

Leadership style, knowledge sharing and audit quality

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Abstract

Purpose – This paper aims to examine how leadership style in audit firms influences audit quality. The paper further explores the mediating role of knowledge sharing in the relationship between leadership style and audit quality.

Design/methodology/approach – The present paper studies the effects of transformational and servant leadership styles on audit quality through knowledge sharing. Data are collected from 396 Iranian external auditors via a questionnaire.

Findings – The results show that both transformational and servant leadership style significantly influence audit quality through knowledge sharing. Moreover, the impact of transformational leadership style is stronger than the impact of servant leadership style.

Originality/value – In audit quality literature, little attention has been devoted to both leadership style and knowledge sharing. This paper develops a parsimonious model which shows how leadership style improves audit quality, and how knowledge sharing strengthens the impact of leadership style on audit quality. The results have important implications particularly for audit industry.

Keywords Transformational leadership, Servant leadership, Knowledge sharing, Audit quality

Paper type Research paper

1. Introduction

Auditing plays an important role as an external corporate governance mechanism, which is directly reflected in audit quality (Xiao *et al.*, 2020). According to Khudhair *et al.* (2019), audit quality generally refers to the services provided by auditors hired by different client companies. Improving audit quality attracts more investors and reflects the audit firm performance. Therefore, stakeholders and investors will have more trust and confidence in audit firms that provide higher audit quality services. In fact, audit quality can be considered as a chain that can have different range; from low audit quality to high audit quality (Khudhair *et al.*, 2019). In this respect, recent literature (e.g. Duh *et al.*, 2020) has acknowledged that knowledge sharing in the organization affects audit quality. The main source of knowledge sharing in an audit firm arises from interpersonal relationships and interactions between auditors (Sergeeva and Andreeva, 2016). Knowledge sharing in the organization involves many cases such as communicating and receiving knowledge from others by examining processes, consulting with peers, co-workers or people with different work experience, doing works in teams, holding brainstorming, training in organization and other informal communication among people (Duh *et al.*, 2020). For this reason, it is clear that



knowledge sharing in organizations exists in many forms and can influence the firm performance and audit quality in different ways.

While knowledge sharing has become increasingly a valuable source of competitive advantage among organizations in the economical era (Yin *et al.*, 2019), the implementation of it often seems very difficult (Ruggles, 1998); since people are often tending to share and talk about their knowledge, particularly in developing countries in which organizations have poor mechanisms for the effective evaluation of organizational personnel. Knowledge management research has recently focused on identifying the vital knowledge sharing antecedents in response to the challenges of knowledge sharing (Berraies and Zine El Abidine, 2019). Particularly, recent research has revealed the substantial roles of leadership style in the implementation of knowledge sharing. For example, Yin *et al.* (2019) studied leadership styles as effective antecedents on knowledge sharing.

Previous research also shows transformational leadership (Le and Lei, 2019; Berraies and Zine El Abidine, 2019) and servant leadership (Tripathi *et al.*, 2020) can facilitate individual learning and knowledge sharing in organizations. Transformational leadership impresses followers thinking and the overall behavior in every organization. Transformational leadership style is an inspirational style, a way to motivate followers and improve their thinking ability (Avolio *et al.*, 2004). Another style of leadership is servant leadership in which leaders originally interested in serving others. In fact, servant leaders concentrate on their followers' growth and well-being. Both transformational and servant leaders are able to influence followers' participation in knowledge development and learning, although there is a difference. Servant leaders usually pay more attention to serve their followers, although transformational leaders utilize their energy to engage the followers in achieving organization's goals (Choudhary *et al.*, 2013).

Therefore, this paper examines whether and how transformational and servant leadership styles affect audit quality through knowledge sharing. For the purposes of this study, we collected data from Iranian external auditors. Our findings show that both transformational and servant leadership styles significantly influence audit quality through knowledge sharing; but the impact of transformational leadership style is stronger than the impact of servant leadership style.

This paper makes contributions to the literature. While recent research has studied the relationship between some leadership styles and service quality in non-audit industries (Ghaleb *et al.*, 2022; Buja *et al.*, 2022; Thanh *et al.*, 2022; Almuhammad and Abdul Aziz, 2022), to the best of our knowledge, the paper is the first in showing an association between leadership style and audit quality. This is consistent with the agentic perspective of social cognitive theory indicating individual agents, like organizational leaders, are important to influence human actions (Bandura, 2001). In line with this theory, we show that the leaders in audit firms can influence the behaviors of auditors and their knowledge sharing behavior, which result in higher audit quality. We develop a parsimonious model by exploring the relationships around knowledge sharing in audit firms, and discovering the missing links from leadership style to audit quality through knowledge sharing. In addition, our research is in the interest of audit firms and audit firms' partners and managers. Our results may inform the partners and managers of audit firms in their efforts for improving audit quality and with respect to the audit firms' leadership style and knowledge sharing management systems (Cepeda-Carrion *et al.*, 2018). This paper shows the importance of audit firms' leadership style and knowledge sharing in audit quality improvement.

