KNOWLEDGE SHARING AND ORGANIZATIONAL PERFORMANCE

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Abstract

Malaysia is one of the industrializing and emerging countries that willing to undertake the rapid economic change and investing in more productive capacity. The contribution of output and employment from the manufacturing sector has been steadily increasing, while the economy from industrial era has shifted to information era; focusing more on knowledge-based economy. Manufacturing companies in Malaysia are facing challenges and opportunities from a rapidly changing operating emvironment and industrial revolution, generation of new sustainable value chain systems, and contribution to the knowledge-based economy. The aim of this study is to examine the influence of tacit and knowledge sharing on organizational performance among manufacturing companies in Malaysia. This quantitative study would provide an insight on the importance and effects of tacit and explicit knowledge sharing toward organizational performance among Malaysia's manufacturing companies. The key underpinning theory of this study is Knowledge-based View (KBV). Data were obtained from 145 manufacturing companies in Malaysia via the representative of Production Managers. This study provides fundamental knowledge and direction for researchers in further research as well as practitioners to constantly improve their organizational performance through the stimulation of tacit and explicit knowledge sharing practices.

Keywords: Tacit and Explicit Knowledge Sharing, Organizational Performance, Manfuacturing Sector

Introduction

In a dynamic and competitive environment, manufacturing companies have to proactively and innovatively revise their operational and strategic information captured from performance measurement. Many organizations and decision makers are seeking new ways to enhance their performance in order to achieve higher quality of production and at the same time, reducing the operational cost to sustain and gain competitive advantage (Ahuja & Khamba, 2008). All businesses or companies are working on leveraging the availability of capital, incentives, and modern infrastructure to optimize cost management and diversify business strategies with digitalization in order to capture the huge market demands (Lee, 2020; Zahiid, 2019).

Malaysia is on the verge to practice proficiently for a new sustainable value chain by establishing a network among companies, academia, and research institutions in order to generate and participate in the sustainable value chain system (Malaysia Productivity Corporation, 2018). Both domestic and multinational manufacturing companies in Malaysia often face multiple challenges. However, these challenges can turn into opportunities, provided that the companies improve their manufacturing processes and complied with regulatory requirements to achieve greater operational excellence across the value chain. The entire value chain of the manufacturing activities can determine or affect the overall output level or productivity of companies and industries. Increased productivity can potentially increase the performance of an organization by driving economic growth and fulfilling the needs of consumers (Roehrich, Hoejmose & Overland, 2017; Agus & Hajinoor, 2012; Marhani, Jaapar & Bari, 2012). Industries with well-managed value chain activities can uplift their capability

to adopt existing technologies, improve processes, and ensure that their products and services are cost-effective.

Moreover, Malaysia's wealth in natural resources is indispensable towards its economic growth. However, this growth has generated quite important impacts towards human and the environment. As the former Prime Minister of Malaysia had admitted that Malaysia has yet to achieve a truly competitive and sustainable development in meeting expectation of the official commitments of Sustainable Development Goals (SDGs) (The Asia Foundation, 2015). One of the visible lower organizational performance issues in Malaysia's manufacturing sector that can be found is refuse to share knowledge within or outside of their organizations and less active in R&D collaboration between industries, universities, and public sector (Tarofder, Azam & Jalal, 2017; Omar, Dahalan & Yusoff, 2016; Ramli & Senin, 2015). Other pressing issues including the unwillingness of manufacturing companies to enhance organizational capabilities due to insufficient of skilled and experienced labours, lack of innovation and efficiency in their production systems, and organizations' perceptions of incurring higher implementation costs on enhancing the manufacturing systems (Abdul-Rashid, Sakundarini, Ghazilla & Thurasamy, 2017; Asada, Nixon & Koen, 2017; Nagulendran, Padfield & Campos-Arceiz, 2016; Sidin & Sham, 2015).

