

The role of social trust structures in auditors' ethical responsibility

Reza Jadid, Asghar Pakmaram*, Nader Rezaei, Rasool Abdi

Department of Management and Accounting, Islamic Azad University, Bonab Branch, Bonab, Iran

(Communicated by Mohammad Bagher Ghaemi)

Abstract

According to the increasing concern of rejecting the connection with unethical behaviours and its underlying factors, paying attention to the ethical behaviour of auditors in the current era has gained great importance, and the abundance of research conducted in this chapter and recent studies is proof of this claim. In this regard, the present study aims to explain the role of social trust structures on auditors' ethical responsibilities by predicting the causal relationships between social trust structures on auditors' moral responsibilities by predicting the causal relationships between confidence, honesty, openness, trust-based behaviour, and cooperative tendencies and ethical responsibilities of auditors. The statistical population of this research is employed and non-employed certified accountants and a standardized questionnaire was used to collect data. After conducting the reliability and validity tests of the sample data, related analyses were done based on the linear structural relations. The results of the structural model show that some constructs of social trust, including honesty, openness, trust-based behaviour and cooperation-seeking tendencies, have a significant effect on auditors' ethical responsibilities.

Keywords: social trust, ethical responsibilities of auditors
2020 MSC: 91Cxx

1 Introduction

The ethical responsibilities of auditors are part of the main basis of auditing, and over many years, factors affecting ethical decision-making have been the subject of internal and external research. These researches mainly consider moral decision-making to be derived from human behavior, and the discussion in this regard is in the field of psychology. The social dimensions of people are an important factor in determining the individual's behavior, and the values created for the individual can be derived from social structures, and these structures can influence moral decisions [30].

Since the main role of auditing in society is to validate the financial reports of companies and to ensure the fair presentation of financial statements, therefore, auditors are expected to have behavioral and ethical factors in conducting investigations in addition to having technical knowledge and skills. comply so that society can be reasonably assured of their fair comments [14]. In fact, some constructs of social trust, including openness, honesty, and confidence, and positive emotions and ethical beliefs of auditors have a positive and significant correlation. In fact, some constructs of social trust, including openness, honesty, and confidence, and positive emotions and ethical beliefs of auditors have

*Corresponding author

Email addresses: jadid_reza@yahoo.com (Reza Jadid), pakmaram@bonabiau.ac.ir (Asghar Pakmaram), naderrezaeimiyandoab@yahoo.com (Nader Rezaei), abdi_rasool@yahoo.com (Rasool Abdi)

a positive and significant correlation. So that auditors can acquire the necessary professional and psychological skills through cognitive criteria and appropriate behaviors and improve their perception of professional abilities and individual performance, and by observing the principles and standards of professional ethics, and creative responsibilities first, to develop the society and finally improve the audit quality [18].

The results of behavioral studies show that moral ideology should guide behaviors and giving priority to ethics provides the basis for creating and improving individual effectiveness. So moral ideology is used as one of the basic behavioral and moral indicators in order to improve people's behavior in decision-making. From the perspective of the founders of the cognitive and behavioral movement, ethical ideology has a direct relationship with people's ability to properly solve problems and make correct decisions and can influence auditors' ethical responsibilities [34]. Therefore, this research, explains the level of influence of social trust on the ethical responsibilities of auditors, and the literature on social trust and ethical responsibilities of auditors is examined inspired by the foundations of cognitive-behavioural theories and ethical ideology. Therefore, considering the existence of a fundamental gap in the field of auditors' ethical responsibilities, the problem of this research is how to understand auditors' ethical responsibilities towards social trust structures with an emphasis on cognitive-behavioural theories. Therefore, in this research, the factors affecting auditors' ethical responsibilities are identified and revealed; Therefore, according to the above, this research seeks to answer the question, what effect do the structures of social trust structures have on the ethical responsibilities of auditors? To answer this question, causal relationships between social trust and the ethical responsibilities of auditors are studied. In fact, the present study introduces a new concept of the phenomenon of moral responsibilities. Therefore, it is expected that the results of this research can help independent auditors to better understand the ethical responsibilities towards some constructs of social trust, including confidence, honesty, frankness, trusting behavior and cooperation-seeking tendencies, and help them in making decisions. Ethical decisions help in achieving moral responsibilities. This research continues with the outline of the theoretical foundations and the background of the research related to the subject, as well as the explanation of the research method and the hypotheses derived from the problem and the theoretical foundations of the research, and then the results of the hypothesis test are explained, and finally, the conclusions and suggestions are expressed.

2 Theoretical foundations and research background

This research follows cognitive-behavioural theory and moral ideology to propose theoretical foundations. According to the cognitive-behavioural theory, the antecedents and consequences of ethical behavior can explain the frequency and form of that behavior. The antecedents are actually the stimuli that cause moral behavior to occur, and the consequences are the consequences or results of behaviors. The auditing profession has always been under pressure to gain public trust. This pressure has intensified with the emergence of financial crises, such as the collapse of the stock market in the New York Stock Exchange in 1987, the recent bankruptcy of large companies such as Enron and WorldCom in the past years, and financial abuses. In such cases, the responsibility for the emergence of this crisis and financial irregularities has been mainly directed towards the inadequacy of financial information reporting, the lack of appropriate accounting and auditing standards, and the insufficient performance of auditors. The result of this has been the loss of public trust in the accounting and auditing profession. The most important solutions that have been used so far for the return of public trust have been actions aimed at revising the organization and formation of accounting and auditing standards authorities, improving financial reporting and drafting new accounting and auditing laws, standards and guidelines [33]. Despite this, the establishment of these laws and regulations has not been able to prevent financial corruption and the collapse of companies, and the recent financial crisis is also a witness to this claim. In addition, turning to this solution is faced with several serious problems, one of the main of which is turning to ethics. Ethics is a common and necessary topic in all active professions in the world, because if there is professional ethics in a profession, that profession will progress, otherwise one should wait for the destruction of that profession [11]. The expansion of ethics can be much more effective for the auditing profession, under the ethical principles such as honesty, truthfulness, goodness, beauty and courage penetrate deep into the auditor's existence and start from childhood and are influenced by factors such as school, friends, religion and institutions. General and culture, which is derived from local and national structures, have found a very strong link; Therefore, the auditor's adherence to ethical principles can be more likely. Considering the mentioned cases and the long history of auditing in the world, research and publication of findings related to professional ethics is not a new issue. In today's conditions, the need to expand research in society is essential, and without a doubt, research publications of any discipline play an important role in stabilizing and promoting it in society [39].

