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Original Research

The Effect of Intrinsic and Extrinsic Motivation on Knowledge Sharing with the Mediating Role of Organizational Trust

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Abstract

The aim of this research was to investigate the effect of the motivation of employees of automotive companies on their knowledge sharing with regard to the mediating role of the organizational trust variable. In this study, a sample of 384 employees from Iran's automotive industry was selected using simple random sampling. The tool used to collect information from the samples was a questionnaire. Additionally, the questionnaire was analyzed using SPSS 25 and the structural equation modeling software SmartPLS V3. The findings show that both internal and external motivation significantly affect knowledge sharing (both knowledge-sharing behavior and intention), and the effects of these motivations were nearly equal and moderate. The research results showed that the independent variables (extrinsic motivation, intrinsic motivation, and organizational trust) accounted for 57% of the variance in the knowledge-sharing variable among automobile manufacturing employees. Also, the experimental results of this study showed that the organizational trust variable has the role of a (partial) mediating variable in relation to the effect of employees' external motivation on their knowledge sharing. According to the research results, motivational factors (internal and external) are effective in increasing organizational knowledge sharing by increasing the organizational trust of employees. Therefore, it is necessary for practitioners, managers, and activists in the field of knowledge management at the country's automotive industry companies to provide a basis for improving organizational trust and knowledge sharing by increasing employee motivation.

Keywords: Knowledge Sharing, Intrinsic Motivation, External Motivation, Organizational Trust, Automotive Industry.

Introduction

In the strategic planning of businesses and organizations, knowledge is an essential element (Carayannis, Ferreira & Fernandez, 2021; Drucker, 2012; Ichijo & Nonaka, 2007), and its optimal management is a key factor in achieving organizational success (Al Ahbabi et al., 2019). While organizational success is increasingly attainable through efficient and dynamic knowledge management, the success of knowledge management depends on sharing knowledge among employees (Chopra and Gupta, 2020). Knowledge sharing is one of the most fundamental processes in knowledge management (Bock & Kim, 2002; Markus, 2001; Wasko & Faraj, 2005) and, in other words, the heart of knowledge management (Hassanzadeh, 2007). Knowledge sharing not only enhances organizations' knowledge management capabilities but also provides more effective solutions for achieving competitive advantage, which is of interest to many organizational managers (Reid, 2003; Le & Lei, 2018). In organizations, encouraging employees to share knowledge voluntarily is not straightforward, and several factors influence employees' willingness to share knowledge, the most important of which is effective employee motivation and building trust.

Employee motivation is divided into two categories, internal and external, which play a role in the process of sharing employees' knowledge. In the context of activity performance, both internal and external motivations influence individuals' personal desire and actual behavior (Moon & Kim, 2001). In internal motivation, people engage in activities not because of potential benefits or external rewards, but because of the activity's personal appeal and the enjoyment and satisfaction derived from the experience (Kankanhalli, Tan & Wei, 2005; Hsu et al., 2007). According to Tyler and Blader (2001), internal motivation is the determining factor in employees' knowledge-sharing behavior (Nouri Kohani & Nadi, 2018), and employees who lack the necessary motivation are unlikely to share their knowledge (Ipe, 2003). In this regard, Jeon, Kim, and Koh (2011) identified a strong relationship between intrinsic motivation factors and knowledge sharing. In addition, research results (Frey & Osterloh, 2013; Jaberi, Salami & Khazai Pool, 2013) show that there is a correlation between internal motivational factors and the desire of employees to create a positive state and, as a result, increase learning and the desire to voluntarily participate in the knowledge sharing process.

Extrinsic motivation is related to the area of employee knowledge exchange. In knowledge exchange, employees share knowledge based on cost-benefit analysis. Employees compare the expected rewards of knowledge exchange with its costs, and if the economic benefits exceed the costs, the knowledge exchange process continues; otherwise, it is discontinued. In the context of knowledge sharing, costs can include employee effort (such as time spent, mental effort, etc.), while potential benefits for employees who share their knowledge can include organizational rewards received, or the requirements created by the organization to compensate their activity for knowledge sharing (Ko, Kirsch & King, 2005).

