# The Impact of IT on Knowledge Sharing Environment and Management Practice

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Abstract- Knowledge-sharing environment have increasingly become an important tool in sustaining best management practices in an organization. Consequently, as the need to implement an effective management practice increases with the innovation in information technology (IT), many channels are available for improving knowledge sharing in organizations. This suggests that the more knowledge is shared in an environment the more rapidly it enhances best management practices which will ultimately lead to a high-quality performance in organizations. Thus, efficient management practice in a knowledge-sharing environment motivates workers to collectively participate in improving organizational performance. Therefore, to investigate the impact of IT on knowledge sharing environment and management practice and its relation to organizational performance, this study analyzed survey data collected from an IT organization. Findings show that different levels of experience improve with the effectiveness of knowledge sharing. Thus, management practice, IT effectiveness, knowledge-sharing environment, and organizational performance make organizations more efficient and effective. The study concludes with recommendations to organizations that aim to achieve high-quality performance to improve their management practices through effective IT implementation and knowledge sharing using important management attributes highlighted in the study.

*Keywords*— Management practice, Knowledge sharing environment, Organizational performance, IT effectiveness

#### I. INTRODUCTION

The influence of information technology (IT) in a knowledge-sharing environment has become a valuable tool for improving best management practices to achieve organizational performance in today's competitive world. This indicates that the ability of an organization to improve effective management practice and achieve a competitive advantage and high organizational performance depends on its innovative technological approach to knowledge sharing [1]. Knowledge sharing is the process by which knowledge is held by an individual and is converted into a form that can be understood, absorbed, and used by other individuals, groups, or

organizations through channels or networks between knowledge providers and seekers [2]. Knowledge sharing is mainly divided into two types: explicit knowledge sharing and tacit knowledge sharing. Tacit knowledge consists of the hands-on skills, best practices, special know-how, heuristic, intuitions, and other experience shared in an organization. Whereas explicit knowledge consists of data and information encoded, stored, and disseminated [3] [4]. That is to say, this is a type of knowledge that can easily be coded, transferred, and shared within an organization. In a nutshell, knowledge sharing is simply a socialization and learning procedure for workers in order to generate organizational innovations through the development of new ideas so as to collectively participate in improving organizational performance [5].

Studies have buttressed the importance of innovation in information technology and knowledge sharing due to its positive impact on improving management practices to complement organizational performance thereby achieving meaningful competitive advantage [6]. As knowledge sharing tends to assist organizations to gain competitive advantage, interest in IT effectiveness also keeps growing as a mechanism to enhance organizational performance [7] [8]. Therefore, with ever-increasing evidence recounting the role of a knowledge-sharing environment, the effectiveness of IT become more wellknown in improving an organization's management practices.

IT effectiveness is an important element of a knowledge-sharing environment [6] [9]. This is because innovation in IT practices encourages users to share knowledge within an organization so as to achieve organizational performance. Considering the role of IT innovation in knowledge sharing, organizations thrive to establish an appropriate management practice to enhance organizational performance [10]. As organizations increase in establishing efficient knowledge transfer mechanisms, management practices tend to become easier and more efficient [6]. This impact of IT effectiveness in management practices is an indication of its positive influence on the organization. As such IT implementation in organizational practices tends to enable the development of new ideas, and initiatives and foster organizational performance [11] [12] [49].

Additionally, most of the successes witnessed in organizations largely depend on the best management practices occasioned by an effective knowledge-sharing environment and are connected to organizational performance [13] [14] [15]. Furthermore, the role of the knowledge-sharing environment is relative to knowledge types, knowledge-sharing approaches, knowledge-sharing processes, and organization performance. However, in spite of the growing number of literature on management practices, there is limited understanding of how organizations can improve their performance using multiple know knowledgesharing practices. Hence, the combination of knowledge sharing and IT effectiveness will provide an important avenue for developing knowledge-based organizations. Therefore, this study aimed to investigate the influence of IT in knowledge sharing environment and management practice for high-quality organizational performance.

