

Organisational Trust and Tacit Knowledge Transfer

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ABSTRACT

This research has investigated the effect of the dimensions of Organisational Trust (OT) on the Tacit Knowledge Transfer (TKT) by the Willingness to Share (W2S) and the Willingness to Use (W2U) the Tacit Knowledge (TK) of public library employees. In terms of nature, the present study is an applied research that, using a descriptive-correlation method. The study sample includes 140 employees of public libraries in Chaharmahal Bakhtiari Province. As well as descriptive statistics, the Kolmogorov-Smirnov test, Pearson correlation coefficient, and regression test were used to analyse the data. There is a positive and significant relationship between Calculus-Based Trust (CBT) and employees' willingness to TKT. There is a positive and significant relationship between Knowledge-Based Trust (KBT) and employees' W2S and apply TKT. There is a positive and significant correlation between Identity-Based Trust (IBT) and employees' W2S and apply TK. The relationship between IBT and the desire to KS is stronger than the relationship between CBT and KBT. Therefore, IBT has a stronger effect than KBT and CBT on the tendency to KS. Employees in the IBT stage are more inclined to share and use TK than employees in the CBT and KBT stage. The TKT is an interactive process formed by the trust between the parties. The results of the current study show that OT has a positive and significant effect on the TKT of public library staff.

Keywords: Organisational trust; Tacit knowledge transfer; Tacit knowledge sharing; Public library

NOMENCLATURE

CBT	:	Calculus-Based Trust
IBT	:	Identity-Based Trust
KS	:	Knowledge Sharing
KT	:	Knowledge Transfer
KBT	:	Knowledge-Based Trust
OT	:	Organisational Trust
TK	:	Tacit Knowledge
TKT	:	Tacit Knowledge Transfer
W2S	:	Willingness to Share
W2U	:	Willingness to Use

1. INTRODUCTION

Mutual trust is one of the factors affecting the willingness to share knowledge in public libraries¹⁻³. Trust is formed in a context of intimacy and personal communication that facilitates the informal exchange of knowledge and increases the possibility of its sharing⁴⁻⁵. KS behavior of employees is directly or indirectly affected by various organisational factors^{2,6}. One of the important factors in the formation of job relationships and the Tacit Knowledge Transfer (TKT) in the organisation is trust. Trust is defined as the belief and desire of individuals to do the work, description, and decisions of other people. The study sample includes 140 employees of public libraries in Chaharmahal Bakhtiari Province. The OT

questionnaire Nguyen (2005) and the tacit Knowledge Sharing (KS) questionnaire Saporito (2000) were used. To investigate the effect of OT on TKT, this study has used the secure job relationship model Lewicki RJ, Bunker(1996)⁷ and the TKT model Holste and Fields (2010)⁸. The results of this study are expected to provide an empirical basis for increasing productivity and synergy in public libraries. The low level of KS in these libraries poses many challenges and has many ancillary costs, including the need for in-service training, repeated task, lack of constructive social capital, or weakness in emerging factors in providing innovative and desirable services. So, this research encourages library managers to look for ways to improve the current state of the organisation. In addition, this study offers a new approach to improving librarians' knowledge-sharing behavior based on OT.

2. LITERATURE REVIEW

2.1 Tacit Knowledge Transfer

TK can be considered as a set of experiences, skills, work perspectives, and value and mental systems within the individual that cannot be expressed and is not stored in any database, but localised in the human mind and his activities⁹. TK is generally transferred through social interactions known as KS¹⁰⁻¹².

2.2 Trust and Knowledge Sharing

Trust is one of the important variables in the use of KT

techniques in job relationships. Social interactions require trust to facilitate the transfer of information¹³. Trust increases employees' willingness to participate in KS¹⁴. Thus, a high level of trust positively affects the flow of knowledge between individuals and thereafter the organisation's database¹⁵. Several studies support a direct relationship between trust and KS¹⁶⁻¹⁷. Employees who trust their peers are more inclined to share their knowledge with others¹⁸. Trust also positively and significantly affects the KS and emotional and normative relationships. KS is partly mediated by the relationship between trust and emotional responses¹⁹.

