



## The Role of Transformational Leadership in Auditor Knowledge Management and Judgement Processes

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### ABSTRACT

Auditors are the pillars of audit firms in which knowledge is created and shared among auditors. Transformational managers and leaders determine the quality of the knowledge and judgments (decisions) that are shared between them and auditors. In this study, we explore the role of transformational leadership in auditor knowledge management (KM) and judgment processes. The required data were collected from the responses of 297 certified accountants and professional managers of audit firms, with IACPA membership, to a questionnaire sent to them via email. The obtained data were analyzed, using partial least squares (PLS) and variance-based structural equation modeling (SEM). The data analysis showed that transformational leadership had a positive and significant effect on the KM processes (knowledge creation, transfer, utilization, and retention) of the auditors, and the auditor KM processes, in turn, had a positive and significant effect on audit decision making and judgment. Among the limitations of this study are the exclusive use of cross-sectional analysis and the absence of moderating factors. This study gives insight into the role of transformational leadership in auditor KM and judgment processes and helps to identify the conditions (criteria) which are to be considered in appointment of auditors and can make sure that auditors share their knowledge for the benefits of the community at large, inside and outside the country.

### Keywords:

Transformational leadership; Knowledge Management (KM) processes; Auditor knowledge creation; auditor judgment.



## 1. Introduction

Presently, many businesses, manage their process and operation improvement, with a focus on leadership styles (Banmairuoy, 2022). With an emphasis on organization level, the question arises as to how leadership can play roles for making use of the company evolution (Oberer & Erkollar, 2018).

There are several leadership styles in the literature, of which 'transformational leadership' is one. This leadership approach features as a combination of different leadership styles (Donate & Sanchez De Pablo, 2015). Transformational leadership constitutes a significant element of strategic management of momentum in the present day organization. Transformational leadership is believed to help KM process and eventually result in sustainable performance (Naqshbandi & Jasimuddin, 2018). Transformational leadership is primarily focused on reaching organizational goals by developing and raising employee's interest. Transformational leaders are encouraged to motivate followers for promotion of innovation, creativity, optimism and enthusiasm. Transformational leaders, beyond mutual exchange, make effort to raise expectations for organizational view (Arnold, 2017). On the other hand, in knowledge organization, leadership becomes important when employees commit leaders to actively engage in knowledge and learning activities (Olaisen & Revang, 2017). Previous evidence indicates that knowledge creation has a significant impact on organizational performance (Muthuveloo et al, 2017). Although organizational performance is defined along the line of organization survival (Wang et al, 2015), Muthuveloo et al (2017) suggest that knowledgeable employees usually establish a good relationship with suppliers and customers.

The job of an independent auditor is, among others, characterized by professional judgment that affects all aspects of auditing, including planning, determining the importance, quantity and quality of audit evidence, and finally, independent auditor professional statement, and involves different groups of stakeholders including managers, investors, and analysts. In the area of audit, the service-oriented audit industry relies on committed auditors (Chen & Peng, 2019). Such auditors, with high energy, devotion and concentration in work, underlie the effort of a business to achieve competitive advantage, good financial performance, and long-term success. In contrast, non-

committed auditors can cost the company up to a trillion dollars a year due to undesired behavior (Rabiul, 2021).

Knowledge management in audit firms is a new research topic. By distributing and disseminating their knowledge, skills and expertise among organizational members, auditors help to improve overall audit performance and increase organizational innovativeness. In this process, raising auditor's knowledge in an efficient and effective way is essential for organization success (Al-Kurdi et al, 2020).

With the formation of the Iranian Association of Certified Public Accountants (IACPA) in recent years many companies have switched auditors, as the number of certified audit and accounting firms increased and the competition between them grew significantly. This led many audit firms to draw up their reports according to the client's demand. Clients, too, on their part, seek those firms that present audit reports conform to the client's views. In this circumstance and in view of the widespread disregard for quality of audit reports, auditors face inevitable moral dilemmas in practice of their profession. Therefore, given the above background, the significance of present research is fully evident. The findings of this study contribute to the theoretical framework on the business of independent auditors and the study of the relationships between transformational leadership, knowledge management and auditor judgment. As a result, this study seeks to identify the research gap in this field.

