Int. J. Nonlinear Anal. Appl. 15 (2024) 2, 285–299

ISSN: 2008-6822 (electronic)

http://dx.doi.org/10.22075/ijnaa.2022.28947.4029



# Provide a structural model of audit quality based on the impact of auditing professional ethics and the moderating role of organizational culture

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(Communicated by Mohammad Bagher Ghaemi)

#### Abstract

The purpose of this study is to provide a structural model of audit quality based on the impact of auditing professional ethics and the moderating role of organizational culture. To achieve the research goal, 384 questionnaires were distributed and collected among auditors working in auditing firms and the auditing organization. The data collected by the questionnaires were analyzed by SPSS24 and Smart PLS3 software using structural equation modeling. The results of the research hypotheses in this study at a 99% confidence level showed that the professional ethics of auditing has a positive and significant effect on audit quality. Organizational audit culture has a positive and significant effect on the relationship between auditors' professional ethics and corporate auditing quality.

Keywords: Auditing, Auditing Quality, Organizational Culture, Professional Ethics.

2020 MSC: 91G15

## 1 Introduction

After many years of ethical changes, we are still facing many restrictions in the business environment, which are the result of unethical behaviors such as injustice, fraud, deception, biased manipulation and dubious actions and many other cases that the future of social, economic and financial life, along with It threatens the well-being of the human race. By specifying the main reasons related to ethical judgments that managers make when faced with ethical situations, future ethical failures can be reduced in order to gain public trust in the accounting profession [17]. Professional ethics, as a basic and important pillar that includes objectivity and honesty in the financial reports of an auditor, can have a decisive role on the performance and accuracy of the auditor's reports. Auditors are required to observe professional ethics and professional behavior in the performance of their duties; Because performing unprofessional behaviors can reduce the quality of auditing and destroy public trust in the auditing profession and harm the dignity of the entire profession. The purpose of the principles of professional conduct in auditing is to raise the credibility of the auditing profession, develop cooperation between auditors and accountants, take care of auditors' interests, develop peace of mind and self-confidence for users, implement legal conditions for the use of auditor's

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Received: August 2022 Accepted: November 2022

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knowledge and expertise, and auditor's independence in the workplace. Professional care requires that the auditor follow professional technical and ethical standards and try to fulfill his professional responsibilities in the best possible way and improve the quality of services [2]. The failure of auditors when they do not use their skills fully or are negligent and make mistakes in reviewing financial statements indicates poor quality audit work. In these cases, it is said that auditors lack professional ethics, auditors should adhere to professional ethics [33].

Currently, unfortunately, in our society, less attention is paid to professional ethics in the work environment, while in the secular West, in the knowledge related to management and organization, there is a branch called professional ethics, but in our religious society, in organizations Not enough attention has been paid to ethics. Our society needs the characteristics of professional ethics such as: social responsibility, order and discipline, conscientious work, respect for clients, moral values, citizenship rights, moral charter, honesty and truthfulness, fairness and equality, trustworthiness, Loyalty, the spirit of partnership, trust and commitment, creating interaction with each other. Define and culture it for its realization. In the last decade, professional ethics has received more attention from Iranian organizations and plays an essential role in the success of an organization. The success of an organization in the society also depends on establishing a correct relationship between the individual and the organization. In order to have a good and pleasant relationship, it is necessary for the organization and the individual to have a special character in temperament, behavior and performance. Previous studies in the field of auditing have determined that the ethical decisions made by auditors can be strongly influenced by the ethical values of their auditing institutions. This factor has a significant impact on organizational goals and the behavior of organization members [20, 10]. Ethical values can be considered as a subset of organizational culture. Culture is defined as a set of social behavior patterns, arts, beliefs, customs and other human products and intellectual features of society or nation. From the combination of the two words culture and organization, a new thought has emerged that none of those two words contain this thought. Organization is a metaphor for order, while the elements of culture are neither regular nor orderly. Therefore, it can be said that culture in an organization is like personality in a person. In other words, every organization has a personality called organizational culture [42].

Hofstede [16] states that the definition of organizational culture is difficult due to its complex characteristics because part of the forms of culture are intangible and not visible. Despite this difficulty, most authors seem to agree that organizational culture is the focal point and center of organizational performance. Hill [35] believe that organizational culture is a model of values, beliefs and behaviors learned from the past along with experience that is developed during the life of organizations and is revealed in the behavior of members. Martin [21] considers organizational culture as patterns of concepts that are obtained from the interconnection of various cultural manifestations such as stories, customs, formal and informal experiences.

Organizational culture is known as one of the most important issues in the success and progress and development of countries, so that many researchers believe that the success of Japan in today's society is one of the important reasons for their attention to organizational culture. Organizations are a cultural phenomenon in society and every organization has its own culture. In addition, among the metaphors that are used to recognize and analyze organizations, is the metaphor of "culture", considering the metaphor of culture for the organization, on the importance of the role of traditions and customs, stories, legends. Organizational artifacts and symbols are emphasized and attention is paid to the manager as the symbol of the organization [29]. Just as personality is defined for individuals (meaning a series of fixed and stable characteristics), personality can also be defined for organizations. Organizational culture is the personality of any organization; It means that organizations can be conservative, creative, timid, etc. just like humans. In [8], DeAngelo proposed audit quality in this way. Audit quality is described as a control system, the auditor's ability to identify and report material misstatements in financial statements and reduce information asymmetry between management and shareholders. Most other definitions of audit quality, despite differences, reflect some of D'Angelo's characteristics. Audit quality depends on the reliability of financial statement information because investors use this information to accurately estimate the company's value.

Also, audit quality includes the audit of financial statements so that they are prepared in accordance with accounting standards and provide reasonable assurance of the audited financial statements, and their disclosure is in accordance with accepted accounting principles and is free of any distortion, error, and fraud [9]. DeAngelo [8] definition shows a critical feature of understanding the impact of auditing on financial statement information. Ball [4] states that auditors have legal liability if financial statements are misleading. Olivia and Ratnawati [24] in a research study the effect of work experience, competence, motivation, responsibility and impartiality of auditing on audit quality and the results indicate that the auditor's ability, responsibility and impartiality have a significant effect on quality. It has an audit. The research results of Ghasemzadeh [13] showed that any improvement in professional ethics can be accompanied by the improvement of its consequences, that is, social responsibility and individual accountability. In a research titled the impact of auditor characteristics on audit quality, Zahmatkesh and Rezazadeh [41] examined the

impact of work experience, audit competence, motivation, accountability and impartiality of the auditor on quality from the point of view of auditors in companies. The results indicate that Professional competence, accountability and impartiality of the auditor have significant effects on audit quality. In their research, Haeridistia and Fadjarenie [14] analyzed professional ethics, experience, and independence on audit quality, and these researchers found that professional ethics, experience, and independence are all three positive and influential factors on audit quality. Banimahd and Nenjati [5] found in his research that as uncertainty avoidance increases, the auditor's work commitment decreases. Also, when the auditor is a man, his work commitment increases. If the auditor's workplace is a private audit firm, the work commitment will increase. Since the work experience variable has a positive relationship with work commitment, it can be concluded that the more experience people have in the auditor profession, the more their commitment increases.