2.2.1 Calculus-Based Trust

CBT is a perfectly logical factor based on counting the risk and benefits of a relationship; therefore, it is always considered as the first step in building a trust-based relationship. Components of CBT include punishment and reward²⁰. Considering the effect of it on employment relationships, the following hypotheses are proposed:

- H1a. CBT has a positive relationship with employees' W2S TK in job relationships
- H1b. CBT has a positive relationship with employees' W2U TK gained from job relationships.

2.2.2 Knowledge-Based Trust

KBT arises from the evaluation of the other party by the person. In this case, if the addressee has the desired characteristics, the person will trust him, otherwise, trust will not be formed. Considering the effect of KBT on job relationships, the following hypotheses are proposed:

- H2a. KBT has a positive relationship with W2S TK in job relationships
- H2b. KBT has a positive relationship with W2U TK gained from job relationships.

2.2.3 Identity-Based Trust

Personality theorists; consider IBT as an individual characteristic and it is defined as an idea, expectation, or

feeling that is rooted in a person's personality and depends on the initial psychological maturity of the person²¹. Tendency to knowledge sharing depends on how much people trust each other⁸. Different dimensions of trust have a positive and significant effect on employees' W2S knowledge²². Kremer, *et al.*, (2019)²³ concluded in their research that trust between employees is the main prerequisite for sharing knowledge and, consequently, increasing employee innovation. According to the effect of IBT on the TKT, the following hypotheses It is proposed:

- H3a. IBT has a positive relationship with W2S TKT in job relationships
- H3b. IBT has a positive relationship with W2U TKT gained from job relationships.

According to Lewicki and Bunker(1996)⁷, CBT becomes KBT because groups and individuals create environments of shared values and beliefs. But KBT may never become IBT. Accordingly, the hypotheses related to the occurrence of trust in employment relationships in this study are presented as follows:

- H4a: KBT is more strongly related to employees' W2S TK than sensitive trust
- H4b: IBT is stronger than KBT in W2S TK
- H4c: KBT has a stronger relationship with W2U TK than CBT
- H4d: IBT has a stronger relationship with W2U TK than KBT.

3. CONCEPTUAL MODEL

According to Lewicki and Bunker's model (1996), the present study examines the relationship between CBT, KBT, and IBT with the tendency to use and share TK of public library staff. The theory of reasoned action is a model for predicting behavioral intention. Therefore, in this research, it has been used to study the behavioral intention of public library employees to share knowledge as shown in Fig. 1.

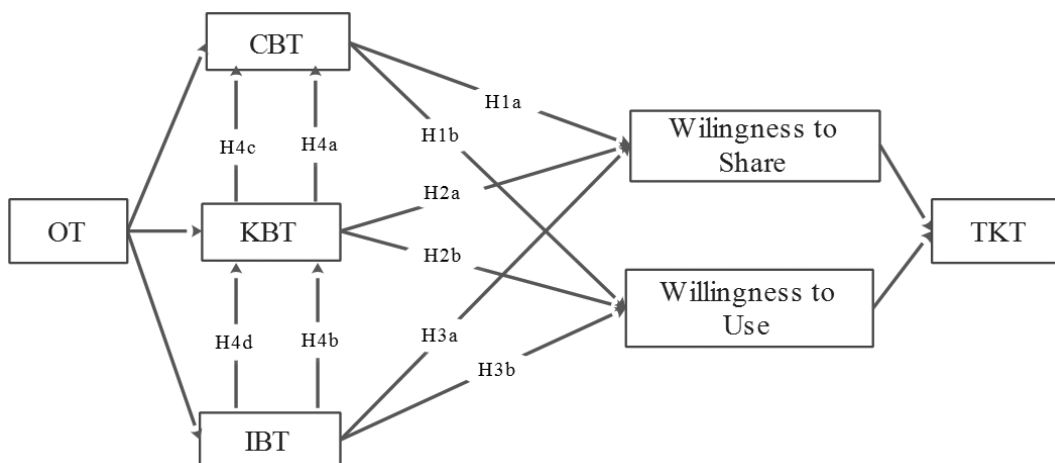


Figure 1. Conceptual model of research.