In general, ethics in auditing is derived from the fundamentals of the general principles of the science of ethics and is divided into three areas: Meta-Ethics, Normative Ethics (normative), and Applied ethics. Metaethics is the study of the language of ethics. This branch of ethics includes the examination of the nature of ethics and relationships and

rules of the Deductive Logic of ethics [33]. The presence of opportunistic motives makes the presentation of audit reports in a persuasive manner. In other words, persuasion is considered one of the auditors' advertising methods that can create a competitive advantage [16]. Persuasion is a communication process in which a source expresses evidence and results, and its purpose is to influence the emotions of the audience and change their behavior [12]. Persuasive messages do not give reasons, but they persuade their audience by manipulating symbols and human emotions. Persuasion is mostly used in political science, but with time, today this theoretical issue has been very much considered in financial and business discussions [13]. Duska et al. [10] believe that maintaining this trust in the auditing profession is possible when professional auditors provide their services at a level that deserves the trust of society. Also, it should be provided by following the rules that ensure the continuity of services with appropriate quality. Lovett and Jordan [28] developed an ethical decision-making model, which presents the way auditors make ethical decisions, and it is assumed that the auditor has a strong sense of how to deal with the evaluation of a situation or problem. In addition to this, the presented model promotes the ethical behavior of auditors and makes the use of judgment and ethical principles the basis of the auditor's decision-making. Rest's [41] extended model for ethical decision-making is shown in the figure below:



Figure 1: Rest's [41] developed model for auditors' ethical responsibilities

The ethical responsibility of auditors for ethical decision-making includes four processes of ethical sensitivity to recognize ethical issues, create ethical judgments, create ethical intentions in the form of ethical motives, and conduct ethical behavior in the form of ethical actions. Ethical problem recognition (moral sensitivity) deals with the individual's recognition and understanding of an ethical concept. Moral judgment refers to making a judgment about a moral issue after a person has understood it.

A person's judgment about what behavior is right or wrong is called moral judgment. Ethical intention (behavioral intention), the ethical tendency is said to be a directed behavior that a person tends towards after making a moral judgment, based on the cognitive development of his morals, and finally performing ethical behavior (ethical action) is the last stage of the decision process. Ethical decision-making is to act in a manner consistent with the previous stages of decision-making. The basis of performing a moral action is the moral inclination of the person towards it [28].

Social trust has emerged as a relatively new approach to trust under the name of the cognitive approach, whose proponents have given a definition of trust that can be perceived both as a mental state and as a social attitude and relationship [25]. Social trust as the main element of social capital means the trust of society members in each other in social life. Social trust indicators based on Miller et al.'s theory [31] are honesty, openness, confidence, trust-based behavior and cooperative tendencies.

Honesty is the conformity and harmony between actions and speech with inner beliefs and tendencies and not pretending to behave or speak that is not correct and acceptable in a person's opinion. Candour is the participation of others in information, thoughts and feelings through which a person expresses his inner thoughts, feelings, fears and doubts towards others. Confidence is an acknowledgement that the other party has the necessary abilities and competencies to resolve the current issues in the current situation. Trust-based behavior according to the two concepts of a trusting person, a reliable person and behavior based on trusting, reliable behavior; Trusting can simultaneously include the categories of openness, honesty, confidence, etc. Collaborative tendencies indicate that a person wants to work with others to achieve a common goal, which requires coordinating one's actions with the actions of others [7].

The auditing profession is one of the most disciplined professions in the world, and because of the type and nature of the services it provides, it enjoys a certain credibility and trust. Adherence to moral principles also originates from a person's inherent personality and personal beliefs, and not from a series of rules and regulations. Therefore, it seems that there is a direct relationship between compliance with social values by the auditor and ethical responsibilities. Compliance with social values and norms by the auditor improves the quality of the audit. In a society where auditors have sufficient legitimacy and reputation in detecting fraud reports, then the social trust in the auditor will increase and this will help to improve social trust at the country level [3]. According to Miller et al., [31], values are social patterns that, to the extent of their acceptance by a group of people, provide a basis for creating common expectations and a criterion for guiding and regulating behavior [31]. Therefore, value is effective for decision-making, attitudes

and behaviors, and therefore the root of auditors' moral judgments can be found in values [29].