In fact, previous studies have emphasized that companies who refused to share knowledge within or outside of their organizations may impede sustainable competitive advantage (Tarofder et al., 2017; Omar et al., 2016; Rehman, Ilyas & Asghar, 2015). Tacit and explicit knowledge sharing are emerging as an essential concept and frequently cited as an important antecedent of innovation and organizational performance (Allameh, Pool, Jaberi & Soveini, 2014; Noruzy, Dalfard, Azhdari, Nazari-Shirkouhi & Rezazadeh, 2013; Alwis & Hartmann, 2008). Knowledge sharing within manufacturing companies would be a place where management and employees acknowledge the importance of tacit and explicit knowledge sharing and commonly exchange knowledge with colleagues in their day-to-day operation activities (Allameh et al., 2014; Kathiravelu, Mansor, Ramayah & Idris, 2014; Suppiah & Sandhu, 2011). It also stimulates employee involvement in an organization (Sharkie, 2003) and viewed as the intellectual capital of the organization since they are required to do knowledge work, where their responsibilities to learn and share their information of task jobs includes planning, implementation, acting and monitoring with their subordinates or colleagues for knowledge enhancement. Sharkie (2003) has described those employees in learning organizations are continually acquiring, sharing and creating new knowledge and are willing to apply that knowledge in making decisions or performing their works. Thus, sustainable source of competitive advantage could be achieved and increase the overall organizational performance.

Based on the highlighted issues of this study, it would be recommended manufacturing sector in Malaysia to apply or enhance tacit and explicit knowledge sharing poractices as the primary strategic resource toward higher organizational performance. In this study, tacit and explicit knowledge sharing are examined upon their relationship with organizational performance among manufacturing companies in Malaysia. Both of these knowledge concepts have been clarified as one of the most extensively researched issues since the early development of organizational and KBV theories (Alwis & Hartmann, 2008; Balconi, Pozzali & Viale, 2007; Ancori, Bureth & Cohendet, 2000). Despite some consensus, there are still substantial arguments on the definition and operationalization of tacit and explicit knowledge sharing for the long-term sustainable competitive advantage to increase firms' performance (Park, Vertinsky & Becerra, 2015; Allameh *et al.*, 2014; Bhuiyan, 2011). Therefore, this study was aimed to investigate tacit and explicit knowledge sharing towards sustainability and expect

to provide infinite possible solutions to the contemporary business environment and organizational performance enhancement.

Literature Review

The Malaysian government has embarked on ambitious plans and national strategies towards building a knowledge economy through initiatives such as the building of the Third Industrial Master Plan (IMP3) (2006-2020), driving of industrialization to a higher level of global competitiveness, transformation and innovation in industries (Bohari, Hin & Fuad, 2017; Ministry of International Trade and Industry, 2015). Malaysia's transition to a knowledge-based economy has put the manufacturing companies under spotlight as the development of the manufacturing sector is linked to the requirements of the country's economic growth (Karim & Arif-Uz-Zaman, 2013). The government's aspiration of turning Malaysia into one of the leading international manufacturing hubs in the Asian Region has put a strong pressure on local manufacturing companies, particularly for the companies actively involved and collaborates with the Ministry of International Trade and Industry (MITI), Malaysian Investment Development Authority (MIDA) and Federation of Malaysian Manufacturers (FMM) to improve the quality of manufacturing processes and products as well as services they offer (Federation of Malaysian Manufacturers, 2018).

Tacit and explicit knowledge sharing are the primary strategic resource towards sustainability, especially in the manufacturing sector (Giovannini, Aubry, Panetto, Dassisti & Haouzi, 2012). They provide infinite possible solutions to combine a company's resources and narrow down the best combinations to achieve the greatest expected value (Nieves, Quintana & Osorio, 2014). Other than that, they offer know-how on configuring and integrating the resources of raw materials, machinery, and labours into production processes. In addition, it still plays an important role on managing the production processes from the manufacturing processes to satisfy the final consumers. These functions include leveraging the knowledge resources; gathering and analyzing market information; and exchange knowledge with expertise and other stakeholders of the organization (Islam, Jasimuddin & Hasan, 2017).

The Knowledge-based View (KBV) theory explains that knowledge can be the valuable resource for organizations to obtain information and wisdom on solving problems and able to justify how the problems can be resolved (Giovannini *et al.*, 2012; Yaacob, Iskandar, Abdullah, Yaacob, Abdullah & Azelin, 2011). Zack (1999) further emphasizes that how organizations manage their stores of knowledge can determine organization success or failure. Companies that are more effective at finding, absorbing, and exploiting new knowledge from both of their internal and external environments will tend to perform better than their competitors (Martínde Castro, Delgado-Verde, Navas-López & Cruz-González, 2013).