On the other hand, while motivational stimuli such as rewards, encouragement, and managerial support motivate knowledge-sharing behavior, other important factors, such as trust, are also important obstacles to knowledge sharing among employees (Guo et al., 2023). Trust is a channel for the flow of known knowledge within organizations, and its absence among employees is a fundamental barrier to knowledge sharing. Increasing knowledge exchange

based on mutual trust is a factor of knowledge creation (Szulanski, 2001). In fact, without trust, many people working in organizations will not share their knowledge (Wu et al., 2009); because the willingness of the organization's employees to share knowledge and use (implicit) knowledge depends on how reliable their colleagues are as receivers of knowledge or sources of knowledge (Adler, 2001; De Long and Fahey, 2000; Gruber, 2000; Lucas, 2005; McAllister, 1995; Nahapiet and Ghoshal, 1998; Scott, 2000; Tsai and Ghoshal, 1998).

The results of the studies also indicate that organizational trust facilitates knowledge management and influences the knowledge sharing process in organizations (Holster and Fields, 2010; Jones, 2017; Curado & Vieira, 2019; Kmieciak, 2021; Rutten, Blass-Franken & Martin, 2016; Hsu and Chang, 2014; Nerstad et al., 2018; Ouakouak and Ouedraogo, 2019; Lee, Jin & Ryu, 2021; Yuan & Ma, 2022). In general, the results of these studies emphasize the fundamental value of trust in knowledge management capabilities and improving employee knowledge sharing.

Therefore, one of the fundamental issues in today's organizations, including the country's manufacturing and industrial centers, is to increase employee trust to facilitate the transfer of employees' tacit knowledge and its transformation into explicit knowledge using basic knowledge management frameworks. If this is achieved, the efficiency of knowledge management measures in industrial and manufacturing centers, including the country's automotive industry, will increase appropriately.

In the country's automotive industry, much of the knowledge required to improve individual skills and enhance the quality of products and services is tacit (Mehdizadeh, 2013), and sharing such knowledge is challenging. Knowledge sharing in automotive industrial companies is complicated by the existence of barriers that prevent the transfer of knowledge from the source to the recipient, which, as a result, reduces the intention of employees to participate in knowledge sharing. Potentially important barriers, such as employees' tendency to hoard knowledge and motivational drivers (Zenk et al., 2022), as well as other influential factors, should also be identified to activate and strengthen employees' knowledge-sharing behaviors.

Building on the aforementioned topics, the present research focuses on investigating the mediating role of organizational trust in employees' motivation and knowledge sharing in the automotive industry, using a conceptual framework. The theoretical literature indicates that diverse motivations and complex psychological states influence employee trust levels (Guo et al., 2023; Luqman et al., 2023). However, no research has examined the role of organizational trust in employees' motivation in an automotive company and in their knowledge sharing. In the present study, examining employee motivation drivers is valuable because it helps build trust among employees and can also strengthen employee knowledge sharing, organizational development, and innovation.

Literature Review

Today, in various businesses, employee knowledge sharing is a vital component (Islam, Jasimuddin & Hasan, 2015), and in organizations, it is regarded as a key component of knowledge management. Bock & Kim, 2002). There are various definitions of knowledge sharing. Many experts and writers have defined knowledge sharing from their respective perspectives. Some experts and writers have used the terms knowledge exchange, knowledge transfer, and swapping in conceptualizing knowledge sharing. For example, Argote, Ingram, Levine, and Moreland (2000), Connely and Kelloway (2003), and Ireson & Burel (2010) have

used the term knowledge exchange in the organization in the conceptualization of knowledge sharing. Others, such as Nonaka & Takeuchi (1995), Alavi & Leidner (2001), and Lin and Lee (2004), have used the term knowledge transfer to conceptualize knowledge sharing. Eskandari and Valvi (2016) used the terms knowledge transfer and swapping interchangeably, and Van den Hooff & Huysman (2009) and Alam et al. (2009) used the term swapping to describe the knowledge-sharing process. And have described knowledge sharing as the process of knowledge swapping between people.

According to the definitions provided, knowledge sharing can be understood as an exchange process in which employees transfer their ideas and experiences to others, with the aim of profit and loss, thereby fostering learning and expanding the knowledge base of an individual, group, or organization. In social exchange theory, human communication occurs through the internal analysis of gains and losses and the comparison of alternatives. In fact, this theory focuses on perceptions of the benefits and losses of relationships with others and on their functions in satisfying communication. In other words, social exchange theory considers maximum benefits and assumes that people interact with others based on personal evaluation of costs and benefits. During resource exchange, individuals seek to increase their benefits and reduce their costs (Homans, 1958).