According to the research conducted, it can be argued that professional ethics and organizational culture are among the main indicators in auditing quality, so it is necessary for the governing organizations of the auditing profession to pay more attention to the ethical aspects of auditing and organizational culture in auditing institutions. If the audit quality is completely related to the possibility of discovering important distortions, it will not be complete in terms of concept, because basically the auditors themselves have the possibility to choose the possibility of risk, and considering that the organizational culture affects ethical values, in this research, to present the model A structure of audit quality based on the impact of professional audit ethics and the moderating role of organizational culture was discussed.

## 2 Theoretical foundations and background of research

The presence of pressure from the employer and the auditor's company leads to a decrease in the quality of audit services and to some extent the auditor surrenders to these pressures. In this regard, auditors' behavior depends on the ethical evaluation of the situations they face (problems/dilemmas) and also on the groups and factors that the auditor uses when resolving conflicts of interest. This is despite the fact that it is late that professional accounting associations in different societies have started to formulate the code of professional conduct with the aim of requiring accountants to be responsible for the public interest and observe professional ethics, but it seems that the Code of Professional Conduct It alone cannot solve the existing problems, and accounting professional scandals continue to occur in every corner. Therefore, it seems that the dominance of the positive hypothesis of accounting (which is based on the maximization of personal interests) as the dominant model in accounting research has taken us away from paying attention to professional behavior in judgments [27, 32].

The focus of the auditing profession has tended towards strategic issues compared to the past; And the scope of its investigations goes towards bigger issues and changes. The board of directors and senior managers of the organization need to ensure the audit in order to understand why the problems arise and their root causes. The audit mission is to provide assurance services and independent and impartial consultants to create added value and improve the company's operations. Auditing is able to ensure that there is a strong commitment to good behavior in the organization and this commitment actually translates into the organization's daily behaviors, and more importantly, having such information allows the company to reduce the risks associated with manage organizational culture correctly [26].

The auditing profession has a very important position and maintaining public trust in the accounting profession in a society requires the provision of reliable and high-quality information by professional accountants. Auditors are required to formulate and implement their audit programs in the framework of auditing standards, which are known as the criteria for evaluating the quality of auditors' work, for crediting and commenting.

In addition, auditors are required to observe professional ethics and professional behaviors in performing their duties, because performing unprofessional behaviors can reduce the quality of auditing, destroy public trust in the accounting and auditing profession, and harm the dignity of the entire profession. The collection of these cases can be found in the commitment of auditors towards the profession and the beneficiaries who use the professional services of auditors [5]. Due to the importance of ethics and professional behavior and that the professionals of the auditing profession can do their work in a completely honest, perfect and correct way, the organizers of the auditing profession established rules, regulations and principles of professional conduct. These rules usually include honesty, truthfulness, loyalty, respect, sense of responsibility and concern for the interests of others, caution, justice and compliance with laws and regulations [30, 7]. Professional ethics, professional behaviors and professional commitment of auditors can be influenced by various factors such as culture, emotions, views and attitudes of the organization members and finally, under the influence of these factors, it leads to compliance or non-compliance of professional behavior and commitment among auditors. Among these factors, moral values and cultural values interact with each other. Organizational culture affects moral values. The direct connection between the moral and cultural values of the

organization makes the employees of the organization enjoy ethical behavior to ensure the interests of the organization and its beneficiaries [5, 3]. Ethics and culture are one of the basic areas that audit managers pay attention to in order to increase their planning resources; Therefore, it is necessary for the board of directors and audit managers to reach a common point of view regarding the importance of culture and the role that audit can play in supporting the board of directors in this area. It is necessary that the behavior of front-line employees, such as sales employees, employees of agencies or centers, adhere to the ethics and culture of their organization, and it is necessary to assure the board of directors that the entire organization is moving in the same direction. This is not an easy task, but auditing can support the board of directors by providing such assurance [26].

In a research, Salem et al. [31] investigated the quality of auditing and saving doubtful receivables in Islamic and conventional banks. By examining the effect of audit quality on adjusting the reserve of doubtful receivables among Islamic and conventional banks, they found that the size of audit institutions, the size of the audit committee, and the independence of the audit committee inhibit the methods of profit manipulation through the reserve of doubtful receivables in Islamic banks. In contrast, audit committee mechanisms do not affect the performance of profit manipulation in conventional banks. They also found that the rate of profit manipulation in Islamic banks operating in troubled countries is lower compared to conventional banks. In addition, the research results indicate that the audit quality in conventional banks is low compared to Islamic banks.

Ernstberger et al. [11] in research entitled Are the remuneration policies of audit firms related to audit quality? They showed that the bonus policies in auditing companies are different. Also, profit sharing and high variable remuneration are associated, and auditor remuneration is associated with lower audit quality. Also, some evidence shows that audit quality in cases where partners rely too much on variable remuneration has a high audit quality risk.

Hai et al. [15] in research titled providing a model of factors affecting the organizational structure, operational mechanism and audit quality showed that the factors affecting the operational mechanism of auditing companies include the legal system, quality control and internal governance of companies. Factors affecting audit quality and organizational structure are the performance mechanism of audit companies. Among these factors, the operational mechanism has the most influence and a decisive role in the audit quality.

Hardistia and Fadjerni [14] in their research titled "The effect of independence, professional ethics and auditor experience on the quality of their audit" found that professional ethics, experience and independence of the auditor are all three positive and influential factors on the quality of the audit. Lee et al. [18] in a study titled Audit Partner Duties and Audit Quality in the United States showed that companies with more diverse boards and management teams are more likely to have a female audit partner. In addition, the experience of the employer's board of directors is associated with the experience of the audit partner. Higher audit quality is associated with higher audit fees from female auditors and more experienced audit partners.