# II. LITERATURE REVIEW

The aim of this study is to explore the impact of IT on the knowledge-sharing environment and management practices in organizations and how it enhances organizational performance. Therefore, the following literature review will highlight issues relating to the development of ideas and innovations in IT as it affects management practice, knowledge-sharing environment, and organizational performance. Hence, the literature review will be presented as follows:

# **Innovations in Knowledge Sharing**

Knowledge sharing represents one of the most important organizational processes that enable new knowledge and management processes to be transferred within an organization. Importantly, knowledge sharing is a way of developing and utilizing innovation in IT to facilitate best management practices, and improve performance and organizational success [15] [16]. This portrayed that knowledge sharing represents a key to ensuring sustainable organization practices [7]. Hence, the call for increased awareness and innovations among organizations. As the awareness on management practices increases, knowledge management tend to widen to involve IT innovation as an effective tool to improve organizational success [17] [18]. Thus, innovations arising from IT effectiveness have increased sharing of knowledge capable of improving organizational performance [6]. Previous literature explores approaches used for knowledge sharing with less interest on how it enhances management practices and organizational performance. The study improves existing literature by exploring knowledge-sharing practices relative to management practices, IT effectiveness, and organizational performance. The insight generated from this study highlights the importance of IT on knowledge sharing environment and management practices as a crucial strategy in developing organizations.

In organizations, management practices have shown to be more efficient when it matches with technological

innovations to create successful business opportunities and sustains organizational activities [7]. The assertion on innovation-driven organizations overcomes shows that the capacity of an enterprise to accomplish its aims is related to knowledge transfer within an organization. However, technology is an important platform to speed up the process of knowledge transfer and how managers interact in meeting organizations' goals [19] [50]. Organizational practice enables an organization to successfully implement practices that stimulate learning to support the generation of novel approaches to resolve organizational issues.

As organization structure and practices are increasingly guided by technology, most processes and practices tend to promote IT based-communication to gain organizational support [20]. It becomes clear that managers play an important role in the success of organizations. Although the performance of leadership influences organizational outcomes how managers perform their strategic knowledge output through management practice leads to their managerial performance. The management research considers day-to-day experience and practices that require extensive implementation of management practice. The involvement of the manager is, therefore, necessary to conduct organizational activities to reflect management practice. Therefore, the findings of this study provide insight to improve the overall managerial practices.

# **Organizational Management Practices**

The organizational pattern of sharing basic information learned involves addressing organizational problems. Therefore, introducing a new and correct way to communicate and share information in relation to organizational management practices is rightly considered appropriate to boost organizational performance [6] [14]. Management practices have been viewed as part of organizational culture that determines the capability and success of an organization [14]. IT has transformed management practices in form of social reality that fosters organizations' knowledge sharing and represents the pivot of social systems [6]. Key aspects to be considered for good organizational management practices include:

> Technology support: Organizational communication and sharing of knowledge require technical support or IT effectiveness in developing organizational management practices. IT effectiveness as used in this study relates to the ability of organizations to develop and use IT facilities effectively to facilitate knowledge management practices. IT is an enabler to improving organizations' performance relative to management practices. Organizations suffer a setback when the IT infrastructure cannot fully support knowledge management practices [6]. IT underutilization occurs when organizations spend more than necessary on IT infrastructure with fewer people to effectively use the facilities to meet organizational needs [21] [48]. IT effectiveness directly relates to the expertise of users in facilitating knowledge sharing, coordination of connectivity, and

interactivity in keeping to organizational practices [1] [22].

Communication: Communication involves the passing of messages between a sender and a receiver. Issues that are crucial to communication processes such as the communication style of the sender, the communication medium that is being used to facilitate communication, and the interpretation ability of the receiver constitute an important part of messages required in management practice [6]. Managers may need to implement an effective communication style in different contexts to concede the message; to communicate feedback as expected and to exercising control continue to communicate back and forth requires certain rules as well as the interpretation of the message during communication [23]. This is because communication style ultimately affects the sharing of knowledge and the commitment to organizational activities [24] [25].

# **Knowledge Sharing Practices**

Knowledge sharing within an organization represents a vital part of management practice capable of affecting the overall performance of the organization [26]. This is because knowledge sharing enables an organization to increase knowledge and skills, and share valuable content and data about the organization. In this case, knowledge sharing is supported by IT effectiveness [6] [54]. There is a connection within and outside an organization's environment, IT plays important role in sharing and processing management information and procedures for management practices [15].