The results of past research show that economic resources, social-emotional resources, and trust resources play an important role in interpersonal exchange and influence interaction and knowledge sharing in online communities (Liu, Xu, Li, & Wei, 2023). In fact, rewards, reciprocity, expectations, costs, and resources, depending on the conditions and specific exchange methods, can motivate individuals (Blau, 1968). Therefore, in the field of organizational knowledge sharing, exchange methods (negotiation, mutual, generalized, and resource exchange) can affect employees' professional knowledge sharing (Aldaheri, Guzman & Stewart, 2023). These exchange methods are mainly determined by the acquisition of intrinsic benefits (such as feelings of worth, knowledge self-efficacy, and enjoyment of helping), the acquisition of extrinsic benefits (such as reputation, social support, and trust), and cognitive and executive costs (Wu, Zhang & Luan, 2023). In addition, the growth of individuals' motivation to share knowledge helps increase their trust.

According to the Self-determination theory (Deci & Ryan, 1985), there is a close relationship between employees' psychological needs and their motivational orientation. Motivation is a multidimensional construct that can be understood by different psychological elements (Guo et al., 2023). Frey and Osterloh (2013) divided motivation into two categories: intrinsic and extrinsic motivation (Frey & Osterloh, 2013). Internal motivations are closely linked to internal goals and individuals' self-perceptions (Wang, Chen, & Ayesh, 2023). In internal motivation, people's intrinsic satisfaction with doing something is important. Consequently, intrinsic motivation enables people to satisfy their psychological needs and validate their capabilities (Sun, Zhang & Shen, 2022). Extrinsic motivations, unlike intrinsic motivations, are related to the results of performing a behavior, such as receiving rewards or mutual benefits (Perotti et al., 2023).

Motivation is also considered a key factor in knowledge sharing. Existing research has clearly shown that high employee motivation is essential for active knowledge sharing. Employee motivation is also dependent on psychological security and on increasing their sense of dignity at work. In this framework, employees' motivation to share knowledge is related to key factors such as satisfaction, attention, communication, and self-confidence (Guo et al.,

2023). This is why, according to Frey and Osterloh (2013), intrinsic motivation is particularly important for tacit knowledge sharing. Among internal factors, people consider knowledge sharing a pleasant, enjoyable, useful, and exciting activity in itself (Foss et al., 2009). While in external factors to perform an activity, there are expected results from that activity or a purposeful reason for doing it (Frey & Osterloh, 2013).

Based on prior research, external motivation factors, such as organizational rewards and mutual interaction, increase the sharing of organizational knowledge and are effective in encouraging employees to interact with one another (Perotti et al., 2023). In contrast to one-way communication, organizational rewards and mutual interaction by increasing the usefulness of interpersonal relationships foster greater employee participation in knowledge sharing (Miguez, Naranjo-Zolotov, 2022). Additionally, as relationships between colleagues broaden, their desire to engage in behaviors that benefit one another increases, owing to the presence of mutual trust and strong interpersonal relationships (Nguyeh et al., 2019).

On the other hand, the development of trust among employees is related to motivational components such as expectations and goals (Park & Kim, 2018). Especially when employees share experiences in employee relations, employees are more inclined to trust one another (Masood et al., 2023). Therefore, it can be concluded that rewards and mutual relationships are effective in increasing colleagues' organizational trust. Organizational trust refers to employees' positive expectations regarding the competence, benevolence, and reliability of organizational members at horizontal and vertical levels and under risk-prone conditions (Ahteela & Vanhala, 2018). In this regard, Costigan, Ilter and Berman (1998) defined organizational trust as positive individual expectations regarding employees' competence, reliability, and benevolence. Costigan, Ilter and Berman (1998) presented the organizational trust model based on three types of horizontal trust (trust between employees), vertical (between employees and managers), and institutional trust.

Ellonen et al. (2008) distinguish two forms of trust in organizations: individual (interpersonal) and non-individual (institutional). They state that individual trust includes horizontal trust (employees' trust in one another) and vertical trust (employees' trust in managers), and Institutional trust encompasses trust in the organization's technical and commercial competencies, strategies and policies, performance, and Human resource communication. In general, based on Ellonen et al.'s (2008) view, both horizontal and vertical dimensions of organizational trust can be considered, as they together enhance employees' organizational trust.

Trust is the foundation of meaningful relationships among organizational employees. The results of previous research indicate a lack of trust among employees and cases of knowledge misuse, which have long been cited as obstacles to sharing organizational knowledge (Razmerita, Kirchner & Nielsen, 2016). In this regard, the research results of Kunttu and Neuvo (2019) show that in relationships between employees, the existence of mutual trust is a vital element to reduce information barriers and increase knowledge sharing (Kunttu and Neuvo, 2019).

