

IMPACT OF KNOWLEDGE PRACTICES ON INNOVATION: THE ROLE OF EMPLOYEES' INTENTION TO STAY AND RECOGNITION

Nida Kamal

Bahria Business School, Bahria University Islamabad, Pakistan

Hina Samdani

Bahria Business School, Bahria University Islamabad, Pakistan

Muhammad Awais Mehmood

Bahria Business School, Bahria University Islamabad, Pakistan

Qaiser Rashid Janjua

*Air University School of Management, Air University
Islamabad, Pakistan*

Received: 28 Feb 2022

Revised: 17 Mar 2022

Accepted: 31 Mar 2022

ABSTRACT

Purpose: Building upon a human-centered approach, knowledge management considers organizations to be complex systems that spring from the unique organizational contexts in which they are developed. The aim of the present study was to empirically investigate how knowledge practices impact innovation by inquiring into the employees' intention to stay in the organization and the role of employee recognition.

Design/Methodology: Data were collected from 275 middle and upper tier managerial employees of telecom, information technology and manufacturing industry of Pakistan through an online survey. Using the Smart PLS 3.0, the study carried out statistical analysis of survey data.

Findings: This study found that knowledge creation, sharing and application are important factors to be taken into account within social or organizational settings. It also revealed that knowledge proactive initiatives, the employees' intention to stay and the recognition of employees in the organization can improve their innovative output in the firm.

Implications: The findings of the research reveal the longer orientation that can be developed in employees to remain within the organization and contribute to innovation.

Keywords: *Knowledge Practices, Employee Intention, Innovation, Employee Recognition*

Paper type: Research Paper

NBR

NUST Business Review

© NUST Business School

NBR22022801

Vol. 03 (02)

01, 2022

pp. 1-15

DOI:

[https://doi.org/10.37435/
NBR22022801](https://doi.org/10.37435/NBR22022801)

This work is licensed
under a Creative
Commons Attribution
4.0 International

License.



INTRODUCTION

In the wake of a growing interest in the knowledge economy and management, it is imperative to look upon the latter's efficacy in terms of implementation, particularly within the context of developing economies (Ahmad, Shafique, & Kalyar, 2021). The economy of knowledge pertains to salient features of the organization globally (Drucker, 2002; Sharma, 2004; Mauser, Klepper, Rice, Schmalzbauer, Hackmann, Leemans, & Moore, 2013; Hislop, Bosua & Helms 2018). Knowledge-based-theory (Grant, 1996), making its conceptual grounds from the resource-based-theory (Grant, 1991), clearly views knowledge as an organization's resource, thus making it the most critical asset in the rapidly changing global and economic environment (Blome, Schoenherr, & Eckstein, 2014; Kozlenkova, Samaha, & Palmatier, 2014; Nonaka, & Toyama, 2015).

It is an emerging challenge, as categorized by Jennex, Smolnik and Croasdell (2009) and Aiken (2016), for knowledge acquirement or aquisition in terms of creation, distribution, conversion and effective implementation. These processes are becoming essentials for the learning organizations. The highly imperative technological progressions is leading the environment of the firms to acknowledge the extent of tangibility and adaptability pertaining to knowledge management (Mueller, 2012; Rouzbehani, 2017). Knowledge practices that are effective within an organization are evolving as a substantial factor for the robust and dynamic organizations that are prevailing in the current era, acknowledging the realization of knowledge-based-theory by the corporate world (Chang, 2005; Kianto, Andreeva, & Pavlov, 2013; Villar, Alegre, & Pla-Barber, 2014; Heisig, Suraj, Kianto, Kemboi, Perez Arrau, & Fathi Easa, 2016).

Organizations equipped with sharper learning environments strive to be dynamic and to continue operating with skilled manpower (Senge, 1990) in relation to the extrinsic performance aligning with the cognitive caliber of the human resource. It can be a great challenge to assess whether the practices that are taking place currently in the organization are regarded as knowledge practices (Zutshi et al. 2021). These should not be accepted as a normal part of the working environment. While talking about knowledge practices in an organization, Knowledge Creation (KC), Knowledge Sharing (KS) and Knowledge Application (KA) are considered as process flow of knowledge management (Anantatmula, 2008; Szenes, Tilakaratna, & Maton, 2015; Inkinen, 2016; Turner, 2018). This also revolves around adaptive learning behavior that makes it possible for the human capital to work in dynamic organizations so their learning capacity can be improved (Sharma, 2004; Chiva, Ghauri, & Alegre, 2014; Marsick & Watkins, 2015).