4. METHODOLOGY

The present study is applied research that has studied the relationship between OT and TKT of librarians of public libraries in Chaharmahal and Bakhtiari province in 2021 using a descriptive-correlation method. The sample size is 140 people, calculated based on Cochran's formula (Table 1). In this study, organisational trust calculation²⁴ questionnaire tacit knowledge transfer²⁵ questionnaire were used. The reliability of the questionnaire was assessed using Cronbach's alpha coefficient by SPSS software.

According to the calculated Cronbach's alpha, the questionnaire has high reliability.

Table 1. Distribution of research questions and Cronbach's alpha coefficients questionnaire items

Variable	Indicates	Q	Cronbach's alpha	Ref
OT	IBT	1-4	.89	Nguyen(2005)
	KBT	5-8		
	Trust	9-12		
TKT	W2S	13-20	.87	Saparito(2000)
	W2U	21-28		

5. FINDINGS

5.1 Descriptive Findings

Totally, out of 140 people in the study, 86 are men and 54 are women. The largest number in terms of education belongs to bachelors (94 participants). Most people (87 people) have degrees other than library and information science. In terms of work experience, 46 persons have between 5-10 years, 36 people have 10-15 years, and the remaining 32 people have more than 15 years, respectively.

5.2 Analytical Findings

- Examining the relationship between CBT in job relationships with the desire to share and use tacit knowledge.

There is a strong positive correlation between CBT and implicit KS ($r=0.744$; $P\text{-value}=0.002$). So, H1a is confirmed. Also, there is a significant and positive correlation between CBT and the use of TK ($r=0.847$; $P\text{-value}=0.009$). Therefore, the H1b is confirmed (Table 2).

- Investigating the relationship between KBT in job relationships with the desire to W2S and W2U TK.

Table 2. Calculate the level of significance between CBT, W2S, and W2U

Hypothesis	Regression test			Coefficient of correlation		
	Correlation	Sig	Sum of Sq	df	F	Sig
CBT→W2S	.744	.000	6.429	1	4.147	.002
CBT→W2U	.847	.000	14.518	1	3.882	.009

The data in Table 3 show that there is a significant relationship between KBT and TKS. H2a is therefore confirmed. According to the calculated correlation value (0.698), this

relationship is a strong one. Also, the correlation between KBT and W2U TK is significant. Therefore, the H2b hypothesis is confirmed. The calculated correlation value of 0.784 indicates a positive and strong relationship between KBT and the W2U TK.

Table 3. Calculate the level of significance between KBT, W2S, and W2U

Hypothesis	Regression test			Coefficient of correlation		
	Correlation	Sig	Sum of Sq	df	F	Sig
KBT→W2S	.689	.000	5.373	1	3.024	.008
KBT→W2U	.784	.000	9.066	1	5.195	.000

Considering the significance of regression test statistics ($F=3.024$; $P\text{-value}=0.008$), it is concluded that KBT is a predictor for implicit KS. Therefore, the H2c is confirmed. Similarly, results of the regression model for KBT and willingness to W2U TK ($F=5.195$; $P\text{-value}<0.001$) show that KBT predicts the tendency to W2U TK of employees. Based on this, the H2d is confirmed.

- Investigating the relationship between IBT with the desire to W2S and W2U of TK.

As depicted in Table 4, the correlation coefficient between IBT and TKS is significant and positive ($r=0.704$; $P\text{-value}<0.001$). H3a is therefore confirmed. Also, the correlation coefficient between IBT and W2U TK is positive and significant ($r=0.907$; $P\text{-value}<0.001$) and because this H3b is confirmed.