In research entitled the effect of auditor characteristics on audit quality, Zahmatkesh and Rezazadeh [41] showed that the auditor's professional competence, responsibility, and objectivity have a significant effect on audit quality. Hiring people with high work experience increases the audit quality due to the auditor's professional competence; Auditors gain deeper knowledge and better judgment to achieve audit quality. Accountability improves auditor performance and objectivity enables them to act without being influenced by other people.

Rakhshi et al. [27] in research titled pressures and ethical dilemmas in price-audit quality conflict, identified the factors for resolving the conflict of interest (when the auditor faces it). The statistical population in this study was made up of the trusted auditing companies of the stock exchange, the number of trusted auditing institutions of the stock exchange is 77 and they were investigated by the full number method. The information required for this study was extracted based on a completed questionnaire and analyzed based on the analysis of variance (ANOVA) test. The obtained results show a significant relationship between the auditor's experience and the pressure received by the auditor from the client (employer), the pressure of the audit firm, the ethical evaluation of problems (dilemmas) and the solutions of conflict of interest, while the size of the audit firm did not show a significant relationship with these variables. In addition, based on the results, the significant relationship between conflict-of-interest solutions and also ethical evaluation of dilemmas (problems) with the pressure received from the employer and the pressure received from the audit institute is another result of this study. According to the results, compliance with the code of professional conduct with more supervision and accuracy is suggested to improve audit quality by reducing ethical conflicts.

Naghshbandi et al. [23] investigated the relationship between independence, professionalism and professional skepticism with audit quality. This research examines the relationship between independence, professionalism and professional skepticism with audit quality. The current research is practical and descriptive-survey based on the structural equation model in terms of data collection. The statistical population of auditors working in audit institutions in Mashhad was selected. In order to test the hypotheses, the probability value obtained from fitting the model was used

in the significant state of the parameters. The appropriateness of the proposed model was checked by explaining the hypotheses in the mode of standard estimation and the significance of the parameters using SmartPLS software. The results showed an error level of five percent; There is a significant relationship between the variables of independence, professionalism and professional skepticism with audit quality.

Tabesh et al. [34] in research titled "Evaluation of the effect of aura on the auditor's professional career" showed that auditors who have no aura bias have a higher professional identity compared to other auditors. Also, based on the result of the second hypothesis, it was determined that auditors who have no aura bias have higher professional skepticism compared to other auditors.

Ramzan Ahmadi et al. [28] in the research entitled Modeling structures affecting the professional ethics of auditing by using structural modeling - an interpretation from the point of view of experts through structural modeling - an interpretation showed that the most basic structures affecting the professional ethics of auditing are the structure of competition in the market. Auditing is the type and power of corporate governance, whether the employer is private or non-private, the size of the employer's organization, lack of compromise due to the employer's threat to dismiss the auditor, financial problems of the auditor, and economic fluctuations such as rising exchange rates and inflation. These structures are related to environmental and economic indicators.

# 3 Reliability measurement:

In this research, similar to Abbott et al.'s [1] research, the measurement of abnormal accruals from the residuals (error component) obtained from the regression model of Kotari and his colleagues as described below (model no....) has been used:

$$[TAit/Ait - 1] = \beta_0 + \beta_1[1/Ait - 1] + \beta_2[(\Delta REVit - \Delta ARit)/Ait - 1] + \beta_3[PPEit/Ait - 1] + \beta_4[NIit/Ait - 1] + \varepsilon it.$$

$$(3.1)$$

TAit =: total accrual items (the difference between operating profit and operating cash flow) Ait-1: total assets of the year (t-1)

Ait-1 = change in income from year t-1 to t.

 $\Delta REVit$  = change in accounts receivable from year t-1 to t.

PPEit = gross fixed assets in year t

NIit= net profit

How to measure relevance

Predictability has been used as a measure of relevance. More predictability means more relevance of financial reports. How to measure timeliness: To measure timeliness, the criterion is the time interval between the release of financial statements and the end date of the financial reporting period.

$$DT - Tissue - Treporting$$
 (3.2)

Tissue: The time of publication of audited financial statements

Treporting: End date of the financial reporting period

# 4 Endogenous choice of auditor

When there is a problem of endogeneity of the independent variable, it leads to conflicting estimates. 56 Ordinary Least Squares Method. Research shows that business owners do not choose their auditor randomly, but based on their needs.

$$Top19_{it} = \lambda + \gamma_1 Pvtown_{it} + \gamma_2 Size_{it} + \gamma_3 Lev_{it} + \gamma_4 InvRec_{it} + \gamma_5 Liq_{it} + \gamma_6 Loss_{it} + \gamma_7 Curr_{it} + \gamma_8 Salegrowth_{it} + \gamma_9 Aturn_{it} + \sum \beta_j Industry Dum + \beta_k YearDum + \delta_{it}$$

$$(4.1)$$

InvRec: The ratio of the sum of inventories and accounts receivable to the sum of total assets

Liq: the ratio of total current assets to total current liabilities

Curr: Ratio of current assets to total assets

Aturn: the ratio of sales to total assets. Other variables are defined in previous sections.

# 5 Audit quality

This variable indicates the quality of the audit, and in the present research, as in the research of Meir, the quality of the audit is measured by measuring the amount of optional accrual items. can be considered To determine the level of discretionary accruals, which is considered as an audit quality criterion in this study, the Jones model has been used. All accrual items are determined using the cash flow approach introduced by Hariber and Collins (2002).

$$(N_{it} - CFO_t) = TAC_{it} (5.1)$$

In the above relationship, TAC represents the total accruals (profit before unexpected items minus operating cash flows) in year t for company i. In the mentioned model, after obtaining the total accruals, the first step is to determine the relationship between the total accruals and the income variables. Accounts receivable and gross are property, machinery and equipment, which are estimated as follows using the ordinary least squares method:

$$\frac{TAC_{it}}{TA_{i(t-1)}} = \alpha_1 \left(\frac{1}{TA_{i(t-1)}}\right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i(t-1)}}\right) + \alpha_3 \left(\frac{PPE_{it}}{TA_{i(t-1)}}\right) + \varepsilon_{it}$$

$$(5.2)$$

After fitting the above model and the significance of all variables of the model, coefficients  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  have been obtained and therefore non-discretionary accrual items will be obtained as follows for each company:

$$= \alpha_1 \left( \frac{1}{TA_{i(t-1)}} \right) + \alpha_2 \left( \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i(t-1)}} \right) + \alpha_3 \left( \frac{PPE_{it}}{TA_{i(t-1)}} \right) \frac{NDA_{it}}{TA_{i(t-1)}}$$

$$(5.3)$$

In the last step, the amount of discretionary accruals is calculated as follows from the difference between the total of accruals each year and non-discretionary accruals estimated based on Jones' adjusted model as follows:

$$= \frac{TCA_{it}}{TA_{i(t-1)}} - \frac{NDA_{it}}{TA_{i(t-1)}}DA_{it}$$
(5.4)