Nelson & Cooprider (1996) empirically investigated trust as a prerequisite for knowledge sharing and identified a causal relationship between the two. According to them, trust through shared knowledge affects the performance of groups within the organization In fact, the existence of trust in organizations is the basis for employees' desire to share their knowledge with others and improve their performance. It also seems that in these organizations there is a

greater willingness to listen to others and absorb their knowledge (Mayer, Davis & Schoorman, 1995). Additionally, cooperation and Organizational cohesion among employees for the generation of new ideas are facilitated by trust. Knowledge-oriented structures should be based on trust rather than control-oriented ones, given their strong need to share knowledge. In fact, to share organizational knowledge, a suitable level of interpersonal trust is necessary (Wang & Ahmed, 2003).

Interpersonal trust is related to motivational factors that, together with facilitating knowledge exchange, can help employees perform complex job tasks by adopting an innovative approach (Park & Kim, 2018). Additionally, in conditions where mutual experience exchange occurs in employee relations, employees exhibit a greater desire to trust one another. Based on this, employees' trust is created through mutual interactions and guided by motivations, making it possible to predict behavior (Guo et al., 2023). For example, organizational rewards can simultaneously increase employees' trust and strengthen their willingness to share knowledge. Therefore, employees' trust positively affects their knowledge sharing and can also mediate the relationship between organizational knowledge sharing and other variables. The theoretical framework of the research and the effect of motivation (intrinsic, extrinsic) on organizational knowledge sharing with respect to the role of the organizational trust variable are outlined in Figure 1.

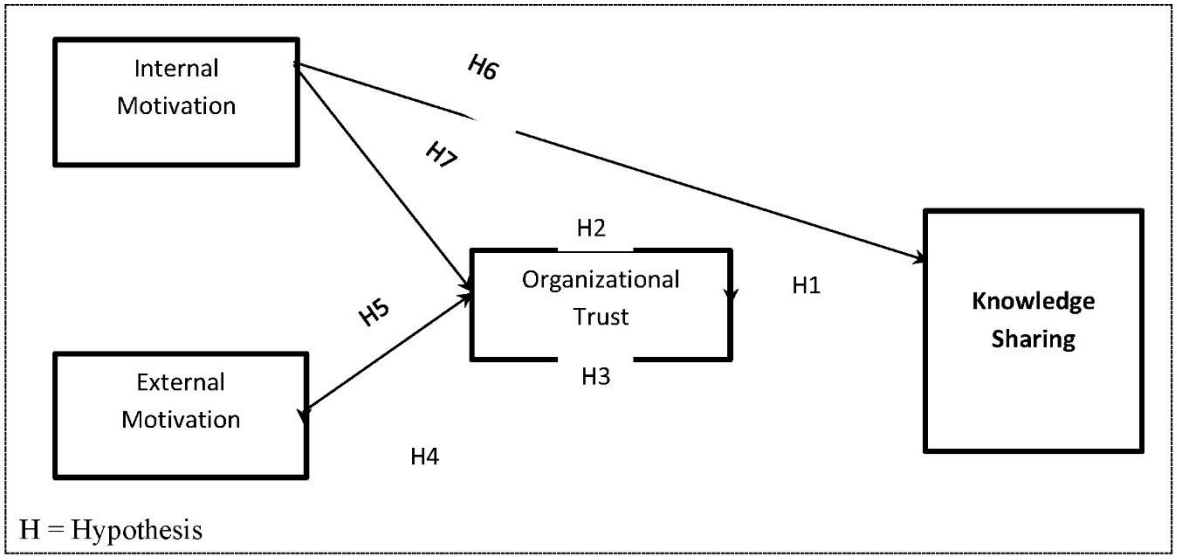

Figure 1: Research model

Hypotheses

H1. Organizational trust of employees is effective in increasing their knowledge sharing.

H2. In relation to internal motivation and knowledge sharing of employees, the organizational trust variable has the role of a (partial) mediating variable.

H3. In relation to extrinsic motivation and employee knowledge sharing, the variable of organizational trust plays the role of a (partial) mediating variable.

H4. External motivations are effective in increasing employee knowledge sharing.

H5. External motivations are effective in increasing employees' organizational trust.

H6. Internal motivations are effective in increasing employee knowledge sharing.

H7. Internal motivations are effective in increasing employees' organizational trust.

