

Achieving and Sustaining Organisational Performance < Knowledge Management Systems



Management,
Knowledge and Learning
International Conference 2021
Technology, Innovation
and Industrial Management

Economy for a New Normal:
Digitalisation and Human Relations
in Business and Education
20–21 May 2021
Online Conference

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Purpose: This paper aims to conduct literature research on organisational performance and how it is affected by knowledge management systems.

Study design/methodology/approach: This research paper reviewed relevant literature in articles, journals and books of the subject area. The keywords were used to search various websites for articles and journals for review. Literature on the relationship between knowledge management and organisational performance and subsequently, literature that explores the relationship between knowledge management systems and organisational performance was the key focus.

Findings: The study shows that the knowledge-based view of the firm, in terms of organisational performance holds but the success thereof or otherwise hinges on the availability of other factors or enablers such as the corporate culture, managerial support are required for knowledge management, and for that matter, knowledge management systems to have a positive effect on the organisational performance.

Originality/value: I hereby declare that this submission is my own work of review of existing literature on the topic and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree.

Keywords: Knowledge, Knowledge Management, Knowledge Management Systems, Organisational Performance

1. Introduction

The objective of knowledge management systems (KMS) is to support the creation, transfer, and application of knowledge in organisations. Knowledge and knowledge management are complex and multi-faceted concepts. Thus, effective development and implementation of KMS requires a foundation in several rich pieces of literature (Yang, 2008)

In the highly competitive business world, the success of one's organisation depends on how well the top management utilises its corporate assets to achieve business goals. These assets can be categorised into tangible (e.g. financial capital, buildings and employees) and intangible form (e.g. knowledge, corporate image and branding). Conventionally, most of the firms have prioritised the management and utilisation of the tangible aspects in their day-to-day operations (Cham et al., 2016)

Cham et al. (2016) (*quoting McFayden and Canella, 2004*) states that knowledge itself has become a critical resource. It is an imperative element for businesses to solve operational problems and to make decisions to support business strategies (Cham et al., 2016)

Information technologies designed to assist managerial and professional workers have evolved over several decades. They have progressed from systems that process and disseminate vast amounts of information to an organisation's managers (MIS), to systems that provide specific decision-makers with tools for ad hoc decision analysis (DSS), to systems designed to provide updated, often real-time, relevant information to senior and middle managers (EIS). These systems have each contributed to individual and organisational improvements in varying

degrees and continue to be essential components of organisations' information technology investment (M. Alavi & Leidner, 1999)

The concept of coding and transmitting knowledge in organisations is not new--training and employee development programs, organisational policies, routines, procedures, reports, and manuals have served this function for years (M. Alavi & Leidner, 1999)

Many factors could be attributed to the achievement and, very significantly, the sustenance of the achieved success. Among the critical resources of production, land, labour, capital, etc., knowledge is one essential resource that is not professionally managed. For efficiency in knowledge management, the effective set up of knowledge management systems is vital and incredibly significant. This paper aims to conduct literature research on organisational performance and how it is affected by knowledge management systems.

This paper reviewed relevant literature in articles, journals and books. Literature on the relationship between knowledge management and organisational performance and subsequently, literature that explores the relationship between knowledge management systems and organisational performance was the key focus.

2. Literature Review

2.1. Knowledge

Alavi and Leidner (2001) define knowledge as a justified belief that increases an entity's capacity for effective action. Knowledge may be tacit or explicit; it can refer to an object, a cognitive state, or a capability; it may reside in individuals, groups (i.e., social systems), documents, processes, policies, physical settings, or computer repositories. Thus, no single or optimum approach to organisational knowledge management and knowledge management systems can be developed (Alavi & Leidner, 2001). Knowledge is a strategic asset for all types and sizes of organisations; Includes knowledge of competitors (competitors), competitive intensity, information intensity, market uncertainty and customer and supplier relationships, use of innovative technology and knowledge of organisational resource capacity (Chandra T, 2019). Knowledge management then refers to a systemic and organizationally specified process for acquiring, organising and communicating both tacit and explicit knowledge of employees so that other employees may make use of it to be more effective and productive in their work (Alavi & Leidner, 1999)

In today's business environment, knowledge-based technologies such as microelectronics, computers, telecommunications, man-made gadgets, and robotics have been deployed to cater to knowledge management initiatives by forming a knowledge management system (KMS) (Cham et al., 2016; Alavi & Leidner, 1999). Thus, KMS serves as the platform for sharing crucial information, decision-making, strategy crafting and increased intellectual capability of the organisation (Cham et al., 2016)