Today, numerous audit organizations in other sectors have grasped the advantages and benefits of knowledge management. The KM research in these sectors has developed to help achieve the intended goals of the audit organizations. Several studies investigated the factors that contributed to knowledge sharing in different contexts (Ahmad et al, 2018).

Knowledge management and sharing among auditors are new topics. Audit firms are knowledge organizations that require to generate and distribute knowledge for (the use of) auditors. Significant competitive advantages could be achieved for the firm from the use of knowledge among auditors (Mahdi & Almsafir, 2014).

Prior research investigated the relationship between transformational leadership, knowledge management and auditor judgment in the education

sector. For example, Donate and Sanchez De Pablo (2015) and Kissing'u (2017) showed that transformational leadership, given the mediating role of KM capabilities, had a direct effect on performance. Kissing'u et al (2016) provided empirical evidence on the strong effect of knowledge management on sustainable Performance. Hitka et al (2019) and Monje (2019) suggested that when the organization wants to remain in the competitive industry, KM processes, next to leadership styles, are highly important.

Although the above findings are promising, several important gaps still remain. First, None of the previous studies examined the mediating role of knowledge management in the relationship between transformational leadership and auditor judgment. The studies have shown that knowledge management has an impact on employee engagement and auditor judgment (Weaver & Mitchell, 2012). Leaders with poor knowledge management have a cost of about 62.4 million dollars annually. Therefore, this study has an emphasis on the use of knowledge management for improvement of auditor judgment. Second, transformational leadership is undoubtedly a good trick for the audit services industry (e.g. Chen & Peng, 2019; Huertas-Valdivia et al, 2019). For example, Jung and Yoon (2015) and Liang et al (2017) assume that transformational leadership in the audit industry contributes to development of workforce and human resources. They maintain that this factor, by promoting employee interest in organizational gains, creates self-confidence and self-esteem in employees. Transformational leadership is most likely to be beneficial in a traditionally hierarchical and group-oriented culture (e.g. Iran), where organizations have more value and employees are led to achieve group goals (Rabiul, 2021). Therefore, this study, investigating the role of transformational leadership in KM and auditor judgment processes, seeks to resolve the existing gaps in the literature.

## 2. Theoretical framework and research background

Transformational leadership can provide a better and more clear picture of the future, effectively explaining its views to its employees, and followers, too, very willingly accept those views. Transformational leaders show behaviors by which they play the role of model for followers. These leaders are inspiring and motivate

their followers, and this is one of the ways which is beyond rewarding followers (House & Becker, 2015).

Knowledge management (KM) is a coherent systematic process that employs a right combination of information technologies and human interaction to identify, manage and share informational capitals of organization (Al-Kurdi et al, 2018) the components of which are as follows.

**Knowledge creation.** Organizations take conscious actions to study and define the relevant knowledge and sources. In other words, creation of new knowledge becomes possible either by finding new sets of solutions the employees find out about them to perform their task or by finding knowledge from outside sources.

**Knowledge retention.** The modern knowledge is stored in a way that makes it accessible to people in organization. Database management and data storage technology can help this process.

**Knowledge transfer.** Knowledge should be distributed appropriately and effectively based on user specific needs. In addition, knowledge is shared by application tools to make it intelligible for the user.

**Knowledge utilization.** Knowledge is used in texts and contents that enable the user to learn and even create the new knowledge (Fauzi et al, 2019).

The International Auditing and Assurance Standards Board (IAASB, 2018) defines professional judgment as "the use of the learnings, experiences, and knowledge obtained regarding the auditing and accounting standards and the requirements of professional behavior to reach appropriate decisions, considering the auditing circumstance. The International Standards on Auditing (ISA200) and Iran's standards on auditing require auditors to exercise their professional judgment in applying the standards so that this judgment is well-founded and defensible. The mentioned standards compromise the objectives, requirements, implementation and other practical explanations that are designed to support the auditor in obtaining reasonable assurance.

In the management literature, transformational leadership is referred to as neo charismatic leadership. The new theory of transformational leadership emphasizes on the role of charismatic leaders to whom followers are significantly attached and attracted (Ergnlia, 2017).