Shayesteh Shojaei and Pourzamani [45] in research investigated the effect of ethical behavior and social identity on the job performance of auditors with emphasis on role conflict, self-efficacy and moral sensitivity. The results of their research show that ethical behavior and social identity have a positive and significant effect on auditors' job performance. Also, the findings show that self-efficacy and moral sensitivities have a positive and significant effect and role conflict has a negative and significant effect on auditors' job performance. In research, Drozd et al. [9] investigated the impact of auditors' ethical ideology on their professional performance. The results of their research show that to evaluate auditors' ethical behavior and ideology, effectiveness criteria can be used following ethical values and ethical test standards. They concluded that the ideology and criteria of ethical values of auditors should be evaluated as indicators of achieving the objectives of the business unit. In research, Ismail and Yuhanis [19] investigated the factors influencing the work ethic behavior of auditors. The results of their research show that work ethic behavior among auditors is influenced by professional commitment, environment and independent ethical rules, ethical values of companies, and the ethical ideology of idealism and relativism. Ittonen et al. [20] in research entitled Entropy of continuity of activity and professional doubt of auditors have stated that auditors need to determine a threshold of fundamental doubt to determine the type of audit report to present, but fundamental doubt is not defined in auditing standards. Auditors are often criticized for having high thresholds that result in too few going concern reports. They have used Shannon's entropy from information theory as a measure to evaluate the information value of the audit report. First, they estimated the probability of bankruptcy of the entrepreneur in the sample, and then using the distribution of the probability of bankruptcy, they calculated the entropy at each point of the probability of bankruptcy and finally showed that the entropy in the statistical population was maximized at 1010 probability of bankruptcy. Alleyne et al. [2] researched that the statistical sample of the research was 614 informal accountants working in corporate organizations. The results showed that the organizational commitment and moral values of the company affect the internal and external disclosure motives. Informal accountants have high organizational commitment, as well as people who work in organizations with strong perceived ethical values, are more likely to show high internal disclosure motivations. Kamali and Shurvarzi [22], investigated the effect of strategic orientation of audit institutions on the expectation of the continuity of the relationship with the client, considering the mediating role of the quality of the relationship with the client, and the findings show the positive effect of the strategic orientation on the quality of the relationship with the client and the expectation of the continuity of the relationship with the customer. The research findings also show the mediating role of customer relationship quality in the relationship between strategic orientation and the expectation of customer relationship continuity. In research, Rajab Dori et al. [40] examined the relationship between ethical behavior and ethical theories in the judgment of auditors. The general results of the research show that there is a significant relationship between auditors' ethical behavior and ethical theories. The findings show that the theories of altruism, justice, benevolence, and virtue have a positive and significant relationship with auditors' ethical behavior, and no significant relationship was observed between the theories of dutifulness and utilitarianism with auditors' ethical behavior. Shayesteh Shojaei et al. [46] in research investigated the effect of ethical criteria including ethical environment, professional commitment, ethical values and ethical ideology on the performance of auditors. The results of their research show that all the ethical criteria mentioned have a positive and significant effect on the job performance of auditors. Also, the components related to the ethical environment, including the instrumental environment, the desired environment, the independent environment, the criteria environment, the efficiency-oriented environment, and the legal and regulatory environment have a positive and significant effect on the auditor's performance. However, among the components related to moral ideology, the effect of idealism on the performance of auditors is positive and significant, and the relative effect of rent on the performance of auditors is negative and significant.

2.1 Qualitative dimensions of social responsibility

In order to measure corporate social responsibility, the criteria of the American institute known as KLD were ranked and used according to four social and environmental criteria. Social responsibility has four dimensions: social participation, employee relations, environment and product characteristics, each dimension has its own strengths and weaknesses.

$$CSR\ Score = CSRCOM + CSREMP + CSRENV + CSRPR(\cdot) \quad (2.1)$$

where, CSR: overall social responsibility score; CSRCOM: Social Contribution Disclosure Score; CSREMP: employee relationship disclosure score CSRENV: environmental disclosure score; and CSRPRO: the product features disclosure score [4].

2.2 Disclosure of corporate social responsibility

The overall value of corporate social responsibility disclosure is obtained from the sum of the partial value of corporate social responsibility dimensions and can be calculated from the following formula [36, 44].

$$CSR D = EMP D + COM D + PROD + ENVD. \quad (2.2)$$

Total score of corporate social responsibility disclosure

$$CSR D_j = \frac{\sum_{t=1}^{n_j} X_{ij}}{n_j} \quad (2.3)$$

CSR D: CSR disclosure score in company j . n_j = number of estimated cases for company j . X_{ij} = If the disclosures are quantitative and their details are in the form of numbers, a detailed description of the activity and, if possible, pictures, diagrams, and tables, the disclosure score is 2.

If the information is non-quantitative and the explanation is descriptive, the exposure score is 7. If disclosures are made in the form of sentences or paragraphs, the disclosure score is 0. If an item is not disclosed, the disclosure score is zero.

The amount of disclosure of information related to employee relations The disclosure score of the dimension of employee relations is obtained from the following formula:

$$EMP D = \frac{\sum A}{6} \quad (2.4)$$

EMP D: employee relationship disclosure score. A: The disclosure score for each of the criteria of employee relations in company j , the number six in the denominator represents the six criteria related to the disclosure of employee relations.

$$COM D = \frac{\sum B}{6} \quad (2.5)$$

COM D: employee relationship disclosure score B: The disclosure score for each of the criteria of social relations in company j , the number six in the denominator represents the six criteria related to the disclosure of social participation.

The amount of information disclosure related to production (PROD).

The post-production disclosure score is obtained from the following formula:

$$PROD = \frac{\sum C}{4} \quad (2.6)$$

C: The disclosure score for each of the production criteria in company j , the number four in the denominator represents the four criteria related to the amount of production disclosure.

Environmental information disclosure (ENVD)

The environmental dimension disclosure score is obtained from the following formula:

$$ENVD = \frac{\sum D}{4} \quad (2.7)$$

ENVD: environmental exposure score. D: The disclosure score for each of the environmental criteria in company j , the number four in the denominator represents the four criteria related to the level of environmental disclosure.

2.3 Audit and information risk

Information asymmetry (IA): Following the research of Tessema [48], in this research, the fluctuation criterion of the daily return of 0 stock price is used as an index of information asymmetry. This variable is measured based on the dispersion (standard deviation) in the daily returns of stock prices during the year under review. The more investors face a higher level of information asymmetry, the more likely they are to predict stock returns inaccurately, and therefore it is expected that companies with more information asymmetry will have more volatility in their stock returns [48].

$$IA_{i,t} = \sqrt{\frac{\sum_{n=l}^k (RET_{i,n} - \overline{RET})^2}{k-l}} \quad (2.8)$$

where: \overline{RET} is daily return of stock price of company i on day n during year t ,

Stock price synchronicity (SYNCH) in this research, following the research of Neifar and Ajili [35], in order to measure the synchronicity of the annual stock price of each company, first the coefficient of determination (R²) obtained from the estimation of the extended market model using the ordinary least squares regression method (OLS) is calculated based on monthly stock returns for each company during each year separately from the following relationship.