Table 4. Calculate the level of significance between IBT, W2S, and W2U

Hypothesis	Regression test			Coefficient of correlation		
	Correlation	Sig	Sum of Sq	df	F	Sig
IBT→W2S	.704	.000	8.140	1	3.571	.001
IBT→W2U	.908	.000	9.286	1	3.020	.008

According to the data in Table 4, the regression model confirms that IBT is a predictor for TKS ($F=3.571$; $P\text{-value}=0.001$). Therefore, H3c is confirmed. Also, the same goes right with IBT and the W2U TK ($F=3.02$; $P\text{-value}=0.008$). IBT predicts the W2U TK employees. Therefore, the H3d is confirmed.

5.3 Structural Equation Modeling

5.3.1 Evaluation of Factor Loading

After the theoretical formulation of the model, the model should be fitted, which provides general and detailed information about the model.

Based on the results presented in Table 5, the significance level of the model (0.091) is higher than the significance level of $\alpha = 0.05$. As a result, there is no significant difference

Table 5. Conceptual model fit indicators

Fit indexes	Measure	Scale	Result
χ^2 / df	44.251	df2	Optimal fit
p-value	.091	.05	Optimal fit
GFI	.974	.90	Optimal fit
AGFI	.939	.90	Optimal fit
RMR	.012	4	Optimal fit
TLI	.982	.90	Optimal fit
RFI	.932	.90	Optimal fit
CFI	.991	.90	Optimal fit
NFI	.966	.90	Optimal fit
IFI	.991	.90	Optimal fit
RMSEA	.035	.05	Optimal fit
PNFI	.483	.05	Relatively optimal fit

between the measured model and experimental data and the fitting model is suitable for the data. The result of dividing the test statistic by the degree of freedom is equal to 1.341 (less than 3 is desirable). The small values reported for RMR and RMSEA also confirm the appropriateness of the conceptual model and the relationships between it. The GFI, AGFI, TLI,

RFI, NFI, IFI, and CFI indices are also more than 0.9 and close to 1, which is another confirmation of the good fitness of the model. The PNFI index is also reported to be relatively fine, so all of them confirm the model.

The results of Table 6 report a significant level for all regression coefficients very close to zero and as a result, the relationships between them are significant.

5.3.2 Indirect Effects of Model Paths

KBT has a stronger relationship (0.847) with employees' W2S TK in job relationships than CBT (0.311). Therefore, the H4a is significant at the significance level of $\alpha = 0.05$. IBT has no stronger relationship (0.769) in employees' W2S TK in job relationships than KBT (0.847) and this hypothesis is not significant. Therefore, the H4b is not confirmed. KBT has a stronger relationship (0.640) than accounting trust (0.443) in employees' W2U TK. Therefore, the H4c is significant at the significance level of $\alpha = 0.05$. Also, IBT has a stronger relationship (0.692) than KBT (0.640) in employees' W2U TK. Therefore, the H4d is significant at the significance level of $\alpha = 0.05$.

Table 6. Fitted values of model parameters

Fit indexes	b	β	p-value	R ²	Result
Trust→CBT	1.636	.824	***	.512	Significant
Trust→KBT	.472	.591	***	.521	Significant
Trust→IBT	.602	.674	***	.684	Significant
CBT→W2U	.633	.443	***	.124	Significant
CBT→W2S	.635	.311	***	109	Significant
KBT→W2U	.540	.640	***	.078	Significant
KBT→W2S	1.389	.847	***	.445	Significant
IBT→W2U	1.040	.692	***	.523	Significant
IBT→W2S	.820	.769	***	.684	Significant
W2U→TKT	1	.621	***	.372	Significant
W2S→TKT	1	.760	***	.476	Significant

P < 0.001***

6. DISCUSSION

A low level of KS in public libraries causes problems such as increased overhead costs, the need for in-service training, repetitive work, reduced constructive social capital, or weakness in emerging factors in providing innovative and desirable services. Accordingly, efforts to increase OT can increase the W2S TK in individuals and W2U TK of employees to achieve organisational goals.

CBT organisations have employees who W2S and W2U TK. To build CBT, organisations must develop specific trust policies and procedures. According to the results of this study, CBT related to employees' W2S TK in professional relationships. CBT is the primary basis for building trust-based relationships. CBT includes laws, policies, and penalties for breach of trust.