In sum, according to the review of the literature by the authors, no research, in the context of mixed

studies, has been so far conducted on the relationship of transformational leadership, KM components, and audit judgments in Iran and abroad, and present research is the first one in this area. In the following, we present an overview of the studies most relevant to ours.

Banmairuoy et al (2022), in a research titled 'The effect of knowledge-oriented leadership and human resource development on sustainable competitive advantage through organizational innovation's component factors: Evidence from Thailand's new S-curve industries,' stated that knowledge-based leadership directly affects sustainable competitive advantage, while human resource development does not have a significant direct impact on sustainable competitive advantage.

Salehi Kamamardakhi et al (2021), in a research titled 'The Impact of Organizational Ethics and Culture on the Auditor's Professional Judgment with respect to Corporate Social Responsibility Using Structural Equation Modeling' noted that corporate social responsibility moderates the impact of organizational culture on the auditor's professional judgment. The purpose of this study is to investigate the effect of organizational ethics and culture on the professional judgment of the auditor with respect to corporate social responsibility using structural equation modeling. The present study is descriptive and field-based in terms of data collection. The population of the research is experts and accountants. The sample size was determined using Cochran's formula of 211 people. In this research, simple random sampling method has been used. Data were analyzed using SPSS22 software and structural equation modeling. Findings showed that organizational ethics has a significant effect on the auditor's judgment. However, organizational culture did not have a significant effect on the auditor's judgment. Findings also showed that organizational culture has a significant effect on organizational ethics. In addition, corporate social responsibility does not moderate the impact of organizational ethics on the auditor's professional judgment.

Causholli et al (2021), in a research titled 'The ties that bind: Knowledge-seeking networks and auditor

job performance. Accounting, Organizations and Society,' noted that in an analysis after that they found tacit knowledge links with managers could be beneficial to auditor performance, and tacit knowledge links with senior managers and partners were sometimes detrimental.

Rabiul (2021), investigated the relationship between leadership styles, motivating language, and work engagement and concluded that both leadership styles (servant and transformational) and three types of motivating language had positive relationships with employee work engagement.

Albawwat (2021), in a research titled 'Tacit knowledge sharing in small audit firms and audit quality inputs: the antecedent effect of auditors' social capital,' showed that tacit knowledge sharing had a positive effect on auditor values, morals, attitudes, experiences, skills and knowledge (i.e. audit quality inputs).

Hitka et al (2019), in a research titled Knowledge and Human Capital as Sustainable Competitive Advantage in Human Resource Management, stated that there is a relationship between motivational factors related to job aspiration and completed education, and motivational factors related to job aspiration are important both for employees with higher education and employees with a high school diploma.

Svanberg, Öhman and Neidermeyer (2017), in a research titled 'The relationship between transformational client leadership and auditor objectivity,' stated that auditors are prone to be influenced by perceived practices of transformational leadership.

Analoui et al (2013), in a research titled 'Leadership and knowledge management in UK ICT organizations,' stated that when principal Knowledge managers adopt transformational and transactional leadership styles within organizations, there is a significant increase in knowledge management activity.

Based on the research objectives and considering the related theoretical bases, the following conceptual model is considered for the research, as given in figure 1.