Employees tend to align their goals and achieve them with the organization's strategic roadmap and their self-driven learning improvement (Hanken, 2014). Sousa (2006) explains that procedural learning may boost knowledge creation. This indicates that knowledge creation can be instrumental in improving the learning behaviour of the organization (Demir, Budur, Omer & Heshmati, 2021).

Senge (1990) states that the performance of the employees can be improved in a learning organization. This becomes a contributing factor towards attaining personal mastery. Castro and Verde (2011) led an empirical analysis that relates to firm's innovative outcome and knowledge management practices within a Spanish firm. The results depicted substantial evidence to support the relationship. This signifies the positive effect that extensive accessibility of knowledge management and its application can have upon the innovated performance outcomes.

Currently as advocated by Gloet and Samson (2022) the context as well as the opportunity set of knowledge management and innovation are constantly in change process. Therefore, it is important to study the role of knowledge practices on innovative behaviors of employees. Similarly in their study, Singh and colleagues (2021) also suggest that it is important to understand and empirically test the role of knowledge practices on innovative behavior of employees in lieu of growing domains of both research and practice. The present study has been designed to address the above gaps with a focus on inquiring into the impact of knowledge practices on innovative employee behavior in the service sector

In this study, an attempt has been made by researchers to lay emphasis on managing knowledge practices and adapt them in accordance with the learning organizations. Further, employee recognition has been taken as a moderator to assess its impact on the intention of employees to continue working for a longer period in knowledge intensive organizations. The study strengthens the theoretical grounds available in the literature of knowledge-based-theory, whereby knowledge practices can ensure the employees' commitment to an organization (Sharma & Goswami, 2009) when their efforts are being acknowledged. The intention is increased by achieving high level of knowledge regarding motivation that stems from both new and exististing knowledge practices.

In the current research, knowledge practices are viewed as consisting of not only technological developments in organization but also behavioral change reflected in the organizational practices as knowledge practices. These must focus on making the end user feel that it will make their working environment more flexible and efficient instead of making it more tech-intesivy (Omotayo, 2015; Hislop, Bosua & Helms, 2018). At this stage, paving attention to the management of knowledge practices is relatively more important than information management (Singh, 2007; Frey & Osborne, 2017).

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Knowledge Creation

Nonaka and Krogh (2009) describe knowledge creation in an organization as the key element of their knowledge system. This is achieved by making knowledge available and further enhancing it for knowledge based outcome. Sharma and

Goswami (2009) define knowledge creation as generation or creation of organization's reconfiguring capability and capacity to learn beyond the standard routine task. Lu and Tsai (2004) emphasize the importance of knowledge creation to inhibit current knowledge from becoming redundant quickly. Furthermore, they lay focus on transforming new learnt processes, behavior and experiences pertaining to the human capital in a documented form while ensuring the documentation of methods, procedures and practices properly. The cognitive aspect that human beings adopt to deal with learning and change, facilitates the constant learning and improvement relating to extremely structured knowledge (Rahe, 2009). The effect regarding newly generated knowledge enhances the capacity of employees concerning the innovative procedures where this innovative approach of conducting work enables the intrinsic motivation of the employee to stay connected with the firm. Evolving innovative technologies can also help the management to analysis the capacity and other strong areas of expertise in the employee.

Knowledge Sharing

Knowledge sharing seems to be an important component of knowledge management, which concerns the creation and usability of value from organizational knowledge (Jasimuddin, Klein & Connell, 2005). Explicit knowledge that is acquired from outside the organization and the implicit knowledge that is formulated within the organization is described as hard mechanism (explicit) and shift mechanism (tacit) respectively for competency building by Jasimuddin (2008). This knowledge is either acquired through adaptive learning or general learning (Sharma, 2004; Nan, 2008) and is additionally converted through regular technological tools of the organization that include intranets, enterprise resource planners, dashboards, content management sites, newsletters and much more. This is also termed as the business transaction process (Barachini, 2009). In this way it enables learning, enhances organizational culture, trust and less fear towards innovativeness.