# 6 Corporate governance mechanisms and audit fees

In this section, the research models and variables used in the research are described:

# 6.1 Research models:

First, in this research, two models have been used for the independence of the board of directors and the duality of the CEO with audit fees. The following model has been used to carry out the first and second hypotheses:

Total Audit FeesI,t = 
$$\alpha_0 + \alpha_1 PCTINDBRDI$$
,  $t + \alpha_2 CEODUALITYI$ ,  $t + \alpha_3 OWNCONI$ ,  $t + \alpha_4 SIZEi$ .t  
+  $\alpha_5 LEVWRAGEI$ ,  $t + \alpha_6 ROAi$ ,  $t + \alpha_7 BIGNI$ ,  $t + \alpha_8 RIi$ ,  $t + \varepsilon I$ ,  $t$  (6.1)

Also, the following model is used to carry out the hypothesis of independence of the board of directors and duality of the CEO with audit fees with dispersed ownership compared to the company with centralized ownership:

Total Audit Fees i,t = 
$$\alpha_0 + \alpha_1 PCTINDBRDi$$
,  $t + \alpha_2 CEODUALITYi$ ,  $t + \alpha_3 OWNCONi$ ,  $t$   
+  $\alpha_4 (PCTINDBRDi$ ,  $t * OWNCONi$ ,  $t$ ) +  $\alpha_5 (CEODUALITYi$ ,  $t * OWNCONi$ ,  $t$ )  
+  $\alpha_6 SIZEi$ .  $t + \alpha_7 LEVWRAGEi$ ,  $t + \alpha_8 ROAi$ ,  $t + \alpha_9 BIGNi$ ,  $t + \alpha_{10} RIi$ ,  $t + \varepsilon i$ ,  $t$  (6.2)

Dependent variable: In this research, the independent audit fee is the dependent variable.

## Independent variables

Non-obligatory member: refers to a member of the board of directors who does not have official executive responsibility in the company.

Dual responsibility of the CEO: It refers to a situation where the CEO is simultaneously the chairman of the company's board of directors.

BIGN (auditor type): If the auditor of the company is a member of the audit organization's statistical sample, the number is 1 and otherwise, the number is zero.

Ownership concentration (major shareholders): total ownership percentage of shareholders who own at least 5% of the company's shares.

#### control variables

SIZE (company size): It is measured as the natural logarithm of the assets of the sample member companies.

LEVERAGE: The ratio of total liabilities to total assets.

ROA: It is measured as the ratio of net profit to total assets.

RI: It is obtained by dividing the sum of accounts receivable and inventories by total assets.

## 7 Restatement of Financial Statements

$$Restate_{it} = \beta_0 + \beta_1 Top 19_{it} + \beta_2 Audchg_{it} + \beta_3 Size_{it} + \beta_4 Lev_{it} + \beta_5 InvRec_{it} + \beta_6 Liq_{it} + \beta_7 ROA_{it} + \beta_8 Loss_{it} + \beta_9 Subs_{it} + \beta_{10} LogAge_{it} + \beta_{11} Conown_{it} + \beta_{12} Pvtown_{it} + \sum \beta_j Industry Dum + \beta_k YearDum + \varepsilon_{it}$$

$$(7.1)$$

The changes used in the model are defined as follows

- Restate dummy variable equal to one if the entrepreneur's financial statements have been restated in the following year, otherwise zero
- Top19: Dummy variable equal to one if the auditor is among the 19 trusted private auditing institutions of the Stock Exchange and Securities Organization belonging to the "first" class, and zero for trusted private auditing institutions of other classes.
- Audchg: Dummy variable equal to one if the auditor has changed, zero otherwise
- Size: The size of the owner, the natural logarithm of the total assets of the owner
- Lev: financial leverage, the sum total of debts divided by the total sum of assets
- InvRec: the ratio of the sum of inventories and accounts receivable to the sum of total assets
- Liq: the ratio of total current assets to total current liabilities
- ROA: return on assets ratio, profit divided by total assets. loss: The loss of the business owner is a dummy variable equal to one if the business owner has reported a loss, otherwise it is zero.
- Dummy variable equal to one if the owner has a subsidiary company, zero otherwise.
- Subs: the natural logarithm of the owner's age
- LogAge: concentration of ownership, percentage of the common shares of the business owner that belongs to the largest shareholder
- Conown Pytown: Private ownership is a dummy variable equal to one if greater than or equal to 50% of the owner's shares belonging to the private sector, otherwise it is zero. IndustryDum: 16 dummy variables to control for the industry effect
- YearDum: 10 dummy variables to control the effect of changes over time Endogeneity of auditor selection

When there is an endogeneity problem, the logistic regression method leads to conflicting estimates. Research shows that the owners do not randomly choose their accountants, but this choice is based on the needs of the owners [19].

$$Top19_{it} = \lambda + \gamma_1 Pvtown_{it} + \gamma_2 Size_{it} + \gamma_3 Lev_{it} + \gamma_4 InvRec_{it} + \gamma_5 Liq_{it} + \gamma_6 Loss_{it} + \gamma_7 Curr_{it} + \gamma_8 Salegrowth_{it} + \gamma_9 Aturn_{it} + \sum_i \beta_j Industry Dum + \beta_k YearDum + \delta_{it}$$

$$(7.2)$$

The variables used in the model are defined as follows

Curr: ratio of current assets to total assets

Salegrowth: the percentage of changes in sales, the difference between the sales of the current year and the previous year, divided by the sales of the previous year

Aturn ratio of sales to total assets. Other variables are defined in previous sections.

