

# Auditors' professional and organizational identities and commercialization in audit firms with emphasis on the moderating role of Machiavellism

Mehdi Akbari, Razieh Alikhani\*, Mehdi Maranjory, Yosef Taghipourian

*Department of Accounting, Chalous Branch, Islamic Azad University, Chalous, Iran*

*(Communicated by Farshid Khojasteh)*

---

## Abstract

The aim of this study was to investigate the professional and organizational identity of auditors and commercialization in auditing firms with an emphasis on the moderating role of Machiavellianism. In order to achieve the research goal, about 384 questionnaires were distributed and collected among the auditors of auditing firms in Iran as a statistical sample. The data collected by the questionnaires were analyzed by SPSS24 and Smart PLS3 software using structural equation modeling. The results of the analysis of research hypotheses using structural equation modeling at a 99% confidence level showed that the professional identity and organizational identity of auditors have a positive and significant effect on the market orientation of auditing firms. The professional identity and organizational identity of auditors have a positive and significant effect on the customer orientation of auditing firms. The professional identity and organizational identity of auditors have a positive and significant effect on the direction of the processes of auditing firms. Machiavellianism has a positive and significant effect on the relationship between the professional identity of auditors and the market orientation, customer and processes of auditing firms. Machiavellianism has a positive and significant effect on the relationship between auditors' organizational identity and market orientation, customer and auditing firm processes. Based on the obtained results, it can be stated that commercialization in auditing firms is influenced by the professional and organizational identity of auditors, and in the meantime, Machiavellian behavior of auditors can also moderate the effects. Therefore, auditing firms can implement effective commercialization systems by controlling the professional identity and organizational identity of auditors.

Keywords: commercialization, Machiavellism, auditors professional identity, auditors organizational identity  
2020 MSC: 91G15, 90B60

---

## 1 Introduction

After the financial scandals of Enron and WorldCom companies, which attracted global attention, the belief in the independence of auditors was increasingly questioned. In the United States of America, the Sarbanes-Oxley Act of 2002 was approved to respond to the deficiencies in the auditing profession. The main focus of the Sarbanes-Oxley Act is to limit financial influences in the communication between auditors and employers in order to improve and

---

\*Corresponding author

*Email addresses:* Mehdi-674@yahoo.com (Mehdi Akbari), Alikhani-r2@yahoo.com (Razieh Alikhani), Mr.maranjory@gmail.com (Mehdi Maranjory), ytaghipouryan@gmail.com (Yosef Taghipourian)

promote independence. was, a case that has been of great interest in accounting research[27, 28]. The auditor is employed by the employer but has a professional duty to protect the interests of the users; The interests of users and employers are in conflict with each other. Entrepreneurs tend to prepare financial statements in a way that shows that company as an attractive investment, and this information asymmetry between the entrepreneur and investors can provide the personal interests of the entrepreneur and his company. However, the theory of social identity states that auditors' familiarity with the employer as well as their knowledge of the profession play an effective role in the auditor's independence. The literature on social identity, professional and decision-making in accounting states that dissimilar judgments may be due to the different preferences and motivations of members, sample selections that are created due to the different professional roles that individuals adopt. The dimensions and components of auditors' professional identity can help the auditing profession not to give in to the employer's demands and not to make the auditor's judgment biased [6]. Examining the interaction between audit institutions and the employer's company indicates a change in the role of professional identity in relation to the commercialization of audit institutions. The positive relationship between professional identity and commercialism has led to the emergence of a new phenomenon called organizational professionalization [10].

The users of accounting information need the services of independent and qualified experts to validate and assure the accounting information, so that the desired information is believable by the users. The need for the services of independent auditors is hidden in this argument, and the existence philosophy of independent auditors is to give a professional opinion on the validity of information and fulfill the task of accreditation. Therefore, the auditing profession has a special position and importance, and gaining public trust in the accounting profession in a society requires that the information provided by professional accountants is reliable and of the highest quality. Auditors are required to formulate and implement their audit plans in the framework of audit standards, which are known as the quality assessment index of auditors, for commenting and crediting. Also, auditors are required to observe professional ethics and professional behaviors in the performance of their duties, because performing unprofessional behaviors reduces the quality of auditing, destroys public trust in the accounting and auditing profession, and harms the dignity of the entire profession [5].

The commitment of employees to the organization and their profession is among the things that have been taken into consideration in many researches, and if it is paid attention to, it can create beneficial organizational consequences, great desire and effort in line with the goals of the organization and the desire to remain in the organization. On the other hand, professional commitment, which shows a person's sense of identity and dependence towards a job, has a tremendous and significant effect on increasing the quality and efficiency of a person in performing professional duties; Therefore, these two factors, i.e., organizational commitment and professional commitment, together, are able to increase productivity in the organization. Considering the existence of the historical fact that the financial reports of commercial institutions and companies are influenced by the goals of different people, i.e. owners, managers and users, the necessity of having people who are able to determine the accuracy and desirability of financial information is felt; Therefore, the existence of independent auditors in the light of this need is quite clear; That is, competent people and professional behavior who can determine the financial information that is relied on, presents a favorable image. The principles of professional behavior and professional care, such as independence, competence, confidentiality and integrity, along with compliance with operational and reporting standards, whose compliance shows the commitment of individuals to the audit profession, along with organizational commitment and its related elements, such as how everyone works. audit team members and auditors' organizational absence, which can ultimately be a form of the auditor's job commitment, is a determining factor in separating efficient from ineffective audit behavior, and this, along with the auditor's sense of belonging and dependence on his profession, creates a sense of identity and follows it to creates responsibility in him, which is effective in the quality of his work [36].

Professional identity is the measure that a professional employee experiences a sense of integration with the profession and has a commitment to accept the requirements of professional independence and ethical values of the profession [22]. Organizational identity shows the shared identity experienced by a person with an organization to a significant extent, in which the person experiences the failure or success of the organization as a part of his own failure or success [35]. In addition, organizational identity means that members of an organization automatically or instinctively make the best decisions based on the interests of the organization and what the organization wants [33].

Mention of business orientation in relation to the audit industry has been increasingly negative. For this reason, before the Enron scandal, researchers claimed that auditing is not compatible with business activities, because audit professionals, who are experts in their field, naturally focus on developing business activities instead of performing their professional duties. Researchers have also claimed that an active role in marketing and customer acquisition can be considered unethical [7]. Some researchers warn that the increasing commercial orientation of audit firms towards non-audit activities may lead to an increasing orientation towards financial gain. They believe that this can

affect the independence of auditors towards their clients. The Enron scandal reinforced the idea that any kind of commercialization in the audit industry is problematic [10].

Surviving in the competitive market, retaining and attracting new clients is critical for audit firms; Therefore, the customer-oriented culture, which is one of the concepts of marketing, is also used in the auditing profession. Also, the motivation to earn more money and compete in the audit market may strengthen the love of money spirit among auditors. On the other hand, the results of past researches have shown that Machiavellianism in the auditing profession leads to the impairment of professional ethics among auditors. These issues may affect the auditor's independence and opinion, as well as the quality of the audit, and as a result, the public's trust in the auditors will decrease [32].

Machiavellianism is a type of personal behavior that can be considered a persuasive behavior to achieve one's goals. People with a high level of Machiavellianism may use aggressive, speculative and deviant behaviors in order to achieve personal and organizational goals and pay little attention to the well-being of the people around them. Machiavellian people do not pay attention to conventional ethics and are generally introduced as immoral people [20]. Business ethics researchers have also considered the concept of Machiavellianism, which means having a cunning, cold, opportunistic and calculating personality, as well as having the least concern for conventional and conventional moral and spiritual standards and the tendency to do unethical and deceptive methods, in ethical decisions[14]. In many researches, it was found that; People with high Machiavellian characteristics are less inclined to ethical standards [51].

People with Machiavellian and opportunistic personalities always pursue their personal interests and compliance with professional ethics is not very important for them [47]. Along with idealism and relativism, Machiavellian tendencies are raised. In general, Machiavellianism (Machiavellianism) is a set of behaviors through which people try to gain from others and circumstances at any cost, beyond what they deserve. A person with Machiavellian tendencies may easily violate the rights of others at the cost of deception, manipulation, and negligence. Such a person uses various methods of deception, persuasion, and even aggression to achieve his personal interests. Machiavellianism is often in conflict with humanistic moral principles. However, because it ideologically covers utilitarian and personal moral principles, it is introduced as a moral ideology in scientific and academic texts [42]. Theoretically, materialistic and Machiavellian people seek their own interests, that is, they seek to achieve personal and selfish goals in the form of wealth and power, and in this way they can easily put pressure on others or harm them [19].