Knowledge Application

Knowledge application is made viable via managerial practices and ICTs that are adopted by the organization. According to Martinsons and Davison (2007), triumph of knowledge management is centered around the information system by building a comprehensive knowledge management system. Applicability of knowledge is probable through three means: i) a standalone software for specific functional area or Enterprise Resource Planning (ERP) deployments or Management Information System (MIS); (ii) implementation of knowledge promoting practices from the top management; and (iii) the sharing and access of knowledge. These Knowledge applications effects positively on the intention of employees to stay with the organization because of the sophisticated working systems and learning environment. Self-paced e-learning, Massive Open Online Courses (MOOC) can play a vital role in the capacity building of the employees

when it comes to training them on the newly deployed ICT tools. Due to the more dynamic and constantly changing working environment, it is always beneficial to add applications to perform more in less time, and once its realized by the employees their behaviour towards performing their job is more effective and positive.

Employees' Intention to Stay in an Organization

A multitude of firms have specifically emphasized the problem of high turnover of the personnel. According to Grant (1996), only the knowledge in the organizations is the biggest asset that is to be managed in the current times. Organizations in todays age of globalisation, despite paying all their attention to digitisation, lucrative reward and recognition system, are not able to retain human resource and leading towards loss of implicit knowledge (Regts & Molleman, 2013; Schwab, 2017; Dess, McNamara, Eisner & Lee, 2019). These knowledge practices enhance the performance capacity of human resource by motivating them to assemble their intention regarding commitment towards the organization (Birasnav, 2014; Mustapha, Ahmad, Uli & Idris, 2010). This enhances their autonomy towards the work and thinking out of the box (Nonaka & Takeuchi, 1995; Switzer, 2008). Employees' intention to leave the organization negatively impact on the knowledge environment (Udechukwu & Mujtaba, 2007; Fidalgo & Gouveia, 2012; Katsikea, Theodosiou & Morgan, 2015).

However, learning organizations equipped with intelligent systems, freedom regarding achieving innovative methods and knowledge creation of working procedures are believed to enhance employee's skills and competencies, leading towards higher retention rates. Through employee's perception of self-convincing, organizations are able to attain their inclination regarding retention and knowledge transformation (Switzer, 2008). Whereas in the body of knowledge, the major factor has been kept upon the outcome of the employee and how they feel towards it. Employee turnover is the outcome of the employee's intention and is a negative construct. 'Employee's intention to stay' has been considered as a positive construct and 'knowledge practices and intervention of innovation' as an enabler and enhancer of this intention. Furthermore, it can be a strong rationale for improving commitment of employees in association with the organization.

Innovation

Nonaka and Krogh (2009) argue the consequences of knowledge practice and its impact on innovation by stating that "the ultimate outcome of organizational knowledge creation is product and process innovations" (p. 646). Similarly, Watanabe and Senoo (2010), state knowledge management as an inception business strategy that is implemented in the firms resulting into a highly positive effect on firm's and individual innovation (Ashesh & Maheshwari, 2008). While discussing human capital management in relation to hiring talented manpower, it is always considered that individuals who have higher intelligence qotent,

better intrinsic skill and motivation are hired for benefit of the organization. Schiuma, Carlucci and Lerro (2012) endorse “workers” as one of the main constituents of the organization that bring about business success. Seleim and Khalil (2011) looks at knowledge management as a tool that enables employee satisfaction and improved innovation. Andreeva and Kianto (2012) and Demarest (1997) state that in the presence of innovation and supporting environment, the employee can easily conceive and adapt the innovative mechanism of working. Cognitively, the employee will not only own the business process but also consider it as her own success and psychologically earn the feel of achievement and learning. Therefore, the enabled knowledge environment generates innovation.