## The basics of developing research hypotheses

The basic principles of auditing professional behavior include truth, honesty, objectivity, efficiency, professional care, confidentiality of information, professional behavior, independence. Also, the researchers stated the six principles that should be present in the audit, which include: accountability, public welfare, objectivity, independence, honesty, professional care and development of the nature of services. The auditor must observe honesty and truthfulness in all his professional relationships. This requires that his name does not appear in any distorted report, misleading report, negligently prepared report and incomplete report.

The auditor must have the skills and professional knowledge and expertise necessary to perform accurate and appropriate professional services in accordance with professional standards [7]. The auditor is requested to carefully consider all unusual circumstances and eliminate any possible doubts or concerns. Researchers believe that the auditor must have professional, both scientific and practical documents to perform the required tasks with knowledge, experience and the help of consultants [25]. The auditor must keep his work information confidential and must not disclose such information in any way, except in the cases required by law for legal disputes, reporting to the relevant competent organizations in case of legal violations, as a professional need in response to ethical requirements, in the times needed to protect the interests of the accountant and not to disclose about quality control [7]. Professional care requires that the auditor follow technical and ethical professional standards and try to perform his professional responsibilities in the best possible way and improve the quality of services. Therefore, the auditor is required to follow the professional behavior in response to the professional needs issued by the relevant authorities. The auditor should refrain from any behavior that may question his profession and expertise, or by not using the methods and laws, or by exaggerating the presentation of the services provided by him, lead to discrediting the profession or other accountants [30]. Professional conduct also requires that the successor auditor communicate with the predecessor auditor to accept or reject the client's contract [25]. Accountants must refrain from paying commissions to obtain any professional designation. The auditor is not allowed to use false advertisements that are inappropriate from a professional point of view and include deception and trickery; And he should also avoid any advertisement that causes harm to this profession or to others [7].

Accounting quality is described as a control system, the ability of accounting to identify and report significant distortions in financial statements and reduce information asymmetry between management and shareholders. This concept is also related to the level of information in financial statements and this is due to the fact that financial statements must be audited by high quality auditors [25]. The importance of audit quality is related to the output of the audit process presented in the auditor's report. which the decision making of many external users depends on, as a result, the quality of the audit brings common benefits to all the beneficiaries of the accounting process, including accountants, investors, banks, creditors, associations and organizations of this profession. Increasing audit quality helps to attract new clients for the audit firm and to maintain their current clients. High quality auditing can be a part of the internal control system of entrepreneurs who are unable to directly control management behaviors. Audit quality is one of the important topics that leads to the development of the auditing profession and the professional performance of auditing institutions. Based on the stated principles, the hypothesis was designed as follows:

First hypothesis: professional audit ethics has a significant impact on audit quality.

The focus of the internal audit profession has moved more towards management issues than in the past; And the scope of its investigations goes towards important changes and bigger issues. The board of directors and the senior management of the organization need internal audit assurance to understand why the problems arise and their root causes. The mission of the audit unit is to provide assurance services and independent and impartial consultants in order to add value and improve the company's operations. Auditing can ensure that there is a strong commitment to good behavior in the organization and this commitment actually becomes the daily culture of the organization and more importantly, having audit information allows the board of directors to properly manage the risks associated with the organizational culture. The board of directors and the CEO are the first ones who are responsible for defining and analyzing the organizational culture by encouraging ethics, values and behavior to these requirements throughout their organization. Auditing, as a key role, can assure the board of directors that the actions taken to change the culture and behaviors are working well and that the organizational culture is reflected at all levels [26].

Professional ethics, professional behaviors and work commitment of auditors can be influenced by various factors such as culture, emotions, views and attitudes of the organization members and finally, with the influence of these factors, it leads to compliance or non-compliance of professional behavior and work commitment among auditors. Among these factors, moral values and cultural values have mutual influence on each other. Organizational culture influences moral values. The direct relationship between the organization's moral and cultural values cause the organization's employees to behave ethically in order to secure the interests of the organization and its beneficiaries. Morgan [22] believes that the culture of any organization is one of the major factors affecting its performance. According to Baron

[6], the influence of organizational culture on the members of the organization is to such an extent that it is possible to understand the behavior, feelings, views and attitudes of the members of the organization by examining its angles and evaluate, predict and guide their possible reaction to the desired developments. With the lever of organizational culture, it is easy to facilitate changes and make new directions stable in the organization. Organization is more than horizontal and vertical levels, units and hierarchies. An organization has a personality like a person, a personality that has the characteristics of flexibility, conservatism and innovation, etc. In the organization, the employees agree on a specific pattern of behavior, and this is the organizational culture. Therefore, since in every organization, there is a unique culture of that organization that shows people how to understand and give meaning to events, organizational culture can be used as a powerful lever to guide and strengthen organizational behavior. Among the important issues in today's organizations are underwork, slacking off, lack of work commitment, dislike of work and finally leaving the service of employees. It is necessary for managers to always find the cause of these phenomena and what factors cause employees' discouragement and alienation from the organization.

Whittle et al. [36] believe that culture influences moral values. By studying the cultural characteristics presented by Hofstede, they showed in different countries that different countries with different cultures, their moral values change according to the culture. They suggest that this issue should be taken into account in decisions related to international trade. Yamamura's research [40] is the first study that paid attention to the auditor's decision-making and audit risk determination with the help of Hofstede's model. He found that cultural differences can cause differences in the design and selection of audit methods in the audit program, and these differences directly affect risk identification for Audited accounts will be affected. Wood [39] examined the relationship between culture and environmental variables. He realized that the level of literacy and economic prosperity of the country are among the most effective determinants of the country's audit environment [39]. Walker and Johnson [37] found that the cultural differences in different societies affect auditors' field of activity and how they act. Windsor and Ashkansi [38] found similar results in their study of 131 partners of large national audit firms in Australia. Its findings showed that organizational culture and personal factors are the main factors that determine auditors' decision-making styles and their independent behavior [5]. Based on the stated principles, the second and third hypotheses were designed as follows:

Second hypothesis: Organizational culture has a significant effect on audit quality.

The third hypothesis: Organizational culture has a moderating role in the relationship between audit professional ethics and audit quality.