The continued survival of any profession and the employment of its members depends on the type and quality of services they provide, as well as the credibility and confidence they gain as a result of providing these services. This credibility and trust is the main capital of any profession; which is very important to maintain. Auditors are not exempted from this rule and are required to observe ethics and professional behavior in the performance of their organizational and professional duties, because unethical behavior can reduce the quality of auditing, destroy the public's confidence in the auditing and accounting profession, and ultimately destroy the dignity.

The whole profession will be damaged. Based on the "approach to behavior" theory, the type of behavior of a person is determined based on personal beliefs and beliefs, and this behavior is the criterion for evaluating the effectiveness and efficiency of that person. Therefore, the evaluation of a person in applying Machiavellianism can be called the person's approach to that behavior[44].

Audit firms have recently introduced new titles such as knowledge-based organizations, multinational professional service networks and professional service firms as the name of the institution [11]. These names may simply be new forms of branding, and may also indicate a change in the nature of companies and their services. These foundations largely refer to the development of commercialization of titles in the auditing industry. For example, titles such as profitability, productivity, market strategy, customer orientation, corporatization, and business process are labels that are used to describe the development of audit firms in relation to business orientations[3, 7, 39]. Few studies have sought to discover business trends in the auditing industry, which were mainly exploratory or theoretical studies. Based on this, the professional and organizational identity of auditors remained ambiguous in the emerging trends of commercialization in the auditing industry [10]. Machiavellianism as a moral factor can affect the professional and organizational identity of auditors. On the one hand, Machiavellian behaviors with utilitarian practices may help commercialization in audit firms. On the other hand, Machiavelli's personality in auditors may damage the dignity of the profession and make it difficult to attract new clients in the auditing company in line with commercialization. Therefore, based on the ambiguity and the problem in the mentioned materials, this research seeks to answer the question whether the professional and organizational identity of auditors has a significant effect on the dimensions of commercialization in auditing companies due to Machiavellian behavior.

## 2 Theoretical foundations and background of research

Professional identity refers to the concept that a professional employee experiences the feeling of being one with the profession and is committed to accepting the requirements of independence and ethical values of the profession. On the other hand, organizational identity refers to the concept that a person experiences a common identity with an organization, where a person experiences the failures or successes of the organization as his own failures or successes. In addition, organizational identity refers to the fact that the members of an organization automatically or instinctively make the best decision based on the interests of the organization and do what the organization wants. More than a decade ago, Freidson [17] stated that professional identity emphasizes financial profitability related to the needs of stakeholders, and organizational identity (specifically in audit firms) is more driven by financial achievements related to profitability. According to this argument, auditors' professional identity may reduce commercialization, while organizational identity may have a positive relationship with commercialization. Understanding the relationship between auditors' identity and commercialization on the mechanism through which commercialization in the audit industry has evolved due to the changing concept of auditors' professional and organizational identities is important and important [10].

Machiavellianism or opportunism is expressed as one of the psychological characteristics and moral characteristics of people [32]. Psychological hazards are widely recognized as a major challenge in various occupations. A challenge that most organizations can hardly manage and control in practice [26]. The code of professional conduct prohibits Machiavellian behavior. These regulations can create some conflicts and limitations with their inner desire for people with high levels of Machiavellianism, which may affect the professional and organizational identity of auditing [18]. Bandura [4] believes that the person, the environment and the individual's behavior have a mutual effect on each other and draws a picture of human behavior that the framework of Bandura's theory, people with strong beliefs, compared to people who have weak beliefs, try to perform tasks and tasks. And they show more pressure and as a result, their performance in doing the task is more favorable. Behavioral disorders cause the audit process to not have the power to collect sufficient and reliable audit evidence. As a result, the auditor makes wrong decisions in the absence of reliable and sufficient audit evidence, and the quality of the audit decreases [45].

Li [28] in a study entitled Organizational identity, professional identity salience, and internal auditors' evaluations of the intensity of internal control concerns investigated whether increasing the salience of an internal auditor's professional identity, defined by the expectations of their professional group, auditors' judgments. It increases the internal about the intensity of internal control concerns when their organizational identity is high. The results showed that the salience of professional identity moderates the relationship between organizational identity and the assessed severity of identified internal control weaknesses. An increase in the salience of professional identity leads to a more severe assessment of identified internal control weaknesses when organizational identity is high than when it is low.

Hassan et al. [21] in a research entitled the effect of integrated audit management effectiveness on business sustainability in manufacturing companies investigated the effectiveness of integrated audit management and its impact on business sustainability for an emerging economy. This research was conducted with a sample of 104 certified manufacturing companies in Malaysia. The collected data were analyzed using structural equation modeling using partial least squares. The findings have shown that human resource capability, technological capability and quality capability have a strong influence on the importance of the internal audit process, which in turn leads to the effectiveness of integrated audit management in line with the business sustainability result.

Ponomareva et al. [40] in a research entitled commercialization of audit institutions and mental health of auditors investigated how the commercial relationship of audit firms with the mental health of auditors. Research data was obtained from 166 questionnaires among Swedish auditors. Data were analyzed using multiple regression analysis. The results showed that the commercialization of audit institutions can have a positive effect on the mental health of auditors. Broberg et al. [10] in a research titled Professional and organizational identities of auditors and commercialization in audit firms examined how professional and organizational identities of auditors are related to commercialization in audit firms. Based on this, 374 questionnaires were distributed among the members of the professional association of accountants, auditors and audit consultants in Sweden. The findings of the research showed that auditors' organizational identity has a positive relationship with three aspects of commercialization, i.e., market orientation, customer orientation, and company process orientation. Contrary to the arguments based on previous literature, this study has shown that auditors' professional identity is also positively related to commercialization.

Arad et al. [3] in a research entitled Development of commercialization of the auditing profession in Iran: An analysis of the auditors' identity status investigated the effect of potential factors affecting commercialization, which are professional identity and organizational identity, on the commercialization of auditing institutions. The statistical population included chartered accountants working in audit institutions that are members of the Chartered Accoun-

tants Society of Iran in 2018, and the final sample includes 357 auditors. Library and field methods were used to collect research data. In order to measure professional identity from Miles and Snow [35] questionnaire, organizational identity from O'Callaghan et al. [37] questionnaire, and to measure commercialization components, including process-oriented questionnaire from Chen et al. [13], customer-oriented questionnaire from De Franco et al. [15], and the market-oriented questionnaire of Mousavi Shiri et al. [36] has been used. Inferential statistics (structural equation model) and SPSS and Lisrel software were also used in data analysis. The findings show that auditors' professional identity and organizational identity have a positive effect on market-oriented, customer-oriented and process-oriented auditing institutions.

Valian et al. [56] investigated the relationship between professional and organizational identity of auditors and commercialization in auditing firms in a research entitled professional and organizational identity of auditors and commercialization in auditing firms. The research tool is a questionnaire with 25 items based on a Likert scale with grades 1 to 5. The standard questionnaire was revised according to the conditions of the target community and the validity and reliability of the new questionnaire was confirmed. The questioning period was 6 months, which was carried out during the years 2016 to 2017. A sample size of 384 people was selected from the society-auditors working in the audit organization and private sector institutions, members of the society of official accountants of Iran, and statistical analysis was done on 294 received questionnaires. To test the hypotheses of the research, structural equations with the help of software (PLS) were used. The results of the research showed that auditors' professional identity has a negative and significant relationship with three commercialization criteria, including customer orientation, market orientation, and process orientation, while auditors' organizational identity has a positive and significant relationship with these three criteria.

Tabesh et al. [55] in a research entitled "Evaluation of the effect of Holo on the auditor's professional career" examined the auditors working under the supervision of the audit organization in the form of two participation test and control groups. The research tool was a questionnaire that was inspired by Okolie's [38] questionnaire to measure the aura effect and Christie and Geis's [14] questionnaire to measure the professional career. To analyze the test of research hypotheses, multivariate MANOVA tests, repeated measures variance analysis, and post hoc tests were used to compare time. The results of the research in the form of the first hypothesis 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.