Effective knowledge-sharing practices consider a number of factors such as; knowledge-sharing types, approaches, and knowledge-sharing processes as explained in figure 1 under [6] [27].



Figure 1: Components of an effective knowledge-sharing environment.

• *Knowledge sharing types:* Knowledge sharing as briefly discussed is of two types: tacit and explicit knowledge [28] [29] [30]. Therefore, knowledge shared within organizations can be either tacit or explicit. Tacit knowledge can be technical tacit or cognitive tacit, distinguished by the degree of tacitness. The level of tacitness refers to the degree message is shared interactively among individuals [29]. Technical tacit knowledge is based on personal

skills and artisanship and evolves within practical knowledge. Cognitive tacit knowledge is based on the belief an individual holds relative to values and viewpoints, usually expressed by the way an interpretation is made about an environment. Cognitive tacit occurs naturally among individuals. Previous literature has shown that tacit knowledge is very difficult to transfer and further asserts that face-to-face communication is preferred for knowledge sharing across individuals although there was insufficient evidence [31] [32]. Later studies have shown that certain dimensions of tacit knowledge are transferrable even through social media [33] [34]. Explicit knowledge refers to structured and formalized instances of knowledge that an individual describes in formal language based on established work processes. Knowledge sharing begins with tacit knowledge through socialization. Ultimately, explicit knowledge is created via codification in database and information retrieval systems [1] [29].

Knowledge sharing approaches: The establishment of a broad knowledge-sharing environment necessitates that organizations recognize two approaches to knowledge sharing which are codification and personalization [32]. Organizational view of knowledge sharing intensive varies and are either codification or personalization in dominating knowledge sharing procedure [35] [36]. In the knowledge codification process, 'knowledge is properly codified and is stored in databases so it can be easily accessed and used by others people in the organization [37]. The knowledge codification process allows for the conversion of knowledge into messages and also processed as information [38]. However, the process of transforming knowledge into information, as evidenced in Figure 2 below, focuses on formalizing knowledge into an appropriate code, structure, or scheme. Adopting a codification approach implies that the core focus is to collect and organize knowledge and this approach reduces the cost of acquiring and improving knowledge storage [39].

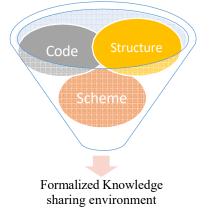


Figure 2: Formalized knowledge-sharing environment

• *Knowledge sharing processes:* The knowledge sharing process is central to organizational activities

in support of improving management practices. Knowledge-sharing activity, therefore, implies transferring knowledge of different forms to an individual, group of persons, or to an organization. Knowledge sharing process enables an individual to exchange tacit or explicit knowledge to create new knowledge in a social knowing process [40]. The knowledge sharing process comprises two dimensions which are knowledge donating and knowledge collecting [41].

Knowledge donation also known as knowledge contribution entails the process of communicating with other people [42] [52] [53]. In every organization, the way knowledge is donated represents knowledge management practice. During the process of knowledge donation, those donating knowledge dedicate quality time to taking proper records and also post their codified knowledge, skills, and experiences [40] [41]. Therefore, sharing of information processes and information flow is fundamentally a key driver of knowledge donation in organizations. Knowledge sharing processes involves collection, seeking or receiving of knowledge relative to knowledge donation. Thus, knowledge sharing can be explained as a relational act based on a senderreceiver relationship that incorporates knowledge to others receiving them [42]. From this perspective, knowledge sharing is communicated and received through consulting others to access information sources such as social media systems [22]

Many studies provided supportive evidence of the relationship existing between knowledge sharing environment, IT effectiveness, and organizational performance relative to management practices in organizations [43] [51] [54]. The study shows how important the concept that contributes to strengthening management practices in organizations are presented in the study using seven distinctive outlines as shown in Table 1 below:

Table 1: The concept that contributes to strengthening management practices in organizations.