The structure of this paper proceeds as follows. Second section reviews the prior literature and develops research hypotheses. Third section describes the research design, including the sample, variable measurement, and empirical models. Fourth section reports the results; and finally fifth section explains our conclusion with existed limitations and routes for future research.

2. Literature review

2.1 Audit quality

The Importance of “quality” has increased in every aspect, especially in the field of auditing and accounting; since human recognized quality as a weapon for fighting in competitive world and gain advantages by improving quality (Beck *et al.*, 2019). Audit quality is considered as a very important topic in the academic and professional research (Carp and Istrate, 2021; Athavale *et al.*, 2022; Samagaio and Felício, 2022). Audit quality means the identification and reporting of material misstatement by external auditors (DeAngelo, 1981). According to DeAngelo (1981), the quality of audit services is defined as a market assessment in which a particular auditor discovers (1) a breach in the client’s accounting system; and (2) reports violations. The probability that a particular auditor will detect a breach depends on the auditor’s technological capabilities, the audit methods used in that audit procedures, the amount of sampling, and so on. Probability of conditionally reporting detected violations is a measure of the auditor’s independence from the client in conducting an audit. Audit quality reflects a challenge, because information is observable, but it is difficult to focus. Moreover, researchers and experts can only describe the high quality of an audit; which possible by the explanation of errors or shortcomings that lead to a decline in audit quality (Knechel *et al.*, 2013).

2.2 Knowledge sharing

Nonaka (1994) defined knowledge as “a valid belief that increases the ability of individuals to act effectively in an organization” and is classified as one of the most important strategic resources in the organizations (Grant, 1997; Singh *et al.*, 2021). Knowledge can be generally divided into two categories: tacit and explicit knowledge. Tacit knowledge is temporary, personal and subjective knowledge that is difficult to document and exchange. Explicit knowledge is expressed in a formal and structured language and can be passed on to others. Knowledge sharing is the act of sharing knowledge with others in an organization. Knowledge sharing between people is a process through which peoples’ knowledge becomes comprehensible, absorbed and used by other people (Ipe, 2003; Ahmad and Karim, 2019). Employees’ external motivations such as organizational rewards (Bartol and Srivastava, 2002), as well as intrinsic motivations such as enjoying helping others and self-efficacy of knowledge, are known as two main determinants of knowledge sharing behavior in organizations. On the other hand, Ardichvili *et al.* (2003) showed that employees’ fear of criticism and misleading others thwart their intention to help and share knowledge with organizational members and communities. Knowledge sharing can be horizontal or vertical in the nature, for example, among peers in the same rank or between people with different ranks. Both types of sharing Knowledge deepen the employee’s understanding the present condition and the circumstances surrounding decision-making (Duh *et al.*, 2020).

2.3 Transformational leadership

Leadership is a process of social influence, in which a leader seeks the subordinates’ voluntary participations in an effort to achieve the organizational goals (Budur, 2020). A leader can be defined as a person who allows or influences the subordinates to act in a way to acquire the organizational goals (Mullins, 2007). There are different leadership styles, one of which is transformational leadership style (Omolayo, 2007). There has been a scientific debate about the nature and effectiveness of transformational leadership since the 1970s. Dow and Downton (1974) first talked about transformational leadership style. Transformational leadership then developed by Bass. According to Bass (1990), transformational leadership occurs when leaders expand and enhance the interests of their employees, when employees become aware of and accept the group’s goals and mission, and when managers motivate employees to go beyond personal interests for the group to

cooperate (Budur, 2020; Qadri *et al.*, 2021). According to Abu-Rumman (2021), transformational leaders interact more with their followers, focus on higher intrinsic needs, and raise awareness of the importance of specific outcomes and new ways in which goals can be achieved. Transformational leaders lead people from lower levels of need (according to Maslow's hierarchy) to higher levels (Kelly, 2003). They may also motivate followers to go beyond their own interests for the sake of groups' aims (Feinberg *et al.*, 2005); But they usually help followers achieve inner satisfaction as well. Transformational leaders build trust, admiration, loyalty, and respect among their followers (Ariyani and Hidayati, 2018; Barbuto and Wheeler, 2006; Cao and Le, 2022).