Mashhad Qaraqiyyeh et al. [32] in a research entitled Machiavellianism, money worship, customer-oriented culture and the purchase of audit opinion by the employer to investigate the effect of money worship, customer-oriented culture on Machiavellianism and then the effect of all these variables on the purchase of audit opinion from They paid to the employer. In this research, the theoretical foundations of the research were collected through library studies and research data through questionnaires. The research hypothesis was investigated based on the path analysis method and through the multivariate regression test. The statistical sample of this research includes 120 auditors working in private audit institutions, members of the public accountants community. The results of the research showed that the purchase of an audit opinion by the employer is influenced by the characteristics of Machiavellianism and the customer-oriented culture of auditors. Machiavellianism is also influenced by money worship and customer oriented culture. Finally, money worship has a significant and positive effect on customer-oriented culture and Machiavellianism.

### 3 Comparability of the financial statement in the audit

To measure it in the present research, for each company-year observation, the criterion provided by De Franco et al. [15] has been used. It should be noted that from this criterion in the research; Sohn [52] and Mehrovarz and Marfoo [34] have been used. The measurement method is as follows: First, for each company-year observation, the following model is estimated:

$$Earnings_{it} = \alpha_i + \beta_i Return_{it} + \epsilon_{it} \quad (3.1)$$

which in this model:

Earnings: quarterly net profit adjusted by the market value of equity at the beginning of the period

Return: Quarterly stock returns

The estimated coefficients  $\alpha_i$  and  $\beta_i$  show the accounting function of company  $i$ . The closeness of accounting functions between two companies shows the comparability between these two companies. Now, to measure the distance between the estimated accounting functions of companies  $i$  and  $j$  (for every possible combination of companies  $i$  and  $j$

in the relevant industry), the predicted profits of the two companies are estimated using the following models:

$$E(Earnings)_{iit} = \alpha_i + \beta_i Return_{it} \quad (3.2)$$

$$E(Earnings)_{ijt} = \alpha_j + \beta_j Return_{jt} \quad (3.3)$$

$Earnings_{iit}$ : the expected profit of the company according to the function of company i and the return of company i

$Earnings_{ijt}$ : the expected profit of the company according to the function of company j and the return of company j

Then the comparability of financial statements between two companies i and j is calculated using the following model:

$$CompAcct_{ijt} = E(Earnings_{ijt}) - E(Earnings_{iit}) \quad (3.4)$$

$CompAcct_{ijt}$ : the ability to compare financial statements between two companies i and j, and its higher value indicates greater comparability.

The dependent variable in this research is the profit reaction coefficient, which in most similar studies such as Malek and Saidin [30], Okolie [38], Zakaria et al. (ERC) have used the following formula:

$$AR_{it} = \alpha_0 + \alpha_1 UE_{it} + \epsilon \quad (3.5)$$

AR: abnormal return of company i per year

UE: Unexpected profit of company i in the year:

The variables used in the above model are calculated as follows:

Abnormal stock return: Abnormal return of each share means the difference between the actual return and the expected return of that share. Usually, different models are used to calculate the expected return of stocks. In this research, the adjusted return model of the market has been used according to the similar backgrounds mentioned above. According to this model, it is assumed that the expected return of the market is the same for all securities and the return of each security is similar to the market return.

$$ER_{it} = ERm \quad (3.6)$$

Thus, the abnormal return will be as follows:

$$AR_{it} = R_{it} - Rm \quad (3.7)$$

The market return is calculated as follows:

$$\begin{aligned} I_1 &: \text{Total stock market price index at the beginning of the year} \\ I_0 &: \text{Total stock market price index at the end of the year} \end{aligned} \quad (3.8)$$

The actual yield for each share is also calculated as follows:

So that:

$$\begin{aligned} R_i &: \text{return of share i in year t} \\ P_1 &: \text{Price per share at the end of year t} \\ D &: \text{cash profit per share} \\ P_0 &: \text{share price at the beginning of year t} \\ \alpha &: \text{capital increase percentage} \end{aligned} \quad (3.9)$$

Audit size with financial expertise and audit committee independence

$$\begin{aligned} LNAFEE_{it} &= \beta_0 + \beta_1 ACEXP_{it} + \beta_2 ACIND_{it} + \beta_3 ACSIZE_{it} + \beta_4 LNTA_{it} \\ &+ \beta_5 LEVERAGE_{it} + \beta_6 RECINV_{it} + \beta_7 OPINION_{it} \\ &+ \beta_8 SIZE - FA_{it} + \beta_9 BDIND_{it} + \beta_{10} BDMEET_{it} + \epsilon_{it} \end{aligned}$$



Financial expertise and audit fees

$$LNAFEE_{it} = \beta_0 + \beta_1 ACEXP_{it} + \beta_2 LNTA_{it} + \beta_3 LEVERAGE_{it} + \beta_4 RECINV_{it} \\ + \beta_5 OPINION_{it} + \beta_6 SIZE_{FA_{it}} + \beta_7 BDIND_{it} + \beta_8 BDMEET_{it} + \epsilon_{it}$$

Independence of the audit committee and audit fees

$$LNAFEE_{it} = \beta_0 + \beta_1 ACIND_{it} + \beta_2 LNTA_{it} + \beta_3 LEVERAGE_{it} + \beta_4 RECINV_{it} \\ + \beta_5 OPINION_{it} + \beta_6 SIZE_{FA_{it}} + \beta_7 BDIND_{it} + \beta_8 BDMEET_{it} + \epsilon_{it}$$

Audit size and audit fee

$$LNAFEE_{it} = \beta_0 + \beta_1 ACSIZE_{it} + \beta_2 LNTA_{it} + \beta_3 LEVERAGE_{it} + \beta_4 RECINV_{it} \\ + \beta_5 OPINION_{it} + \beta_6 SIZE_{FA_{it}} + \beta_7 BDIND_{it} + \beta_8 BDMEET_{it} + \epsilon_{it}$$

The audit fee (LNAFEE) is equal to the natural logarithm of the audit fee [1, 13, 46, 59].

The financial expertise of the audit committee (ACEXP) is equal to the percentage of members with financial expertise in the audit committee [16, 59]. According to paragraph six of article 1 of the committee's charter, auditing members' financial expertise, a university degree or a domestic or internationally recognized professional degree in financial affairs, accounting, auditing, financial management, economics, other management disciplines with a financial or economic orientation, along with the ability to analyze statements and Financial reports and internal controls governing financial reporting are defined [53].

The independence of the audit committee (ACIND) is equal to the percentage of independent members in the audit committee [16]. Based on paragraph one of article 1 of the charter of the audit committee, an independent member is a member who does not have any direct or indirect relationship or interest that affects decision making. His independence is effective, causes him to favor the interests of a particular individual or group of shareholders or other stakeholders, or causes non-compliance with the same interests of shareholders, it is defined [53].

The size of the audit committee (ACSIZE) is equal to the number of members present in the audit committee [16, 59]. the audit committee according to paragraph 1 of article 5 of the charter of the committee consists of three to five members with the selection and appointment of the board of directors [53] 4- The basics of developing research hypotheses

Market orientation is at the strategic levels of a company and describes how a company deals with the market. Marketing researchers believe that market orientation is usually a combination of a market-oriented strategy and a market-driven strategy [26]. Combining and pursuing both strategies is considered a way to achieve optimal performance. A market-driven strategy involves market needs and customer expectations, while a market-oriented strategy involves developing a wide range of products or services and specifying them. To implement both stated strategies, audit firms and auditors must be commercially aware and engage in marketing activities [9, 24]. Market orientation in the auditing profession is not a new issue. It has been known for a long time that the audit profession must continuously change its relationship with external partners and clients. When more professional activities are performed, auditors place more emphasis on the interests of the audit firm, but when activities are performed in relation to the public interest (i.e., auditing), auditors must be concerned with both the auditing profession and the audit. Therefore, it can be assumed that when auditors have to perform business and market activities, they have a stronger organizational identity and experience more conflict between the profession and the organization [10]. Based on the stated principles, the following hypotheses are proposed:

Market orientation is at the strategic levels of a company and describes how a company deals with the market. Marketing researchers believe that market orientation is usually a combination of a market-oriented strategy and a market-driven strategy [9]. Combining and pursuing both strategies is considered a way to achieve optimal performance. A market-driven strategy involves market needs and customer expectations, while a market-oriented strategy involves developing a wide range of products or services and specifying them. To implement both stated strategies, audit firms and auditors must be commercially aware and engage in marketing activities [9, 24]. Market orientation in the auditing profession is not a new issue. It has been known for a long time that the audit profession must continuously change its relationship with external partners and clients. When more professional activities are performed, auditors place more emphasis on the interests of the audit firm, but when activities are performed in relation to the public interest (i.e., auditing), auditors must be concerned with both the auditing profession and the audit. Therefore, it can be assumed that when auditors have to perform business and market activities, they have a stronger organizational

identity and experience more conflict between the profession and the organization [10]. Based on the stated principles, the following hypotheses are proposed:

1. The professional identity of auditors has a significant effect on the market orientation of auditing institutions.
2. The organizational identity of auditors has a significant effect on the market orientation of audit institutions.