1. Efficient management practices provide greater stability

to efficiently manage changes in organizational settings;

2. Provide conscientiousness to be diligent, hardworking, and quickly respond to changes within the working environment;

3. Extraversion of personality trait to be more open and willing to establish a good relationship with other people in IT based knowledge sharing environment;

4. Ability to perform confidently combines IT effectiveness while reasoning with others and maintaining management strategies;

5. Develop a cognitive ability to suggest a solution in a critical situation

6. Self-efficacy to confidently cope with changing work demands complement job requirement;

7. Self-rated job performance is more effective in a knowledge-sharing environment.

In addition, improvement in management practices indicates a clear understanding of work ethics based on knowledge-sharing environment, and organizational performance relative to IT effectiveness in complementing productivity and job satisfaction [2] [44]. Studies found that the performance of organizations is more flexible to accommodate worker views when knowledge sharing and IT effectiveness are in line with improving management practices [45] [46]. This shows that the insight based on the findings of the present study could position organizations rightly to explore opportunities in improving management practices.

# **III. HYPOTHESES**

Hypothesis 1 (H1): Significant positive relationship exists between management practice and a knowledge-sharing environment.

Hypothesis 2 (H2): Significant positive correlation exists between management practice and organizational performance.

Hypothesis 3 (H3): There is a positive correlation between management practice and IT effectiveness

## IV. RESEARCH OBJECTIVES

The objectives of the study are as follows:

- To improve management practice through the knowledge-sharing environment.
- To determine organizational performance due to the effectiveness of management practice.
- To identify the effectiveness of IT in management practice.

## V. RESEARCH METHODOLOGY

Research methodology deals with the sources of data, sample size, an instrument to be used, and statistical tools to be applied for the data analysis. In this research, we have used a quantitative method to examine the impact of IT in a knowledge-sharing environment for efficient management practice in organizations.

## **Research Design**

The design of this study is based on the correlational impact of the variables; that investigates the relationship between the impact of IT on knowledge sharing environment, management practices, and the resulting effect on organizational performance. The strength and the direction of the relationship were identified by using the coefficient of correlation at the respective significant level of association. The response from the managers provides a clear understanding of management practices in IT based organizations. The study samples were obtained from 45 managers who superintend operational decisions across a range of IT organizations. Thus, the study reveals the achievement realized through implementing management practices.

# Data Collection

Data for this study were collected from managers working in IT organizations mainly from managers that have a different levels of achievement and experience. A total of 45 samples were collected, analyzed, and reported in this study. All the data were analyzed using SPSS. Pearson coefficient was conducted to test the relationship between management practice and organizational outcomes. The analyses were done to explore the relationship between the three variables; knowledge sharing environment, organizational performance, and IT effectiveness relative to their level of relationship with management practices.

#### VI. RESULTS AND DISCUSSION

#### **Analysis of Results**

Pearson correlation is used to determine the nature of the relationship between the variables and to test the hypothetical assumptions. The analysis of data was done in relation to the following research questions:

- Is there any relationship between a knowledgesharing environment and management practice?
- What type of relationship exists between management practice and organizational performance?
- What is the relationship between management practice and IT effectiveness?

The statistical analysis of the intercorrelation dimensions of the management practice with knowledge sharing environment, organizational performance, and, IT effectiveness was positively significant. The strength of the relationship of all the dimensions was evaluated using Pearson Correlation (r) analysis. The result of the Pearson Correlation (r) is shown in Table 2. The correlation results determine the measure of strength and direction of the relationship between two variables on a scale with a range of (-1) to (+1). The relationship between the variables was used to validate the research hypotheses.

H1. Significant positive relationship exists between management practices and a knowledge-sharing environment.

The results of the Pearson correlation show that r = .645 and p = .000 < = 0.05. The result is statistically significant and shows a positive inter-correlation between management practices and a knowledge-sharing environment.

H2. Significant positive correlation exists between management practice and organizational performance

As can be seen, there is statistically significant strong and positive inter-correlation between management practice and organizational performance. Pearson correlation factor between the two variables were r = .857 and p = .000 < = 0.05. Since this result is statistically significant level is less than 0.05. This implies that hypothesis H2 is substantiated for organizational performance development by management practice influence. Therefore, we conclude that organizational performance is influenced by the management practice approach.