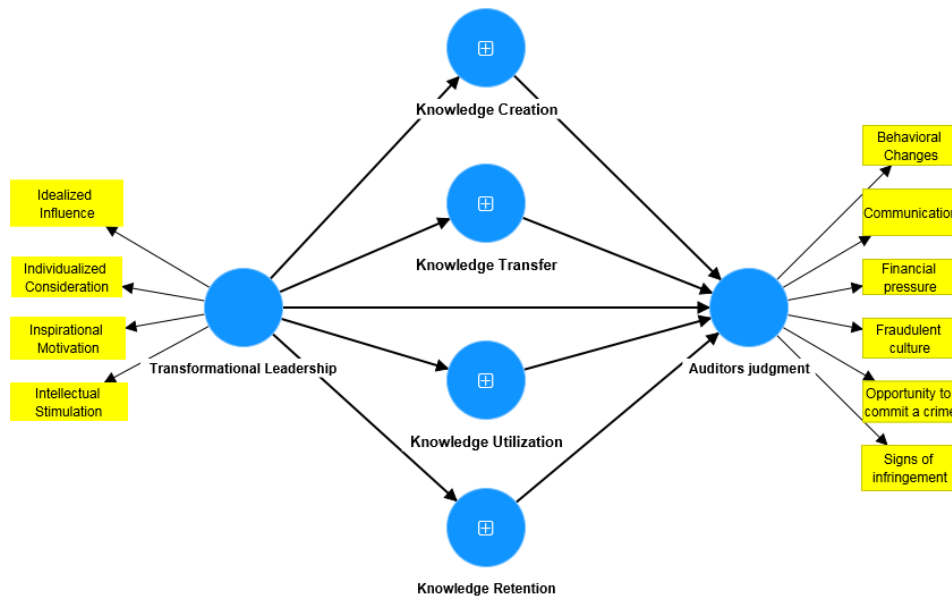


Figure 1. Research conceptual model

Hence, the following hypotheses are proposed:

**First hypothesis.** Transformational leadership has an effect on auditor knowledge creation..

**Second hypothesis.** Transformational leadership has an effect on auditor knowledge transfer.

**Third hypothesis.** Transformational leadership has an effect on auditor knowledge utilization.

**Fourth hypothesis.** Transformational leadership has an effect on auditor knowledge retention.

**Fifth hypothesis.** Auditor knowledge creation has an effect on auditor judgment and decision.

**Sixth hypothesis.** Auditor knowledge transfer has an effect on auditor judgment and decision.

**Seventh hypothesis.** Auditor knowledge utilization has an effect on auditor judgment and decision.

**Eighth hypothesis.** Auditor knowledge retention has an effect on auditor judgment and decision.

### 3. Research methodology

This is an applied research conducted with a descriptive-correlational design aiming to explain the impact of transformational leadership on the auditor knowledge creation, transfer, use and retention processes and their eventual impact on auditor judgment.

The statistical population in this study included all the 1300 certified accountants and professional managers working in audit firms with an IACPA

membership. The sample size, consisting of 297 people, was obtained from Cochran's formula and subjected to this study. To obtain the required data, 350 questionnaires were distributed of which 297 were analyzed.

To measure knowledge management, the questionnaire developed by Newman and Conrad (1997) was used. Knowledge management (KM) dimensions are: knowledge creation, knowledge use, knowledge transfer, and knowledge retention.

To measure transformational leadership, the questionnaire of Bass and Avolio (2010) was used and auditor judgment and decision was measured using the questionnaire of Hurtt (2012). The scoring of the items in the questionnaires was on a 5-point Likert scale from 1 (fully disagree) to 5 (fully agree). The scale validity was confirmed using construct validity (confirmatory factor analysis; CFA) according to which a factor loading between 0.4 and 0.6 is acceptable and more than 0.6 is very desirable. According to the CFA results, the factor loading of all the items was greater than 0.4, confirming the questionnaire validity. In addition, the questionnaire reliability was measured using Cronbach's alpha and composite reliability (CR). The relationships between the variables was examined using structural equation modeling (SEM) technique in SPSS and Smart PLS4 software.

#### 4. Findings

Table 1 presents the descriptive statistics of the sample respondents according to which the majority of the respondents (251) were male, aged 41 to 50, and had a master's degree and 10 to 15 years work experience.

To test reliability of the measurement model, factor loadings, Cronbach's alphas, and composite reliability were used. The threshold value for factor loading is 0.4. As is seen in table 2, all factor loadings of the questions are higher than 0.4, indicating the measure's fit. According to the data analysis algorithm in Smart PLS4, after assessment of the factor loadings of the questions, Cronbach's alphas and CR coefficients are calculated and reported. The second measure for assessment of the measurement model fit is convergent validity that determines correlation of each construct with its items (indicators). These are reported in table 2.