$$r_{i,k,w} = \alpha_i + \beta_i r_{m,w} + \gamma_i r_{k,w} + \varepsilon_{i,t} \quad (2.9)$$

where, $r_{i,k,w}$ = monthly return of company i in industry k in month w , $r_{m,w}$ = market weighted return in month w , $r_{k,w}$ = Weighted return of industry k in month w . Since the coefficient of determination (R²) is in the range of zero to one, in order to obtain a distribution close to normal, according to the researches of Piotroski and Roulstone [38], Morck et al. [32] and Jensen [21], from The transformation of the natural logarithm of the coefficient of determination (R) is used as described in the following relationship [35].

$$SYNCH_{i,t} = LN \left(\frac{R_{i,t}^2}{1 - R_{i,t}^2} \right). \quad (2.10)$$

Accounting conservatism (CC): In this research, conservatism dependent on news, which is called conditional conservatism (post-event or temporal asymmetry of profit), will be used. To measure conditional conservatism, the Khan and Watts model will be used [24] (which is based on the Basu model [6]). The time asymmetry model of Basu [6] is one of the most widely used conditional conservatism models that is used to estimate the conditional conservatism of the company year. According to Basu's conservative model, positive returns represent good news and negative returns represent bad news. According to Basu, profit reaction to bad news is more timely than profit reaction to good news. Cross-sectional regression of Basu [6] is as follows:

$$\frac{E_{i,t}}{P_{i,t}} = \alpha_0 + \beta_{1,i} NEG_{i,t} + \beta_{2,i} RET_{i,t} + \beta_{3,i} NEG_{i,t} \times RET_{i,t} + \varepsilon_{i,t} \quad (2.11)$$

where:

$E_{i,t}$ = net profit of company i at the end of year t ,

$P_{i,t}$ = market value of company i at the end of year t ,

$NEG_{i,t}$ = virtual variable, if there is bad news, negative return is equal to one and otherwise it is equal to zero.

$RET_{i,t}$ = return on the company's stock in year t , which is the difference between the price of each company's share at the end of the period and the price of each share at the beginning of the period, plus adjustments due to the earnings of the shares, including the dividend of bonus shares and divided by the price of each share It is defined at the beginning of the course.

2.4 Hypotheses and conceptual model

Based on theoretical foundations and previous research, research hypotheses have been developed as follows:

Main hypothesis: social trust structures affect auditors' ethical responsibilities.

The constructs of social trust include confidence, honesty, openness, behavior based on trusting and cooperative tendencies, and the ethical responsibilities of auditors include the constructs of moral sensitivity, moral judgment, moral motives, and ethical action.

The model is the relationship between the theoretical level and the work of collecting and analyzing information. Models include signs and symptoms, that is, the characteristics of some experimental phenomena (including their components and their relationships) are logically expressed through concepts related to each other. Therefore, the model reflects reality and integrates certain aspects of the real world that are related to the problem under investigation clarifies the major relationships among the mentioned aspects and finally provides the possibility of empirical testing of the theory according to the nature of these relationships. After testing the model, a better understanding of some parts of the real world is obtained. In short, a model is a device consisting of concepts, hypotheses and indicators that facilitate the selection and collection of information required for hypothesis testing [23]. Therefore, according to the above argument, formulated hypotheses and theoretical foundations in tracing the model of ethical responsibilities of auditors, the conceptual model of the research has been formulated as Figure 2:

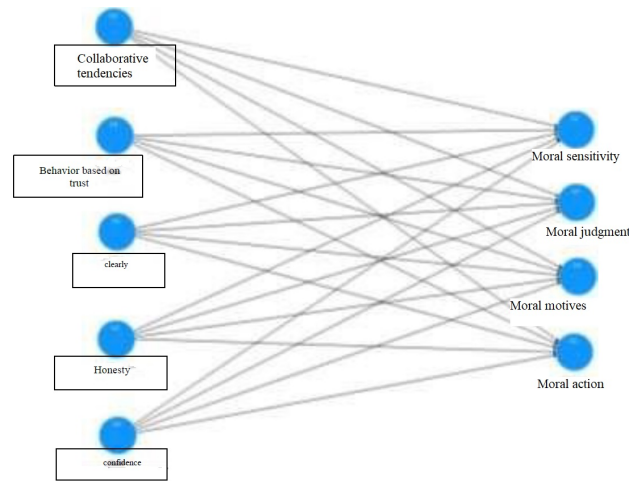


Figure 2: The conceptual framework of the research

3 Methodology

The purpose of the current research is to explain the role of social trust structures on the ethical responsibilities of auditors by predicting the causal relationships between the constructs of trust, honesty, openness, trusting behavior and cooperative tendencies and auditors’ ethical responsibilities. This research is applied in terms of its purpose and descriptive-analytical in terms of data collection methods based on the structural modelling approach. To test the hypotheses by structural equation modelling method, version 2.7.2 of smart-pls statistical software was used. When the volume of observations is small or does not have a normal distribution, it is preferable to use software such as smart-pls [42]. The partial least squares path model is defined by two sets of linear structural equations (internal model or structural model and external model or measurement model). The structural model determines the relationship between the underlying variables and the measurement model, the relationship between the underlying variables and the observed indicators. Also, he has used the online (<https://survey.porsline.ir>) and face-to-face questionnaire method in the information-gathering stage and the structural equation modelling approach based on partial least squares in the inference stage. To distribute the questionnaire among the statistical sample, 27 questionnaires were collected in person and offline through social networks online, of which 00 were rejected due to insufficient or incorrect data, bringing the number of correct observations to 60. Regarding the adequacy of the sample size in the structural equation modelling method, to obtain valid and generalizable results, according to the theory of Chin et al. [8], the sample size should be the ratio of 01 cases for each parameter. Therefore, according to the structural model of this research, the existing observations (questionnaire) (90 items) are statistically sufficient. Barnett et al. [5] also suggested 2 items for each parameter [5, 17]. In this study, the endogenous variable of constructs related to auditors’ ethical responsibilities includes moral sensitivity, moral judgment, moral motivations and ethical action and the independent variables of social trust constructs include confidence, honesty, openness, trusting behavior and cooperative tendencies. It has been carefully measured. The questions of this questionnaire were taken from the standardized questionnaire. In addition, to develop and localize the research tool suitable for the country’s environment and confirm its validity, university professors and experts in the research field were used. Table 1 shows the information related to the research variables.