Materials and Methods

In this research, all employees of Iran's automotive industry were selected as the statistical population. Based on this, first, a complete list of the characteristics of all automotive centers and companies in Iran was prepared, and then five companies, Saipa, Mega Motor, Pars Khodro, Atlas Khodro, and Diyar Khodro, which had an organizational knowledge management system, were selected.

The total size of the companies' statistical population was 20,439, and 384 individuals were selected as the statistical sample using Cochran's formula; the questionnaire was then distributed to them using simple random sampling.

The questionnaire included some standard questions and some researcher-made questions, and Respondents were allowed to place their answer at any point of the Likert scale (5 points).

To operationalize the knowledge-sharing structures and evaluate the knowledge-sharing structure, two components, "intention to share knowledge" and "behavior of knowledge sharing," were used. The items related to the measurement of the "intention to share knowledge" component were used from the knowledge sharing questionnaire - Ajzen model, and the items related to the measurement of the "knowledge sharing behavior" component were used from the standard knowledge sharing questionnaire of Yan Yu et al. (2013). Additionally, to measure organizational trust, a researcher-developed questionnaire was used, adapted from Ellonen et al.'s (2008) 17-item instrument to assess the dimensions of organizational trust (horizontal, vertical, and institutional). Measuring the components of internal motivation (internal reward, knowledge self-efficacy, and enjoyment of helping) was done by 13 researcher-made items, and measuring the components of external motivation (monetary-non-monetary reward, mutual benefits) was also done by 8 researcher-made items. Also, a total of 425 questionnaires were distributed among the statistical sample. Due to the distortion of some questionnaires, the information from 384 questionnaires was finally entered into the Spss25 software, and the analysis was performed using the Smart PLS V3 software.

Reliability and validity

In this study, Cronbach's alpha (α), Composite Reliability (CR), and factor loadings were used to measure reliability, and average variance extraction (AVE), and Fornell-Larker's criterion were used to measure validity or reliability. As the results of the Table 1 shows, Cronbach’s alpha values and CR for all research constructs were higher than 0.7, which indicates the appropriate internal consistency of the data of each construct. Additionally, the factor loadings for all observable variables in the research were higher than 0.4, indicating adequate reliability of the measurement models. Also, the convergent validity of the research measurement models was established by measuring the mean values of the AVE. AVE results show that all AVE values are higher than 0.5 (see Table 1). Therefore, it can be concluded that the convergent validity of research constructs is appropriate and approved.

Table1
Reliability and validity results of the research construct

Constructs Name	Outer Loadings (Above 0.4)	Construct Reliability (Above 0.7)	Cronbach Alpha Coefficient (Above 0.7)	Variance Extracted (AVE) (Above 0.5)
Individual trust (vertical) (VT)				
VT1	.852			
VT2	.763			
VT3	.915	.951	.938	.766
VT4	.90			
VT5	.909			
VT6	.903			
Institutional trust (IT)				
IT1	.657			
IT2	.831			
IT3	.794	.903	.870	.610
IT4	.710			
IT5	.870			
IT6	.804			
individual trust (horizontal) (HT)				
HT1	.825			
HT2	.865	.933	.910	.735
HT3	.881			
HT4	.865			
HT5	.851			
Organizational Trust				
Individual trust (vertical)	.932	.949	.942	.848
Institutional trust	.918			
individual trust (horizontal)	.913			
Mutual benefit (MB)				
MB1	.884			
MB2	.864	.909	.866	.714
MB3	.811			
MB4	.818			
Cash and non-cash rewards (C.Re)				
C.Re1	.889			
C.Re2	.934	.952	.933	.833
C.Re3	.921			
C.Re4	.905			
External motivation				
Mutual benefit	.850	.918	.898	.758
Cash and non-cash rewards	.891			
knowledge self-efficacy (K.SE)				
K.SE1	.651			
K.SE2	.817	.862	.799	.556
K.SE3	.793			
K.SE4	.741			
K.SE5	.716			

Constructs Name	Outer Loadings (Above 0.4)	Construct Reliability (Above 0.7)	Cronbach Alpha Coefficient (Above 0.7)	Variance Extracted (AVE) (Above 0.5)
Intrinsic Reward (IR) IR1 IR2 IR3 IR4	 .830 .738 .911 .877	.906	.861	.708
Enjoy helping (EH) EH1 EH2 EH3 EH4	 .885 .907 .910 .878	.941	.917	.801
Intrinsic motivation knowledge self-efficacy Intrinsic Reward Enjoy helping	 .816 .887 .816	.92	.904	.7
Intention to share knowledge (IS) IS1 IS2 IS3 IS4 IS5	 .653 .720 .865 .732 .850	.877	.823	.590
Knowledge sharing behavior (SB) SB1 SB2 SB 3 SB4	 .849 .90 .913 .869	.934	.906	.780
Knowledge Sharing Intention to share knowledge Knowledge sharing behavior	 .786 .846	.887	.859	.667