As the business environment changes, the implementation of the tacit and explicit knowledge sharing practices have been developed into information system that simplifies users to obtain and share knowledge effectively in their respective fields and areas (Rio, Riel & Brissaud, 2017; Nieves *et al.*, 2014). Some knowledge-driven companies chose information technologies to fundamentally reengineer their manufacturing processes, providing and enhancing a wide array of services, increasing efficiency and cutting costs (Ibrahim & Nissen, 2005). Other than that, certain organizations use them to emphasize on their intellectual capital, which is employees' knowledge, brainpower, know-how and processes, as well as the ability to continuously improve those processes and sustain competitive advantage (Tocan, 2012). The organizations believe that the capacity of labours would be able to communicate, learn, and share innovation in order to survive and compete effectively in the contemporary environment. Many studies reveal a significant relationship between tacit and explicit knowledge sharing and organizational performance (Allameh *et al.*, 2014; Park *et al.*, 2015; Bhuiyan, 2011). Teece

(2007) has suggested that knowledge constitutes valuable intangible assets for creating and sustaining competitive advantages. In organization contexts, people can learn, not only from their own direct experiences, but also from the experiences of others. Because employees interact with one another, knowledge gathered by one person can be transferred to his/her colleagues through feedback, explanation, help, or advice (Geisler & Wickramasinghe, 2009). However, Tarofder et al. (2017) have argued that tacit and explicit knowledge sharing have no assurance on improving organizational performance due to the employee's refusal to share knowledge and hence lead to ineffective and inefficient in the overall organizational performance. In addition, Omar et al. (2016) explain that the performance of companies has no relationship with the knowledge sharing implementation due to the failure of employees in delivering reliable information within the company or across its relevance branches. Moreover, the inadequate training and lack of team-efficacy could reduce the unreliability of explicit knowledge shared and discourage the implementation of tacit knowledge sharing (Omar et al., 2016). Holt, Armenakis, Field, and Harris (2007) also state that employees who refuse to change or unready to accept new knowledge could cause organization's performance standstill and hinder tacit knowledge sharing.

Based on the findings of this study, it can conclude that a comprehensive knowledge sharing brings about synergy relationship with the whole operations of an organization, especially on its production processes. As consistent with the previous studies' findings (Honarpour, Jusoh & Md Nor, 2018; Hussain, Konar & Ali, 2016), studies had found that the effects of tacit and explicit knowledge sharing have the most contributions on practical knowledge and skill (procedural knowledge) of an organization, which focuses on continuous quality improvement for the manufacturing processes, ensuring safety for operational employees and also, the sustainability of organizational performance. Therefore, tacit and explicit knowledge sharing are believed to have the most influential impact on manufacturing performance by improving production quality, gain competitive advantage, and achieve advantageous performance among manufacturing companies (Allameh *et al.*, 2014; Almahamid Awwad & McAdams, 2010).

Methodology

In this study, samples were selected from the list of the Federation of Malaysian Manufacturers (FMM) Directory (50th Edition) because there are approximately 2,600 manufacturing and services companies have registered and recorded in the directory. Quantitative approach was applied in this research and a cross-sectional survey is carried out to examine the relationships between tacit and explicit knowledge sharing and organizational performance. The unit of analysis was organization because manufacturing companies in Malaysia have large amounts of sales value, manufacturing establishments and labour forces (Malaysian Investment Development Authority, 2018). Production managers as representative of manufacturing companies were selected and required to answer the questionnaire as they possess capabilities in decision making, authority to act on behalf of the company and overseeing the entire organization manufacturing production and process.

The samples of 145 were drawn from the Federation of Malaysian Manufacturers (FMM) Directory through disproportionate stratified random sampling. Specifically, the samples were selected from the 20 manufacturing sub-sectors classified by the Malaysian Investment Development Autohrity (2018). G*Power 3.1.9.4 was used to determine the minimum sample size for regression analysis. As recommended by Mayr, Erdfelder, Buchner & Faul (2007), the medium effect size will be selected as the minimum sample size for research and therefore 134 samples were proposed by the G*Power method. In order to understand the cause-and-effect relationships and provide a better research model, Partial Least Square

Structural Equation Modeling (PLS-SEM) was employed to analyze the data. The statistical anlaysis of construct validity and reliability, loadings, average variance extracted (AVE) and the composite reliability (CR) were analysed through the measurement and structural models of SmartPLS software.