More and more companies have instituted knowledge repositories, supporting such diverse types of knowledge as best practices, lessons learned, product development knowledge, customer knowledge, human resource management knowledge and methods-based knowledge (Gottschalk, 2007; Davenport and Prusak 1998)

2.2. Knowledge Management Systems

Knowledge management systems (KMS) refer to a class of information systems applied to managing organisational knowledge for use at the individual, group and organisational level. Information Technology (IT) applications are used to support and enhance the organisational processes of knowledge creation, storage and retrieval, transfer, and application. Again, Yang (2008) posited that the goal of any KMS base is to discover, capture, codify, validate, transfer, and convert knowledge into actionable information that can help a business be more effective, efficient, and innovative. (Alavi & Leidner, 2001; Gottschalk, 2007; Yang, 2008). Integrated and integrative technology architecture is a key driver for knowledge management systems. Again, knowledge management systems are multi-faceted. That is, effective knowledge management systems involve far more than just technology, encompassing broad cultural and organisational issues (Alavi & Leidner, 1999). Therefore a knowledge management system must be a socio-technical system that has as its objective the management and sharing of knowledge to support the achievement of organisational goals (Yang, 2008)

2.2.1. KMS, IT, IS and Social & Cultural Settings

Modern information technology can collect, systematise, structure, store, combine, distribute, and present value to knowledge workers (Nahapiet & Ghoshal, 1998). From a technical perspective, knowledge management systems may not appear radically different from other information systems. There have been many advanced IT technologies used to systemise, enhance, and speed up the knowledge management processes and activities (Yang, 2008)

Poston and Speier (2005) also noted that knowledge management systems facilitate the efficient and effective sharing of an organisation's intellectual resources. They, however, proceeded to indicate that a knowledge management system must be designed for practical usage such that knowledge workers can readily find high-quality content without feeling overwhelmed (Poston & Speier, 2005). This implies that effective knowledge management systems are not just IT/IS but systems well designed with knowledge workers in mind.

Knowledge management systems extend beyond traditional information systems to provide context for the information presented. In addition to technologies, knowledge workers and knowledge are vital components in a KMS (Yang, 2008).

Pandey and Dutta, in their research on the role of knowledge infrastructure capabilities in knowledge management, suggest that technology plays a considerable role in the effectiveness of knowledge management due to its direct influence on the KM's intervention. However, they discovered that organisational culture plays a significant role in KM excellence (Pandey & Dutta, 2013, p. 448). Knowledge management systems are a combination of Information Technology (IT) and Information System (IS) with socio-cultural facets. While IT does not apply to all of the issues of knowledge management, it does support knowledge management in sundry ways (Alavi & Leidner, 2001; Davenport & Prusak, 1998; Malhotra, 2001; O'Dell & Grayson, 1998). Davenport and Prusak (1998) further posited that IT / IS are only good KM enablers but does not create knowledge and cannot guarantee or even promote knowledge generation or knowledge sharing in a corporate culture that doesn't favour those activities.

Both information systems and knowledge management systems are essential in an organisation and often fulfil the same tasks. Significant components of knowledge management systems are the *best practices*, *communication enablers*, and *system road maps*. The primary purpose of

these components is to provide users with the correct information at the right time and place (Galandere-Zile & Vinogradova, 2005)

When thinking about this socio-technical definition of KMS, Damodaran and Olphert (2000) say it comprises the knowledge itself, sometimes referred to as the intellectual capital of the organisation, organisational attributes (including intangibles such as culture), policies and procedures, as well as some form of electronic storage and retrieval system (Damodaran & Olphert, 2000). That is, the components of people (knowledge workers and managers), technologies (manual and computer-based technologies), and knowledge itself interact to comprise a knowledge management system (Gallupe, 2001). Technology was thus, found to be a significant component of the knowledge management system due to its influence on structure and culture (Alavi and Leidner, 2001; Davenport and Prusak, 1998). The computational power, as such, has little relevance to knowledge work, but the communication and storage capabilities of networked computers make computational power an important enabler of effective knowledge work. (Gottschalk, 2007; Bock et al., 2005)

Again, in this pandemic era, some infrastructure technology that ordinarily wouldn't be thought of as KMS facilitate knowledge management; video conferencing and social media. Both of these technologies don't capture or distribute structured knowledge, but they are pretty effective at enabling people to transfer tacit knowledge (Gottschalk, 2007)

2.3. Organisational Performance

In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge. When markets shift, technologies proliferate, competitors multiply, and products become obsolete almost overnight; successful companies consistently create new knowledge, disseminate it widely throughout the organisation, and quickly embody it in new technologies and products (Nonaka, 1998). In knowledge management literature, adequate theoretical and empirical evidence has been found regarding the positive impacts of successful knowledge management implementation on organisational performance (Muhammed & Zaim, 2020; Ali et al., 2019; Corral de Zubielqui et al., 2019; Davenport & Prusak, 1998; Zaim et al., 2007).