Employee Recognition – Organizations around the globe always compete with each other to gain competitive advantage. To achieve this, one of the critical element organizations have is their human resource. The efficiency and validity of organization is basically dependent upon the efficiency of the employee. The productivity of the employee effects the organizational performance. The aim of organizations is to retain the employees who have skills and play important role to achieve their financial goals. For this purpose, talented employees need recognition (Inuwa, 2016). Employee recognition is considered as the acknowledgement of an employee or set of employees for their accomplishment, efforts and hard work (Dalle & Hastuti, 2017). These efforts are in line with the values and goals of organization (Brun & Dugas, 2008). Past research shows that employee performane enhances due to employee recognition (Hussain, Khaliq, Nisar, Kamboh, & Ali, 2019). As noted by LePine and Van Dyne (1998, p. 865): “Innovation begins with recognition and generation of novel ideas or solutions that challenge past practices and standard operating procedures”. This finding is also supported by Khan (2020) who confirmed that training and brainstorming, the ability of an employee to think out of the box, employee competencies and recognition for innovative employees to have a positive correlation with innovation.

The literature indicates that there is a substantial relationship amongst the individual and firm’s innovation that is affected by knowledge management and particular knowledge practices in the organization (Ahmed & Khalil, 2011; Lam & Ford, 2010; Chen, Sun & MCQueen, 2010; Jasimuddin, 2008; Beesley & Cooper, 2008). There is considerable literature evidence that reinforces the effect recognition policies and strategies have on employee’s job performance (Mustapha, Ahmad & Idris 2010; Lam & Ford, 2010; Fidalgo &Gouveia, 2012; Iyer& Ravindran, 2009; Nonaka & Takeuchi, 1995). Since knowledge-based theory of the firm claims that knowledge-based resource, intellectual capital, is a central factor contributing to sustainable competitive advantage via lower cost, innovation and creativity, efficiencies and customer benefits and considered as a whole organisational performance .The knowledge based theory also reflects on an organization’s need of integration and coordination of employees that practice learning (Kogut & Zander, 1992). Keeping in view the Knowledge based theory,

the process of knowledge management stimulates the documentation and application of knowledge in order to encourage, support and nurture innovation in organizations (Santoro, Ferraris, Giacosa, & Giovando, 2018).

H1: Employee's intention to stay in an organization mediates the relationship between Knowledge Creation and Innovation.

H2: Employee's intention to stay in an organization mediates the relationship between Knowledge Sharing and Innovation.

H3: Employee's intention to stay in an organization mediates the relationship between Knowledge Application and Innovation.

H4: Employee recognition moderates the relationship between Employee's intention to stay in an organization and Innovation

Thus the theoretical basis suggests that Employee intention, to stay for a prolonged duration, is positively effected by job satisfaction that results in improved perception of the employees as indicated in Threoretical model given below:

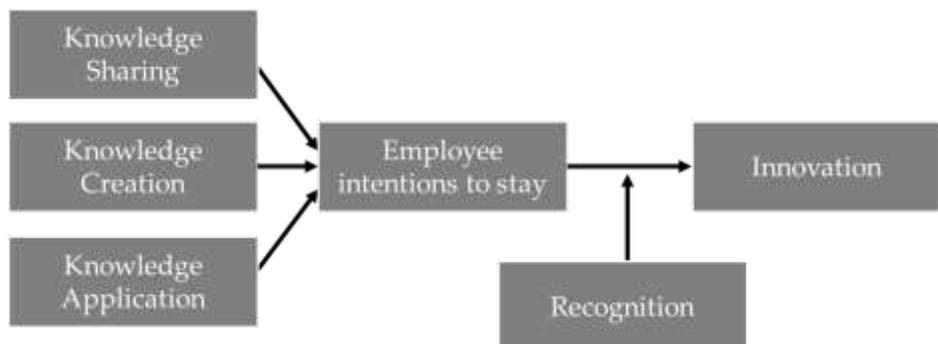


Figure 1: Conceptual Framework

METHODS

The adapted structured questionnaire used to collect data from respondents was validated by 5 academicians and professionals. Employee Intention was measured using the scale by Meyer, Allen and Smith (1993) and the recognition instrument was adapted from Ewool, Azinga and Kamil (2021). The innovation instrument was adapted from Siegel and Kaemmerer (1978) and the knowledge practices were adapted from Botha (2005). All the instruments were based on a five-point Likert Scale ranging from 1 "Strongly Disagree" to 5 "Strongly Agree".

The population of the study included the managerial level employees of service organizations. A total sample of 275 was selected by using the thumb of rule by Green (1991). Non-probability Convenience sampling technique was used in the study to select the respondents for data collection. The structured questionnaires

were distributed on the basis of organizations offering services such as IT, Telecom and FMCG through online data collection forms.