## 8 Conceptual model of research

In research, Zahmatkesh and Rezazadeh [41] stated that the auditor's professional competence, accountability and impartiality have significant effects on audit quality. Hardistia and Fadjerni [14] stated in their studies that professional ethics, experience, and independence are all three positive and influencing factors on audit quality. Banimahd and Nenjati [5] found in his research that as uncertainty avoidance increases, the auditor's work commitment decreases. Based on the basics and research literature, the conceptual model of the research was designed as Figure 1:

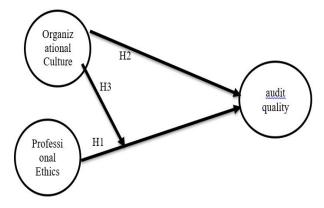


Figure 1: conceptual model of research

# 8.1 research method

This research is used by using the background provided in basic research to meet human needs, improve and optimize tools, welfare development methods and improve the level of human life. From this point of view, this research is

practical in terms of purpose; Also, from the point of view of the method of data collection, it is a descriptive survey due to the use of a questionnaire and path survey to collect and describe descriptive information. Survey research is used to investigate the distribution of characteristics of a statistical population. The purpose of descriptive research is to describe the phenomenon or conditions under investigation. Descriptive research can be used to learn more about existing conditions or to help the decision-making process.

## 8.2 Population and statistical sample

The statistical population of this research is all auditors working in audit institutions and audit organizations in Iran. Since the size of the statistical population is uncertain and scattered, it was not possible to collect information from all the people of the statistical population, and as a result, a sample of the statistical population was selected. The sample group is a small group as a representative of the statistical population, which are selected from the members of the statistical population; In other words, some members of the statistical population (but not all) form the sample group. As a result, the sample group is a subset of the statistical population, which by studying it, the researcher is able to generalize its results to the entire statistical population. The sampling method used in selecting the sample in this research is the non-probability sampling method.; The statistical population of the current research is uncertain; According to Morgan's table, the number of the statistical sample of the study was considered to be 384 people (the upper limit of the number of the studied sample). Therefore, 384 questionnaires were distributed and collected among auditors working in audit institutions and audit organizations. It can be said that the distribution of questionnaires continued until reaching the quorum of 384 complete questionnaires.

## 8.3 Data Collection tools

In this research, a researcher-made questionnaire was used to collect information. For each question, 5 answer options were considered, and the respondent had to choose one of them as the answer. Each of the answers was organized in such a way that, while being logical, that question is separate from the answer related to other questions. Therefore, the questionnaire was designed in such a way that the respondents choose the options based on a 5-point Likert scale from completely agree to completely disagree. Likert scale is a psychometric scale that is often used in research questionnaires. The use of this scale in research surveys is so common that the terms Likert scale and rating scale are used interchangeably. In this research, three indicators of content validity, convergent validity and confirmatory factor analysis were used to check the validity of the measurement tool.

Composite reliability Cronbach's alpha Questionnaire questions Variable 0.80 0.711-19 Organizational Culture 0.83 0.81 20-39 Ethics 0.90 0.87 40-47 audit quality

Table 1: Questionnaire items for measuring variables

According to the values of Cronbach's alpha, the combined reliability reported in the table, as can be seen, all hidden variables have Cronbach's alpha value and combined reliability above 0.7, which indicates that the model has reliability (both in terms of Cronbach's alpha and In terms of reliability, it is suitable.

Convergent validity is another criterion that is used to fit measurement models in the structural equation modeling method. Fornell and Larcker [12] have proposed the use of average variance extracted (AVE) as a measure of convergent validity. The criterion displayed for the desirability of AVE is equal to and higher than 0.5. Table 2 shows the output results of the model for AVE. As can be seen, the results show the appropriateness of the convergent validity criterion (AVE).

Table 2: Convergent Validity Index (AVE) coefficients of each variable

	AVE	Variable
ſ	0.56	Organizational Culture
ſ	0.61	Ethics
ſ	0.55	audit quality

Table 2 shows the output results of the model for the AVE index. As can be seen, the results show the appropriateness of the convergent validity criterion (AVE).

In order to check the validity of the measurement model, Fronel and Locker criteria are used. Fornell and Locker [12] state; Divergent validity is at an acceptable level when the AVE for each construct is greater than the shared variance between that construct and other constructs in the model. In PLS, this is checked by a matrix (3) where the houses of this matrix contain the values of the correlation coefficients between the constructs and the square root of the AVE values of each construct.

Table 3: divergent validity

	Organizational Culture	Organizational Culture	audit quality		
Organizational Culture	0.75				
Ethics	0.57	0.73			
audit quality	0.65	0.43	0.74		

Based on the results obtained from the correlations and the square root of AVE placed on the diameter of Table 3, the validity of the model variance at the structure level can be confirmed in terms of Fronel and Locker criteria.

## 9 Discussion and results

In this part, the data related to the variables in descriptive form, which consisted of 384 people from the research samples, have been analyzed. Table 4 shows the descriptive statistics of the research variables.

Table 4: Descriptive statistics of research variables

Number	The highest amount	The least amount	Elongation	crookedness	standard deviation	average	Variable
384	64.4	83.2	-0.24	-0.35	0.37	93.3	Organizational Culture
384	85.4	95.2	0.81	-0.24	0.34	90.3	Professional ethics
384	5	63.2	0.46	-0.30	0.49	97.3	audit quality

In Table 4, the descriptive statistics including the average concentration criteria as well as the standard deviation dispersion criteria for the variables of the investigated questionnaires are given; The audit quality variable has the highest average (3.97) and professional ethics has the lowest average 3.90. In this research, factor analysis with partial least squares method was used to analyze the data and check the fit of the model. For this purpose, the third version of Smart PLS software 3 was used. The results of using this software are described below.

Table 5: Of the results of the normality test of the variables

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Test result	Sig	K-S	Component		
The data distribution is not normal	0.026	2.47	Organizational Culture		
The data distribution is not normal	0.011	2.60	Professional ethics		
The data distribution is not normal	0.002	2.88	audit quality		

As can be seen in the table, according to the Kolmogorov-Smirnov test, the significance level of all components is less than  $\alpha_0 = 0.05$ , so the data distribution is not normal. As a result, based on the third chapter, it is better to use the structural equation model method using PLS software, because one of the capabilities of this software is to check non-normal data.

In order to fit the overall model (both measurement and structural model parts), the SRMR criterion was used. whose value should be less than 0.1. According to the obtained value (SRMR = 0.07), the measurement and structural model has a good fit, that is, in general, the measurement and structural model has a good quality in explaining the endogenous variable of the research. In the following, the structural model of the relationships of the variables is mentioned.