It is claimed that to be successful in accounting, the accountant must pay the price of competition and informed business in favor of the client. Most of the auditors' emphasis is on creating and maintaining a close or even intimate relationship of the auditor to meet the audit needs of the clients and their activities [12, 37]. Such activities are often seen as aspects of customer orientation. Sweeney and McGarry [54] claim that auditors' involvement in such activities tends to make them more commercial and therefore more professional. Auditors face great pressure from audit firms and employers to retain new audit work and clients [9]. It is argued that customer orientation is an important strategic issue for firms and is often a fundamental and important factor that leads to competitive advantage. When independence is discussed, the attitude and actions of auditors can, on the one hand, result from calculated and conscious actions, and on the other hand, be based on professional values and logic emphasized in auditors' firms [12]. Since commercialization seems to be the preferred logic in accounting companies, it is argued that auditors with a stronger organizational identity and as a result stronger participation in the company and its goals, are more involved in and respond to customer-oriented activities [10]. Based on the stated principles, the following hypotheses are proposed:

3. The professional identity of auditors has a significant effect on the client orientation of audit institutions.
4. The organizational identity of auditors has a significant effect on the customer orientation of audit institutions.

Process orientation shows the process of socialization as well as the efficiency and effectiveness of business processes in a company [8, 9]. Even if business can be seen as opposed to serving the public interest, it is argued that auditing has always been a profession that has commercial aspects and provides services to clients. Managing audit more as a business activity can lead companies to use a more structured and prescribed audit approach, often classified as "structured" [2]. A structured audit approach is based on guidelines, checklists, guidelines, prescribed processes and computer-based support [9]. Broberg et al. [9] found that structure is an important part of auditors' work and the concept of "solidification" is used to define audit processes and to a large extent the audit system of firms. This reinforcement requires a belief that auditors who follow the company's process are of high quality. In line with the aforementioned content, it is argued that auditors with a stronger professional identity that emphasize professional opinions and independence are less responsive to the direction of the audit processes [10]. Based on the stated principles, the following hypotheses are proposed:

5. The professional identity of auditing has a significant effect on the orientation of auditing institutions' processes.
6. The organizational identity of the auditors has a significant effect on the orientation of the audit institutes' processes.

Auditors play a vital and important role in today's global business. They are the key providers of financial information to investors, lenders and other stakeholders of the company. They are expected to provide reliable and truthful information and also behave responsibly while performing their professional duties. On the other hand, financial scandals in recent reports show that, like other professions, auditors can also face ethical dilemmas and unethical behavior that can lead to reputational loss for some auditors as well as serious professional damage [37]. Hirani et al. [23] showed that auditors' overconfidence as well as their Machiavellian personality affect professional judgment. Also, professional judgment has an effect on the conflict between the auditor and management, and excessive trust has a significant effect on it, and professional judgment plays a moderating role in the effect of excessive trust and Machiavellian personality on the conflict between the auditor and management [6]. Machiavelli's researches have been carried out in fields other than psychology. Of course, in the field of accounting, Machiavelli has been studied much less. A research in Canada has studied the Machiavelli rate among Canadian accountants and auditors. The results of this study state that there is no significant difference between Machiavelli in the partners of the auditing firm and the managers of those firms. However, considering the evidence, Machiavelli is significantly lower in audit firm partners compared to chief auditors [50]. The principles of professional conduct in the accounting profession influence the performance of professional services provided by its members, and non-implementation of these rules and principles will result in disciplinary measures; Therefore, the profession of accounting and auditing, like other professions, must follow certain behavioral principles; But success in the profession may depend on the personality characteristics of



individuals that facilitate following and obeying the principles of professional behavior [57]. Personality traits may lead to individual success or failure in the workplace, depending on the suitability of individual traits and the behavioral requirements of each person's job. Machiavelli is a part of an individual's personality that is related to choosing a job and profession, and it is the approach of people in their career orientation and interaction with their colleagues [25].

Explosive and unexpected change in the auditing industry has begun since the Enron management scandals in 2000. In these scandals, Enron managers were questioned more than their auditors. The public, the media, and researchers alike stated that Arthur Andersen's (Enron's auditor) focus on financial gain, in line with the orientation of its partners toward wealth accumulation, was a major reason for the Enron scandals. Since then, there has been no negative reference to business orientation in relation to the audit industry. Even before the Enron scandals, scholars argued that auditing and commercialization were incompatible. Audit professionals are naturally inclined to perform their professional duties instead of focusing on business development activities [9]. Market orientation is one of the company's strategies and determines how a company enters the market. Market researchers have argued that market orientation is often a combination of a market-based strategy and a market-oriented strategy. Combining and pursuing both strategies is to obtain superior performance [24].

To implement both strategies, audit firms and auditors must be commercially aware. It can be said that when audit firms perform commercial and marketing activities, auditors with a stronger organizational identity do not experience conflict between the profession and the organization as much as auditors with a stronger professional identity. Following this argument, it is stated that auditors with a stronger professional identity are more concerned with aspects such as autonomy, independence, professional judgment, public interest activities [10].

It shows the orientation of the socialization process of the company as well as the efficiency and effectiveness of business processes in a company. These aspects are discussed in the audit literature for audit firms and auditors in terms of economic and financial benefits, costs, time efficiency and effectiveness [8]. Even if business is seen as conflicting with serving the public interest, it has been argued that auditing always includes business and client service aspects. Managing audit more as a business activity can lead companies to use a more regular and predetermined audit approach, often classified as a structured approach. For example, a large structure can facilitate cost control and control the audit process. Therefore, this indicates increased competition and enhanced commercialization of the audit profession. A structured audit approach focuses on instructions, checklists, guidelines, established procedures, and computer support. Structure is often in conflict with judgment, and the auditor's judgment is considered as a determining factor of audit quality and a manifestation of the auditor's independence. Decreasing judgment is against the professional identity of auditors, which affects the orientation process in the company.

Behavioral differences in the audit process affect the performance of auditors from collecting information to sending opinions about that information. This issue reduces the effectiveness of the audit. Studies have shown that the behavioral characteristic of Machiavellianism in auditors and accountants has a negative impact on their judgment and professional behavior. Among these researches is Shafer and Lucianetti's [48] research. They investigated the relationship between auditors' opportunistic Machiavellianism in dealing with profit management and found that Machiavellianism in auditors is associated with them in dealing with professional indifference and doubt [39]. The pressure in the field of attracting new customers as well as customer retention in the competitive structure of the market has made auditors to use market penetration tools. This has caused the principle of independence and professional ethics in audit services to be questioned and in some cases audit independence has decreased. In order to show that they maintain their independence in competitive conditions, auditors try to engage in deceptive behavior in the market, the most common of which is pricing audit services at a lower rate than reality [43]. Many audit institutions use the policy of low pricing of services as a tool to influence the market. Therefore, it is necessary to examine the motivation and honesty of audit institutions. Considering that the code of professional conduct has prohibited auditors from advertising and marketing their services, but there is evidence that audit firms follow some deceptive marketing practices. Based on this, the researchers believe that Machiavelli's behavior in order to achieve a greater share in the audit services market and to maximize his benefits, can be the source of ethical crises. Since auditors cannot market their services in the environmental conditions and due to privatization the number of audit institutions and as a result the competition in the audit service market is increasing, the possibility of non-compliance with ethical standards and ethical orientation and in The result of stimulating Machiavellian behaviors and activities seems probable [31]. Based on the stated principles, the following hypotheses are proposed:

7. Machiavellianism has a significant effect on the relationship between the professional identity of auditors and the market orientation of audit institutions.

8. Machiavellianism has a significant effect on the relationship between the organizational identity of auditors and the market orientation of audit institutions.

9. Machiavellianism has a significant effect on the relationship between the professional identity of auditors and the client orientation of audit institutions.

10. Machiavellianism has a significant effect on the relationship between the organizational identity of auditors and the client orientation of audit institutions.

11. Machiavellianism has a significant effect on the relationship between the professional identity of auditors and the orientation of audit institutions' processes.

12. Machiavellianism has a significant effect on the relationship between the organizational identity of auditors and the orientation of the processes of auditing institutions.