A total number of 275 reponses were collected after floating 400 questionnaires, showing a 68.7% reponse rate. The data was collected after face and content validity of the instruments had been checked. The reliability of the instrument was checked and found to be satisfactory having Cronbach alpha values within the range.

Table 1: Demographic information

Item	No. of Respondents	Percentage (%)
Gender		
Male	198	72
Female	77	28
Age		
20-29	143	52
30-39	69	25
40-49	41	15
50-59	22	8

A sample of 275 respondents out of 400 showed adequacies on the KMO value of 0.91. Of the 275 respondents, 52% were from the age of 20-29, 25% from the age of 30-39, 15% respondents from the age group of 40-49 and 8% from the older age group of working professionals i.e., 50-59. 28% of the respondents were female and 72% of them were male.

Validity and Reliability

The validity is identified by comparing CR and AVE values obtained from the construct. The CR values should be greater than the AVE values. These results reflect that all CR values were higher than AVE values for all the constructs. Cronbach Alpha, as a measure of internal consistency, identifies the inter-item consistency and reliability. The table above reflects the Cronbach alpha values of all the variables of this study which range from 0.7-0.9. To establish the discriminant validity the Heterotrait-monotrait (HTMT) criterion analysis was used. Table 2 below reflects the values through analysis as suggested by Hensler, Ringle, & Sarstedt (2015). The HTMT 0.85 criteria reflects that the values are in range and establishes discriminant validity of all the constructs.

Table 2: Summary of Validity and Reliability

Variable	CR 0.7-0.9	AVE >0.50	Chronbach α 0.7-0.9
Application	0.884	0.562	0.842
Creation	0.955	0.702	0.945
Employee Intention	0.921	0.573	0.902

Innovation	0.883	0.506	0.842
Recognition	0.827	0.502	0.748
Sharing	0.894	0.553	0.858

Table 3: Heterotrait-monotrait (HTMT) Analysis

	1	2	3	4	5	6
1. Application	-					
2. Creation	0.535	-				
3. Employee Intention	0.655	0.543	-			
4. Innovation	0.798	0.503	0.801	-		
5. Recognition	0.709	0.629	0.785	0.801	-	
6. Sharing	0.843	0.513	0.666	0.829	0.716	-

Table 4 firstly depicts the direct effects to indicate the effect of knowledge practices and innovation, as hypothesized. It reflects that the Knowledge practices such as the knowledge creation and knowledge sharing have a significant and positive direct effect on the employee's intention to stay in the organization. However, application of the knowledge does not particularly depict the employee's intention to stay in that organization, as employees who have skills and knowledge tend to apply their knowledge in whichever firm, they are employed in.

Mediation is tested by the bootstrapping method as depicted in table 4 above. The path coefficients of the indirect path, t-values and p values reflect that employee intentions to stay in an organization, positively mediate the relationship between knowledge creation and innovation. Similarly, employee intentions to stay in an organization positively mediate the relationship between knowledge sharing and innovation. It is pertinent to note that that the results of employee intentions to stay in an organization, mediating the relationship between knowledge application and innovation, were found to be insignificant. The result shows that employee intention and knowledge practices share an important relation, however, the relationship between knowledge application and employee intention is weak. This is the reason why knowledge creation and knowledge sharing had a more powerful affect. In this way, knowledge creation from the internal resources of the organization, and sharing fulfils the requirements of the knowledge procedures. Further, acquisition is made via a learning perspective and SECI mechanism, whereas external sources are not highly imperative, thus supporting Barachini's (2009) study.