H3. There is a positive correlation between management practice and IT effectiveness

Results of Pearson correlation showed that r = .745and p = .000 < = 0.05. Hence, there was a statistically significance, strong and positive correlation between management practice and IT effectiveness. In other words, IT effectiveness is influenced by management practice. Since this statistically significant level is much lesser than the level of 0.05, we did reject the null hypothesis (Ho) and conclude that a strong relationship exists between management practice and IT effectiveness. Table 2: Pearson Correlation Analysis

		Knowled ge Sharing	Organizati onal Performan	IT Effective ness
		Environ ment	ce	
Manage ment	Pearson Correla	.645**	.857**	.743**
Practice	tion Sig. level (2-	.000	.000	.000
	tailed) No of items	45	45	45

Discussion

This study evaluates the relationship between management practice with knowledge sharing environment, organizational performance, and IT effectiveness. By investigating the effectiveness of management practice, the reality of its impacts on organizational outcomes becomes clearer in achieving organizational outcomes. The research findings of this study show a strong and positive correlation between management practice and knowledge-sharing environment. Efficient management practices enable people to develop skills and competencies to perform the organizational task [6] [43] [50]. Such effort will allow the managers to achieve their organizational goals.

Based on the present study, the impact on management practices from knowledge sharing environment, organizational performance, and IT effectiveness are intricately woven together in addressing organizational goals and in sustaining effective management practice [47]. Management positions to create a suitable knowledgesharing environment within an organization can be quickly spread throughout the organization. For organizational performance and IT effectiveness, there was a strong correlation between management practice and these variables. Management practices seem as ideal in managerialstyle settings, for organizations. Therefore, it is possible to assume that this mode of managerial practice creates a positive impact on developing the organizations. Management practice had a positive and strong significance with knowledge sharing environment, organizational performance, and IT effectiveness in achieving high organization goals.

More specifically, the organizational task is better managed with IT effectiveness and new skills developed from a knowledge-sharing environment led to better management practices [2]. In summary, the findings revealed that management practice complements an efficient organizational practice leading to high performance.

Insights from the Study

Based on the present research findings and support from existing literature, this study provides important practicable advantages that can further transform IT organizations shown in Table 3 below: Table 3: Important management attributes to be implemented by organizations

1. Improvement in the quality of management practice motivates others to become more creative and industrious; 2. The managers will through IT effectiveness share organizational practices with other workers to effectively communicate in order to maintain a good working relationship, for common vision achievement teamwork.

3. IT effectiveness enables managers to better handle uncertainties in their working environment.

4. Developing an effective knowledge-sharing environment will improve communication, and contribute to meeting management targets.

5. Influences from management practice actively affect organizational process and management practices.

#### VII. CONCLUSION AND RECOMMENDATION

The study has investigated the impact of IT on knowledge-sharing environment and management practice and its relation to organizational performance and IT effectiveness. Findings were based on data collected from IT industries and were supported by previous research findings. Statistically analyzed result was used to address the hypothetical assumption of the study. The analysis has two important outcomes in management practice. Firstly, overall management practice with respect to positive organizational outcomes does exist. Which demonstrated that management practice affects knowledge sharing, organizational performance, and IT effectiveness. Secondly, there were intercorrelation relationships between management practice with knowledge sharing environment, organizational performance and IT effectiveness.

Therefore, this study recommends that for organizations to achieve high quality performance there is need to improvement in their management practices through effective IT implementation and knowledge sharing environment. This coincides with previous studies' recommendations highlighting the importance of IT complementing and supporting the effectiveness of a knowledge-sharing environment in improving management practice in an organizational setting. The study also recommends continued efforts for organizations to connect and extract specific knowledge from knowledge contributors to address immediate or future knowledge requirements that are very necessary to support certain organizational tasks.

Further studies may be developed or replicated through the evaluation of different levels of management practices relative to knowledge sharing and the effectiveness of IT in order to improve organizational performance.