#### 4 Conceptual model of research

Based on the research literature and research of Broberg et al. [10], the conceptual model was designed as Figure 1:

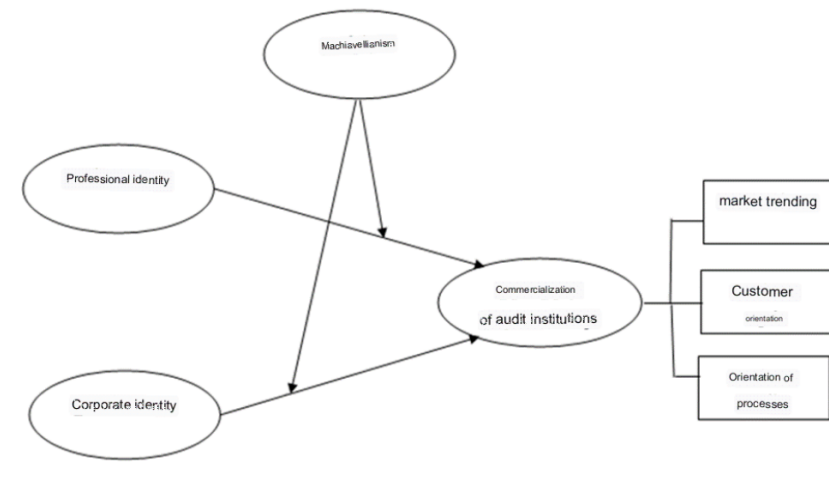


Figure 1: conceptual model of research

#### 5 Research methodology

The current research is an applied research and due to the use of a questionnaire to collect information, it is classified as a survey descriptive research. Also, the current research is based on the purpose of an applied research and according to the method, it is of the correlation type. In this research, the collection of information related to the theoretical foundations and background of the research is done using the library method. Also, the collection of information related to the research variables to analyze the hypotheses is done using a questionnaire under the survey method.

The statistical population of this research is all independent auditors in auditing companies in Iran. Since the size of the statistical population is unlimited and scattered, it is not possible to collect information from all the people of the statistical population, and as a result, a sample of the statistical population will be selected. The sample group is a small set of the statistical population including some members who are selected from 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, by studying which the researcher is able to generalize the result to the entire statistical population. The statistical population of the current research is unclear, the number of the statistical sample of the research was about 384 people using Morgan's table. For more certainty, 400 questionnaires were distributed, of which 384 questionnaires were completely filled and 16 questionnaires were incomplete, so the questionnaire return rate is:

$$\text{Return rate questionnaire} = 384/400 = 0.96$$

The questionnaire, which is used for data collection, was distributed among the respondents in the form of e-mail and message in virtual groups, and it consists of two parts, the first part is related to the personal characteristics of the respondent. In the second part, questions related to research variables have been raised, which include questions as described in Table 1:

Table 1: Questionnaire items

Row	Variable in equation	Number of questions in the questionnaire	Number of questions in the questionnaire	Source
1	Professional identity	4	1-4	[10]
2	The identity of the organization	4	5-8	[10]
3	The first mock of Sam	10	9-18	[48]
4	Market direction	6	19-24	[10]
5	Customer orientation	5	25-29	[10]
6	Process orientation	6	30-35	[10]

In order to calculate the reliability of the questionnaire in this research, Cronbach's alpha coefficient and combined reliability (CR) were used, which is shown in Table 2.

Table 2: Reliability coefficients of the questionnaire

Factor	Cronbach's alpha	Composite reliability
Corporate identity	0.74	0.84
Professional identity	0.72	0.81
Machiavellianism	0.84	0.88
Market trending	0.82	0.87
Customer orientation	0.81	0.87
Orientation of process	0.85	0.89

According to the values of Cronbach's alpha, the combined reliability reported in table 2 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 alpha Cronbach and in terms of composite reliability) is suitable.

To check the validity of the questionnaire, two criteria of convergent validity and divergent validity have been used. The results of convergent validity (AVE) are in Table 3.

Table 3: Convergent validity index (AVE) coefficients of each variable

Factor	AVE
Corporate identity	0.56
Professional identity	0.52
Machiavellianism	0.59
Market trending	0.53
Customer orientation	0.57
Orientation of process	0.57

Table 3 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. The results of this measure are shown in Table 4.

Based on the results obtained from the correlations and the square root of AVE, which is placed on the diameter of table 4, the validity of the model variance at the structural level can be confirmed in terms of the Fronel and Locker criteria.

## 6 Data analysis

In this part of the research, descriptive statistics and inferential statistics methods have been used to analyze the information extracted from the questionnaire. In fact, first, using SPSS software, each variable is described in the

Table 4: Divergent validity

	Environmental organiza- tional identity	Commercial industrial professional	Machiavellianism	Market trending	Customer orientation	Orientation of process
Corporate identity	0.75					
Professional identity	0.64	0.72				
Machiavellianism	0.54	0.63	0.77			
Market trending	0.46	0.50	0.39	0.73		
Customer orientation	0.72	0.41	0.60	0.47	0.75	
Orientation of process	0.67	0.54	0.45	0.52	0.64	0.75

form of tables and statistical indicators, and then for data analysis, hypothesis testing, and in general to generalize the results from the sample to the statistical population using the structural equation modeling method. It was used by Smart PLS software. In this section, the descriptive statistics of the main research variables were analyzed. Table 5 shows the descriptive statistics of the variables used in the research.

Table 5: Descriptive statistics

Component	Average	Standard deviation
Corporate identity	3.62	0.55
Professional identity	3.62	0.64
Machiavellianism	4.16	0.46
Market trending	3.99	0.52
Customer orientation	3.74	0.53
Orientation of process	3.73	0.39

In Table 5, 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; Machiavellianism factor has the highest average (4.16) and professional identity has the lowest average (3.62). The first and most basic criterion for measuring the relationship between structures in the model (structural part) is the significant numbers of T-values. If the value of these numbers exceeds 1.96, it indicates the correctness of the relationship between the constructs and as a result, the research hypotheses are confirmed at the 95% confidence level. In the figure below, the model related to T-values is presented.

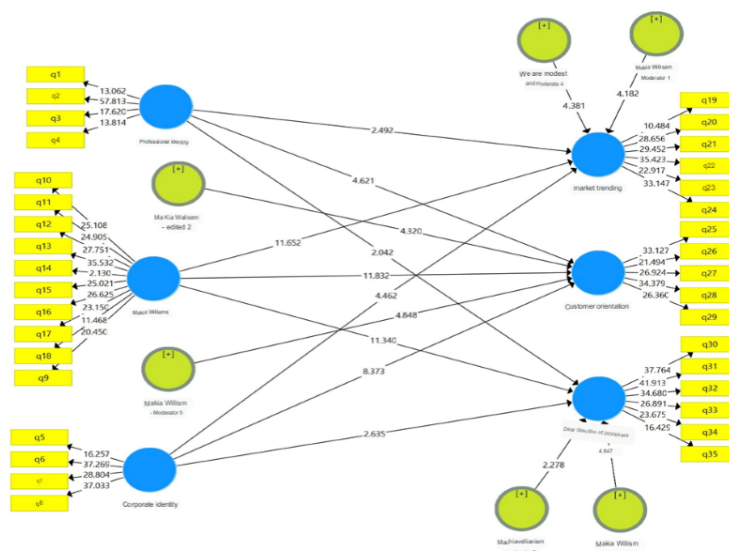


Figure 2: The significance coefficient (T-values) of the relationships of each of the main factors with each other

Next, the results of the path coefficients and the significance level of the main hypotheses in the main research model are shown in Figure 3.