Table 4: Hypotheses Testing

Hypotheses	B	SD	t	p
Application -> Employee Intention	0.146	0.144	1.011	0.313
Application -> Innovation	0.053	0.081	0.660	0.509
Creation -> Employee Intention	0.276	0.052	5.283	0.000
Creation -> Innovation	-0.057	0.026	2.151	0.032
Employee Intention -> Innovation	0.834	0.108	7.719	0.000
Recognition -> Innovation	0.022	0.124	0.174	0.862
Sharing -> Employee Intention	0.310	0.151	2.059	0.040
Sharing -> Innovation	0.129	0.090	1.431	0.153
Application -> Employee Intention -> Innovation	0.122	0.127	0.954	0.340
Creation -> Employee Intention -> Innovation	0.230	0.054	4.275	0.000
Sharing -> Employee Intention -> Innovation	0.259	0.126	2.059	0.040
Moderating Effect 1 -> Innovation	0.026	0.019	1.376	0.170

As an outcome of the moderation analysis, which was not supported as shown in table 4, it can be seen that employee's intentions were most impacted by the mediating effect than the moderation of employee recognition. According to table 4, it can be understood that employees show better results and motivation to work if they are working in a knowledge-based environment, as it creates more learning-based atmosphere for all. Many employees get to learn new skills, which leads to growth in the organization hence gives every employee an opportunity to move forward and enhance employee loyalty for the organization in the long run.

DISCUSSION

Knowledge practices are considered imperative in understanding the individual dynamics of the employees. It can be inferred that knowledge practices will aid in developing operational human resource procedures that can help in retention of employees and ensure alignment of employee's goals and that of the organization. In the context of Pakistan, the development of a knowledge culture, environment and application of knowledge practices has yet to make a clear impact. The mechanism for recognition is developed, but the employees working in the knowledge organizations appreciate the learning pace and their recognition in terms of acknowledgement and association of achievement with their tags. The rejection of moderation hypothesis clearly indicates the lack of reliance on recognition among the employees as one of the major factors in Pakistan.

Theoretical and Managerial Implications

Theoretically, the study adds to the literature of knowledge management and more precisely expands the nomological network of knowledge practices. It plays an important role in expanding the theoretical literature by laying and supporting

the foundation of its framework on knowledge-based-theory (Grant, 1996) while driving its conceptual grounds from the resource-based-theory (Grant, 1991), which are considered to be landmark theories in social sciences. It further contributes to the validity of instrument for knowledge practices effecting the intention of employees to stay.

From this study, it can be inferred that organizations may utilize the current resources that are expended on knowledge practices and their implementation. In this way benefits can be acquired through effective management of present patterns. Knowledge-based operations and knowledge practices are highly significant for running operations to ensure practice oriented and highly dynamic organizations where improved technology is at the center. Therefore, the findings are not applicable to the government sector organizations. From this study, it can be concluded that knowledge creation and sharing are practices that not only have a significant impact on amplifying the innovativeness of the work procedures but also positively enhance an employee's empathy and good will. This relates to employees taking a keen personal interest in enhancing the efficiency and improvements pertaining to the organization. This helps in analyzing the amount of work needed in the identification process of value creation and methods of improving the managerial applicability in terms of knowledge management practices and the roles that can arise from it.

Future Research and Limitations

This study is bounded by certain limitations. In view of the scope of the study, the present research only explores creation, sharing and application for measuring knowledge practices. Future studies may include knowledge capture and knowledge access along with knowledge creation, sharing and application in order to measure knowledge practices. Furthermore, this study did not investigate other variables which may be antecedents of innovative behavior or of employees such as perceived organization fit. In future studies, researchers may incorporate perceived organization fit in framework to learn its impact on innovative behavior of employees. This study focused on recognition as moderator. Follow up studies may study the impact of management of innovation relationship as moderator on the given relationship. Last but not least, as this study focuses on knowledge workers in IT, telecom and FMCG, this is a limitation and limits the generalization of findings to other groups of knowledge workers. Future studies may be carried out in higher education to understand the impact of knowledge practices on faculty.

REFERENCES

- Ahmad, B., Shafique, I., & Kalyar, M. N. (2021). A moderated mediation model of the association between coworker social undermining and knowledge hiding. *VINE Journal of Information and Knowledge Management Systems*. Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/VJIKMS-03-2020-0051>