2.4 Servant leadership

Leadership style is a relatively fixed pattern of a leader's behavior (Xie *et al.*, 2018). According to Xie *et al.* (2018), the success or failure of organizations, nations and other social units is largely attributed to their leadership style. Leadership is defined as an effective process between the influential leader and the followers (Bourdieu, 2002; Razak *et al.*, 2018). According to Omolayo (2007), servant leadership is one of the different leadership styles. Greenleaf (1977) proposed the of servant leadership idea for first time in his article "Servant as Leaders" and acknowledged that leaders must first see themselves as servants. Servant leadership is primarily seen as a conceptual structure (Barbuto and Hayden, 2011; Brown *et al.*, 2020). Servant leadership broadly defined as "a desire in the leaders to guide, motivate, provide hope for followers and provide a good caring experience via establishing a high quality relationship with both followers and subordinates" (Spears and Greenleaf, 2002). Brown *et al.* (2020) said that service leaders dedicate themselves to the growth and well-being of the people. Barbuto and Wheeler (2006) identified and validated five dimensions of servant leadership; these five dimensions include altruism, emotion healing, wisdom, persuasion and organizational service (Gandolfi and Stone, 2018). The basic motivation for servant leadership is the desire to serve. It is not the leader's interest to serve him, but his privilege of serving others. Servant leaders value human beings equally and seek the promotion, development and professional participation of all members of the organization. Servant leaders waive their personal rights because they have found greatness in serving others (Gregory Stone *et al.*, 2004; Rabiul and Yean, 2021).

2.5 Research gap

As discussed above, on the one hand, prior research, based on the social cognitive theory as well as contingency and situational theories of leadership, suggests that knowledge sharing can be influenced by leadership style. On the other hand, past studies indicate that knowledge sharing may affect audit quality (Duh *et al.*, 2020). Hence, we can theoretically assume that changes in knowledge sharing behavior of auditors caused by taking different leadership styles of audit managers can affect audit quality. In other words, due to positive effect of knowledge sharing on audit quality, and positive effects of transformational and servant leadership on knowledge sharing, taking this leadership styles by audit managers probably results in higher audit quality. Nevertheless, prior empirical or survey research do not provide any direct evidence this theoretical connection. We extend the literature by examine whether or not leadership styles through knowledge sharing lead to an increase in audit quality.

2.6 Institutional background

The study is conducted at the auditing firms in Iran. Iran is a nation of more than 84 million people [1], is located in west Asia, which commonly referred to the Middle East. From geographically perspective, Iran's surface area is 1,648,195 km. While Iran is rich with

resources such as oil, gas and other natural reserves, it is considered a developing country. Iranians' ancient documents are the evidences that all public incomes and costs were recorded and kept, soundly and punctually. The Iranian Expert Accountants Association has registered in 1974 and still operating (Mashayekhi and Mashayekh, 2008).

Iranian governmental structure reform programs with many measures were introduced; one of which was international accounting standards with modifications. These allowed private audit firms to verify financial statements of listed companies to improve financial reporting quality and credibility. Unlike other developing countries, Iran has not allowed international accounting firms to operate in the country. It has classified audit firms into four categories (A, B, C and D from high to low ranked) to differentiate audit firms (MohammadRezaei *et al.*, 2018). The current paper concentrates on discussing and analyzing the effect of leadership styles on audit quality through the knowledge sharing. Hence, hypotheses are developed that link some specific aspects of leadership style to audit quality.

2.7 Indirect effect of transformational leadership on audit quality through knowledge sharing

Based on the theory of transformational leadership, leadership style has four important dimensions including idealized influence, inspirational motivation, intellectual stimulation and individual consideration (Longshore and Bass, 1987; Budur, 2020; Santoso *et al.*, 2022). Idealized influence means creating high expectations about the mission and goals of the group or taking on a charismatic role that brings praise to employees. Motivation inspiration includes explaining the organization's vision to employees and creating optimism about achieving goals. Intellectual stimulation means encouraging employees to challenge existing approaches and assumptions, as well as re-examining existing problems to find new solutions. Individual consideration includes paying attention to the individual needs and strengths of employees and meeting their demands and developing their abilities (Hay, 2006; Bakti and Hartono, 2022). According to the research literature, transformational leadership has an undeniable role in enhancing knowledge sharing (Berraies and Zine El Abidine, 2019; Yin *et al.*, 2019; Anselmann and Mulder, 2020). On the other hand, knowledge sharing can have a significant impact on audit quality. For example, research by Javadi *et al.* (2012) state that knowledge sharing among auditors can create an environment for consultation, brainstorming and training by preventing the repetition of past mistakes and rework. Therefore, considering the impact of transformational leadership style on knowledge sharing and the impact of knowledge sharing on audit quality, we expect that transformational leadership increases the audit quality by knowledge sharing. Accordingly, the following hypothesis is proposed:

H1. Transformational leadership through knowledge sharing leads to an increase in audit quality.