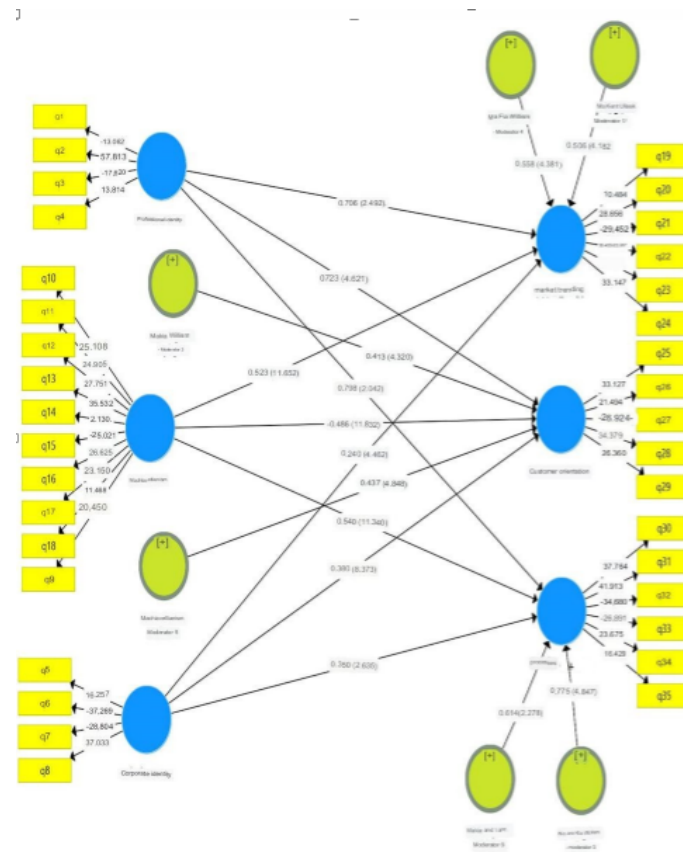


Figure 3: The results of path coefficients and significance level of the main hypotheses of the research model

Table 6: the results of the path coefficients and the significance level of the main hypotheses of the research model

The relationship of each factor with each other	Path coefficient	T-value	P-value
Professional identity → Market orientation	0.70	2.49	0.001
Professional identity → Customer orientation	0.72	4.62	0.001
Professional identity → Process orientation	0.80	2.04	0.001
Organizational identity → Market orientation	0.24	4.46	0.001
Organizational identity → Customer orientation	0.38	8.37	0.001
Organizational identity → Process orientation	0.35	2.63	0.001
Professional identity → Machiavellianism → Market orientation	0.50	4.18	0.001
Professional identity → Machiavellianism → Customer orientation	0.41	4.32	0.001
Professional identity → Machiavellianism → Process orientation	0.77	4.85	0.001
Organizational identity → Machiavellianism → Market orientation	0.56	4.38	0.001
Organizational identity → Machiavellianism → Customer orientation	0.44	4.85	0.001
Organizational identity → Machiavellianism → Process orientation	0.61	2.28	0.001

The first hypothesis: based on the results listed in table 6, the impact of auditors' professional identity on the market orientation of audit institutions is equal to 0.70 positive and its significance (0.001) is less than one percent. Therefore, the professional identity of auditors has a positive and significant effect on the market orientation of audit institutions. Therefore, at the confidence level of 99%, the first research hypothesis that the professional identity of auditors has a significant effect on the market orientation of audit institutions is accepted.

Second hypothesis: based on the results listed in table 6, the impact of auditors' organizational identity on the market orientation of audit firms is equal to 0.24 positive and its significance (0.001) is less than one hundredth. Therefore, the organizational identity of auditors has a positive and significant effect on the market orientation of audit institutions. Therefore, at the confidence level of 99%, the second hypothesis of the research, that the organizational identity of auditors has a significant effect on the market orientation of audit institutions, is accepted.



The third hypothesis: based on the results listed in table 6, the impact of the professional identity of auditors on the customer orientation of audit institutions is equal to 0.72 positive and its significance (0.001) is less than one hundredth. Therefore, the professional identity of auditors has a positive and significant effect on the customer orientation of audit institutions. Therefore, at the confidence level of 99%, the third hypothesis of the research that the professional identity of auditors has a significant effect on the customer orientation of audit institutions is accepted.

The fourth hypothesis: based on the results listed in table 6, the impact of auditors' organizational identity on the customer orientation of auditing firms is equal to 0.38 positive and its significance (0.001) is less than one hundredth. Therefore, the organizational identity of auditors has a positive and significant effect on the customer orientation of audit institutions. Therefore, at the confidence level of 99%, the fourth hypothesis of the research, that the organizational identity of auditors has a significant effect on the customer orientation of audit institutions, is accepted.

The fifth hypothesis: based on the results listed in table 6, the impact of the professional identity of auditors on the orientation of audit institutes' processes is equal to 0.80 positive and its significance (0.001) is less than one hundredth. Therefore, the professional identity of auditors has a positive and significant effect on the orientation of audit institutions' processes. Therefore, at the confidence level of 99%, the fifth hypothesis of the research, that the professional identity of auditing has a significant effect on the orientation of the processes of auditing institutions, is accepted.

Sixth hypothesis: based on the results listed in table 6, the impact of the organizational identity of auditors on the orientation of the audit institutes' processes is equal to 0.35 positive and its significance (0.001) is less than one percent. Therefore, the organizational identity of auditors has a positive and significant effect on the orientation of audit institutions' processes. Therefore, at the confidence level of 99%, the sixth hypothesis of the research that the organizational identity of auditors has a significant effect on the orientation of the processes of auditing institutions is accepted.

The seventh hypothesis: based on the results listed in table 6, the impact of the variable of professional identity with the moderating role of Machiavellianism on the market orientation of audit institutions is equal to 0.50 positive and its significance (0.001) is less than one percent. Therefore, Machiavellianism has a positive and significant effect on the relationship between the professional identity of auditors and the market orientation of audit institutions. Therefore, at the confidence level of 99%, the seventh research hypothesis that Machiavellianism has a significant effect on the relationship between the professional identity of auditors and the market orientation of audit institutions is accepted.

The eighth hypothesis: based on the results listed in table 6, the impact of the variable of organizational identity with the moderating role of Machiavellianism on the market orientation of auditing firms is equal to 0.56 positive and its significance (0.001) is less than one percent. Therefore, Machiavellianism has a positive and significant effect on the relationship between the organizational identity of auditors and the market orientation of audit institutions. Therefore, at the confidence level of 99%, the eighth research hypothesis that Machiavellianism has a significant effect on the relationship between the organizational identity of auditors and the market orientation of audit institutions is accepted.

Ninth hypothesis: Based on the results listed in table 6, the impact of the variable of professional identity with the moderating role of Machiavellianism on the customer orientation of audit institutions is equal to 0.41 positive and its significance (0.001) is less than one percent. Therefore, Machiavellianism has a positive and significant effect on the relationship between the professional identity of auditors and the client orientation of audit institutions. Therefore, at the confidence level of 99%, the ninth research hypothesis that Machiavellianism has a significant effect on the relationship between the professional identity of auditors and the client orientation of audit institutions is accepted.

Tenth hypothesis: Based on the results listed in table 6, the impact of the variable of organizational identity with the moderating role of Machiavellianism on the customer orientation of auditing firms is equal to 0.44 positive and its significance (0.001) is less than one hundredth. Therefore, Machiavellianism has a positive and significant effect on the relationship between auditors' organizational identity and audit firms' customer orientation. Therefore, at the confidence level of 99%, the tenth hypothesis of the research that Machiavellianism has a significant effect on the relationship between the organizational identity of auditors and the client orientation of audit institutions is accepted.

11th hypothesis: based on the results listed in table 6, the impact of the variable of professional identity with the moderating role of Machiavellianism on the orientation of audit institutes' processes is equal to 0.77 positive and its significance (0.001) is less than one percent. Therefore, Machiavellianism has a positive and significant effect on the relationship between the professional identity of auditors and the orientation of audit institutions' processes. Therefore, at the confidence level of 99%, the 11th hypothesis of the research that Machiavellianism has a significant effect on

the relationship between the professional identity of auditors and the orientation of audit institutions' processes is accepted.

The twelfth hypothesis: based on the results listed in table 6, the impact of the variable of organizational identity with the moderating role of Machiavellianism on the orientation of audit institutes' processes is equal to 0.61 positive and its significance (0.001) is less than one percent. Therefore, Machiavellianism has a positive and significant effect on the relationship between the organizational identity of auditors and the orientation of audit institutions' processes. Therefore, at the confidence level of 99%, the twelfth hypothesis of the research that Machiavellianism has a significant effect on the relationship between the organizational identity of auditors and the orientation of audit institutions' processes is accepted.