The results of the Table 2 show that the value of the root mean of AVE of all the variables of the current research, which are located in the houses in the main diameter of the matrix, is more than the value of the correlation between them, which are arranged in the lower and left houses of the main diameter. Therefore, in the current research, the model's constructs (latent variables) interact more with their indicators than with other constructs. In other words, the divergent validity of the measurement models is at a suitable level.

Table 2
he results of the Fornell-Larker test

	Cash and non-cash rewards	Enjoy helping	Individual trust (vertical)	Institutional trust	Intention to share knowledge	Intrinsic Reward	Knowledge sharing behavior	Mutual benefit	individual trust (horizontal)	knowledge self-efficacy
Cash and non-cash rewards	.913									
Enjoy helping	.10	.895								
Individual trust (vertical)	.666	.104	.875							
Institutional trust	.662	.162	.750	.781						
Intention to share knowledge	.292	.471	.285	.339	.768					
Intrinsic Reward	.132	.583	.237	.290	.499	.841				
Knowledge sharing behavior	.365	.369	.418	.444	.391	.329	.883			
Mutual benefit	.519	.410	.517	.570	.401	.456	.608	.845		
individual trust(horizontal)	.607	.152	.790	.779	.338	.283	.426	.522	.857	
knowledge self-efficacy	.226	.452	.405	.396	.389	.616	.348	.453	.420	.746

Results

Descriptive findings

As shown in Table 3, 10.1% of respondents are women. Also, 89.9% of the respondents are men.

Table 3
Frequency distribution of the gender type of respondents

	Frequency	Percent
woman	39	10.1
man	345	89.9
Total	384	100

Table 4 shows that 2.6% of respondents held a high school degree, 15.4% held a diploma, 10.2% held an Associate's degree, 46.9% held a bachelor's degree, 20% held a master's degree, and 4.9% held a Ph.D.

Table 4
Frequency distribution of respondents' educational degree

Degree	Frequency	Percent
High school	10	2.6
diploma	59	15.4
Associate degree	39	10.2
BA	180	46.9
MA	77	20
Ph.D. and higher	19	4.9
Total	384	100

Assessment of model fit

In this research, to evaluate the conceptual model of the research, the Construct Cross-validated Redundancy (CV Red) of the model, and the Goodness of Fit (GOF) criterion of the model were examined. CV Re,d which was introduced by Stone & Geisser (1975) determines the predictive power of the model. Hensler et al. (2009) have determined three values of 0.02, 0.15, and 0.35 regarding the severity of the predictive power of the model regarding endogenous structures, which respectively show the weak, medium, and strong predictive power of the structural model (Hensler et al., 2009). The GOF criterion was developed by Tenenhaus et al. (2004). Wetzles et al. (2009) introduced three values of 0.01, 0.25, and 0.36 as weak, medium, and strong values for GOF (Wetzles et al., 2009).

According to the results in Table 5, the calculated Q^2 values and their comparison with the criterion values indicate that the model's prediction power is strong and suitable. Additionally, the GOF value of 0.715 indicates that the overall fit of the present research model is very favorable, according to Wetzles et al. (2009).

Table 5
CV Red and GOF model

criteria Variables	*CV Red* Q^2 (=1-SSE/SSO)	predictive power	
Individual trust (vertical)	.659	Strong	GOF = 0.715
Institutional trust	.506	Strong	
individual trust (horizontal)	.606	Strong	
Organizational Trust	.275	almost strong	
Mutual benefit	.501	Strong	
Cash and non-cash rewards	.655	Strong	
Intrinsic Reward	.528	Strong	
knowledge self-efficacy	.358	Strong	
Enjoy helping	.526	Strong	
Intention to share knowledge	.353	Strong	
Knowledge sharing behavior	.550	Strong	
Knowledge Sharing	.238	almost strong	

Testing hypotheses

In this research, to confirm or reject the hypotheses, the significance of the t-value for each hypothesis is first assessed, and then the mediating effects of the organizational trust structure are calculated. In the following, using Smart PLS software, we get the output of significance coefficients (t-value) along with the path coefficient (β) of the research model (Figure 2).