Considering that the acceptable value for Cronbach's alpha and composite reliability is 0.7, the reported values for Cronbach's alpha and composite reliability in table 2 are all higher than the threshold 0.7, hence the research reliability is acceptable and confirmed. In addition, the reported AVE in the above table is above the threshold 0.5 for all the constructs, indicating the acceptable level of the research convergent validity.

For assessment of the research discriminant validity, heterotrait-monotrait (HTMT) ratio was used. Discriminant validity exists when HTMT ratio is lower than 0.90 (Henseler et al, 2015). The results hereon are reported in table 3 which confirm the research discriminant validity.

The structural model fit was assessed using  $R^2$  coefficient. Chen (1998) proposed three  $R^2$  values of 0.19, 0.33, and 0.67 as the standard values indicating weak, moderate, and high levels of fit, respectively. The  $R^2$  values for the model endogenous variables in table 4 indicate that the structural model is adequately fit in terms of  $R^2$  measure.

Henseler et al (2014) introduced Standardized Root Mean Square Residual (SRMR) as the right index for assessment of the model overall fit in SEM-PLS. A SRMR value smaller than 0.1, and in a conservative case, 0.08 is adequate (Hu & Bentler, 1999) based on which the model overall fit is assessed as adequate.

The normal fit index (NFI), known as Bentler-Bonett index, is a comparative fit index. This index assesses the model by comparing Chi-square values of

the independent model (a model in which there is no relationship between variables and covariance between them is zero) and Chi-square of the saturated model. NFI values higher than 0.9 indicate acceptable level of the model fit. The next index of the structural model fit is  $Q^2$ . This measure, proposed by Stone and Geisser (1975), shows the model prediction power in endogenous constructs (Henseler et al, 2015).  $Q^2$  values of 0.02, 0.15, and 0.35 represent weak, moderate, strong prediction power of an exogenous construct, respectively.

The  $Q^2$  values in the above table indicate the model high prediction power regarding these constructs and once again confirm the structural model fit. Exact model fit statistical inference (based on the bootstrap) tests the difference between the used covariance matrix and the covariance matrix specified by the compound factor model. As stated by Hensler (2015),  $d_{ULS}$  (i.e. squared Euclidean distance) and  $d_G$  (i.e. geodesic distance) represent two different ways of calculating the difference between the estimated model (the most reasonable choice) and the saturation model. Bootstrap provides confidence intervals for these difference values. Values greater than 0.05 for  $d_{ULS}$  (i.e. the square of the Euclidean distance) and  $d_G$  (i.e. the geodesic distance) are considered acceptable by this measure. Given the  $d_{ULS}$  and  $d_G$  values which are greater than 0.05 confirm the model fit.

In the following, we treat the research structural model together with factor loadings and significance coefficients as presented in figure 2 and then discuss the test of the research hypotheses.

Based on figure 2, the results on the test of direct relationships and the path significance coefficients are presented in table 7.

Given the results reported in figure 2 and table 7, the significance coefficient (t-statistic) is greater than the absolute value of 1.96, indicating that this effect is significant based on which all the research hypotheses are accepted.

**Table 1. The sample descriptives**

Demographics	Number of the sample in the used spectrum			
	Man		Women	
Gender	251		46	
Age	20-30 years	31-40 years	41-50 years	50 years and above
	5	109	121	62
Education	Below bachelor's	Bachelor's	Master's	PhD
	6	96	129	66
Working experience	Less than 5 years	5-10 years	10-15 years	More than 15 years
	20-30 years	31-40 years	41-50 years	50 years and above

**Table 2. Cronbach's alpha and composite reliability (CR) of latent variables**

Construct reliability and validity	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Auditors judgment	0.738	0.749	0.823	0.543
Knowledge Creation	0.789	0.711	0.792	0.596
Knowledge Retention	0.795	0.712	0.757	0.552
Knowledge Transfer	0.771	0.963	0.788	0.585
Knowledge Utilization	0.755	0.770	0.864	0.684
Transformational Leadership	0.708	0.722	0.825	0.549