Table 1: Variables of the research model

| Measuring tool | Number of questions | Structure | type | Variable |
|------------------|---------------------|------------|------------|--------------------------|
| | 6 | | | confidence |
| | 5 | | | Honesty |
| [43] | 6 | reflective | perceptive | clearly |
| | 9 | | | Behavior based on trust |
| | 9 | | | Collaborative tendencies |
| | 9 | | | Moral sensitivity |
| [15, 26, 37, 47] | 6 | reflective | perceptive | Moral judgment |
| | 9 | | | Moral motives |
| | 6 | | | Moral action |

4 Model analysis and test items

In the research model, the variables were modeled as higher-level reflective structures. The work steps and methods used are according to table 2.

Table 2: Summary of data analysis steps

| Reliability of indicators | | | |
|--|--|-------------|---|
| Cronbach's alpha composite reliability | Investigation of one-dimensionality | Reliability | Evaluation of the measurement model (External validity) |
| Convergent validity (AVE) and diagnostic | | | |
| Fresnel and Locker criterion | Differential validity | narrative | |
| Checking subscription validity | Construct correlation and multiple co-collinearity (VIF) | | |
| Estimation of path coefficient | | | Structural model evaluation (Internal validity) |
| coefficient of determination (R ²) | | | |
| Predictive communication | | | |
| Subscription credit check | | | |
| Credit check | | | Examining model |
| goodness of fit criterion (GOF) and square root mean residual (SRMR) | | | |
| Examining the significant Z coefficients related to each of the hypotheses | | | quality indicators |

To evaluate the measurement model (external model), the reliability and validity of constructs and indicators are evaluated. Cronbach's alpha and composite reliability were obtained for each of the model constructs greater than 1.2. Also, all indicators had the necessary reliability. To check the validity of the model constructs, convergent validity and diagnostic validity were used. The average criterion of the extracted variance to evaluate the convergent validity of all model structures is more than 1.2 and considering that the average root of the extracted variance in the diameter of the matrix is greater than the correlation or the structure with other structures, the mentioned criterion is also acceptable. Therefore, the quality of the model structures has good validity.

Table 3: Checking the quality of the measurement model

| Convergent validity | Composite reliability | Cronbach's alpha | Structure |
|---------------------|-----------------------|------------------|--------------------------|
| 10449 | 10200 | 10000 | Confidence |
| 10240 | 10050 | 10257 | Honesty |
| 10421 | 10052 | 10255 | Clearly |
| 10249 | 10214 | 10049 | Behavior based on trust |
| 10290 | 10094 | 10294 | Collaborative tendencies |
| 10227 | 10029 | 10070 | Moral sensitivity |
| 10459 | 10206 | 10462 | Moral judgment |
| 10290 | 10094 | 10290 | Moral motives |
| 10429 | 10215 | 10027 | Moral action |

Finally, divergent validity is the third criterion for assessing the fit of measurement models in the PLS method. The validity of divergence in this method is measured in two ways: a) methods of reciprocal factor loadings; and (b) Fornell and Larcker method. In this research, the second method was used to measure the validity of transmissibility. According to Fornell and Larker, transfer validity is at an acceptable level when the average variance extracted for each construct is greater than the shared variance between that construct and other constructs in the model. If the root mean of the variance extracted for a variable is greater than the correlation of that variable with other variables, there is validity and validity for the variable. In the table below, the numbers on the main diameter of the square root of the average variance are extracted. According to table number 4, it can be said that the divergent validity is acceptable.

One of the most powerful and appropriate methods of analysis in behavioral science research is multivariate analysis. The nature of such problems is multivariable and they cannot be solved with a two-variable method (where only one independent variable and one dependent variable are considered each time). Therefore, in this research, the structural equation model and especially the path analysis have been used to confirm or reject the hypotheses. Path analysis evaluates hypothesized relationships. In this analysis, the value of the path coefficient represents the standardized beta (β) in the regression, the critical value represents the t coefficient of each path and the significance

Table 4: Divergent validity of research variables

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|--------------------------|
| 2 | 0 | 2 | 4 | 5 | 6 | 9 | 7 | 0 | Variables |
| | | | | | | | | 1002 | Confidence |
| | | | | | | | 1007 | 1042 | Honesty |
| | | | | | | 1026 | 1020 | 1069 | Clearly |
| | | | | | 1022 | 1045 | 1026 | 1064 | Behavior based on trust |
| | | | | 1022 | 1022 | 1001 | 1022 | 1056 | Collaborative tendencies |
| | | | 1009 | 1049 | 1007 | 1044 | 1026 | 1047 | Moral sensitivity |
| | | 1021 | 1045 | 1002 | 1027 | 1042 | 1040 | 1046 | Moral judgment |
| | 1007 | 1020 | 1044 | 1027 | 1046 | 1049 | 1040 | 1022 | Moral motives |
| 1020 | 1042 | 1042 | 1044 | 1042 | 1046 | 1046 | 1020 | 1024 | Moral action |

level also indicates the level of confidence in the obtained values. The results of this analysis can be expressed in the form of direct effects that investigate the relationship between two variables. Research path analysis shows the relationships between research variables simultaneously. The purpose of path analysis is to identify the causal relationships between the variables of the research conceptual model. The results showing the model in the standard estimation mode show the model in the mode of significant coefficients. In this structural model, causal relationships between explanatory variables and auditors' ethical responsibilities are presented. To evaluate the structural model (internal model), after calculating the path coefficients, factor loadings and explained variance of the variables by PLS algorithm command, the significance of the paths and factor loadings is checked using the Bootstrapping method to obtain t values (Bootstrapping approach is a suitable method for creating standard errors or t-values. When the sample size is small and the accuracy of the estimators is important, this method can calculate the errors using the resampling method and provide the appropriate and versatile confidence interval or standard deviation. Also, this method is used to estimate the variance of the estimators when the probability distribution function of the estimators is uncertain or complex [1]. The significant results of the routes can be seen in the table below.