According to the results of Fuller (2018)²¹, research, policies and the implementation of trust are factors that affect trust relationships. But²⁶⁻²⁷ believes that rewards and

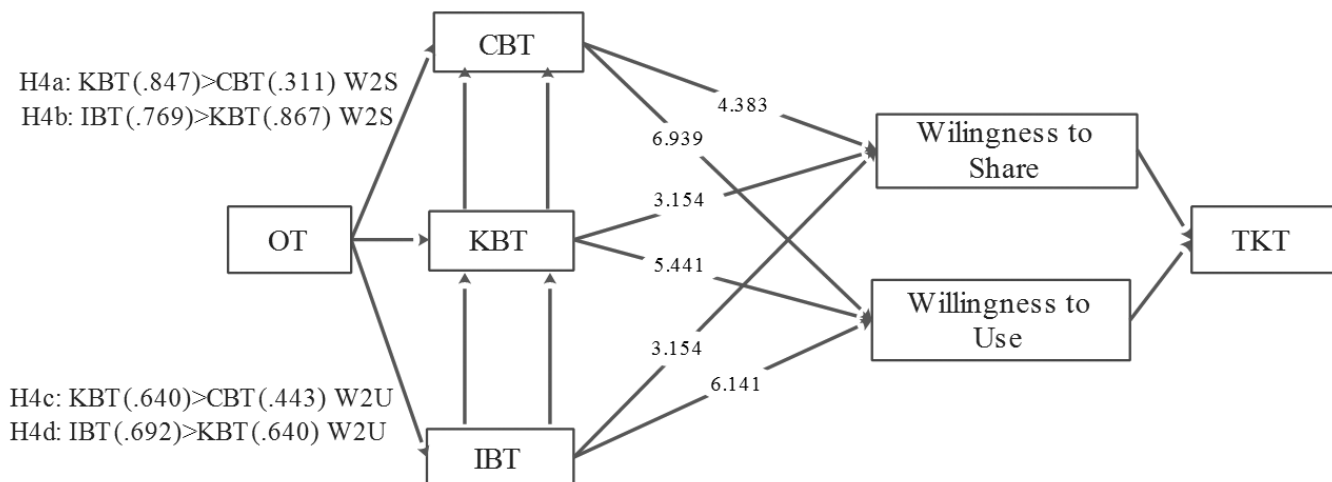


Figure 2. The final research model.

encouragement are not predictors of the relationship of trust in KS behaviors, so it contradicts the results obtained in this study. Because the formation of CBT related to the laws, policies, and penalties for breach of trust, the W2S and W2U TK influenced by rewards or punishments in the workplace. W2S TK leads to greater confidence in the W2U of TK in professional relationships.

KBT has a positive and significant effect on employees' W2S knowledge. The results of this study are consistent with the findings Dhanaraj, Lyles, Steensma and Tihanyi(2004)^{26,27}. The positive relationship between KBT and TKT has reduced uncertainty. This contradicts the findings of²⁸ that trust has no positive effect on KT.

Based on the results, IBT has a positive and significant effect on employees' W2S TK. IBT is based on the theory of reasoned action (rational action)²⁹. The findings of the present study show that IBT predicts the tendency to TK. In other words, IBT is directly related to the W2S and W2U knowledge.

The results of examining the relationship between research variables are displayed in the final model as shown in Fig. 2.

7. CONCLUSION

According to the results of the study, can be said that IBT has a stronger effect on the W2S than KBT and CBT. Employees in the IBT stage are more inclined to share and use TK than employees in the CBT and KBT stage. IBT is rooted in the emotional dimension of individuals. The results of studies³⁰ also show that benevolence is one of the main components of trust in sharing and applying knowledge in the organisation. According to the obtained results, it seems that focusing on IBT and strengthening the spirit of cooperation and benevolence can increase the W2S and the W2U of tacit knowledge of public library employees. Considering the positive effect of identity-based trust on the willingness of employees to share knowledge in public libraries, it is suggested to identify the factors of creating identity-based trust in future research.