2.8 Indirect effect of servant leadership on audit quality through knowledge sharing

Greenleaf (1977) pointed out that leaders should consider themselves primarily as servants (Gui *et al.*, 2021). Among the knowledge sharing various antecedents, leadership is a major factor (Park and Kim, 2018; Singh *et al.*, 2021); because leaders enable communication, collaboration, and trust between employees that lead to knowledge sharing as a good source of competitive advantage for the organization. Bou Reslan *et al.* (2021) suggest that leaders create an open and transparent work environment in which members can share experiences, information and knowledge through transparent communication. By providing knowledge and guidance to employees, leaders are able to create an appropriate organizational environment for knowledge sharing (Winarno and Hermana, 2021). Tuan and Thao (2018)

assumed that servant leaders show great sense of empathy, care for all employees and act in their favor, encouraging employees to participate in sharing information and knowledge for others' advancement. In addition, employees passionately mimic the leaders' behaviors and participate in other servant behaviors such as sharing. [Tripathi et al. \(2020\)](#) also highlighted the importance of servant leadership in knowledge sharing. Audit quality and efficiency can be increased by reducing rework that is possible with knowledge sharing ([McCracken and Kaynak, 1996](#); [Krishnan et al., 2000](#); [Duh et al., 2020](#)). In addition, knowledge sharing can increase knowledge and expertise in the industry and thus increases the professional competence of auditors, which is considered as a factor influencing the quality of auditing ([International Auditing and Assurance Standards Board \(IAASB\), 2021](#)). Knowledge sharing including learning and interactions in the audit process that increase the accuracy of auditors, improve consensus between them, increase the stability of interactions, and bring new knowledge to the decision-making process, are all important in audit quality ([Duh et al., 2020](#)). Therefore, we propose the following hypothesis:

H2. Servant leadership through knowledge sharing leads to an increase in audit quality.

2.9 The effect of transformational leadership versus servant leadership

Transformational leadership is a dominant concept in leadership research ([Dvir et al., 2002](#)); however, recent studies have focused more on servant leadership ([Ehrhart, 2004](#); [Hoch et al., 2016](#); [Sendjaya et al., 2008](#); [Van Dierendonck, 2011](#)). In studies comparing leadership styles, transformational leadership is usually compared with servant leadership ([Van Dierendonck, 2011](#); [Choudhary et al., 2013](#); [Andersen, 2018](#)). Scholars have identified some major differences between transformational and servant leadership styles. As formulated by [Gregory Stone et al. \(2004\)](#) 'The extent to which the leader is able to shift the primary focus of leadership from the organization to the follower is the distinguishing factor in classifying leaders as either transformational or servant leader'. [Barbuto and Wheeler \(2006\)](#) recommended that another important difference between servant leadership and transformational leadership is that servant leadership focuses on a desire to serve, whereas transformational leadership emphasizes a desire to lead and inspiring followers to perform well.

[Graham \(1991\)](#) specifically argued that the primary allegiance of transformational leaders is to the organization rather than to follower autonomy or universal moral principles. [Parolini et al. \(2009\)](#) also concluded that transformational leadership is unique in terms of its strategic role toward organizational goals whereas servant leadership is focused on individual autonomy. Servant leaders usually pay more attentions to serve their followers, although transformational leaders utilize their energy to engage the followers in achieving organization's goals ([Choudhary et al., 2013](#)). For these differences, there is a consensus that transformational and servant leadership cannot be used interchangeably ([Hoch et al., 2016](#)).

Although, in terms of promoting knowledge sharing, both servant leadership and transformational leadership have a positive impact ([Tripathi et al., 2020](#); [Yin et al., 2019](#); [Liu and DeFrank, 2013](#)), due to their differences, it is not probable that the effect of both of them on audit quality through knowledge sharing be equal.