Table 5: Factor load, significance and coefficient of determination of total (direct) effects

| conclusion | meaningful level | t statistic | path coefficient | The first to the twentieth hypotheses |
|-----------------|------------------|-------------|------------------|--|
| Does not affect | 10906 | 0.210 | -10170 | Confidence → moral sensitivity |
| Does not affect | 10420 | 0.675 | -0.197 | Confidence → moral judgment |
| has an effect | 10011 | 00710 | 10015 | Confidence → moral motivation |
| Does not affect | 10920 | 10025 | -10164 | Confidence → moral action |
| has an effect | 10105 | 70699 | 10100 | Honesty → moral sensitivity |
| has an effect | 10111 | 40725 | 10750 | Honesty → Moral judgment |
| has an effect | 10114 | 70241 | 10652 | Honesty → moral motivation |
| has an effect | 10177 | 70726 | 10752 | Honesty → moral action |
| Does not affect | 10964 | 0.272 | -0.150 | Honesty → moral sensitivity |
| has an effect | 10111 | 50010 | 10121 | Honesty → Moral judgment |
| Does not affect | 0.60 | 00650 | 0.747 | Honesty → moral motivation |
| Does not affect | 0.902 | 0.422 | 0.160 | Honesty → moral action |
| Does not affect | 0.990 | 0.294 | -0.102 | Behavior based on trust → moral sensitivity |
| Does not affect | 0.570 | 0.497 | -0.109 | Behavior based on trust → moral judgment |
| Does not affect | 0.294 | 0.990 | 0.166 | Behavior based on trust → moral motivation |
| has an effect | 0.164 | 70116 | 0.752 | Behavior based on trust → ethical action |
| Does not affect | 0.746 | 00002 | 0.706 | Cooperation-seeking tendencies → moral sensitivity |
| has an effect | 0.160 | 00220 | 0.956 | Cooperative tendencies → moral judgment |
| has an effect | 0.190 | 70100 | 0.612 | Cooperative tendencies → moral motivation |
| has an effect | 0.112 | 70420 | 0.645 | Cooperative tendencies → moral action |

As can be seen in Table 5, the analysis of the routes shows that the value of the t statistic for nine routes is higher than 0.86 and therefore it is significant, and it is not significant for the other eleven routes. This means the path of honesty over moral sensitivity (the fifth path), the path of honesty over moral judgment (the sixth path), the path of honesty over moral motivation (the seventh path) and the path of honesty over moral action (the eighth path), the path of openness over moral judgment (the tenth path), the path of behavior based on trusting moral action (the 06th

path), the path of cooperative tendencies based on moral judgment (the 09th path), the path of cooperative tendencies based on moral motivation (the 08th path) and finally the path of cooperative tendencies based on moral action (the 71th path) are significant at the 829 confidence level. In testing the desired hypotheses using the structural equation model, the output of the software shows the appropriateness of the adjusted structural model for the hypothesis test. The obtained coefficients are significant when their significance test value is greater than 0.86 and smaller than -0.86. As can be seen, the significance coefficients indicate the significance (not the path) of the paths of the model. Therefore, the structural model shows that social trust affects auditors' ethical responsibilities.

In the measurement and structural models under investigation, the mean of sharing is used to measure the fit of the external model, and the coefficient of determination R7 is used for the fit of the structural model. The average value of sharing indicates the percentage of changes in indicators that is justified by the corresponding structure, and researchers have mentioned an acceptable level for statistical sharing greater than 1.2 [27]. According to the R7 values that indicate the ability of the model to describe the structure, the presented model has a good fit.

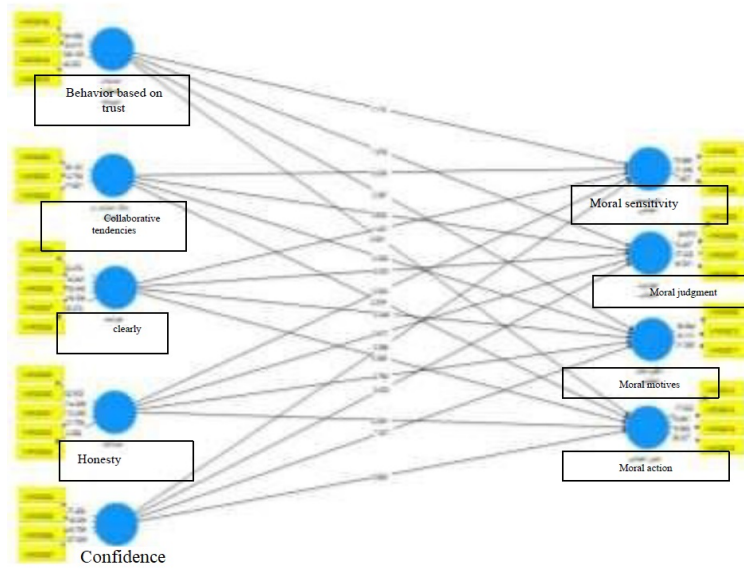


Figure 3: Modified research model

Table 6: Checking the quality of the structural model and goodness of fit

| F7 | R7adj | R7 | SRMR | Model/structure |
|-------|-------|-------|-------|--------------------------------------|
| 1.028 | 1.627 | 1.621 | 1.017 | Ethical responsibilities of auditors |

In the following, the modified model will be as follows:

5 Discussion and conclusion

The present study has explained the role of social trust structures on the ethical responsibilities of auditors by predicting causal relationships between the constructs of trust, honesty, openness, trusting behavior and cooperative tendencies and auditors' ethical responsibilities. The graphs show the significance of the coefficient and the obtained parameters of the structural model. As seen, the significant coefficients of nine paths are significant at the 829 confidence level. Therefore, the structural model shows that some constructs of social trust include the path of honesty on moral sensitivity (the fifth path), the path of honesty on moral judgment (the sixth path), the path of honesty on moral motivation (the seventh path) and the path of honesty on moral action (path 9th), the path of frankness on moral judgment (tenth path), the path of behavior based on trusting moral action (06th path), the path of cooperative tendencies on moral judgment (09th path), the path of cooperative tendencies on moral motivation (08th path) and finally, the path of cooperation-seeking tendencies on moral action (the 71th path) is confirmed. The results of the test of this hypothesis are in line with the results of the studies of Shaiste et al. mentioned in the present study. Therefore, the findings of the research show that social trust structures influence auditors' ethical responsibilities. In other words, these structures can be considered as the strengthening factor of auditors' ethical