The findings of the study have found consistent with most of the previous research, which shown tacit and explicit knowledge sharing have the significant positive effects on organizational performance among manufacturing companies in Malaysia (Nieves *et al.*, 2014; Bhuiyan, 2011; Teece, 2007). The findings have indicated that tacit and explicit knowledge sharing are valuable to organizations' performance and would have a strong impact on business operations and enhanced strategic management (Adaileh & Abualzeat, 2017; Park *et al.*, 2015). Furthermore, Yusof, Ismail, Ahmad and Yusof (2012) also support that firms with the effectiveness of tacit and explicit knowledge sharing practices, companies are more likely to make better use of resources and so will exhibit superior outcomes such as more innovation and superior financial performance.

From the study's findings, the researcher can bring to a close discussion that knowledge sharing practices (Bhuiyan, 2011; Cabrera, Collins & Salgado, 2006; Ngah & Jusoff, 2009) are evident as the modest albeit encouraging practice of knowledge sharing going on in the Malaysia's manufacturing companies, particularly in terms of tacit and explicit knowledge sharing. This situation verifies that manufacturing companies acknowledge the importance of tacit and explicit knowledge sharing in their daily operation activities and share knowledge among themselves on a frequent basis. Knowledge sharing is a sustainable evolutionary process that involves the spread of tacit and explicit knowledge over time. It also encourages the action or process of innovating something new that is different with competitors (Allee, 2012; Dyer & Nobeoka, 2000).

Conclusion

This study contributes a number of theoretical implications from knowledge enhancement in the quality improvement domain. First, this research extends to explore in the area of manufacturing sector among manufacturing companies' performance especially in the Malaysian region. Secondly, this research makes a contribution of filling the existing gaps of the relationships between tacit and explicit knowledge sharing and organizational performance in research on Malaysia's manufacturing sector. In addition, this study is only able to focus on manufacturing sector in Malaysia due to the lack of time and limited financial resources. For future research, it is suggested that future researchers must be able to prepare themselves with various supports before conducting the final research. Other competitive and top manufacturing sectors outside of Malaysia that could be treated as precedent such as Guangdong, Zhejiang and Jiangsu in China, Bharuch and Ludhiana in India, and special economic zones (SEZs) in Indonesia are recommended to be investigated for future research in order to provide more valuable findings towards manufacturing sector in the Asian perspective.

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References

Abdul-Rashid, S. H., Sakundarini, N., Ghazilla, R. A. R., & Thurasamy, R. (2017). The impact of sustainable manufacturing practices on sustainability performance: Empirical evidence from Malaysia. *International Journal of Operations & Production Management*, 37(2), 182-204.