## 7 Conclusion

The results of the analysis of research hypotheses using structural equation modeling at the 99% confidence level showed that the professional identity and organizational identity of auditors have a positive and significant effect on the market orientation of audit institutions. The professional identity and organizational identity of auditors have a positive and significant effect on the customer orientation of audit institutions. The professional identity and organizational identity of auditors have a positive and significant effect on the orientation of audit institutions' processes. Machiavellianism has a positive and significant effect on the relationship between auditors' professional identity and market orientation, customer and processes of audit institutions. Machiavellianism has a positive and significant effect on the relationship between the organizational identity of auditors and the orientation of the market, the client and the processes of auditing institutions. Hodges and Young [24] and Broberg et al. [9] state that audit firms and auditors should be commercially aware and participate in marketing activities. Therefore, the professional identity of auditors improves the competitive strategy of the auditing firm. In some ways, this result is in agreement with the research results of Broberg et al. [10], Broberg et al. [9] and Hodges and Young [24]. Rudewicz [44] state that organizational identity is a process that brings the goals of the organization and the goals of the employees closer together. Professional identity also shows a person's commitment to his profession. The two concepts of organizational and professional identity can influence the judgment and decision making of people working in the auditing profession. Broberg et al. [10] state that when auditors have to perform business and market activities, they have a stronger organizational identity and experience more conflict between the profession and the organization. In some ways, this result is in agreement with the research result of Broberg et al. [10]. Sweeney and McGarry [54] state that the intervention of auditors in solving audit needs with clients tends to become more commercial and, as a result, audit firms become more professional. Auditors face a lot of pressure from audit firms and employers to retain new audit work and clients. In some ways, this result is in agreement with the results of Broberg et al. [10] and Sweeney and McGarry [54]. Carrington et al. [12] argued that customer orientation is an important strategic issue for audit firms and is often an important factor leading to competitive advantage. When it comes to independence, the attitude and actions of auditors, on the one hand, can be the result of calculated and conscious actions, and on the other hand, based on the professional values and logic emphasized in the auditors' firms. It seems that commercialization is the desired logic in audit institutions, but it is argued that auditors with a stronger organizational identity and as a result, a stronger participation in the institution and its goals, are more involved in the activity and response to customer-oriented activities. In some ways, this result is in agreement with the research results of Broberg et al. [10] and Carrington et al. [12]. Broberg [9] found that structure is an important part of auditors' work and the concept of "solidification" is used to define audit processes and to a large extent the audit system of firms. This reinforcement requires a belief that auditors who follow the company's process are of high quality. In some ways, this result is in agreement with the research results of Broberg et al. [10] and Broberg [9]. Valian et al. [56] state that by making strategic changes in the functional and competitive areas of audit institutions, the process of commercialization of audit institutions can be successfully completed in a way that helps the commercialization of institutions based on organizational identity criteria. The organizational identity of auditors causes auditors to promote and increase their quality by committing to the processes of their institution. In some ways, this result is in agreement with the research results of Broberg et al. [10] and Valian et al. [56].

The results of the research showed that the professional identity of auditors has a positive and significant effect on the market orientation of auditing institutions, therefore, it is suggested to auditing institutions to hold in-service professional psychology courses for their auditors in order to improve their professional identity, and to improve the strategy of the auditing institution. To gain a competitive advantage based on understanding the current needs of their customers. The results of the research showed that auditors' organizational identity has a positive and significant effect on the market orientation of audit institutions, therefore, it is suggested to the managers of audit institutions by evoking a sense of commitment to the organization by using organizational identity components (such as uniting the goals of the

organization and auditors) in their auditors, needs Provide customers continuously to increase the company's market orientation by gaining their satisfaction. The results of the research showed that the professional identity of auditors has a positive and significant effect on the customer orientation of audit institutions, therefore it is suggested to managers of audit institutions to improve the professional identity of employees by using specialized techniques and by creating a sense of success in the profession for Their auditors direct the company's goals to achieve customer satisfaction. The results of the research showed that the organizational identity of auditors has a positive and significant effect on the customer orientation of auditing institutions, therefore, it is suggested to the managers of auditing institutions with the participation of all employees of the institution in the decisions taken and organizational improvement programs by increasing their interaction with clients as part of the institution and sharing Interact with other auditors to identify client needs to guide the firm's client orientation. The results of the research showed that the audit professional identity has a positive and significant effect on the orientation of audit institutions' processes, therefore, it is suggested to the managers of audit institutions to achieve their specific performance goals in various business processes with the participation of employees with high professional identity in the institution's business processes. find The results of the research show that audit organizational identity has a positive and significant effect on the orientation of the processes of audit institutions, therefore, it is suggested to managers of audit institutions by evoking a sense of commitment to the organization by using the components of organizational identity (such as uniting the goals of the organization and auditors), by increasing the evaluation Different business processes and optimal planning to achieve the desired results in your business strategy. Considering the positive moderating role of Machiavellianism in the relationship between the professional and organizational identity of auditors and commercialization in audit institutions, it is suggested to managers and administrators of audit institutions to use and plan on the Machiavellian behaviors of their hired auditors to achieve their goals. Self-commercialization, such as a favorable performance in gaining a competitive advantage based on understanding the current needs of customers, obtaining opinions and customer satisfaction to increase the quality of their services and business processes. It is suggested that in the future research, the commercialization model in auditing institutions should be presented with emphasis on the role of auditors' professional and organizational identity by using qualitative methods such as thematic analysis and grounded theory. It is suggested that in future researches, auditors' behavioral and personality identity and commercialization in audit institutions should be investigated with emphasis on the moderating role of auditors' religious beliefs. It is suggested to model the factors affecting commercialization among the internal auditors of listed companies in future researches. It is suggested that in the future research, the relationship between the professional and organizational identity of auditors in the marketing capabilities of audit institutions should be investigated.

## References

- [1] L. Abbott, S. Parker, G. Peters, and K. Raghunandan, *The association between audit committee characteristics and audit fees*, *Audit.: J. Practice Theory* **22** (2003), no. 2, 17–31.
- [2] F. Anderson-Gough, C. Grey, and K. Robson. *In the name of the client: the service in two professional services firms*, *Human Rel.* **53** (2000), no. 9, 1151–1173.
- [3] H. Arad, A. Khalatbari Limaki and M. Pourreza Tamijani, *Development of commercialization of the auditing profession in Iran: An analysis of the auditors' identity status*, *J. Audit. Sci.* **21** (2021), no. 84.
- [4] A. Bandura, *Percieved self-efficacy in cognitive development and functioning*, *Eduac. Psycho.* **28** (1993), no. 2, 117–148.
- [5] B. Bani Mahd and A. Nejati, *The relationship between organizational culture and auditors' work commitment*, *Financ. Account. Audit Res.* **8** (2015), no. 30, 119–138.
- [6] F. Barzideh, J.R Babajani, V. Ghorbanzadeh, and A. Abdullahi, *Designing and explaining the identity model in audit judgment*, *Financ. Account. Knowledge* **5** (2017), no. 2, 1–34.
- [7] P. Broberg, *The auditor at work: A study of auditor practice in big 4 audit firms*, PhD dissertation, Lund University, Lund. 2013.
- [8] P. Broberg, T. Tagesson, D. Argento, N. Gyllengahm, and O. Mårtensson, *Explaining the influence of time budget pressure on audit quality in Sweden*, *J. Manag. Govern.* **21** (2017), no. 2, 331–350.
- [9] P. Broberg, T. Umans, and C. Gerlofstig, *Balance between auditing and marketing: an explorative study*, *J. Int. Account. Audit. Tax.* **22** (2013), no. 1, 57–70.