Since transformational leadership is a more dominant leadership style in knowledge sharing, and it focuses on organization goals rather than individuals, and it helps employees reach collective goals ([Bass, 2000](#); [Graham, 1991](#); [Gregory Stone et al., 2004](#)), it seems to be a better match for increasing audit quality than servant leadership. Therefore, the third hypothesis of this research is as below:

H3. The impact of transformational leadership on audit quality is stronger than servant leadership.

3. Methodology

3.1 Data and sample selection

This study uses a questionnaire to collect data on the impact of leadership styles on audit quality through knowledge sharing in audit firms. According to informal statistic, there are around 300 audit firms in Iran; all of which are classified in four rate A, B, C and D according to their competencies. Statistical population in this research involves all active auditors in Iranian auditing firms, which are not calculable. In order to expedite data collection, we collected data in both forms of online and offline.

We sent the link of online questionnaires to the firms on March 15th through emails. We sent reminder emails to the firms to maximize the response rate after three weeks, and follow-up phone calls was made two weeks after sending the reminder emails. Due to Iranian holidays, we had to distribute the paper-questionnaire from April 10th. After three weeks we made the first follow-up, and two weeks later we made the second follow-up by phone calls. The data collection process took about 90 days. We gathered 196 online responses, all valid. We also gathered 216 offline responses, 16 responses were invalid. At last, we had 200 offline and 196 online valid responses to analysis.

3.2 Measurement

The development of the measurement model includes phases of theoretical modeling, statistical testing and refinement. Indicators were mainly adopted from a comprehensive review of the literature and their wording was modified to adjust to our context by reflecting expert opinions. To measure transformational leadership style, this study follows literature (e.g. Chandrasekara, 2019) and used the Bass and Avolio (2000) questionnaire, which consists of 21 questions. This questionnaire measures four important aspects of transformational leadership. This study follows literature (e.g. Xie, 2020) and Jacobs (2006) research questionnaire which was also adopted to measure servant leadership style, consisting of eight questions. To measure knowledge sharing, this study follows literature (e.g. Anwar *et al.*, 2019) and five questions of Carmeli *et al.* (2013) research questionnaire were used.

This study used the research of Knechel *et al.* (2013) to measure the quality of auditing. Knechel *et al.* (2013) identifies and classifies the basic characteristics and various aspects of audit quality. The various aspects of audit quality according to this classification include the four categories of inputs, process, outputs and context. This classification was introduced in 2014 by IAASB as a framework for audit quality by adding key interaction aspects. The framework presented by this committee identifies and presents factors at the level of the audit team, the company and the country that can lead to the quality of the audit. This research has also adopted the items stated in the IAASB for inputs and processing at the level of the institution and the team as items and indicators for measuring audit quality. All variables except demographic questions were measured using a five-point Likert scale.

4. Results

4.1 Measurement model

This part of research dedicated to presenting the results of statistical analysis of field data, consists of two main parts, descriptive and inferential statistics. These analyzes were performed on data obtained from 396 respondents in SPSS software with regression models. It is worthy to note that all research hypotheses were tested at 95% confidence level.

As shown in Table 1, the majority of respondents, around 60%, are men. 50% of respondents are under 30 years old. The respondents are mostly master graduates, all working as auditors. Respondents mostly work in B audit firms, and their job position is auditor. Most of respondents work at least in two audit firms. The majority of collected responses are offline (nearly %51). In similar research in Taiwan, most of respondents were

	<i>N</i>	Percent
<i>Gender</i>		
Man	237	59.8
Woman	159	40.2
<i>Age</i>		
<25	104	26.3
26–30	91	23.0
31–35	97	24.5
36–40	46	11.6
41–45	28	7.1
>45	30	7.6
<i>Education</i>		
Bachelor	157	39.7
Master	174	43.9
PH. D	11	2.8
Bachelor student	27	6.8
Master student	27	6.8
PH. D student	0	0.0
<i>Type of response</i>		
Online	196	49.5
Offline	200	50.5
<i>Field of activity</i>		
Auditor	380	96.0
Other	13	3.3
No answer	3	0.7
<i>Institutional rating</i>		
A	167	42.2
B	169	42.7
C	37	9.3
D	23	5.8
<i>Position</i>		
Auditor	234	59.1
Senior auditor	57	14.4
Supervisor	24	6.1
Senior supervisor	24	6.1
Manager	32	8.1
Partner	25	6.3
<i>Employment history in audit firms</i>		
1	138	36.8
2	142	35.9
3	43	10.9
4	53	13.4
5 Or More	20	5.1

Note(s): It refers to the numbers of audit firms that a respondents have worked from the beginning

Source(s): Authors' calculations

Table 1.
Descriptive statistics

women, bachelor, and senior (Duh *et al.*, 2020). Table 1 shows the respondents' profile in details.