**Table 3. Discriminant validity by HTMT measure**

Heterotrait-monotrait ratio (HTMT)	Auditors judgment	Knowledge Creation	Knowledge Retention	Knowledge Transfer	Knowledge Utilization	Transformational Leadership
Auditors judgment						
Knowledge Creation	0.506					
Knowledge Retention	0.437	0.633				
Knowledge Transfer	0.669	0.285	0.228			
Knowledge Utilization	0.533	0.457	0.651	0.447		
Transformational Leadership	0.662	0.572	0.714	0.330	0.535	

**Table 4. R<sup>2</sup> values**

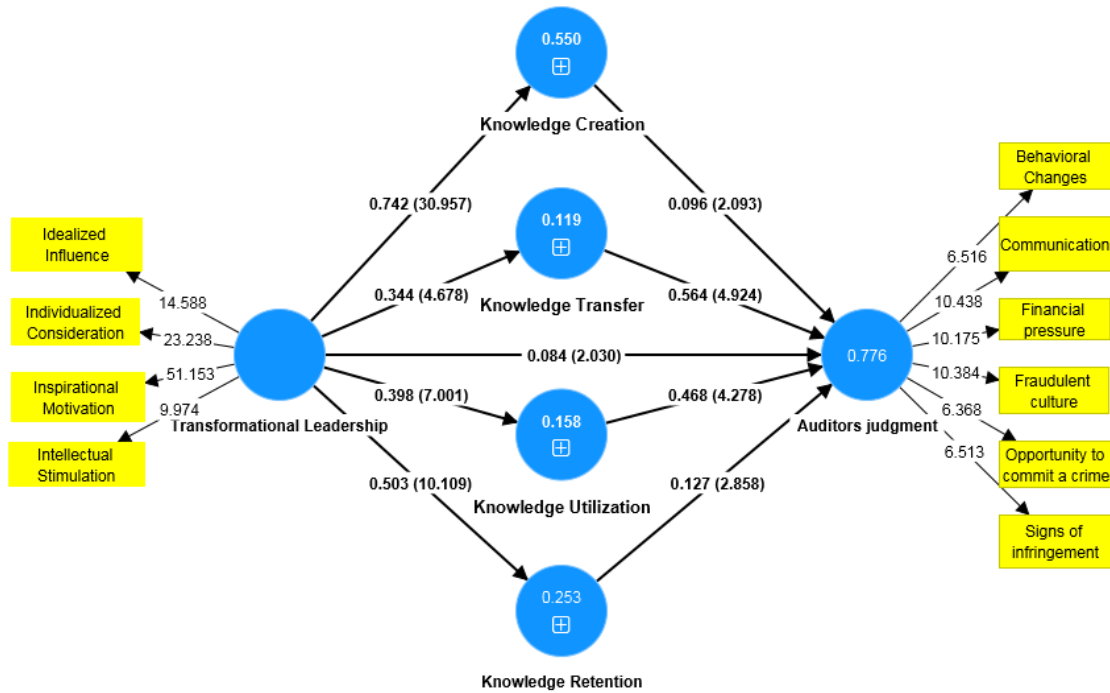
	R <sup>2</sup>	Adjusted R <sup>2</sup>
Auditor judgment	0.776	0.773
Knowledge creation	0.550	0.549
Knowledge retention	0.253	0.251
Knowledge transfer	0.119	0.116
Knowledge utilization	0.158	0.156

**Table 5. Prediction power summary**

Prediction summary	Q <sup>2</sup> predict	RMSE	MAE
Auditor judgment	0.210	0.895	0.661
Knowledge creation	0.544	0.681	0.538
Knowledge retention	0.242	0.875	0.679
Knowledge transfer	0.105	0.956	0.700
Knowledge utilization	0.150	0.926	0.738

**Table 6. The model fit summary**

	Saturated model	Estimated model
SRMR	0.072	0.072
d_ULS	3.851	3.851
d_G	1.769	1.769
NFI	0.962	0.962



