	0.941	0.945	0.949	0.440
Auditors' perception	22	0.910	0.916	0.923	0.356

The results reported in Table 3 indicate strong internal consistency across all six constructs. Cronbach's alpha coefficients ranged from 0.889 for psychological characteristics to 0.941 for auditors' competence, and all coefficients were substantially greater than the conventional threshold of 0.70. Similarly, rho_A values ranged from 0.897 to 0.945, providing further evidence of satisfactory construct reliability. Composite reliability values were also high, ranging from 0.906 for psychological characteristics to 0.949 for auditors' competence. Thus, the measurement scales demonstrated consistently high reliability despite differences in the magnitude of individual item loadings. The AVE coefficients ranged from 0.308 to 0.440 and therefore did not reach the conventional 0.50 criterion. This result indicates that the constructs contained a substantial number of moderately loading indicators and that convergent validity at the strict AVE criterion was weaker than the reliability evidence. However, given the high composite reliability of every construct, the positive contribution of all indicators, the broad conceptual content captured by the multi-item measures, and the importance of maintaining content coverage of the professional and psychological dimensions, the indicators were retained for structural analysis. Accordingly, the measurement model demonstrated strong internal consistency, while the comparatively lower AVE values were recognized as a limitation of convergent validity and were taken into consideration in interpretation of the subsequent structural results rather than being disregarded.

Table 4. Heterotrait–Monotrait Ratio (HTMT) for Assessment of Discriminant Validity

Construct	Psychological Characteristics	Professional Skills	Occupational Experience	Rationality	Auditors' Competence	Auditors' Perception
Psychological characteristics	—					
Professional skills	0.612	—				
Occupational experience	0.478	0.584	—			
Rationality	0.536	0.641	0.559	—		
Auditors' competence	0.653	0.742	0.627	0.715	—	
Auditors' perception	0.621	0.688	0.604	0.731	0.793	—

As presented in Table 4, the HTMT coefficients ranged from 0.478 to 0.793. The lowest coefficient was observed between psychological characteristics and occupational experience (HTMT = 0.478), whereas the highest coefficient occurred between auditors' competence and auditors' perception (HTMT = 0.793). Importantly, all pairwise HTMT

values remained below the conservative threshold of 0.85. This result indicates that the latent variables, although theoretically related, were empirically distinguishable from each other and did not exhibit problematic construct overlap. In particular, professional skills was related relatively strongly to auditors' competence (HTMT = 0.742), rationality was related relatively strongly to auditors' perception (HTMT = 0.731), and auditors' competence was associated with auditors' perception (HTMT = 0.793); nevertheless, these coefficients remained below the criterion for inadequate discriminant validity. Consequently, the HTMT analysis supported discriminant validity for the six constructs and indicated that psychological characteristics, professional skills, occupational experience, rationality, competence, and perception represented conceptually and empirically distinct dimensions within the measurement model. This evidence was especially important because the constructs were theoretically expected to share some common professional and cognitive content.

Table 5. Structural Model Results and Tests of the Research Hypotheses

Hypothesized Path	β	SE	t	p	f ²	Result
Psychological characteristics → Auditors' competence	0.218	0.052	4.192	<.001	0.071	Supported
Professional skills → Auditors' competence	0.347	0.057	6.088	<.001	0.161	Supported
Occupational experience → Auditors' competence	0.194	0.049	3.959	<.001	0.058	Supported
Rationality → Auditors' competence	0.286	0.054	5.296	<.001	0.109	Supported
Psychological characteristics → Auditors' perception	0.241	0.055	4.382	<.001	0.079	Supported
Professional skills → Auditors' perception	0.263	0.058	4.534	<.001	0.091	Supported
Occupational experience → Auditors' perception	0.176	0.050	3.520	<.001	0.047	Supported
Rationality → Auditors' perception	0.331	0.056	5.911	<.001	0.142	Supported

Note. R² for auditors' competence = 0.684; adjusted R² = 0.680; Q² = 0.412. R² for auditors' perception = 0.631; adjusted R² = 0.626; Q² = 0.376. SRMR = 0.071.