REFERENCES

1. Biranvand, A.; Seif, M. & Khasseh, A. Knowledge sharing among Librarians in public libraries of Fars Province, Iran. *Libr. Philos. Pract. E-J [Internet]*, 2015. <http://digitalcommons.unl.edu/libphilprac/1259>. (Accessed on 28 May 2021).
2. Kaffashan, Kakhki M.; Hadadian, A.; Namdar, Joyame E. & Malakooti, Asl N. Understanding librarians' knowledge sharing behavior: The role of organisational climate, motivational drives and leadership empowerment. *Libr. Inf. Sci. Res. [Internet]*, 2020, **42**(1), 100998. <http://www.sciencedirect.com/science/article/pii/S0740818819301537>. (Accessed on 20 May 2021)
3. Biranvand, A.; Golshani, M.; Akbarnejad, R. & Rafiee, Z. The Role of organisational trust in the transfer of tacit knowledge (Case study: Public libraries of fars province). *Res. Inf. Sci. Public Libr. [Internet]*., 2021, **27**(2). <http://publij.ir/article-1-2327-en.html> (Accessed on 28 October 2021).
4. Ziemba, E. & Eisenhardt, M. Prosumers' eagerness for knowledge sharing with enterprises—a Polish study. *Online J. Appl. Knowl. Manage.*, 2014, **2**(1), 40–58.
5. Purwaningsih, M.; Purwandari, B.; Mishbah, M. & Putra, P.O.H. Collaborative commerce model for SMEs: A knowledge and resources sharing mechanism for co-creation. *DESIDOC J. Libr. Inf. Technol.*, 2022, **42**(2). doi: 10.14429/djlit.42.2.17294
6. Singh, Gupta S.; Busso, D. & Kamboj, S. Top management knowledge value, knowledge sharing practices, open innovation and organisational performance. *J. Bus. Res. [Internet]*., 2021, **128**, 788-98. <https://www.sciencedirect.com/science/article/pii/S0148296319302930>. (Accessed on 28 may 2021).
7. Lewicki, R.J. & Bunker, B.B. Developing and maintaining trust in work relationships. *Trust Organ Front Theory Res.* 1996, **114**, 139.
8. Holste, J.S. & Fields, D. Trust and tacit knowledge sharing and use. *J. Knowl. Manage.*, 2010. doi: 10.1108/13673271011015615
9. Balogun, A.G. & Adetula, G.A. Willingness to share and use tacit knowledge among employees in team-based organisations: Are the dimensions of interpersonal trust facilitators. *Inf. Knowl. Manage.* 2015, **5**(7), 100-7.
10. Agarwal, N.K. & Islam, M.A. Knowledge management implementation in a library: Mapping tools and technologies to phases of the KM cycle. *VINE.*, 2014, **44**(3), 322-44.
11. Kennedy, J.; Gubbins, C. & Buckley, F. How do individuals affect the process of managing tacit knowledge. *In Proceedings of the European Conference on Knowledge Management.*, 2012, 21411–1417.
12. Shao, Z.; Feng, Y.; Wang, T. & Liu, L. The impact mechanism of charismatic leadership on individual's tacit knowledge sharing. *WHICEB 2016 Proc.*, 2016, <https://aisel.aisnet.org/whiceb2016/> (Accessed on 22 May 2022).
13. Kaffashan, Kakhki M.; Rajabi, M.; Naji, A.; AsemanDoreh, Y. & Harati, H. The effect of job and motivation on the knowledge sharing of librarians in public libraries. *Public Libr. Q.*, 2020, **39**(1), 17-36. doi: 10.1080/01616846.2019.1585218
14. Cabrera, E.F. & Cabrera, A. Fostering knowledge sharing through people management practices. *Int. J. Hum. Resour. Manage. [Internet]*., 2005, **16**(5), 720-35. doi: 10.1080/09585190500083020
15. De Long, D.W. & Fahey, L. Diagnosing cultural barriers to knowledge management. *Acad. Manage. Perspect. [Internet]*., 2000, **14**(4), 113-27. <https://journals.aom.org/doi/abs/10.5465/ame.2000.397982> (Accessed on 22 May 2022).
16. Ho, L-A.; Kuo, T-H. & Lin, B. How social identification and trust influence organisational online knowledge sharing. *Internet Res [Internet]*., 2012 doi: 10.1108/10662241211199942
17. Lin, M-J.J.; Hung, S-W. & Chen, C-J. Fostering the determinants of knowledge sharing in professional virtual communities. *Comput. Hum. Behav.*, 2009, **25**(4), 929-39. <https://www.sciencedirect.com/science/article/pii/S0747563209000417>