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Figure 2: Beta and T-value Coefficients of the model

As seen in Figure 2 and the results of Table 6, the values of significant coefficients (t-values) of the research hypotheses are higher than 1.96. Therefore, it can be concluded that these hypotheses are approved. Of course, based on the results obtained for the second and third hypotheses of the research, the indirect effect of intrinsic motivation and extrinsic motivation on knowledge sharing is significant (T-values > 1.96), according to the mediating role of the organizational trust variable, but this mediation (partial) needs to be investigated.

Table 6
Hypothesis test results

Hypothesis number	Relationship among the Constructs	Standardized Coefficients (β)	T-values	Result
H1.	Organizational Trust Knowledge Sharing	.294	3.589	supported
H2.	Intrinsic motivation, Organizational Trust, Knowledge Sharing	.054	2.364	supported
H3.	External motivation, Organizational Trust Knowledge Sharing	.198	3.471	supported
H4.	External motivation Knowledge Sharing	.312	4.560	supported
H5.	External motivation Organizational Trust	.673	15.387	supported
H6.	Intrinsic motivation Knowledge Sharing	.310	5.259	supported
H7.	Intrinsic motivation Organizational Trust	.183	2.521	supported

To determine the intensity of the partial mediation effect, we can use the Variance Accounted for (VAF) (Icobucci & Duhachek, 2003). The value range of this statistic is between 0 and 1, and the values closer to 1 indicate the high impact of the mediating variable. The measurement of this statistic is such that a value less than 0.2 means no intensity of mediation effect, a value of 0.2 to 0.8 has partial mediation, and a value above 0.8 has full mediation intensity (Hair et al., 2014). To measure this statistic, we use the following formula:

$$VAF = \frac{a * b}{(a * b) + c}$$

a = value of the path coefficient between the independent variable and the mediator.
b = value of the path coefficient between the mediator and dependent variable.
c = value of the path coefficient between the independent and dependent variables.

The VAF value for the mediating variable (partial) of organizational trust in relation to the effect of external motivation on knowledge sharing is equal to 0.388, and the VAF value for the same variable in relation to the effect of internal motivation on knowledge sharing is equal to 0.148. Therefore, according to Hair et al.'s criteria (2014) regarding the effect of external motivation on knowledge sharing, the organizational trust variable has a (partial) mediating role; however, in relation to the effect of internal motivation on knowledge sharing, it does not have the necessary mediation (partial) effect.

Discussion

Since knowledge sharing is human-mediated, motivation to share knowledge is vital. Motivating employees to share knowledge is a key priority in any organization's knowledge management program. One reason for the failure of knowledge management programs in organizations is insufficient employee motivation to share knowledge. Lack of motivation among employees, whether internal or external, negatively affects organizational knowledge sharing. The findings of this study showed that employees at the automotive company exhibit

similar levels of extrinsic and intrinsic motivation to share knowledge. A notable point in the findings of the present study is that the intensity of the direct effect of extrinsic motivation and intrinsic motivation on knowledge sharing is almost the same (Extrinsic motivation (β) = 0.312; Internal motivation (β) = 0.310), and there is not much difference between them, which is in contrast to the results of previous research. In most past research, intrinsic motivation has a stronger effect on knowledge sharing than extrinsic motivation (Cho, Park & Kim, 2015; Foss et al., 2009; Pee and Lee, 2015; Nguyen et al., 2019).

In relation to this result, it can be argued that the motivational system of employees at Iran's automotive companies relies to a large extent on material incentives, and that the lack of non-material incentives to foster the motivation to share knowledge is significant. Sometimes, employees are reluctant to share knowledge due to time constraints. Employees of these companies may also be reluctant to share their knowledge with others due to cultural barriers, such as fear of losing their jobs, as they are concerned that they will lose their job security if they share their personal knowledge, which is considered their asset, with others. In addition, the absence of an effective reward system to encourage employees to share their knowledge is a barrier to knowledge sharing.

The results of examining the mediating role of organizational trust were among the other findings of the present study. Although the arguments and empirical evidence of the current research show that intrinsic and extrinsic motivation have (positive) effects on knowledge sharing and confirm the results of previous research (Amabile, 1993; Cameron and Pierce, 1994; Davis, Bagozzi & Warshaw, 1992; Vansteenkiste et al., 2004; Wiersma, 1992). But in relation to these (positive) effects, confirming the mediating role of the organizational trust variable is one of the most important findings of this research.