High-performance organisations are organisations that achieve results (both financial and non-financial) that are better than those of their peer group over some time of at least five to ten years (Bagorogoza & de Waal, 2010; Waal, 2012). Meanwhile, before organisations can realise the "grand promise" of KM, the first issue that should be addressed is: What knowledge needs to be managed and what performance ends? KM initiatives work best when knowledge is managed within a context where value is created (Massey et al., 2002). To realise value created in organisations and hence be able to attribute the results to KMS or otherwise, it is essential to understand what constitutes organisational performance. Developed by Kaplan and Norton, Balanced Scorecard (BSC) provides one of the best-integrated views of overall Organisational Performance and strategic objectives (R. Kaplan & Norton, 2004). They propose the hypothesis about a chain of cause-and-effect events that leads an organisation to succeed in the long run. BSC integrates financial measures with other key performance indicators to create a perspective that incorporates economic and non-financial aspects (Gupta & Chopra, 2018). The BSC complements the financial measures with operational measures on customer satisfaction, internal processes, and the organisation's innovation and improvement activities—operational measures that are the drivers of future financial performance (R. S. Kaplan & Norton, 1992)

William C. Bogner and Pratima Bansal posit that sustained firm performance is related to well-developed capabilities in focusing on developing either high impact or incremental new knowledge; using existing, internally developed knowledge as an input with which to build subsequent new knowledge; and appropriating long-term rents from inventions by developing subsequent inventions (Bogner & Bansal, 2007)

2.3.1. Other Factors Affecting Organisational Performance

Again, literature has revealed that organisational performance comes from a combination of many factors. H. Inkinen (2016) in his study points out that organisations should pay attention to specific KM leadership attributes and organisational arrangements to achieve firm performance through knowledge management (Inkinen, 2016). Hooi (2019) also wrote that teamwork, which engages the employee in knowledge exchange and mutual problem-solving generates more technological innovations and product innovations. It encourages talented human capital to interact and share knowledge to pursue organisational goals (Hooi, 2019).

2.3.2. KM and Organisational Performance

Knowledge and learning are essential to organisational success (Pandey & Dutta, 2013). Zaim et al. (2019) propose a structural model of knowledge management processes showing the relationship between knowledge generation, knowledge sharing, knowledge storage, and knowledge utilisation and its subsequent impact on organisational KM performance (Zaim et al., 2019). Moreover, the relationship between knowledge management processes and performance seems to be more complex than a simple direct relationship because knowledge needs to be embedded in the organisation to improve performance (Durst & Edvardsson, 2012). Having knowledge embedded in an organisation could be achieved through organisational learning (OL), defined as "the capability of an organisation to process knowledge and to adjust its behaviour to reflect the new cognitive situation to improve its performance" and considered as a requirement for high levels of performance (Jain & Moreno, 2015; Obeso et al., 2020; Wu & Chen, 2014)

2.3.3. Competitive Advantage

One of the primary measures of organisational performance is the creation or acquisition of competitive advantage. Effective KMS must be able to harness Knowledge resources to acquire the firm's competitive advantage. Knowledge management system in organisations aims to effectively use existing knowledge to create new knowledge and to act, achieve sustainable competitive advantage from knowledge-based assets (Alavi & Leidner, 2001). Durmuş-Özdemir and Abdulkhoshimov (2018) state that two main views claim to explain how firms gain competitive advantage. The resource-based view (RBV) and the knowledge-based view (KBV). In both views, knowledge is seen as the leading valuable resource that generates competitive advantage. Again, the two kinds of knowledge resources available to firms: Internal knowledge resources are those that an organisation possesses in existing explicit knowledge in the form of reports, archive materials and statistics and implicit knowledge in the form of employee experience; external knowledge resources represent opportunities and threats outside the organisation, which, when effectively managed, may serve the firm to gain sustainable competitive advantage (Durmuş-Özdemir & Abdulkhoshimov, 2018)