The reliability and construct validities of our measurement model were firstly assessed. The summary of reliability, validity for each construct and correlation between constructs is visible in Table 2.

For examining the reliability, all test statistic values of Cronbach’s alpha and composite reliability exceed the recommended threshold values, 0.70. Moreover, all factor loadings for own constructs are above 0.7 and average variance extracted (AVE) for each construct exceeded 0.3, thus demonstrating convergent validity (Hair *et al.*, 2011). Variables have a distance scale in this research and their normality is confirmed, their correlation with Pearson coefficient is calculated. The correlation study of variables in this section is a descriptive study and has not been used to test hypotheses. Table 2 demonstrate the variables’ mean and standard deviation along with their correlation coefficients. The highest correlation coefficient is related to the relationship between transformational leadership and audit quality (0.76) and the smallest coefficient is related to the relationship between servant leadership and knowledge sharing (0.12). Meanwhile, the knowledge sharing variable has the highest mean (4.25) and the lowest standard deviation (0.473) simultaneously.

4.2 Hypotheses testing

To test our hypotheses, SPSS software is employed. To check the preference of a mediating effect, Sobel test was adopted. Sobel test examines whether the inclusion of a mediator (M) in the regression analysis considerably reduces the effect of the independent variable (X) on the dependent variable (Y) (Abu-Bader and Jones, 2021). The results of the model analysis are visible in Table 3. The indirect effect coefficient of transformational leadership on audit quality is 0.17, which is obtained by multiplying direct effects on each other (0.36 × 0.48). Based on the Sobel test, the significance level of this coefficient is greater than 1.96. Therefore, the first hypothesis that knowledge sharing mediates the relationship between transformational leadership and audit quality has confirmed. Moreover, the indirect effect

Table 2.
Correlation matrix,
reliability and validity

Variable	Mean	SD	1	2	3	Cronbach's alpha	AVE
1. Transformational leadership	4.026	0.535	1			0.923	%39.88
2. Servant leadership	3.648	0.749	0.450 (99%)	1		0.898	%54.94
3. Knowledge sharing	4.251	0.437	0.360 (99%)	0.128 (95%)	1	0.719	%44.15
4. Audit quality	4.042	0.510	0.764 (99%)	0.422 (99%)	0.566 (99%)	0.994	%38.17

Source(s): Authors' calculations

Table 3.
Analysis results

Effects	Beta	t-value	p-value	Result
<i>Hypothesized paths</i>				
TL→KS→AQ	0.360	6.489	0.000	Supported
SL→KS→AQ	0.128	2.508	0.011	Supported
<i>Control measures</i>				
Gender→AQ	0.187	2.195	0.000	Supported
Age→AQ	0.135	-2.046	0.000	Supported
Education→AQ	0.055	-2.025	0.016	Unsupported
Field of activity→AQ	0.137	-0.391	0.151	Supported
Position→AQ	0.218	2.069	0.000	Supported
Institutional rating→AQ	0.044	2.026	0.000	Unsupported
Employment history→AQ	0.344	0.148	0.249	Supported
Type of response→AQ	0.149	-2.153	0.000	Supported

Source(s): Authors' calculations

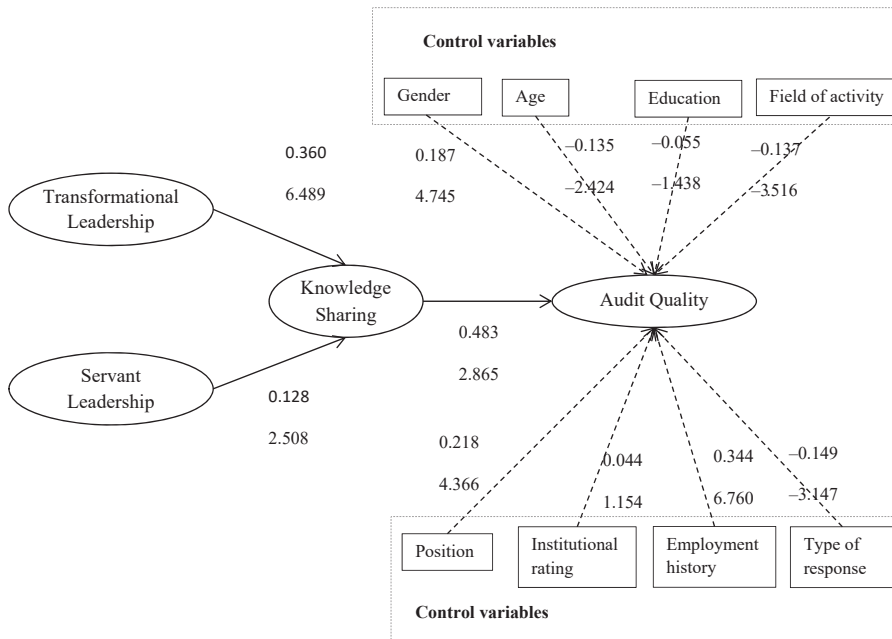
coefficient of servant leadership on audit quality is 0.06, which is obtained by multiplying direct effects on each other (0.12×0.48). Based on the Sobel test, the significance number of this coefficient is calculated to be greater than 1.96. Therefore, the second hypothesis that knowledge sharing mediates the relationship between servant leadership and audit quality is also confirmed. Finally, transformational leadership has an estimated coefficient of 0.360, while servant leadership has an estimated coefficient of 0.128. Thus, that transformational leadership and servant leadership have positive impacts on audit quality, but transformational leadership has stronger impact than servant leadership, confirming the third hypothesis.