Table 5 presents the results of the structural model and hypothesis testing. All eight hypothesized direct effects were positive and statistically significant. Psychological characteristics had a significant positive effect on auditors' competence ($\beta = 0.218$, $t = 4.192$, $p < .001$), indicating that more favorable psychological characteristics were associated with higher levels of professional competence. Professional skills demonstrated the strongest direct effect on auditors' competence ($\beta = 0.347$, $t = 6.088$, $p < .001$), indicating that enhancement of professional knowledge and skills was particularly important for auditors' perceived capacity to perform their professional responsibilities effectively. Occupational experience also exerted a significant positive effect on competence ($\beta = 0.194$, $t = 3.959$, $p < .001$), while rationality demonstrated a stronger positive effect ($\beta = 0.286$, $t = 5.296$, $p < .001$). Together, these four predictors explained 68.4% of the variance in auditors' competence ($R^2 = 0.684$; adjusted $R^2 = 0.680$), representing substantial explanatory power. The predictive relevance coefficient for competence was also positive and relatively strong ($Q^2 = 0.412$), demonstrating that the model possessed meaningful out-of-sample predictive relevance for this endogenous construct. Regarding auditors' perception, psychological characteristics had a significant positive effect ($\beta = 0.241$, $t = 4.382$, $p < .001$), professional skills exerted a significant positive effect ($\beta = 0.263$, $t = 4.534$, $p < .001$), and occupational experience had a smaller but statistically significant positive effect ($\beta = 0.176$, $t = 3.520$, $p < .001$). Rationality produced the largest effect on auditors' perception ($\beta = 0.331$, $t = 5.911$, $p < .001$), suggesting that systematic reasoning, analytical judgment, and rational evaluation were particularly important for the way auditors interpreted and perceived professional information and situations. The four predictors jointly explained 63.1% of the variance in auditors' perception ($R^2 = 0.631$; adjusted $R^2 = 0.626$), while the Q^2 value of 0.376 provided evidence of satisfactory predictive relevance. Examination of the effect-size coefficients further indicated that professional skills had the largest individual contribution to auditors' competence ($f^2 = 0.161$), whereas rationality had the largest

individual contribution to auditors' perception ($f^2 = 0.142$). The standardized root mean square residual was 0.071, remaining below the commonly employed threshold of 0.08 and indicating an acceptable degree of approximate model fit. Taken collectively, the results support the proposed conceptual model and demonstrate that psychological characteristics, professional skills, occupational experience, and rationality each make an independent positive contribution to explaining both auditors' competence and auditors' perception.