- Anantatmula, V.S (2008). Leadership role in making effective use of KM. *VINE*, 38(4), 445-460.
- Andreeva, T., & Kianto, A. (2012). Does knowledge management really matter? Linking knowledge management practices, competitiveness and economic performance. *Journal of knowledge management*, 16(4), 617 - 636.
- Ashesh, G. & Maheshwari, S. (2008). Innovation-Driven Cultural Intelligence: An Enabler in an Organization. *GJBM*, 2(2), 103-111.
- Barachini, F. (2009) Cultural and social issues for knowledge. *Journal of Knowledge Management* ,13(1) 98 - 110.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Beesley, L. G., & Cooper, C. (2008). Defining knowledge management (KM) activities: towards consensus. *Journal of knowledge management*, 12(3), 48 - 62.
- Botha, D. F. (2005). Towards an instrument for surveying knowledge management practices. *South African Journal of Business Management*, 36(1), 1-6.
- Chen, J., Sun, P. Y., & McQueen, R. J. (2010). The impact of national cultures on structured knowledge transfer. *Journal of knowledge management*, 14(2), 228 - 242.
- Demir, A., Budur, T., Omer, H. M., & Heshmati, A. (2021). Links between knowledge management and organisational sustainability: does the ISO 9001 certification have an effect? *Knowledge Management Research & Practice*, 1-14.
- De Normalisation, Committe E and Normung EKF (2004) European Guide to good Practice in Knowledge Management-Part 3: SME Implementation, In CEN Workshop Agreement CWA14924-3.
- Drucker P (2002) *Knowledge Management*. Harvard Business Review: Common Wealth Publishing Group, Taipei.
- Ewool, E. M., Azinga, S. A., & Kamil, N. M. (2021). The Influence of Employee Recognition on Employee Engagement: The Moderating Role of Salary Satisfaction. *International Journal of Academic Research in Accounting, Finance and Managment Science*, 11(3), 433–456
- Fidalgo, F. & Gouveia, L.B. (2012). Employee Turnover Impact in Organizational Knowledge Management:The Portuguese Real Estate Case. *Journal of Knowledge Management Economics and Information Technology* ,2(2) 1-16.
- Fong, P.S.W. & Choi, S.K. (2009). The processes of knowledge management in professional services firms in the construction industry: a critical assessment of both theory and practice. *Journal of Knowledge Management*, 13(2), 110 - 126.
- Gloet, M., & Samson, D. (2022). Knowledge and innovation management to support supply chain innovation and sustainability practices. *Information Systems Management*, 39(1), 3-18.
- Gujrati, N.D. & Porter, D.C. (2004). *Basic Econometrics*. The McGraw–Hill Companies, USA.

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Hiller Connell, K. Y., Remington, S. M., & Armstrong, C. M. (2012). Assessing systems thinking skills in two undergraduate sustainability courses: a comparison of teaching strategies. *Journal of Sustainability Education*, 3, 2151-7452.
- Iyer, G.S. & Ravindran, S. (2009). Usefulness, incentives and knowledge management *Journal of Knowledge Management*, 13(6), 410 - 430.
- Jasimuddin, S.M. (2008). A holistic view of knowledge management strategy *Journal of Knowledge Management*, 12 (2), 57 - 66.
- Jasimuddin, S.M., Connell, C. & Klein, J.H. (2005). The challenges of navigating a topic to a prospective researcher: the case of knowledge management research. *Management Research News*, 28 (1), 62-76.
- Jennex, M.E., Smolnik, S. & Croasdell, D.T. (2009). Towards a consensus of knowledgemanagement success. *VINE*, 39(2), 174 - 188.
- Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization science*, 3(3), 383-397.
- Lam, A. & Ford, J. (2010). Knowledge sharing in organisational contexts: a motivation-based perspective. *Journal of Knowledge Management*, 14(1), 51 - 66.
- Lu, J. C., & Tsai, C. W. (2008). An investigation to an enabling role of knowledge management between learning organization and organizational learning. In *Knowledge Management: Concepts, Methodologies, Tools, and Applications* (pp. 1579-1594). Igi Global.
- Lucas, L. M. (2010). The evolution of organizations and the development of appropriate knowledge structures. *Journal of Knowledge Management*, 14(2), 190 - 201.
- Martinsons, M. G. & Davison, R. M. (2007). Strategic decision making and support systems: comparing American, Japanese and Chinese management. *Decision Support Systems*, 43(1), 284-300.
- Martín-de Castro, G., López-Sáez, P., & Delgado-Verde, M. (2011). Towards a knowledge-based view of firm innovation. Theory and empirical research. *Journal of knowledge Management*, 15 (6), 871 - 874.
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Some methodological considerations. *Journal of Applied Psychology*, 78, 538-551
- Mueller, J. (2012). The interactive relationship of corporate culture. *Review of Managerial Science*, 6(2), 183-201.
- Mustapha, N., Ahmad, A., Uli, J. & Idris, K. (2010). Job Characteristics as Antecedents of Intention to Stay and Mediating Effects of Work Family Facilitation and Family Satisfaction among Single Mothers in Malaysia. *International Journal of Business and Social Science*, 1(2), 59-74.
- Nan, N. (2008). A principal-agent model for incentive design in knowledge sharing. *Journal of Knowledge*, 12(3), 101 - 113.