As shown in Table 3, gender, age, education, field of activity, position, institutional rating, employment history and type of response are controlled. Analysis shows that gender, age, field of activity, position, employment history and type of response are significant variables and their effect are controlled to extract the effect of the predictor variable (knowledge sharing) on dependent variable (audit quality).

To improve the presentation of the different associations, we have included Figure 1 which displays all the associations between variables.

4.3 Robustness check

As a robustness check, this paper also employs structural equation modeling (SEM). Consistent with Figure 2, our SEM shows that our main results are remained unchanged as similar to main results, both transformational and servant leadership style significantly influence audit quality through knowledge sharing. Moreover, the impact of transformational



Note(s): Adjusted R squared for Knowledge Sharing and Audit Quality equals 61% and 82%, respectively

Source(s): Authors' calculations

Figure 1. Empirical model

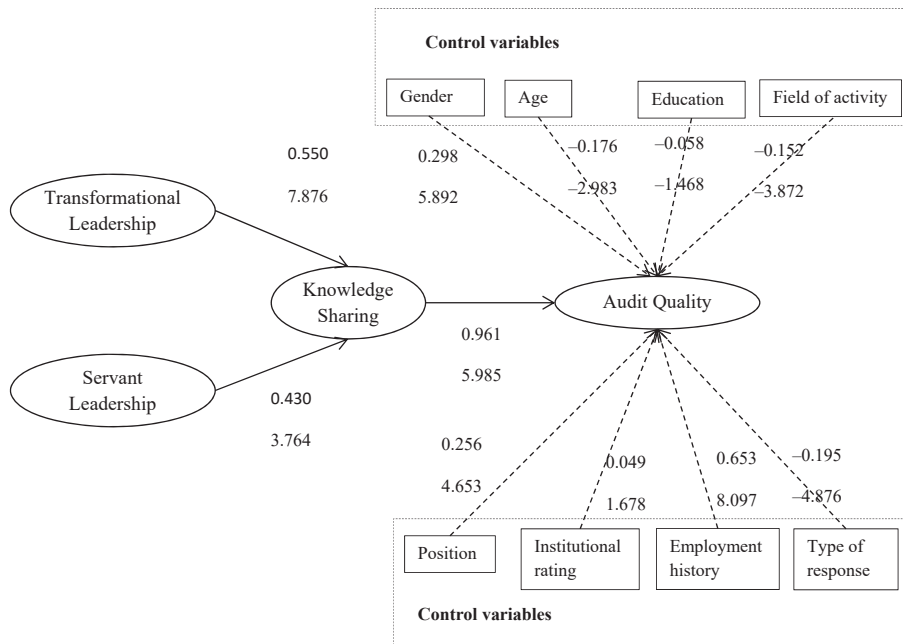


Figure 2.
Robustness check

Note(s): RMSEA = 0.04; GFI = 0.95; CFI = 0.67; NFI = 0.91; SRMR = 0.05
Source(s): Authors' calculations

leadership style is stronger than the impact of servant leadership style. In addition, the indexes regarding the goodness of fit show that the model has generally acceptable fit for the data. For example, root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) is lower than 0.05 and 0.08, respectively, indicating that our model is appropriate and parsimonious.