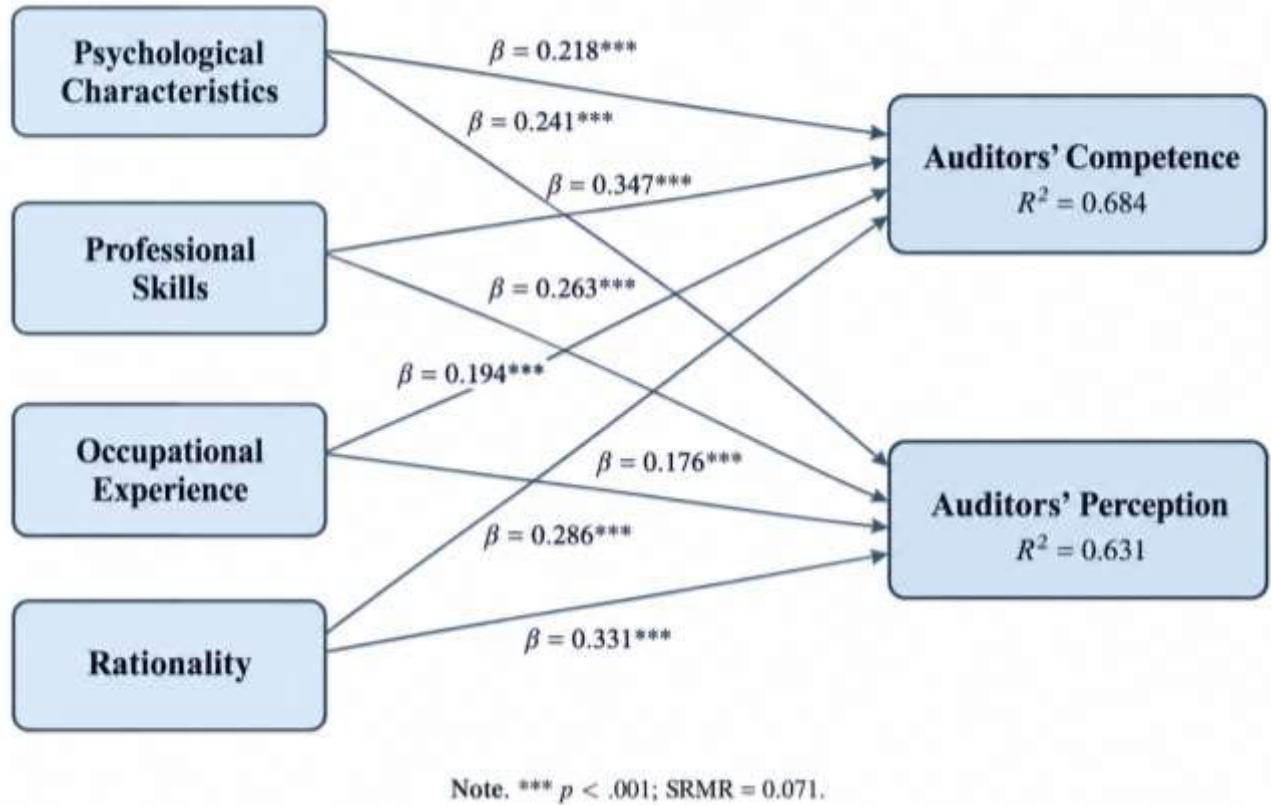


Figure 1. Final PLS-SEM Structural Model of the Effects of Psychological Characteristics, Professional Skills, Occupational Experience, and Rationality on Auditors' Competence and Perception

The overall findings demonstrate a consistent pattern across the structural relationships examined in the study. All four proposed antecedent variables contributed significantly to both endogenous constructs, although their relative importance differed depending on the outcome under consideration. Professional skills emerged as the strongest predictor of auditors' competence, followed by rationality, psychological characteristics, and occupational experience. This pattern indicates that competence is particularly dependent on auditors' ability to apply professional knowledge, technical expertise, procedural capabilities, and job-related skills, while cognitive rationality and individual psychological attributes provide additional explanatory contributions. In contrast, rationality emerged as the strongest predictor of auditors' perception, followed by professional skills, psychological characteristics, and occupational experience. Thus, auditors' perception appears to be especially sensitive to the capacity for systematic reasoning and evidence-based judgment. Occupational experience had the smallest standardized coefficient for both endogenous variables; however, its effects remained statistically significant, showing that accumulated work experience makes an independent contribution even when psychological, professional, and rational factors are simultaneously controlled. The relatively high coefficients of determination further indicated that the four antecedents together accounted for a substantial proportion of individual differences in both competence and perception. These results therefore provide empirical support for all proposed

relationships and indicate that auditors' professional functioning should be understood as the product of an interconnected set of psychological, skill-based, experiential, and rational-cognitive characteristics rather than as the consequence of any single professional attribute.

4. Discussion and Conclusion

The present study examined the effects of auditors' psychological characteristics, professional skills, occupational experience, and rationality on auditors' competence and perception. The structural model indicated that all four antecedent variables had positive and statistically significant effects on both outcome variables. More specifically, psychological characteristics significantly predicted auditors' competence and perception; professional skills exerted significant positive effects on both outcomes and represented the strongest predictor of competence; occupational experience also contributed significantly to competence and perception, although its standardized effects were comparatively smaller; and rationality had substantial positive effects on both outcomes and emerged as the strongest predictor of auditors' perception. The model also showed considerable explanatory power, accounting for 68.4% of the variance in auditors' competence and 63.1% of the variance in auditors' perception. Taken together, these findings suggest that auditors' professional effectiveness cannot be attributed to technical capability alone, but rather reflects the combined influence of psychological, skill-based, experiential, and cognitive-rational characteristics.