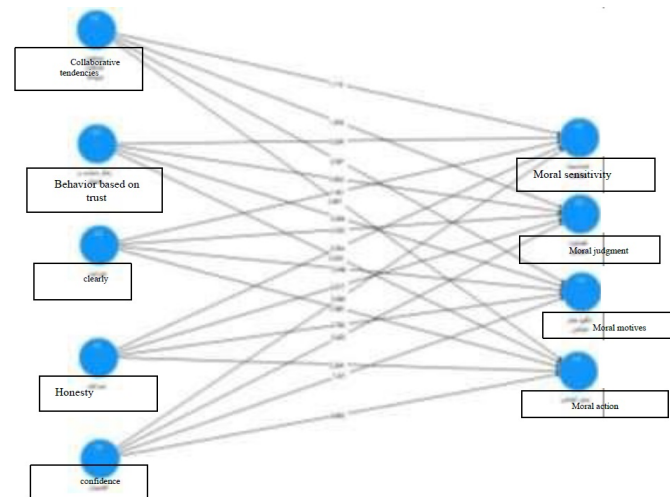


Figure 4: Significant coefficients of the structural model

responsibilities. Therefore, independent auditors are suggested to pay more attention to the investigated social trust phenomenon, including honesty, openness, trust-based behavior and cooperation-seeking tendencies, and include it in their decision-making models because these structures can be a basis for decision-making. Their morals should be in the development of their moral responsibilities.

Also, the existence of obstacles and limitations in the research stages is considered an integral part of research, and this provides a suitable platform for future research. Therefore, the present research was not an exception to this rule and its conduct was faced with limitations. The most important limitations of this research are related to the nature of qualitative research methods, which is that firstly, the subject of study is in the field of behavioral research and the research cannot be considered 0119 scientific, and secondly, in qualitative studies, it is used to measure and collect data. tools such as interviews and questionnaires are used in this regard, mental contexts such as feelings, emotions, attitudes and perceptions affect the data, and finally, it is difficult to achieve a suitable statistical population, and therefore the results of the research are highly dependent on the researcher's observations and the validity of the researcher's conclusions cannot be controlled.

References

- [1] M.R. Abbaszadeh, *Accounting Principles for Service and Commercial Institutions*, Merandiz Publisher, Mashhad, 2016.
- [2] T. Alleyne, İ. Ötoker, U. Ramakrishnan, K. Srinivasan, and M.F. Walutowy, *Unleashing Growth and Strengthening Resilience in the Caribbean*, International Monetary Fund, Washington, DC, 2017.
- [3] B. Bani Mahd and H. Darvish, *Social trust and auditors' attitude about independence*, Account. knowledge Mana. Audit **5** (2015), no. 19, 17–26.
- [4] R. Baradaran Hasanzadeh, E. Abyazi, and R. Namvar, *Political connection and corporate social responsibility: Product market competition*, J. Empir. Res. Account. **9** (2019), no. 3, 301–325.
- [5] T. Barnett, K. Bass, and G. Brown, *Religiosity, ethical ideology, and intentions to report a peer's wrongdoing*, J. Bus. Ethics, **15** (1996), 1161–1174.
- [6] S. Basu, *The conservatism principle and the asymmetric timeliness of earnings¹*, J. Account. Econ. **24** (1997), no. 1, 3–37.
- [7] P. Broberg, T. Umans, P. Skog, and E. Theodorsson, *Auditors' professional and organizational identities and commercialization in audit firms*, Account. Audit. Account. J. **31** (2018), no. 2, 374–399.
- [8] W.W. Chin, B.L. Marcolin, and P.R. Newsted, *A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study*, Info. Syst. Res. **14** (2003), no. 2, 189–217.