Table 6: Results of path coefficients and significance level of the first research hypothesis

P Values	T-Value	Path coefficient	agent relationships
0.001	25.43	0.75	Professional ethics -; audit quality

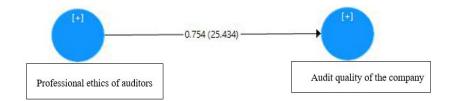


Figure 2: Results of path coefficients and significance level of the first research hypothesis

The results of the analysis of the first hypothesis showed that the effect of professional ethics on audit quality is equal to 0.75 and its significance level (0.001) is less than one percent. This professional ethics has a positive and significant effect on audit quality. Therefore, at the confidence level of 99%, the first research hypothesis that professional ethics has a significant effect on audit quality is accepted. Therefore, with the increase in the professional ethics of auditing institutions, the quality of auditing increases.

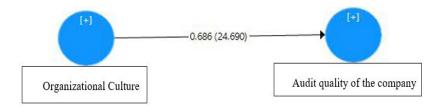


Figure 3: Results of path coefficients and significance level of the second research hypothesis

Table 7: Results of path coefficients and significance level of the tenth research hypothesis

P-Value	T-Value	Path coefficient	agent relationships
0.001	24.69	0.68	Organizational culture –; audit quality

The results of the analysis of the second hypothesis showed that the impact of organizational culture on audit quality is equal to 0.68 and its significance level (0.001) is less than one percent. Based on this, organizational culture has a positive and significant effect on audit quality. Therefore, at the 99% confidence level, the second research hypothesis that organizational culture has a significant effect on audit quality is accepted. Therefore, with the increase in the organizational culture of auditing institutions, the quality of auditing increases.

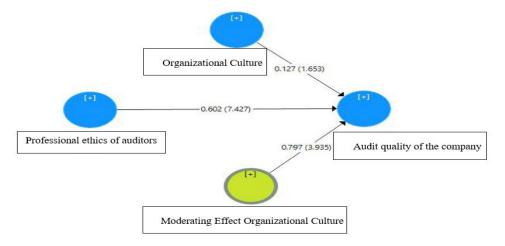


Figure 4: Results of path coefficients and significance level of the third research hypothesis

The results of the analysis of the third hypothesis showed that the effect of professional ethics due to the moderating role of organizational culture on audit quality is equal to 0.79 and its significance level (0.001) is less than one percent. Based on this, professional ethics has a positive and significant effect on audit quality due to the moderating role of organizational culture. Therefore, at the confidence level of 99%, the third hypothesis of the research that

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Table X Regults of	nath coefficients and	significance level of	the third research hypothesis

	P-Value	T-Value	Path coefficient	The relationships of each factor with sub-factors
ſ	0.001	3.93	0.79	Professional ethics -; organizational culture -; audit quality

organizational culture plays a moderating role in the relationship between audit professional ethics and audit quality is accepted. Therefore, with the increase in the organizational culture of audit institutions, the effect of professional ethics on audit quality increases.

# 10 Conclusions and Suggestions

Based on the results of the analysis, professional ethics has a positive and significant effect on audit quality, professional ethics components such as responsibility, trustworthiness, fairness and honesty among auditors can lead to an increase in audit quality, such as an increase in audit efficiency and effectiveness. Therefore, audit institutions can achieve an optimal level of audit quality in their services by institutionalizing the components of professional ethics among their employees. This result is in agreement with the results of Abbott [1]. Also, organizational culture has a positive and significant effect on audit quality. Organizational culture has components and characteristics that can lead to an increase in audit quality. Among these components, we can mention organizational participation, organizational integration, organizational standardization, and considering the organization's values. This result is in agreement with the results of the research of Hardistia and Fadjerni [14], Zahmatkesh and Rezazadeh [41]. The professional ethics of auditors through the organizational culture has a positive and significant effect on the audit quality of companies, therefore, by increasing the professional ethics of auditors through the organizational culture, the quality of auditing companies increases. Having an organizational culture among auditors can help them acquire professional ethics, which can ultimately lead to an increase in the quality of auditing companies. In line with the results, the following suggestions are presented:

- Based on the results of the analysis of the first hypothesis of the research, it is suggested that the managers of auditing institutions should increase the quality of auditing by institutionalizing the components of professional ethics among the employees.
- Based on the results of the analysis of the second hypothesis of the research, it is suggested that managers of auditing institutions increase the quality of auditing by intervening the dimensions of organizational culture in the professional ethics of auditors.
- Based on the results of the analysis of the third hypothesis of the research, it is suggested to the administrators of auditing institutions to achieve the predetermined goals in auditing by providing programs that increase cultural and ethical participation among auditors, the quality of auditing companies. Increase
- Based on the results of the research, it is suggested to the legal and regulatory institutions, including the Audit Organization and the Court of Accounts, to adjust the auditing rules and standards to increase the quality of auditing in auditing institutions based on the dimensions of organizational culture and professional ethics examined in this research.
- It is suggested that in future researches, the subject of audit quality assessment should be investigated in the framework of organizational intelligence and professional ethics. It is suggested that in future research, the assessment of audit quality based on the psychological characteristics of auditors should be investigated.

## References

- [1] L.J. Abbott, B. Daugherty, S. Parker, and G.F. Peters, Internal audit quality and financial reporting quality: The joint importance of independence and competence, J. Account. Res. 54 (2016), 3–40.
- [2] A. Arbab Soleimani, Principles of auditing, Volume one, Publications of the Audit Organization, 2013. [In Persian]
- [3] M. Armstrong, The Performance Management Audit, Cambridge Strategy Publications, 2010.
- [4] R. Ball, Market and political/regulatory perspectives on the recent accounting scandals, J. Account. Res. 2 (2009), no. 47, 277–323.