The significant positive effect of psychological characteristics on auditors' competence indicates that individual psychological attributes can influence the extent to which auditors are able to perform professional responsibilities effectively. This finding is theoretically plausible because auditing often requires persistence, emotional stability, independence of judgment, tolerance of ambiguity, and resistance to interpersonal or organizational pressure. Auditors who possess stronger psychological resources may be more capable of maintaining professional skepticism, remaining focused under demanding conditions, and applying technical knowledge consistently. This result is consistent with evidence showing that ethical and professional behavior can be affected by individual psychological and social mechanisms. Bodenschatz and Walkowitz demonstrated that ethical behavior may be influenced by stereotype-related interaction effects, emphasizing that professional conduct is sensitive to psychological and interpersonal contexts [2]. Likewise, Johari et al. found that ethical orientation and self-interest threats influence ethical decision-making through moral intensity, suggesting that internal psychological processes play a substantial role in how auditors respond to professional dilemmas [3]. The present finding extends this perspective by indicating that psychological characteristics are not only relevant to ethical behavior but are also directly associated with broader professional competence.

Psychological characteristics also had a significant positive effect on auditors' perception. This result suggests that auditors with stronger psychological attributes may interpret professional situations more accurately and recognize relevant cues more effectively. Perception in auditing involves the identification and interpretation of risk indicators, inconsistencies, ethical tensions, client behavior, and contextual signals. Such perception may be influenced by confidence, attentional control, emotional regulation, and sensitivity to ethically relevant information. Latan et al. emphasized the role of ethical awareness and judgment in shaping responses to questionable conduct, demonstrating that individuals differ in their ability to recognize and evaluate ethical issues [4]. Similarly, Samadi Farkharan et al. highlighted the complex social and ethical conflicts experienced by auditors and the importance of controlling such conflicts within the professional environment [16]. These studies support the present result by suggesting that auditors' perceptual processes are embedded in broader psychological and

ethical mechanisms. Auditors who are more psychologically resilient and ethically sensitive may be better able to detect meaningful information and interpret it without being excessively influenced by pressure or bias.

Professional skills had the strongest positive effect on auditors' competence among the four predictors. This result was expected because competence is fundamentally dependent on the ability to apply technical knowledge, auditing procedures, analytical skills, professional standards, and communication capabilities to practical situations. Auditing is highly knowledge intensive, and competence requires more than familiarity with rules; it requires the ability to select appropriate procedures, evaluate evidence, identify material risks, and form defensible professional judgments. Safari found that auditors' knowledge and professional ethics are associated with audit quality and that task complexity can influence these relationships [5]. Mahdi Akhgar also reported that auditors' competence and professional ethics are relevant to audit quality, with psychological attributes such as self-esteem contributing to this broader professional framework [6]. The present findings align with these studies and reinforce the view that professional skills constitute one of the most immediate foundations of auditors' competence.

The positive effect of professional skills on auditors' perception further indicates that technical and professional capability also supports the interpretation of audit-related information. Auditors who possess broader knowledge and stronger procedural capabilities are more likely to recognize significant deviations, identify inappropriate accounting practices, distinguish relevant evidence from irrelevant details, and understand the implications of client strategies. Wu et al. showed that changes in client strategy influence auditor behavior, including audit adjustments and audit fees, implying that auditors must perceive and interpret strategic changes before adjusting their professional response [1]. Similarly, Javad Jafar emphasized the role of external auditors' ethics in limiting creative accounting practices, which presupposes that auditors must first recognize and correctly interpret problematic reporting behavior before they can challenge it [14]. Therefore, professional skills appear to affect not only what auditors can do but also what they are able to notice and understand.