- (Accessed on 25 October 2021)
18. Hejase, H.J.; Haddad, Z.; Hamdar, B.; Ali, R.A.; Hejase, A.J. & Beyrouiti, N. Knowledge sharing: Assessment of factors affecting employee' motivation and behavior in the lebanese organisations. *J. Sci. Res. Rep.*, 2014, 1549-93. <https://www.journaljsrr.com/index.php/JSRR/article/view/20954>. (Accessed on 13 June 2021).
 19. Curado, C. & Vieira, S. Trust, knowledge sharing and organisational commitment in SMEs. *Pers. Rev. [Internet].*, 2019, <https://www.emerald.com/insight/content/doi/10.1108/PR-03-2018-0094/full/html>. (Accessed on 18 March 2022).
 20. Zhao, N.; Shi, Y.; Xin, Z. & Zhang, J. The impact of traditionality/modernity on identification-and calculus-based trust. *Int. J. Psychol.*, 2019, **54**(2), 237–246.
 21. Fuller, L.P. Trust: A pathway to overcome tacit knowledge transfer barriers. Trident University International; 2018.
 22. Kim, E. & Park, S. Employees' perceptions of organisational learning: The role of knowledge and trust. *Kybernetes [Internet].*, 2020. <https://www.emerald.com/insight/content/doi/10.1108/K-03-2020-0169/full/html> (Accessed on 1 March 2021).
 23. Kremer, H.; Villamor, I. & Aguinis, H. Innovation leadership: Best-practice recommendations for promoting employee creativity, voice, and knowledge sharing. *Bus. Horiz.*, 2019, **62**(1), 65-74. <https://www.sciencedirect.com/science/article/pii/S0007681318301459>. (Accessed on 1 March 2021).
 24. Nguyen, T.V. Learning to trust: A study of interfirm trust dynamics in Vietnam. *J. World Bus.*, 2005, **40**(2), 203-21. <https://www.sciencedirect.com/science/article/pii/S1090951605000167> (Accessed on 12 July 2021).
 25. Saporito, P. Three dimensions of trust in bank-small firm relationships: Instrument development and preliminary examination of the production of trust by various organisational structures. *Front Entrep. Res.*, 2000.
 26. Dhanaraj, C.; Lyles, M.A.; Steensma, H.K. & Tihanyi, L. Managing tacit and explicit knowledge transfer in IJVs: The role of relational embeddedness and the impact on performance. *J. Int. Bus. Stud.*, 2004, **35**(5), 428–442.
 27. McKnight, D.H.; Choudhury, V. & Kacmar, C. Developing and validating trust measures for e-Commerce: An integrative typology. *Inf. Syst. Res.*, 2002, <https://pubsonline.informs.org/doi/abs/10.1287/isre.13.3.334.81>. (Accessed on 19 April 2021).
 28. Shah, S.R. & Mahmood, K. Contributing factors in knowledge sharing for performance of university students in teachers' training programs. *Libr. Manage. [Internet].*, 2016, doi: 10.1108/LM-09-2016-0067.
 29. Fishbein, M. & Ajzen, I. Belief, attitude, intention and behavior: An introduction to theory and research., 1975. <https://trid.trb.org/view/1150648> (Accessed on 22 October 2021).
 30. Yuan, X.; Olfman, L. & Yi, J. How do institution-based trust and interpersonal trust affect interdepartmental knowledge sharing? Information diffusion management and knowledge sharing: Breakthroughs in research and practice. IGI Global, 2020, 424–451.

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