2.3.4. Innovation

Another area of measuring organisational performance is organisational innovation. Kristijan Breznik (2018), in his research 'Knowledge Management – from its Inception to the Innovation Linkage', observed that the results revealed significant linkage between knowledge management and innovation in the over 7,000 documents that were analysed (Breznik, 2018). As an extension of the RBV, the knowledge-based view (KBV) posits that the real competitive power of firms depends on their capacity to access information, create knowledge and improve innovation capability. This approach accepts new product creativity as a function of the firm's ability to manage, maintain, and create knowledge (Durmuş- Özdemir & Abdulkhoshimov, 2018). Muhammed & Zaim (2020) noted that an organisations' knowledge management success could positively affect organisations' innovation performance and, subsequently, their financial performance (Muhammed & Zaim, 2020). It is found that Fernandez's methodology combines with Joint Application Design (JAD) adoption is the most prominent method used in building a knowledge management system to support the innovation process in an organisation (Aris & Sensuse, 2020)

Again, Law et al. point out that some sources of innovation include internal R&D, External from Competition, and Customers' pull effect (Law et al., 2019, p. 189). An effective KMS could best harness these.

2.3.4.1. *Km And Innovation*

Heisig et al. (2016) noted that a bulk of empirical studies have addressed and indeed validated the impact of KM as an essential enabler and facilitator of innovation in organisations (Heisig et al., 2016). An efficient knowledge management system (KMS) is a vital strategy to help firms achieve sustainable competitive advantages (Nattapol et al., 2010). Meanwhile, in linking KM success to innovation, Bose (2004) links KM to the various factors needed for innovation. These include reduction of the loss of Intellectual Capacity from employees who leave; the reduction of the cost of development of a new product/service; the increase in productivity of workers by making knowledge accessible to all employees; and, therefore, it increases employee satisfaction (Bose, 2004)

Several early literature reviews suggested different value propositions of KM in the innovation process ranging from creating tools and processes to exploit tacit knowledge for innovation to support collaborative problem solving, enabling retrieval and re-use of ideas and learnings from previous innovations up to the influence of an open-minded KM culture fostering creative thinking (Heisig et al., 2016). A bulk of empirical studies have addressed and indeed validated the impact of KM, and for that matter, KMS, as an essential enabler and facilitator of innovation in organisations (Heisig et al., 2016; H. T. Inkinen et al., 2015; Aboelmaged, 2014)

2.3.4.2. *Innovation & Performance*

Because of the increasing levels of competition and decreasing product life cycles, innovation is widely regarded as one of the most important sources of sustainable competitive advantage in an increasingly changing environment allowing a firm to improve profitability and maintain competitive advantage (Atalay et al., 2013; Artz et al., 2010). Again, Kanchana et al. (2011) showed that effective knowledge management would lead to better learning and subsequently more innovativeness in an organisation (Kanchana et al., 2011)

By deconstructing some of the critical elements of the resource-based view and the knowledge-based view of the firm, Bogner and Bansal (2007) suggest that there are three components to knowledge management systems that influence firm performance: the firm's ability to produce new knowledge, its ability to build on that knowledge, and its effectiveness in capturing a high proportion of the subsequent spin-offs (Bogner & Bansal, 2007).

3. Discussions and Conclusion

This paper discusses knowledge, knowledge management systems, and organisational performance based on a review and analysis of a broad range of relevant literature.

The findings from the literature reviewed so far demonstrate that effective utilisation of KM practices is a significant driver for innovation. Meanwhile, some leadership qualities and organisational settings are needed to support organisational performance through efficient and effective management of knowledge resources. This certainly can only occur when there is an equally effective knowledge management system in place. From the various literature studied, it can be said that the assertion of Pandey and Dutta (2013) is a good summary of the importance of effective knowledge management, and for that matter, KMS towards organisational performance. Organisational values and the establishment of relational capital with top management support can lead to organisation-wide acceptance of knowledge sharing as a value and KM as a business imperative. They further posit that the role of the knowledge management system (knowledge infrastructure capability) influences KM excellence in a knowledge-driven organisation and hence organisational performance. Further, this study agrees in summary with Chandra, T. (2019) that the numerous literature reviewed so far demonstrate alignment that the Knowledge Management System is a complete system that organisations must implement to achieve a competitive advantage, achieve effectiveness and efficiency, improve performance, increase professionalism and reduce risk. (Pandey & Dutta, 2013; Cham T, 2019). It is clear from the study that the knowledge-based view of the firm, in terms of organisational performance holds but the success thereof or otherwise hinges on the availability of other factors or enablers that are required for effective knowledge management, and for that matter, a knowledge management systems to have a positive effect on the organisational performance.