- Adaileh, M., & Abualzeat, H. (2017). Impact of knowledge sharing and leakage on innovative performance. *Journal of Sustainable Development, 10*(1), 92-111.
- Agus, A., & Hajinoor, S. M. (2012). Lean production supply chain management as driver towards enhancing product quality and business performance: Case study of manufacturing companies in Malaysia. *International Journal of Quality & Reliability Management*, 29(1), 92-121.
- Ahuja, I. P. S., & Khamba, J. S. (2008). An evaluation of TPM initiatives in Indian industry for enhanced manufacturing performance. *International Journal of Quality & Reliability Management*, 25(2), 147-172.
- Allameh, S. M., Pool, J. K., Jaberi, A., & Soveini, F. M. (2014). Developing a model for examining the effect of tacit and explicit knowledge sharing on organizational performance based on EFQM approach. *Journal of Science & Technology Policy Management*, 5(3), 265-280.
- Allee, V. (2012). The knowledge evolution. Routledge.
- Almahamid, S., Awwad, A., & McAdams, A. C. (2010). Effects of organizational agility and knowledge sharing on competitive advantage: an empirical study in Jordan. *International Journal of Management*, 27(3), 387
- Alwis, R. S., & Hartmann, E. (2008). The use of tacit knowledge within innovative companies: Knowledge management in innovative enterprises. *Journal of Knowledge Management*, 12(1), 133-147.
- Ancori, B., Bureth, A., & Cohendet, P. (2000). The economics of knowledge: The debate about codification and tacit knowledge. *Industrial and Corporate Change*, 9, 255–287.
- Asada, H., Nixon, S., & Koen, V. (2017). Boosting productivity in Malaysia. *Organisation for Economic Cooperation and Development, Economics Department Working Papers No. 1370*, 2.
- Balconi, M., Pozzali, A., & Viale, R. (2007). The "codification debate" revisited: A conceptual framework to analyze the role of tacit knowledge in economies. *Industrial and Corporate Change*, 16, 823–849.
- Bhuiyan, M. S. H. (2011). Tacit sources of competitive advantages of the leading Chinese companies extracted from the longitudinal analysis of Chinese Internationalisation. *Procedia-Social and Behavioral Sciences*, 24, 727-736.
- Bohari, A. M., Hin, C. W., & Fuad, N. (2017). The competitiveness of halal food industry in Malaysia: A SWOT-ICT analysis. *Geografia-Malaysian Journal of Society and Space*, 9(1).
- Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, 17(2), 245-264.
- Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: the Toyota case. *Strategic management journal*, 21(3), 345-367.
- Federation of Malaysian Manufacturers. (2018). *Business Action*. (49th edition). Kuala Lumpur: Federation of Malaysian Manufacturers.
- Geisler, E., & Wickramasinghe, N. (2009). *Principles of Knowledge Management: Theory, Practice, and Cases*. United States: M.E. Sharpe, Inc.
- Holt, D. T., Armenakis, A. A., Feild, H. S., & Harris, S. G. (2007). Readiness for organizational change: The systematic development of a scale. *The Journal of applied behavioral science*, 43(2), 232-255.
- Honarpour, A., Jusoh, A., & Md Nor, K. (2018). Total quality management, knowledge management, and innovation: an empirical study in R&D units. *Total Quality Management & Business Excellence*, 29(7-8), 798-816.
- Hussain, K., Konar, R., & Ali, F. (2016). Measuring service innovation performance through team culture and knowledge sharing behaviour in hotel services: a PLS approach. *Procedia-Social and Behavioral Sciences*, 224, 35-43.
- Ibrahim, R., & Nissen, M. E. (2005, January). Developing a knowledge-based organizational performance model for discontinuous participatory enterprises. In System Sciences, 2005. HICSS'05. *Proceedings of the 38th Annual Hawaii International Conference on* (pp. 249b-249b). IEEE.
- Islam, M. Z., Jasimuddin, S. M., & Hasan, I. (2017). The role of technology and socialization in linking organizational context and knowledge conversion: The case of Malaysian Service Organizations. *International Journal of Information Management*, 37(5), 497-503.
- Karim, A., & Arif-Uz-Zaman, K. (2013). A methodology for effective implementation of lean strategies and its performance evaluation in manufacturing organizations. *Business Process Management Journal*, 19(1), 169-196.
- Kathiravelu, S. R., Mansor, N. N. A., Ramayah, T., & Idris, N. (2014). Why organizational culture drives knowledge sharing? *Procedia Social and Behavioral Sciences*, 129, 119-126.
- Lee, R. (2020). The Edge Malaysia IR4.0 in Malaysia: The Challenges. Retrieved from https://www.theedgemarkets.com/article/cover-story-ir40-malaysia-challenges