- [5] B. Banimahd and A. Nejati, The relationship between organizational culture and auditors' work commitment, Financ. Account. Audit Res. 8 (2015), no. 30, 119–138.
- [6] A. Baron, Behevior in Organizations Third Edition, Prentice Hall, 1994.
- [7] M. Bouhawia, I. Gugus, and B. Zaki, The effect of working experience, integrity, competence, and organizational commitment on audit quality, IOSR J. Econ. Finance 6 (2015), no. 4, 60–67.
- [8] L.E. DeAngelo, Auditor size and audit quality, J. Account. Econ. 3 (1981), no. 3, 183–199.
- [9] E. De Las Heras, L. Cañibano, and J.A. Moreira, The Impact of the Spanis Financial Act (44—2002) on audit quality\*/El impacto de la Ley Financiera (44—2002) en la calidad de auditoría, Rev. Española Financ. Contabil. 41 (2012), no. 156, 521–546.
- [10] W. Donaldson, Speech by SEC Chairman: Remarks before the financial services roundtable, U.S. Securities and Exchange Commission, 2005, Retrieved from http://www.sec.gov/news/speech/spch.
- [11] J. Ernstberger, C. Koch, M.E. Schreiber, and G. Trompete, Are audit firms' compensation policies associated with audit quality?, Canad. Acad. Account. Assoc. 37 (2020), no. 1, 218–244.
- [12] C. Fornell and D.F. Larcker, Evaluating structural equation models with unobservables variables and measurement error, J. High Technol. Manag. Rese. 11 (1981), no. 1, 137–153.
- [13] A. Ghasemzadeh, S. Maleki, and L. Sharifi, The mediating role of professional ethics regarding intellectual capital, organizational learning and knowledge sharing, J. Med. Educ. Dev. 9 (2016), no. 22, 76–86.
- [14] N. Haeridistia and A. Fadjarenie, The effect of independence, professional ethics and auditor experience on audit quality, Int. J. Sci. Technol. Res. 8 (2019), no. 2, 24–27.
- [15] P.T. Hai, C.A. Tu, and L.D. Toan, Research on factors affecting organizational structure, operating mechanism and audit quality: An empirical study in Vietnam, J. Bus. Econ. Manag. 20 (2019), no. 3, 526–545.
- [16] G. Hofstede, Cultural constraints in management theories, Acad. Manag. Execut. 7 (1993), no. 1, 81–94.
- [17] M.S. Kaboli, A. Rahmani, H. Nikoomaram, and F. Rahnamay Roodposhti, Effectiveness of Schwartz's motivational values and accounting code of ethics on fraudulent financial reporting, Empir. Stud. Financ. Account. 17 (2020), no. 66, 27–50.
- [18] H.S. Lee, A.L. Nagy, and A.B. Zimmerman, Audit partner assignments and audit quality in the United States, Account. Rev. 94 (2019), no. 2, 297–323.
- [19] L. Liu and N. Subramaniam, Government ownership, audit firm size and audit pricing: Evidence from China, J. Accoun. Public Policy 32 (2013), no. 2, 161–175.
- [20] Gh. Mahdavi and A.H. Houshmand, Investigating the impact of the organization's ethical culture on the auditor's behavior, Account. Knowledge Quart. 13 (2012), no. 51, 1–24.
- [21] J. Martin, Organizational Culture, Sage Publications, Thousand Oaks, California, 2002.
- [22] G. Morgan, Images of Organisation, Thousand Oaks, CA: Sage, 1997.
- [23] N. Naghshbandi, M. Gaffari, and F. Yosefpoor, Investigating the relationship between independence, professional-ism and professional skepticism on audit, J. Account. Manag. Vision 3 (2020), no. 23, 79–98.
- [24] F. Olivia and K. Ratnawati, The effect of work experiences, competency, motivation, accountability and objectivity towards audit quality, Procedia Soc. Behav. Sci. 211 (2015), 328–335.
- [25] G. Pflugrath, N. Martinov-Bennie, and L. Chen, The impact of codes of ethics and experience on auditor judgments, Manag. Audit. J. 22 (2007), no. 6, 566–589.
- [26] A. Rahmani and A. Bahirai, Organizational culture audit in Iran, Exper. Account. Res. 8 (2018), no. 3, 182–207.
- [27] M. Rakhshi, K. Azin Far, and S.A. Nabavi Chashmi, *Pressures and moral dilemmas in the price-audit quality conflict*, Financ. Account. Audit Res. **13** (1400), no. 50, 173–206.
- [28] M. Ramzan Ahmadi, A.M. Ahangari, and M. Salehinia, Modeling the effective structures on auditing professional ethics by using structural modeling an interpretation from the perspective of professional experts, Quart. J. Value

- Behav. Account. 4 (2018), no. 8, 317–281.
- [29] A. Rezaian, Management of Organizational Behavior, Side Publications, Tehran, 1386.
- [30] Sh. Salehi, The relationship between auditor's professional ethics and audit quality, Ethics Sci. Technol. 11 (2015), no. 3, 77–86.
- [31] R. Salem, M. Usman, and E. Ezeani, Loan loss provisions and audit quality: Evidence from MENA Islamic and conventional banks, Quart. Rev. Econ. Finance **79** (2021), 345–359.
- [32] N. Salman Panah and G. Talibnia, Examining a selection of factors affecting the moral judgment of certified accountants in Iran, Manag. Account. 6 (2012), no. 3, 87–96.
- [33] R. Suphachin and M. Chuaychoo, The development of causal relationship model of professional ethics, professional skepticism and audit process on audit quality of cooperative auditors in Thailand, Turk. J. Comput. Math. Educ. 12 (2021), no. 13, 1895–1904.
- [34] Z. Tabesh, M. Abdoli, and H. Yavarpoor, Investigating the Halo effect on the professional auditor's career, Account. Audit. Res. 12 (2020), no. 45, 89–112.
- [35] A. Thornhill, P. Lewis, and M. Millmore, and M. Saunders, A Human Resource Strategy Approach Managing Change, Pearson Education, 2000.
- [36] S.J. Vitell, S.L. Nwachukwu, and J.H. Barnes, *The effects of culture on ethical decision-making: An application of Hofstede's typology*, J. Bus. Ethics **12** (1993), 760.
- [37] K.B. Walker and E.N. Johnson, A review and synthesis of research on supplier concentration, quality and fee structure in non-U.S. markets for auditor services, Int. J. Account. **31** (1996), no. 1, 1–18.
- [38] C.A. Windsor and N.M. Ashkanasy, Auditor independence decision making: The role of organizational culture perceptions, Behav. Res. Account. 9 (1996), 80–97.
- [39] R.A. Wood, Global audit characteristics across cultures and environments: An empirical examination, J. Int. Account. Audit. Tax. 5 (1996), no. 2, 215—30.
- [40] J.H. Yamamura, A comparison of Japanese and United States auditor decision-making behavior, Dissertation, Washington State University, 1995.
- [41] S. Zahmatkesh and J. Rezazadeh, The effect of auditor features on audit quality, Tékhne 15 (2017), no. 2, 79–87.
- [42] H. Zarei Metin, The Basics of Organization and Management of Contingency Approach, University of Tehran, Tehran, 2017. [In Persian]