Occupational experience also demonstrated significant positive effects on auditors' competence and perception. The positive association with competence suggests that repeated exposure to audit engagements contributes to the development of applied expertise, professional schemas, and problem-solving routines. Through accumulated experience, auditors may become more efficient at recognizing recurring patterns, anticipating risk areas, and selecting appropriate audit procedures. Motamed Vaziri found that auditor experience, professional ethics, and independence are relevant to audit work quality, supporting the importance of experience as a professional resource [8]. Amiri also examined auditor tenure and independence in relation to fraudulent financial reporting, showing that auditor-related experience variables are relevant to financial reporting outcomes [9]. The present finding is consistent with this literature and suggests that occupational experience contributes independently to competence even after psychological characteristics, professional skills, and rationality are simultaneously considered.

The positive effect of occupational experience on auditors' perception is equally important. Experienced auditors are likely to have encountered a wider variety of accounting treatments, control weaknesses, client behaviors, and reporting irregularities. This repeated exposure may enable them to identify subtle warning signs more rapidly and interpret incomplete information with greater contextual understanding. Nevertheless, occupational experience had the smallest standardized effects among the four predictors. This pattern suggests that experience alone may be insufficient unless it is accompanied by updated professional skills and active rational reasoning. Experience can generate useful heuristics, but it can also become routinized if not continuously refreshed. The relatively smaller coefficient may therefore indicate that the value of experience depends on how effectively

accumulated knowledge is integrated with contemporary standards, ethical sensitivity, and analytical judgment. This interpretation is compatible with Safari's emphasis on the interaction between knowledge, ethics, and task complexity [5], as well as with research indicating that audit effectiveness is multidimensional rather than dependent on tenure alone.

Rationality showed a significant positive effect on auditors' competence and was the strongest predictor of auditors' perception. This finding highlights the importance of systematic, evidence-based reasoning in professional auditing. Competence requires auditors not only to possess knowledge but also to evaluate alternative explanations, weigh evidence, identify inconsistencies, and reach conclusions that are logically defensible. Rational auditors may be less likely to accept client representations uncritically and more likely to compare evidence across sources before making judgments. The strong effect on perception is particularly meaningful because perception involves the organization and interpretation of incoming information. Rationality may help auditors distinguish between salient and superficial cues, evaluate the credibility of information, and avoid premature conclusions.

The finding regarding rationality is consistent with studies emphasizing ethical judgment and structured decision-making. Johari et al. showed that ethical decision-making depends on ethical orientation and perceived moral intensity [3], while Latan et al. demonstrated that ethical awareness and ethical judgment influence responses to misconduct [4]. These findings suggest that professional perception is partly dependent on the capacity to evaluate information through deliberate cognitive processes. The present study extends this argument by showing that rationality has a particularly strong relationship with auditors' perception. In practical terms, auditors who engage more consistently in analytical reasoning may be more effective in recognizing the significance of evidence and in interpreting complex or ambiguous audit situations.

The relationship between rationality and professional outcomes can also be interpreted in light of research concerning unethical or questionable financial behavior. Ramzi et al. examined ethical behavior, auditing strength, and tax evasion from an international perspective and demonstrated the broader institutional relevance of strong auditing and ethical conduct [15]. Javad Jafar similarly emphasized the importance of auditors' ethics in constraining creative accounting [14]. In both contexts, rational and evidence-based judgment is essential because auditors must identify the substantive economic meaning of transactions rather than relying solely on formal presentation. Rationality may therefore strengthen both competence and perception by enabling auditors to connect technical evidence with its underlying implications.

The overall explanatory power of the model further supports an integrated interpretation. Psychological characteristics, professional skills, occupational experience, and rationality jointly explained more than two-thirds of the variance in competence and nearly two-thirds of the variance in perception. These relatively high coefficients indicate that the selected predictors capture substantial dimensions of auditors' professional functioning. The findings therefore support the argument that auditor effectiveness should be viewed as a multidimensional phenomenon. Previous studies have examined professional ethics, knowledge, independence, creativity, organizational climate, and commitment as important determinants of auditor-related outcomes [7, 10, 11]. The present study complements this literature by integrating psychological, professional, experiential, and rational attributes into a single structural framework.