- [9] I. Drozd, M. Pysmenna, and V. Volkov, *Management of ethical behavior of auditors*, *Baltic J. Econ. Stud.* **6** (2020), no. 4, 66–71.
- [10] R.F. Duska, B.S. Duska, and K.W. Kury, *Accounting Ethics*, John Wiley & Sons, 2018.
- [11] H. Eskandari, *Ethics in accounting*, *World Econ. Quart.* (2013), no. 6, 8–15.
- [12] R. Ferretti, F. Pancotto, and E. Rubaltelli, *Persuasion in financial advertising: Behavioral or rational?*, *J. Behav. Exper. Econ.* **71** (2017), 26–30.
- [13] A. Florack and J. Hartmann, *Regulatory focus and investment decisions in small groups*, *J. Exper. Soc. Psycho.* **43** (2007), no. 4, 626–632.
- [14] S.M. Glover and D.F. Prawitt, *Enhancing auditor professional skepticism: The professional skepticism continuum*, *Current Issues Audit.* **8** (2014), no. 2, 1–10.
- [15] I. Goll, N.B. Johnson, and A.A. Rasheed, *Top management team demographic characteristics, business strategy, and firm performance in the US airline industry: The role of managerial discretion*, *Manag. Decis.* **46** (2008), no. 2, 201–222.
- [16] R. Greifeneder, H. Bless, and M.T. Pham, *When do people rely on affective and cognitive feelings in judgment? A review*, *Person. Soc. Psycho. Rev.* **15** (2011), no. 2, 107–141.
- [17] J.F. Hair, M. Sarstedt, T.M. Pieper, and C.M. Ringle, *The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications*, *Long Range Plann.* **45** (2012), no. 5–6, 320–340.
- [18] J.D. Henry and J.R. Crawford, *The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample*, *Br. J. Clinic. Psycho.* **44** (2005), no. 2, 227–239.
- [19] S. Ismail and N. Yuhani, *Determinants of ethical work behaviour of Malaysian public sector auditors*, *Asia-Pacific J. Bus. Admin.* **10** (2018), no. 1, 21–34.
- [20] K. Ittonen, P.C. Tronnes and L. Wong, *Substantial doubt and the entropy of auditors' going concern modifications*, *J. Contemp. Account. Econ.* **13** (2017), no. 2, 134–147.
- [21] M.C. Jensen, *The modern industrial revolution, exit, and the failure of internal control systems*, *J. Finance* **48** (1993), no. 3, 831–880.
- [22] S. Kamali and M.R. Shurvarzi, *The effect of strategic orientation of auditing firms on the expectation of continuing customer relationship with respect to the mediating role of customer relationship quality*, *J. Profess. Audit. Res.* **1** (2021), no. 3, 8–26.
- [23] G. Khaki, *Research Method With an Approach to Thesis Writing*, 9th Edition, Tehran, Fozhan Publications, 2012.
- [24] M. Khan and R.L. Watts, *Estimation and empirical properties of a firm-year measure of accounting conservatism*, *J. Account. Econ.* **48** (2009), no. 2–3, 132–150.
- [25] S. Knack and P. Keefer, *Does social capital have an economic payoff? A cross-country investigation*, *Quart. J. Econ.* **112** (1997), no. 4, 1251–1288.
- [26] M.C. Knapp, *Accounting Ethics*, Wiley Encyclopedia of Management, 2015.
- [27] S. Li, B. Ragu-Nathan, T.S. Ragu-Nathan, and S. Subba Rao, *The impact of supply chain management practices on competitive advantage and organizational performance*, *Omega*, **34** (2006), no. 2, 107–124.
- [28] B.J. Lovett and A.H. Jordan, *Levels of moralisation: A new conception of moral sensitivity*, *J. Moral Educ.* **39** (2010), no. 2, 175–189.
- [29] B.L. Luippold, T. Kida, M.D. Piercey and J.F. Smith, *Managing audits to manage earnings: The impact of diversions on an auditor's detection of earnings management*, *Account. Organ. Soc.* **41** (2015), 39–54.
- [30] S. Mashayekhi Fard, A. Jahanshad, and Z. Poorzamani, *The impact of social responsibility and social intelligence on auditor's professional judgment with the role of mediating a philosophical mindset*, *Int. J. Finance Manag. Account.* **5** (2020), no. 17, 55–65.

- [31] W.R. Miller, J. Zweben, and W.R. Johnson, *Evidence-based treatment: Why, what, where, when, and how?*, J. Substance Abuse Treat. **29** (2005), no. 4, 267–276.
- [32] R. Morck, B. Yeung, and W. Yu, *The information content of stock markets: why do emerging markets have synchronous stock price movements?*, J. Financ. Econ. **58** (2000), no. 1–2, 215–260.
- [33] M. Namazi and H. Rajabdoory, *Professional ethics of auditing in Iran: Content analysis*, Empir. Stud. Financ. Account. **15** (2018), no. 59, 1–34.
- [34] R. Nemati Koshteli, *Investigating the effect of ethical ideology on auditors' self-efficacy*, Financ. Behav. Res. Account. **2** (2022), no. 2, Ser no. (4), 16–33.
- [35] S. Neifar and H. Ajili, *CEO characteristics, accounting opacity and stock price synchronicity: Empirical evidence from German listed firms*, J. Corp. Account. Financ. **30** (2019), no. 2, 29–43.
- [36] M.Z. Nirwanto and H. Rahardja, *Corporate social responsibility disclosure and its relation on institutional ownership: Evidence from public listed companies in Malaysia 2008-2010*, Manag. Audit. J. **13** (2011), 24–47.
- [37] F. Patel, *Effects of accounting information system on organizational profitability*, Int. J. Res. Anal. Rev. **2** (2015), no. 1, 72–76.
- [38] J.D. Piotroski and D.T. Roulstone, *The influence of analysts, institutional investors, and insiders on the incorporation of market, industry, and firm-specific information into stock prices*, Account. Rev. **79** (2004), no. 4, 1119–1151.
- [39] H. Rajabdori and A. Rostameymandi, *Quantitative review of accounting and finance publications in the country*, Account. Magaz. (2014), no. 76, 116–123.
- [40] H. Rajabdori, H.R. Vakili Fard, H. Salari and A. Amiri, *The relationship between ethical theories and ethical behavior in the judgment of auditors*, Judg. Decis. Mak. Account. Audit. **1** (2021), no. 1, 113–141.
- [41] J. Rest, *Morality*, P. Mussen (Ed.) Handbook of child psychology, New York, Wiley, 1983.
- [42] A. Rezazadeh and A. Davari, *Structural Equation Modeling with PLS Software*, Academic Jihad Publishing Organization, 2014.
- [43] M. Safarinia and N. Sharif, *Constructing and examining the psychometric properties of the social trust questionnaire*, Soc. Psycho. Res. Quart. **3** (2010), no. 11, 47–58.
- [44] M. Saleh, N. Zulkifli, and R. Muhamad, *Corporate social responsibility disclosure and its relation on institutional ownership: Evidence from public listed companies in Malaysia*, Manag. Audit. J. **25** (2010), no. 6, 591–613.
- [45] P. Shayesteh Shojaei and Z. Pourzamani, *The effect of ethical behavior and social identity on the performance of the auditors by emphasizing on Role, self-efficacy and professional ethical sensitivities*, Int. J. Finance Manag. Account. **7** (2022), no. 24, 159–174.
- [46] P. Shayesteh Shojaei, Z. Pourzamani, and A. Yaqubnejad, *The impact of ethical standards including ethical environment, professional commitment, ethical values and ethical ideology on performance of auditors*, Bi-Quart. J. Value Behav. Account. **5** (2021), no. 10, 281–318.
- [47] L. Tesio, D. Alpini, A. Cesarani and L. Perucca, *Short form of the dizziness handicap inventory: Construction and validation through Rasch analysis: 1*, Amer. J. Phys. Med. Rehabil. **78** (1999), no. 3, 233–241.
- [48] A. Tessema, *The impact of corporate governance and political connections on information asymmetry: International evidence from banks in the Gulf Cooperation Council member countries*, J. Int. Account. Audit. Tax. **35** (2019), 1–17.