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#### REFERENCES

- [1] A. R Ahmad, A. S. Jameel, and M. B. Raewf, Impact of Social Networking and Technology on Knowledge Sharing among Undergraduate Students. International Business Education Journal, 14(1), 1-16. 2021. <u>https://doi.org/10.37134/ibej.vol14.1.1.2021</u>
- [2] Z. Imran, O. Shafique, W.N. Jamal, and H.M.U. Khizar, Impact of Knowledge Management Environment on Knowledge Sharing Processes. Ilkogretim Online - Elementary Education Online, Year; Vol 20 (Issue 5): pp.1465-1478 http://ilkogretim-online.org doi: 10.17051/ilkonline.2021.05.163
- [3] H.K. Mohajan, M.S. Islam, and F. Shome, Knowledge Sharing Enhances Knowledge Management Environment and Efficiency. Journal of Environmental Treatment Techniques. ISSN: 2309-1185. Journal weblink: <u>http://www.jett.dormaj.com</u>
- [4] M. Polanyi, The Tacit Dimension. Peter Smith, Gloucester, MA, University of Chicago Press: Chicago. 1966
- [5] S.A. Salloum, M. Al-Emran, and K. Shaalan, The Impact of Knowledge Sharing on Information Systems: A Review. Springer Nature Switzerland AG 2018 L. Uden et al. (Eds.): KMO 2018, CCIS 877, pp. 94–106, 2018. <u>https://doi.org/10.1007/978-3-319-95204-8\_9</u>.
- [6] M.M. Attar, Organizational Culture, Knowledge Sharing, and Intellectual Capital: Directions for Future Research. International Journal of Business and Economics Research. 2020; 9(1): 11-20. doi: 10.11648/j.ijber.20200901.12.
- [7] F. A. Al Othman, and O. Sohaib, Enhancing Innovative Capability and Sustainability of Saudi Firms. Sustainability, 2016. 8 (12): p. 1229.
- [8] A. Dysvik, R. Buch, and B. Kuvaas, Knowledge donating and knowledge collecting: The moderating roles of social and economic LMX. Leadership & Organization Development Journal, 2015. 36 (1): p. 35-53.
- [9] K. Dalkir, Knowledge Management in Theory and Practice. 2011, Cambridge, Mass., UNITED STATES: MIT Press.
- [10] R. M. Al-Adaileh, and M. S. Al-Atawi, Organizational culture impact on knowledge exchange: Saudi Telecom context. Journal of knowledge Management, 2011. 15 (2): p. 212-230.
- [11] H.A. Hassan, et al The Impact of Knowledge Sharing on Innovative Work Behavior. ISSN: 2321-8819 (Online) 2348-7186 (Print) Impact Factor: 1.498 Vol. 6, Issue 5, May, 2018
- [12] I. Seeber, G. Waldhart, and R. Maier, IT Enablers for Task Organization and Innovation Support to drive Team Performance. 2014.
- [13] M. Said, I. Khan, and F. Hameed, The Impact of Performance Management System on Employees' Performance. International Journal of Business and Management Sciences Volume 02(03), 2021. Available online at http://www.ijbms.org.
- [14] E. H. Schein, Organizational culture and leadership. Vol. 2. 2010: John Wiley & Sons.
- [15] Z. Wang, N. Wang, and H. Liang, Knowledge sharing, intellectual capital and firm performance. Management decision, 2014. 52 (2): p. 230-258.
- [16] H. Hussinki, et al., Intellectual capital, knowledge management practices and firm performance. Journal of Intellectual Capital, 2017. 18 (4): p. 904-922.
- [17] I. Hsu, and R. Sabherwal, Relationship between intellectual capital and knowledge management: an empirical investigation. Decision Sciences, 2012. 43 (3): p. 489-524.
- [18] S. Cabrilo, and S. Dahms, How strategic knowledge management drives intellectual capital to superior innovation and market performance. Journal of Knowledge Management, 2018.
- [19] P. Reynolds, and P. Yetton, Aligning business and IT strategies in multi-business organizations. Journal of Information Technology, 2015. 30 (2): p. 101-118.