- Nonaka, I. & Krogh, G. (2009). Tacit Knowledge and Knowledge Conversion: Controversy and Advancement in Organizational Knowledge Creation Theory. *Organization Science*, 20 (3), 635–652.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford university Press, New York.
- Noor, K. M. (2011). Work-Life Balance and Intention to Leave among Academics in Malaysian Public Higher Education Institutions. *International Journal of Business and Social Science*, 2 (11), 240-248.
- Rahe, M. (2009). Subjectivity and cognition in knowledge management. *Journal of Knowledge Management*, 13(3), 102 - 117.
- Regts, G. & Molleman, E. (2013). To leave or not to leave: When receiving interpersonal citizenship behavior influences an employee's turnover intention. *Human Relations*, 66(2), 193-218.
- Renzl, B. (2007). Language as a vehicle of knowing: the role of language and meaning in constructing knowledge. *Knowledge Management Research & Practice*, 5(1), 44–53.
- Santoro, G., Ferraris, A., Giacosa, E., & Giovando, G. (2018). How SMEs engage in open innovation: a survey. *Journal of the Knowledge Economy*, 9(2), 561-574.
- Schiama, G., Carlucci, D. & Lerro, A. (2012). Managing knowledge processes for value creation. *VINE*, 42 (1), 4 - 14.
- Seleim, A. A. & Khalil, O. E. (2011). Understanding the knowledge management-intellectual capital relationship: a two-way analysis. *Journal of Intellectual Capital*, 12, 586 - 614.
- Senge, P. (1990). *Fifth Discipline: The Art & Practice of Learning Organization*. Crown Publishing Group, USA.
- Sharma, N. L. & Goswami, S. (2009). The nuances of knowledge creation and development in Indian pharmaceutical industry. *Journal of Knowledge Management*, 13(5), 319 - 330.
- Sharma, P. (2004). *Knowledge Management*. Hardcover, APH Publishing Corporation, New Delhi.
- Siegel, S. M., & Kaemmerer, W. F. (1978). Measuring the perceived support for innovation in organizations. *Journal of Applied Psychology*, 63(5), 553.
- Singh, S. P. (2007). What are we managing-knowledge or information?, *VINE*, 37(2), 169-179.
- Singh, S. K., Mazzucchelli, A., Vessal, S. R., & Solidoro, A. (2021). Knowledge-based HRM practices and innovation performance: Role of social capital and knowledge sharing. *Journal of International Management*, 27(1), 100830.
- Sousa, M. C. (2006). The sustainable innovation engine. *VINE*, 36(4), 398 - 405.
- Switzer, C. (2008). Time for change: empowering organizations to succeed in the knowledge economy. *Journal of Knowledge Management*, 12(2), 18-28.
- Udechukwu, I. I. & Mujtaba, B. G. (2007). Determining the Probability That an Employee Will Stay or Leave the Organization: A Mathematical and

Theoretical Model for Organizations. *Human Resource Development Review*, 6(2), 164-184.

- Wang, W. Y., & Chang, C. (2005). Intellectual capital and performance in causal models: Evidence from the information technology industry in Taiwan. *Journal of intellectual capital*, 6 (2), 222-236
- Watanabe, R. & Senoo, D. (2010). Shaping knowledge management: organization and national culture. *Journal of Knowledge Management*, 14 (2), 214 - 227.
- Zutshi, A., Creed, A., Bhattacharya, A., Bavik, A., Sohal, A., & Bavik, Y. L. (2021). Demystifying knowledge hiding in academic roles in higher education. *Journal of Business Research*, 137, 206-221.