**Figure 2. Structural model together with factor loadings and significance coefficients**

**Table 7. The results on direct relationships and significance coefficients in the research model**

Path	Path coefficients (β)	t-statistic ( O/STDEV )	p-value	Results
Knowledge creation -> Auditors judgment	0.096	2.093	0.037	Accepted
Knowledge retention -> Auditors judgment	0.127	2.858	0.005	Accepted
Knowledge transfer -> Auditors judgment	0.564	4.924	0.000	Accepted
Knowledge utilization -> Auditors judgment	0.468	4.278	0.000	Accepted
Transformational leadership -> Auditors judgment	0.084	2.030	0.043	Accepted
Transformational leadership -> Knowledge Creation	0.742	30.957	0.000	Accepted
Transformational leadership -> Knowledge Retention	0.503	10.109	0.000	Accepted
Transformational leadership -> Knowledge Transfer	0.344	4.678	0.000	Accepted
Transformational leadership -> Knowledge Utilization	0.398	7.001	0.000	Accepted



## **5. Discussion and conclusion**

By reviewing the studies conducted in the field of auditing, it was found that few studies have paid attention to the impact of factors such as auditor knowledge management and transformational leadership on auditor judgment and decision-making. And their simultaneous effect has not been investigated in any research so far. However, some researchers believe that both factors are associated with the auditor judgment and decision-making process.

The obtained results from the test of the main hypothesis support the effect of transformational leadership on auditor judgment and decision making. Transformational leadership refers to an approach that tries through idealist and inspiring influence, and by encouraging learning and education and developmental support, to drive followers in an orbit beyond transient personal gains. These leaders promote the followers in such a way that they achieve higher levels of ideals, put a lot of effort to make superior achievements and achieve prosperity, and think about the excellence of their organization and society. The result of this section is consistent with the findings of Salehi and Qhaderi (2021), Monje et al. (2019), Svanberg et al (2017), and Tse and Warren (2014), who found a significant relationship between charismatic, transformational, collaborative, bureaucratic and power delegations leadership and auditor neutrality, and a relationship between auditor identity and neutrality. In these studies, identity was the mediator between transformational leadership and auditor neutrality. They also found a significant relationship between auditor self-confidence and neutrality.

The obtained results from the test of the first to fourth hypotheses indicated that transformational leadership had an effect on the process of auditor knowledge creation, transfer, utilization and retention. Transformational leadership refers to a leadership that seeks to move followers beyond the orbit of fleeting self-interest through the idealization of influence, inspiration, intellectual stimulation, and developmental support. Therefore, transformational leaders provide the appropriate conditions for employees to share their knowledge and experience. Today, industrialization and IT have made a more careful examination to find more diverse jobs and support the growth and development of various technologies for providing

better services demanded by countries. Knowledge has become an important and vital source in reducing uncertainty and the only sustainable source for gaining competitive advantage in audit firms. These results are consistent with the findings of Causholli et al (2021), AlBawwat (2021), who suggested that knowledge dissemination in audit firms is a critical process that has not been adequately addressed by researchers. Tacit knowledge links with managers can be beneficial to auditor performance, and tacit knowledge links with senior managers and partners are sometimes detrimental. Our findings may help researchers better understand how auditors use their social connections to learn, which in turn may affect audit efficiency and effectiveness. Additionally, audit firms may benefit from a better understanding of the concepts of seeking knowledge from different sources and using this understanding to make decisions that enhance the optimal flow of information.

The obtained results from the test of the fifth to eighth hypotheses indicate that the processes of auditor knowledge creation, transfer, utilization and retention have an effect on auditor judgment and decision making. Specialized knowledge is a set of technical information related to the auditor's job. The effect of auditor knowledge management in the relationship of transformational leadership with auditor judgment and decision making of auditors is expressed in such instances as personal skill, professional skill and quality of experience. The results of this section are consistent with the findings of Salehi and Qhaderi (2021), Al-Bawwat (2021) and Monje et al. (2019), Svanberg et al (2017), and Tse and Warren (2014).

In fine, it is suggested that in auditing courses for accounting students, there should be more emphasis on leadership styles, especially transformational leadership, knowledge management, and auditor judgment, and accounting professors should familiarize students with leadership styles. The audit organizations and firms are expected to improve auditor professional judgment through implicit and explicit knowledge training and knowledge management. And in order to increase the efficiency and effectiveness of auditors, they can be encouraged to improve knowledge management by designing an appropriate organizational culture and implementing an effective reward system and planning.

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