- [20] A. Klitmøller, and J. Lauring, When global virtual teams share knowledge: Media richness, cultural difference and language commonality. Journal of World Business, 2013. 48 (3): p. 398-406.
- [21] A. Kianto, et al., The interaction of intellectual capital assets and knowledge management practices in organizational value creation. Journal of Intellectual capital, 2014. 15 (3): p. 362-375.
- [22] S. Panahi, J. Watson, and H. Patridge, towards tacit knowledge sharing over social web tools. Journal of knowledge management, 2013. 17 (3).
- [23] S. Kivrak, et al., Impact of national culture on knowledge sharing in international construction projects. Canadian Journal of Civil Engineering, 2014. 41 (7): p. 642-649.
- [24] Kang, K. and O. Sohaib, Individualistic-Collectivistic Impact on iTrust towards Purchase Intention in B2C E-Business. Journal of Internet and eBusiness Studies, 2016.
- [25] S. A. Al Saifi, Positioning organisational culture in knowledge management research. Journal of Knowledge Management, 2015. 19 (2): p. 164-189.
- [26] M. Bedarkar, and D. Pandita, A study on the drivers of employee engagement impacting employee performance. Procedia-Social and Behavioral Sciences, 2014. 133: p. 106-115.
- [27] E. Boehm, Improving Efficiency and Effectiveness in an Automotive R&D Organization. Research-Technology Management, 2012. 55 (2): p. 18-25.
- [28] E. A. Smith, The role of tacit and explicit knowledge in the workplace. Journal of knowledge Management, 2001. 5 (4): p. 311-321.
- [29] V. Ambrosini, and C. Bowman, Tacit knowledge: Some suggestions for operationalization. Journal of Management studies, 2001. 38 (6): p. 811-829.
- [30] M.F. Mizintseva, and T.V. Gerbina, Knowledge Management: A Tool for Implementing the Digital Economy. Sci. Tech. Inf. Process. 2018, 45, 40–48.
- [31] J. Brix, Exploring knowledge creation processes as a source of organizational learning: A longitudinal case study of a public innovation project. Scand. J. Manag. 2017, 33, 113–127.
- [32] J. Abbas, Q. Zhang, I. Hussain, S. Akram, A. Afaq and M.A. Shad. Sustainable Innovation in Small Medium Enterprises: The Impact of Knowledge Management on Organizational Innovation through a Mediation Analysis by Using SEM Approach. Sustainability 2020, 12, 2407; doi:10.3390/su12062407
- [33] D. Cabeza-Pullés, V. Fernández-Pérez, M.I. Roldán-Bravo, Internal networking and innovation ambidexterity: The mediating role of knowledge management processes in university research. Eur. Manag. J. 2019.
- [34] I.M. Gachanja, S.I. Nga'nga, and L.M. Kiganane, Influence of organization learning on innovation output in manufacturing firms in Kenya. Int. J. Innov. Stud. 2020.
- [35] A.F. Femi, The Impact of Communication on Workers' Performance in Selected Organisations in Lagos State, Nigeria. IOSR Journal of Humanities and Social Science, 2014. 19 (8): p. 75-82.
- [36] W. Kuncoro, W.O. Suriani, Achieving sustainable competitive advantage through product innovation and market driving. Asia Pac. Manag. Rev. 2018, 23, 186–192.
- [37] J. Cegarra-Navarro, G. Jimenez-Jimenez, and D. Garcia-Perez, A. An Integrative View of Knowledge Processes and a Learning Culture for Ambidexterity: Toward Improved Organizational Performance in the Banking Sector. IEEE Trans. Eng. Manag. 2019, 1–10.
- [38] M. Van Aswegen, and F.P. Retief, The role of innovation and knowledge networks as a policy mechanism towards more resilient peripheral regions. Land Use Policy 2020, 90, 104259.
- [39] A. Pangarso, E.S. Astuti, K. Raharjo, and T.W. Afrianty, Data of innovation ambidexterity as a mediator in the absorptive capacity effect on sustainable competitive advantage. Data Brief 2020, 29, 105200
- [40] N. Bontis, S. Janošević, and V. Dženopoljac, Intellectual capital in Serbia's hotel industry. International Journal of Contemporary Hospitality Management, 2015. 27 (6): p. 1365-1384.
- [41] M. Shujahat, M.J. Sousa, S. Hussain, F. Nawaz, M. Wang, and M. Umer, Translating the impact of knowledge management processes into knowledge-based innovation: The neglected and mediating role of knowledge-worker productivity. J. Bus. Res. 2019, 94, 442–450.
- [42] G. Martín-de-Castro, et al., The moderating role of innovation culture in the relationship between knowledge assets and product innovation. Technological Forecasting and Social Change, 2013. 80 (2): p. 351-363.