- Malaysian Investment Development Authority. (2018). Media Release: Malaysian Investment Performance Report 2017. Retrieved from http://www.mida.gov.my/home/5844/news/media-release--malaysian-investment-performance-report-2017/
- Malaysia Productivity Corporation. (2018). Productivity Report 2017/2018. Retrieved from https://drive.google.com/file/d/10jE_MFSYmZnkeVNGqG4_GOpYp1ZgL/
- Marhani, M. A., Jaapar, A., & Bari, N. A. A. (2012). Lean Construction: Towards enhancing sustainable construction in Malaysia. *Procedia-social and behavioral sciences*, 68, 87-98.
- Martín-de Castro, G., Delgado-Verde, M., Navas-López, J. E., & Cruz-González, J. (2013). The moderating role of innovation culture in the relationship between knowledge assets and product innovation. *Technological Forecasting and Social Change*, 80(2), 351-363.
- Mayr, S., Erdfelder, E., Buchner, A., & Faul, F. (2007). A short tutorial of GPower. *Tutorials in quantitative methods for psychology*, 3(2), 51-59.
- Ministry of International Trade and Industry. (2015). Third Industrial Master Plan (IMP3) 2006-2020. Retrieved from http://www.miti.gov.my/index.php/pages/view/contentaa6a.html
- Nagulendran, K., Padfield, R., & Campos-Arceiz, A. (2016). A multi-stakeholder strategy to identify conservation priorities in Peninsular Malaysia. *Cogent Environmental Science*, 2.
- Ngah, R., & Jusoff, K. (2009). Tacit knowledge sharing and SMEs' organizational performance. *International Journal of Economics and Finance*, 1(1), 216.
- Nieves, J., Quintana, A., & Osorio, J. (2014). Knowledge-based resources and innovation in the hotel industry. *International Journal of Hospitality Management, 38*, 65-73.
- Noruzy, A., Dalfard, V. M., Azhdari, B., Nazari-Shirkouhi, S., & Rezazadeh, A. (2013). Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: an empirical investigation of manufacturing firms. *The International Journal of Advanced Manufacturing Technology*, 1-13.
- Omar, M. K., Dahalan, N. A., & Yusoff, Y. H. M. (2016). Social media usage, perceived team-efficacy and knowledge sharing behaviour among employees of an oil and gas organisation in Malaysia. *Procedia Economics and Finance*, *37*, 309-316.
- Park, C., Vertinsky, I., & Becerra, M. (2015). Transfers of tacit vs. explicit knowledge and performance in international joint ventures: The role of age. *International Business Review*, 24(1), 89-101.
- Ramli, M. F., & Senin, A. A. (2015). Success factors to reduce orientation and resources-related barriers in university-industry R&D collaboration particularly during development research stages. *Procedia Social and Behavioral Sciences*, 172, 375-382.
- Rehman, W. U., Ilyas, M., & Asghar, N. (2015). Knowledge sharing, knowledge management strategy and performance: A knowledge based view. *Pakistan Economics and Social Review*, 53(2), 177-202.
- Rio, M., Riel, A., & Brissaud, D. (2017). Design to Environment: which information model characteristics are needed?. *Procedia CIRP Design*, 1-6.
- Roehrich, J. K., Hoejmose, S. U., & Overland, V. (2017). Driving green supply chain management performance through supplier selection and value internalisation: A self-determination theory perspective. *International Journal of Operations & Production Management*, 37(4), 489-509.
- Sharkie, R. (2003). Knowledge creation and its place in the development of sustainable competitive advantage. *Journal of Knowledge Management*, 7(1), 20-31.
- Sidin, J. P., & Sham, J. J. (2015). Innovation in realizing quality of production in Malaysia. *Asian Social Science*, 11(3), 57-67.
- Suppiah, V., & Sandhu, S. M. (2011). Organisational culture's influence on tacit knowledge-sharing behaviour. *Journal of knowledge management*, 15(3), 462-477.
- Tarofder, A. K., Azam, S. M. F., & Jalal, A. N. (2017). Operational or strategic benefits: Empirical investigation of internet adoption in supply chain management. *Management Research Review*, 40(1), 28-52.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13), 1319-1350.
- The Asia Foundation (2015). Malaysia: Facing the Challenges of Sustainable Development. Retrieved from https://asiafoundation.org/2015/10/07/malaysia-facing-the-challenges-of-sustainable-development/
- Tocan, M. C. (2012). Knowledge based economy assessment. *Journal of Knowledge Management, Economics and Information Technology*, 2(5).
- Yaacob, R., Iskandar, R. A., Abdullah, M. R. T. L., Yaacob, R., Abdullah, R., M. A. R., & Azelin, M. N. (2011). Knowledge sharing in organizations: Issues of society and culture, problems and challenges. *International Journal of Basic & Applied Sciences*, 11(02), 41-46.
- Yusof, Z. M., Ismail, M. B., Ahmad, K., & Yusof, M. M. (2012). Knowledge sharing in the public sector in Malaysia: a proposed holistic model. *Information Development*, 28(1), 43-54.
- Zack, M. H. (1999). Developing a knowledge strategy. California management review, 41(3), 125-145.

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Zahiid, S. J. (2019, January 2). Malaysia's manufacturing hits six-year low in 2018. Malay Mail. Retrieved from https://www.malaymail.com/news/money/2019/01/02/malaysias-manufacturing-hits-six-year-low-in-2018/1708318