The study found that the greater the employees' extrinsic motivation and organizational trust, the more knowledge they share. Conversely, when extrinsic motivation and organizational trust are low, knowledge sharing decreases in these companies. The study also found that higher levels of extrinsic motivation and organizational trust are associated with greater knowledge sharing. Conversely, when extrinsic motivation and organizational trust are low, knowledge sharing decreases in these companies. In explaining this finding, it can be said that in automotive industry companies, motivation and trust are central pillars around which all knowledge-sharing preparations revolve. In these companies, sharing knowledge without motivation and trust is fraught with contradictions. In these companies, when employees have the necessary organizational motivation and trust, group work will develop, and, as a result, knowledge exchange and the use of that knowledge will increase. In fact, it can be argued that when employees are motivated by external motivation factors (cash-non-cash rewards and mutual benefits); they perform assigned activities and actions in a better way. At the same time, employees with free thinking share their new ideas, and by increasing their trust in the organization, they cause innovation in their work field.

Additionally, in the current research on the effect of internal motivation on knowledge sharing, organizational trust did not mediate the relationship. In other words, intrinsic motivation had no indirect effects on knowledge sharing. Organizational trust and intrinsic motivation are similar in nature and are soft categories related to psychological factors. Therefore, in the current research, these two categories are not in the same length, but in the width of each other, and each of them has an impact on the knowledge sharing of the employees, and in the past research, the direct effects of each of them on the knowledge sharing have been

confirmed. To explain this finding, one of the most important factors in the type of internal or external motivation is organizational structure. Organizations with a mechanical structure, such as manufacturing and industrial firms, have a greater effect on external motivation, whereas organizations with an organic structure more strongly stimulate employees' internal motivation. Mechanical structures are suitable for organizations in stable, secure environments, whereas organic structures are suitable for organizations in dynamic, variable environments (Burns, 1961).

Therefore, managers of automotive companies need to modify their organizational structure and reward systems to enhance organizational knowledge sharing and competitive advantage. In this regard, the following solutions can be suggested to increase employee motivation and organizational trust:

1. Designing an efficient (organizational) reward system and linking knowledge sharing with career opportunities and advancement

In this regard, using the classic "carrot and stick" method to strengthen extrinsic motivation can be effective. The carrot is intended to change compensation and promotion structures and reward systems based on knowledge sharing, where feasible. In this regard, knowledge workers and experts can be selected and granted benefits such as awards, recognition from colleagues, small payments each time they share knowledge, and positive pathways for evaluation and promotion, with their performance linked to these benefits. In contrast, knowledge workers who hoard their knowledge and do not participate in knowledge sharing can be penalized.

2. Identifying points of mutual interest (bilateral)

In this regard, knowledge managers of automotive industrial companies can convene a meeting with representatives of working groups and, using brainstorming, prepare a list of areas where knowledge exchange would benefit both parties, and then, using electronic information exchange, create a shared knowledge repository where employees can exchange reports, articles, etc.

3. Fair treatment of employees (procedural justice)

The existence of procedural justice creates trust and commitment. Commitment and trust foster voluntary cooperation among employees of these companies, which in turn enhances performance and motivates employees to do more than merely perform their jobs.

4. Reducing hierarchical structures

As much as possible, existing hierarchical structures in companies should be reduced, and instead, emphasis should be placed on empowering structures that are effective in gaining the trust of employees and their organizational creativity.

Conclusion

The present research was conducted with the aim of investigating the effects of motivation (internal and external) on the knowledge sharing of automotive industry employees with regard to the mediating role of their organizational trust variable. The findings indicate that both internal and external motivation significantly affect knowledge sharing, and the effects of both were nearly equal and moderate.

In this research, the variables in the model accounted for 57% of the variance in the knowledge-sharing variable among employees of an automobile manufacturing company. Also, the theoretical reasoning and experimental results of this study indicated that the organizational trust variable has the role of a (partial) mediating variable in relation to the effect of the external motivation variable on employee knowledge sharing, and its VAF value was equal to 0.388. This value meant that 0.388 percent of the total effects of the extrinsic motivation variable on knowledge sharing of employees in automotive companies were explained through the mediating variable of organizational trust.

In the present study, there were limitations in conducting the research. First, there is a limitation in generalizing the results to other societies. The results of the present study can only be generalized to employees of automotive industrial companies, so caution should be exercised in generalizing the results of this study to other industries and companies. Secondly, the researcher was unable to control all other effective and interfering variables. Therefore, it is recommended for future research to address the effects of motivation (intrinsic and extrinsic) on knowledge sharing, the intervening role of organizational commitment, as well as the moderating role of personality traits.

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