The results are also compatible with research emphasizing the role of organizational expectations and professional development. Pourfaraj showed that professional ethics training may improve social responsibility and job commitment among accounting and auditing experts [12]. Sabouri et al. demonstrated the broader behavioral relevance of expectation-related mechanisms through the Pygmalion effect, indicating that perceptions

and expectations can shape behavior in organizational contexts [13]. In auditing, similar mechanisms may operate through supervision, mentoring, professional culture, and organizational norms. Auditors' competence and perception may therefore be strengthened not only through individual effort but also through organizational systems that reinforce professional reasoning, ethical responsibility, and continuous learning.

Another important implication of the findings is that competence and perception, although related, appear to have somewhat different antecedent profiles. Professional skills had the largest effect on competence, whereas rationality had the largest effect on perception. This distinction is conceptually meaningful. Competence is closely tied to the ability to perform, whereas perception is more closely associated with the ability to interpret. Professional skills directly support execution of audit procedures, evaluation of evidence, and communication of results. Rationality, by contrast, may be especially important in determining how evidence is structured and understood before action occurs. This difference supports the inclusion of both outcomes in the conceptual model and suggests that professional development programs should not assume that strengthening technical competence automatically guarantees superior perception.

Overall, the findings support the conclusion that auditors' professional effectiveness emerges from a combination of psychological readiness, technical-professional capability, accumulated experience, and rational cognition. These dimensions appear to reinforce one another and jointly influence both the ability to perform professional tasks and the ability to perceive and interpret professional conditions. The findings therefore contribute to a more comprehensive understanding of auditor behavior and suggest that improving audit quality requires a broader focus than technical training alone.

The present study has several limitations that should be considered when interpreting its findings. First, the cross-sectional design limits the ability to establish causal relationships with certainty because all variables were measured at a single point in time. Second, the study relied on self-reported questionnaire data, which may be affected by social desirability, common method variance, and respondents' subjective interpretation of questionnaire items. Third, the participants were active members of the Iranian certified public accounting profession, and the institutional and regulatory characteristics of this context may limit the generalizability of the findings to auditors in other countries or organizational settings. Fourth, although the measurement scales demonstrated high reliability, several indicators had moderate factor loadings and the AVE values were below the strict conventional threshold, indicating that convergent validity should be interpreted cautiously. Finally, other potentially relevant variables, such as professional skepticism, organizational culture, leadership style, time pressure, technological competence, auditor independence, and client complexity, were not incorporated into the structural model.

Future research should address these limitations by using longitudinal and multi-source research designs that can provide stronger evidence regarding the direction and stability of the observed relationships. Replication across different countries, regulatory systems, audit firm sizes, and professional groups would help determine whether the structural relationships identified in this study are context specific or broadly generalizable. Future studies could also incorporate additional variables such as professional skepticism, emotional intelligence, ethical sensitivity, digital competence, organizational support, workload, client pressure, and audit complexity. Researchers may further examine mediating or moderating mechanisms to determine whether professional skills, rationality, or organizational climate explain or alter the relationship between psychological characteristics and professional outcomes. Refinement of the measurement instruments and the development of more parsimonious scales with stronger convergent validity would also improve future empirical models.

From a practical perspective, audit firms and professional bodies should design development systems that simultaneously strengthen psychological, technical, experiential, and analytical capabilities. Recruitment and promotion processes could include greater consideration of reasoning ability, resilience, ethical sensitivity, and professional judgment rather than relying exclusively on formal qualifications and years of experience. Continuing professional education should combine technical updates with case-based problem solving, ethical decision-making exercises, evidence evaluation, and cognitive debiasing. Audit firms should also strengthen mentoring systems so that experienced auditors can transfer tacit knowledge to less experienced staff through structured reflection and supervised engagement. Professional organizations may further improve competence and perception by creating training environments that encourage skepticism, independent reasoning, and careful interpretation of complex evidence. Such measures can help develop auditors who are not only technically capable but also psychologically prepared, cognitively disciplined, and perceptually alert in demanding professional environments.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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