5. Discussion

We developed an empirical model of the effects of leadership style on audit quality through knowledge sharing and tested the model with 396 auditors. Several points are important of note. Primarily, the results of this study indicate major role of knowledge sharing in leading transformational and servant leadership style to audit quality. This study provides a better understanding of the importance of leadership style in audit firms since it relates two leadership styles to audit quality. Both servant and transformational leadership have many facets in common and exhibit wonderful leadership. Through this research it has been acknowledged that through knowledge sharing, transformational leadership has more impact on audit quality than servant leadership. As audit firms with transformational and servant leadership likely to achieve greater quality, the results imply high knowledge sharing is associated with improved audit quality. Previous studies that focus on a direct relationship between knowledge sharing and audit quality (Duh *et al.*, 2020). According to Francis and Krishnan (1999), reaching better audit quality is accessible via moving beyond our current knowledge in academic area and sharing the acquired knowledge among employees in auditing firms.

Previous studies show direct effects of transformational on knowledge sharing (Park and Kim, 2018). Yin *et al.* (2019) report the indirect effect of transformational leadership on knowledge sharing mediated by psychological security and team productivity, and Anselmann and Mulder (2020) also support the indirect effect of transformational leadership style on knowledge sharing mediated by team safe environment. According to Yin *et al.* (2019), knowledge sharing has gained more importance for firms' success in knowledge economy era. Transformational leaders monitor followers and help them to keep at a very high level of facilitating knowledge sharing among organizational staff.

Previous studies also show direct effects of servant leadership on knowledge sharing (Tripathi *et al.*, 2020). Some researchers have supported the impact of servant leadership on knowledge sharing. Tuan and Thao (2018) reported the indirect impact of service leadership on knowledge sharing through public service motivation and corporate social responsibility adjustment. Therefore, by employing knowledge sharing as a mediator, we verify the postulation that real usage is the significant link from leadership style to audit quality. The result shows that knowledge sharing fully mediates the relationship between transformational and servant leadership style to audit quality. According to Tripathi *et al.* (2020) servant leaders inspire staff to engage in serving behaviors and knowledge sharing with others. Knowledge mutual exchange results in the co-production of knowledge that promotes efficient resources use to achieve complex organizational goals.

In case of demographic information, meaningful differences are observed. To clarify, transformational leadership style, knowledge sharing and audit quality are greater in woman; while gender has no meaningful difference in servant leadership style. Transformational leadership, knowledge sharing, and audit quality are higher in partners' point of view; while servant leadership is greater in senior supervisors. Servant leadership is more in audit firms' rank B in comparison to others; while there is no significant difference in audit firms' rank A, C and D.

This study finally offers a few areas for further refinement. First, we examine the mediating role of knowledge sharing in relationship between transformational, and servant leadership style with audit quality in Iran and with limitations, this study cannot be generalized for all the audit firms. This study undertook a limited sample size; future research can enhance the generalizability of the findings by considering cross-national or multinational survey. Second, the applied approach in this paper has some limitations; we point out the importance of knowledge sharing, but the specific practices and mechanisms of knowledge sharing are not pointed out, we focus on knowledge sharing as a whole concept rather than special procedures (using information technology like webcasts, internal databases, and online training to facilitate knowledge sharing). Future research should consider various knowledge sharing mechanisms and compare the outcomes. Third, our research is conducted in the individual level data; while our model is applicable to the firm level. In future studies, firms-based data should be considered to test the model applicability. Forth, we only examine the effects of two leadership styles; future research can study multiple leadership styles. Fifth, the result of control variable show that audit firms with certain employees' gender, age, field of activity, position, employment history in audit firms apply knowledge sharing more than other employees do. This way, future research can focus on certain employees' gender, age, field of activity, position, employment history in audit firms that can result in providing deeper findings with usage of knowledge sharing.

This study has clear practical implications, particularly in audit quality that covers a range of low to high quality. We provide useful guidance to partners and senior managers on how audit firms can improve audit quality by applying a specific leadership style through the knowledge sharing. Both transformational and servant leadership style influence the audit quality through knowledge sharing; therefore, we strongly suggest the audit companies' partners and senior managers to choose one of these leadership style in their firms.

In addition to, the impacts of transformational leadership style are more than servant leadership style on the audit quality, we thus recommend to the audit companies' owners and senior managers to apply transformational leadership style in their companies. Moreover, this research can lead to important implications for auditing firms in developing countries like Iran. Unfortunately, there is no strong and efficient leadership style in audit firms in developing countries, therefore, this study clears the importance of having a specific leadership style that contribute to increase audit quality by enhanced knowledge sharing.

Note

1. <http://datatopics.worldbank.org/world-development-indicators>

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Further reading

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