In effect, for an effective KMS to impact positively on organisational performance, three main factors or components must come to play; knowledge itself, people and technology (or support system).

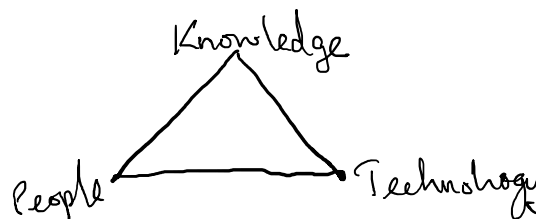


Figure 1: Model

The effectiveness of a knowledge management system depends on the interplay of how balanced these factors. An organisation may be more robust in one or two of these three components than the other. A good balance in the strength interact and the degree of intensity of their individual contribution that these components bring onto the determines the impact a KMS is a good indicator of the effect of KMS have on organisational the performance and hence the role of KMS in achieving and sustaining it of an organisation.

3.1. Limitations of Study

A significant limitation of this study is that it has been conducted over a relatively short period, and hence literature that has been reviewed has not been exhaustive.

Again, due to the limited time and scope afforded in this research and because the focus was to investigate if and how knowledge management systems (KMS) affect organisational performance, other possible knowledge management functions that potentially could impact knowledge management success and organisational performance was not studied. Future research may focus on other KM practices and processes, such as knowledge creation, sharing and utilisation, which may be equally crucial for knowledge management success and organisational performance.

3.2. Addressing the Future

The general conclusion of this study that the effective contribution of KMS towards the achievement and sustenance of organisational performance is dependent on the trio component of knowledge, people and technology; it will be of great interest for further research into the roles that each of these components directly contribute to it and the effect of the interaction of these components on organisational performance. The use of analytical social studies methodologies, such as statistical tools in the analysis of the implementation of Knowledge Management Systems is highly recommended. These methodologies are to test the relative contribution of the various KMS components to organisational performance. These integrative studies may broaden our horizon and understanding of this subject.

Again, findings from the various literature suggest that further research on the relationship between knowledge management, and for that matter, KMS and business outcomes are required. I agree with Asiaei and Bontis (2019) about the need to propose a theoretical model to illuminate the process for employing KM-enabled performance because much uncertainty still exists about the literature addressing the KM-performance link (Asiaei & Bontis, 2019). Heisig et al. (2016) classified the need for future research articulated by the KM expert panel into eight themes: *business strategy, intellectual capital, decision-making, knowledge sharing, organisational learning, innovation performance, productivity, and competitive advantage*. they suggested that research in these areas could demonstrate the diversity of value created by knowledge management activities (Heisig et al., 2016)

Finally, another area of further research should be on social media and social media platforms as KMS. This is essential in pandemic eras like now. This resonates with the work of Gottschalk (2007), who says electronic networks make it possible to share information quickly, globally and with large numbers of individuals (Gottschalk, 2007).