- [43] G. Alessandri, E. Perinelli, E. DeLongis, W.B. Schaufeli, A. Theodorou, L. Borgogni, G.V. Caprara and L. Cinque (2018). Job burnout: The contribution of emotional stability and emotional selfefficacy beliefs. Journal of Occupational and Organizational Psychology 1-29 (2018). DOI:10.1111/joop.12225.
- [44] M. Hutchinson, J. Hurley, D. Kozlowski, and L. Whitehair, The use of emotional intelligence capabilities in clinical reasoning and decisionmaking: A qualitative, exploratory study. Journal of clinical nursing, 27(3-4), e600-e610.2018
- [45] M. H. Jafri, C. Dem, and S. Choden, Emotional intelligence and employee creativity: Moderating role of proactive personality and organizational climate. Business Perspectives and Research, 4(1), 54-66. 2016
- [46] K.A. Pekaar, D. Linden, A.B. Bakker and M.P. Born, Emotional intelligence and job performance: The role of enactment and focus on others' emotions, Human Performance, 30:2-3, 135-153, DOI: 10.1080/08959285.2017.1332630. 2017
- [47] F. Ahmad, and M. Karim,"Impacts of knowledge sharing: a review and directions for future research", Journal of Workplace Learning, Vol. 31 Issue: 3, 2019 pp.207- 230, "https://doi.org/10.1108/JWL-07-2018-0096"
- [48] M. Z. Ibrahim, and R Hassan, The Implementation of Internet of Things Using Test Bed in The UKMnet Environment. Asia-Pacific Journal of Information Technology and Multimedia. Vol. 8 No. 2, December 2019: 1 – 17 e-ISSN: 2289-2192 "https://doi.org/10.17576/apjitm-2019-0802-01"
- [49] H. Sallehudin, R.C. Razak, M. Ismail, A. F. Fadzil, and R.Baker, Cloud Computing Implementation in the Public Sector: Factors and Impac. Asia-Pacific Journal of Information Technology and Multimedia. Vol. 7 No. 2-2, December 2018: 27 – 42. e-ISSN: 2289-2192 "https://doi.org/10.17576/apjitm-2018-0702(02)-03"
- [50] N. Mat, J. Alias and N. Muslim, The Impacts of Organizational Factors on Knowledge Sharing in Higher Learning Instituitions (HLIs): Case at Universiti Kebangsaan Malaysia (UKM). Mediterranean Journal of Social Sciences. MCSER Publishing, Rome-Italy Vol 7 No 6November 201618. ISSN 2039-2117 (online)ISSN 2039-9340 (print). Doi:10.5901/mjss.2016.v7n6p181.
- [51] N. A. Hasan, N. A. Omar, M. N. Zainuddin, and D. Mukhtar, The interaction effects of knowledge transfer on knowledge assets and innovative performance relationship. GEOGRAFIA OnlineTM Malaysian Journal of Society and Space 16 issue 4 (69-83) © 2020, e-ISSN 2682-7727 "https://doi.org/10.17576/geo-2020-1604-06"
- [52] M. Tajpour, E. Hosseini, M. Mohammadi, and B. Bahman-Zangi, The Effect of Knowledge Management on the Sustainability of Technology-Driven Businesses in Emerging Markets: The Mediating Role of Social Media. Sustainability 2022, 14, 8602. 10.3390/su14148602
- [53][53]
  - A. H.M. Nashir, S.A.Shukor and A. Sheikhi, Sustainable Supply Chain Management in Malaysia: Issues and Futures. Asia-Pacific Journal of Information Technology and Multimedia. Vol. 9 No. 2 December 2020: 50 – 68 e-ISSN: 2289-2192.
- [54] N. A. Razak, H. Saeed, H.Alakrash, Pedagogical Issues of Using ICT Applications in Iraq. Asia-Pacific Journal of Information Technology and Multimedia. Vol. 7 No. 2-2, December 2018: 79 – 87 e-ISSN: 2289-2192. "https://doi.org/10.17576/apjitm-2018-0702(02)-07"