- [10] 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.
- [11] D.M. Brock, *The changing professional organization: a review of competing archetypes*, Int. J. Manage. Rev. **8** (2006), no. 3, 157–174.
- [12] T. Carrington, G. Johed, and P. Öhman, *The organisational context of professionalism in auditing*, Paper Present. Critic. Perspect. Account. Conf., Clearwater, FL., 2011.
- [13] Y.M. Chan, G. Liu, and J. Sun, *Independent audit committee members' board tenure and audit fees*, Account. Finance **53** (2013), 1129–1147.
- [14] R. Christie and F.L. Geis, *Studies in Machiavellianism*, Academic Press, New York, 1970.
- [15] G. De Franco, S.P. Kothari, and R. Verdi, *The benefits of financial statement comparability*, J. Account. Res. **49** (2011), no. 4, 895–931.
- [16] H. Fakhari, J. Mohammadi, and M.H. Nataj-Kordi, *Investigating the effect of audit committee characteristics on profit management*, Empir. Stud. Financ. Account. **12** (2014), no. 46, 123–146.
- [17] E. Freidson, *Professionalism: The third Logic*, University of Chicago Press, Chicago, 2001.
- [18] G. Gemmil and W. Heisler, *Machiavellianism as a factor in managerial job satisfaction, and upward mobility*, Acad. Manage. J. **15** (1972), no. 1, 51–62.
- [19] M. Gol Paror, *The relationship between idealism, relativism, Machiavellianism and cultural values with unethical behaviors (A case study of a government organization)*, Soc. Cultural Stud. **6** (2014), no. 2, 111–134.
- [20] S. Goram and W. Greg, *Ethical performance evaluation (EPE) in Business practices framework and case illustrations*, Eur. Bus. Rev. **19** (2013), no. 5, 420–430.
- [21] N.A. Hassan, S. Zailani, and M.K. Rahman, *Impact of integrated audit management effectiveness on business sustainability in manufacturing firms*, Manag. Res. Rev. **44** (2021), no. 12, 1599–1622.
- [22] D.R. Heckman, K.H. Steensma, G.A. Bigley, and J.F. Hereford, *Effects of organisational and professional identification on the relationship between administrators' social influence and professional employees' adoption of new work behaviour*, J. Appl. Psycho. **94** (2009), no. 5, 1325–1335.
- [23] F. Hirani, H.R. Vakili Fard, B. Bani Mahd, and F. Rahnama Rudpashti, *The influence of social characteristics of auditors on their judgment in resolving conflict between the auditor and the management of selected characteristics: Overconfidence and Machiavellian personality*, Audit. Knowledge **17** (2016), no. 67, 71–98.
- [24] S. Hodges and L. Young, *Unconsciously competent: academia's neglect of marketing success in the professions*, J. Rel. Market. **8** (2009), no. 1, 36–49.
- [25] J. Holland, *Exploration of a theory of vocational choice, part IV. A longitudinal study using a sample of typical college students*, J. Appl. Psycho. **52** (1968), no. 1–2, 1–37.
- [26] A.H. Jespersen, P. Hohnen, and P. Hasle, *Internal audits of psychosocial risks at workplaces with certified OHS management systems*, Safety Sci. **84** (2016), 201–209.
- [27] W.R. Kinney, Z. Palmrose, and S. Schol, *Auditor independence, non-audit services and restatements: Was the U.S. government right?*, J. Account. Res. **42** (2004), no. 3, 561–588.
- [28] C. Li, *Does client importance affect auditor independence at the office level? Empirical evidence from going-concern opinions*, Contemp. Account. Res. **26** (2009), no. 1, 201–230.
- [29] F. Mael and B.E. Ashforth, *Alumni and their alma mater: A partial test of the reformulated model of organizational identification*, J. Organ. Behav. **13** (1992), no. 2, 103–123.
- [30] M. Malek and S.F. Saidin, *Auditor switching and investors' reliance on earnings: Evidence from Bursa Malaysia*, J. Mod. Account. Audit. **10** (2014), no. 7, 777–785.
- [31] M. Maran Jouri, M. Khalkhali, R. Alikhani, and Y. Taghipurian Gilani, *The effect of Machiavellianism on auditors' attitude towards marketing activities with the mediating role of ethical orientation*, Appl. Res. Financ. Report. **10** (2021), no. 2.

- [32] H. Mashhad Qaraqiyeh, B. Bani Mahd, C. Farkhandoost Haghighi, and M. Moradzadeh Fard, *Machiavellianism, money worship, customer oriented culture and buying audit opinion from the employer*, *Managem. Account. Audit. Knowledge* **8** (2018), no. 29, 161–174.
- [33] C. McGarry and B. Sweeney, *Clan type controls in audit firms – audit seniors’ perspective*, *Irish Account. Rev.* **15** (2007), no. 2, 37–59.
- [34] F. Mehrovarz and M. Marfoo, *The relationship between the comparability of financial statements and the awareness of stock prices regarding future profits*, *Financ. Account. Empir. Stud.* **49** (2015), 83–110.
- [35] R.E. Miles and C.C. Snow, *Organizational Strategy Structure and Process*, McGraw-Hill, New York, 1978.
- [36] M. Mousavi Shiri, M. Salehi, and M. Ahmadnejad, *Examining the relationship between professional commitment and organizational commitment of auditors with inefficient audit behavior*, *Account. Audit. Res.* **27** (2014), 1–26.
- [37] S. O’Callaghan, U. Patel, J.P. Walker, R.J. Elson, L. Wood, and D. Wood, *Are auditors influenced by the attire worn by clients? A pilot study*, *J. Finance Account.* **15** (2014).
- [38] A.O. Okolie, *Audit quality and earnings response coefficients of quoted companies in Nigeria*, *J. Appl. Finance Bank.* **4** (2014), no. 2, 139–161.
- [39] C.F. Picard. *The marketization of accountancy*, *Critic. Persp. Account.* **34** (2016), 79–97.
- [40] Y. Ponomareva, T. Uman, P. Broberg, E. Vinberg, and K. Karlsson, *Commercialization of audit firms and auditors’ subjective well-being*, *Meditari Account. Res.* **10** (2020), 218–384.
- [41] V. Radiation, M.R. Abdoli, and H. Yavarpour, *Examining the effect of halo on the auditor’s professional career*, *Account. Audit. Res. Quart.* **45** (2019), 89–112.
- [42] K.A. Richmond, *Ethical reasoning, Machiavellian behavior, and gender: The impact on accounting students’ ethical decision making*, Unpublished Doctoral Dissertation in General Business with a major in Accounting, Virginia, Blacksburg University, 2001.
- [43] R.A. Royai and M. Mohammadi, *Ethics and Professionalism in Accounting*, Second edition, Tehran, Farhang Library, 2013. [In Persian]
- [44] F. Rudewicz, *The Fraud diamond: Use of investigative due diligence to identify the “capability element of Fraud”*, *TMA Connecticut: CTTMA Newsletter* **4** (2011), 1–3.
- [45] Z. Safari, B. Bani Mahd, and Z. Mousavi Kashi, *Machiavellianism and auditor’s individual effectiveness*, *Manage. Account. Audit. Knowledge* **7** (2017), no. 26, 105–120.
- [46] H. Sajjadi, M. Rashidi Baghi, A. Abu Bakri, and M. Shir Alizadeh, *The relationship between audit fees and board of directors’ remuneration*, *Experiment. Account. Res.* **5** (2014), no. 17, 39–58.
- [47] R. Shaaban, B. Bani Mahd, and R.A. Royai, *The effect of social conservatism and Machiavellianism on auditor independence*, *Quart. J. Manage. Account. Audit. Knowledge* **6** (2016), no. 22, 75–86.
- [48] W.E. Shafer and L. Lucianetti, *Machiavellianism, stakeholder orientation, and support for sustainability reporting*, *Bus. Ethics: Eur. Rev.* **27** (2018), no. 3, 272–285.
- [49] W.E. Shafer and Z. Wang, *Effects of ethical context and Machiavellianism on attitudes toward earnings management in China*, *Manage. Audit. J.* **26** (2011), no. 5, 372–392.
- [50] A. Shome and H.V. Rao, *Machiavellianism in public accountants: Some additional Canadian evidence*, *Bus. Ethics: Eur. Rev.* **18** (2009), no. 4.
- [51] A. Singhapakdi, K.L. Kraft, S.J. Vitell, and K.C. Rallapalli, *The perceived importance of ethics and social responsibility on organizational effectiveness: A survey of marketers*, *J. Aca. Market. Sci.* **23** (1995), no. 1, 49–56.
- [52] B.C. Sohn, *The effect of accounting comparability on the accrual-based and real earnings management*, *J. Account. Public Policy* **35** (2016), no. 5.
- [53] Stock Exchange and Securities Organization, *Guidelines for internal controls of publishers accepted in the Tehran Stock Exchange and Iran Foreign Exchange*, Stock Exchange, 2011.
- [54] B. Sweeney and C. McGarry. *Commercial and professional audit goals: inculcation of audit seniors*. *Int. J. Audit.*



- 15** (2011), no. 3, 316–332.
- [55] Z. Tabesh, M.R. Abdoli, and H. Yavarpour, *Evaluation of the effect of Holo on the auditor's professional career*, *Account. Audit. Res.* **45** (2019), 89–112.
- [56] H. Valian, M. Safari Graili, and D. Hasanpour, *Professional and organizational identity of auditors and commercialization in auditing institutions*, *Audit. Knowledge* **20** (2019), no. 78, 356–391.
- [57] R.L. Wakefield, *Accounting and Machiavellianism*, *Behav. Res. Account.* **20** (2008), no. 1, 115–129.
- [58] N.B. Zakaria, A.M. Bin Mohamad, and Z. Rabiatal Alawiyah, *Default risk and the earnings response coefficient. Evidence from Malaysia*, *J. Basic Appl. Sci. Res.* **3** (2013), no. 6, 535–545.
- [59] M. Zaman, H. Mohammed, and H. Roszaini, *Corporate governance quality, audit fees and non-audit services fees*, *J. Bus. Finance Account.* **38** (2011), no. 1–2, 165–197.