References

- Alavi, & Leidner, D. (1999). Knowledge management systems: Emerging views and practices from the field. *Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences*. 1999. HICSS-32. Abstracts and CD-ROM of Full Papers. <https://doi.org/10.1109/HICSS.1999.772754>
- Alavi, & Leidner, D. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, 1, 107. <https://doi.org/10.2307/3250961>
- Ali, A., Panneer Selvam, D. D. D., Paris, L., & Gunasekaran, A. (2019). Key factors influencing knowledge sharing practices and its relationship with organizational performance within the oil and gas industry. *Journal of Knowledge Management*, 23. <https://doi.org/10.1108/JKM-06-2018-0394>
- Aris, R., & Sensuse, D. (2020, December 19). Knowledge Management Systems Development and Implementation: A systematic Literature Review.
- Asiaei, K., & Bontis, N. (2019). Translating knowledge management into performance: The role of performance measurement systems. *Management Research Review*, 43(1), 113–132. <https://doi.org/10.1108/MRR-10-2018-0395>
- Atalay, M., Anafarta, N., & Sarvan, F. (2013). The Relationship between Innovation and Firm Performance: An Empirical Evidence from Turkish Automotive Supplier Industry. *Procedia - Social and Behavioral Sciences*, 75, 226–235. <https://doi.org/10.1016/j.sbspro.2013.04.026>
- Bagorogoza, J., & de Waal, A. (2010). The role of knowledge management in creating and sustaining high performance organisations: The case of financial institutions in Uganda. *World Journal of Entrepreneurship, Management and Sustainable Development*, 6(4), 307–324. <https://doi.org/10.1108/20425961201000023>
- Bogner, W., & Bansal, T. (2007). Knowledge Management as the Basis of Sustained High Performance. *Journal of Management Studies*, 44, 165–188. <https://doi.org/10.1111/j.1467-6486.2007.00667.x>
- Bose, R. (2004). Knowledge management metrics. *Industrial Management & Data Systems*, 104(6), 457–468. <https://doi.org/10.1108/02635570410543771>
- Breznik, K. (2018). Knowledge Management – from its Inception to the Innovation Linkage. *Procedia - Social and Behavioral Sciences*, 238, 141–148. <https://doi.org/10.1016/j.sbspro.2018.03.017>
- Cham, T. (2019). Mapping Knowledge Management System Within Literatures of Creative Industry. *Journal of Management Information and Decision Sciences*. <https://www.abacademies.org/articles/mapping-knowledge-management-system-within-literatures-of-creative-industry-8339.html>
- Cham, T. H., Lim, Y. M., Cheng, B. L., & Lee, T. H. (2016). Determinants of knowledge management systems success in the banking industry. *VINE Journal of Information and Knowledge Management Systems*, 46(1), 2–20. <https://doi.org/10.1108/VJKMS-03-2014-0021>
- Corral de Zubielqui, G., Lindsay, N., Lindsay, W., & Jones, J. (2019). Knowledge quality, innovation and firm performance: A study of knowledge transfer in SMEs. *Small Business Economics*, 53(1), 145–164. <https://doi.org/10.1007/s11187-018-0046-0>
- Damodaran, L., & Olphert, W. (2000). Barriers and facilitators to the use of knowledge management systems. *Behaviour & Information Technology*, 19(6), 405–413. <https://doi.org/10.1080/014492900750052660>
- Davenport, T., & Prusak, L. (1998). Working Knowledge: How Organizations Manage What They Know. In *Ubiquity* (Vol. 1). <https://doi.org/10.1145/348772.348775>
- Durmüş-Özdemir, E., & ABDUKHOSHIMOV, K. (2018). Exploring the mediating role of innovation in the effect of the knowledge management process on performance. *Technology Analysis and Strategic Management*, 30, 596–608. <https://doi.org/10.1080/09537325.2017.1348495>
- Durst, S., & Edvardsson, I. (2012). Knowledge Management in SMEs: A Literature Review. *Journal of Knowledge Management*, 16, 879–903. <https://doi.org/10.1108/13673271211276173>
- Galandere-Zile, I., & Vinogradova, V. (2005). Where is the Border Between an Information System and a Knowledge Management System? *Managing Global Transitions*, 3, 179–196.
- Gallupe, B. (2001). Knowledge Management Systems: Surveying the Landscape. *International Journal of Management Reviews*, 3, 61–77. <https://doi.org/10.1111/1468-2370.00054>
- Gottschalk, P. (2007). Knowledge Management Systems: Value Shop Creation. IGI Global. <https://doi.org/10.4018/978-1-59904-060-8>
- Gupta, V., & Chopra, M. (2018). Gauging the impact of knowledge management practices on organizational performance – a balanced scorecard perspective. *VINE Journal of Information and Knowledge Management Systems*, 48(1), 21–46. <https://doi.org/10.1108/VJKMS-07-2016-0038>
- Heisig, P., Suraj, O., Kianto, A., Kemboi, C., Perez Arrau, G., & Easa, N. (2016). Knowledge management and business performance: Global experts' views on future research needs. *Journal of Knowledge Management*, 20. <https://doi.org/10.1108/JKM-12-2015-0521>

- Hooi, L. W. (2019). Firm performance: Is organizational learning capability the magic wand? *International Journal of Productivity and Performance Management*, 68(8), 1411–1433. <https://doi.org/10.1108/IJPPM-01-2019-0023>
- Inkinen, H. (2016). Review of empirical research on knowledge management practices and firm performance. *Journal of Knowledge Management*, 20(2), 230–257. <https://doi.org/10.1108/JKM-09-2015-0336>
- Jain, A., & Moreno, A. (2015). Organizational learning, knowledge management practices and firm's performance. *The Learning Organization*, 22, 14–39. <https://doi.org/10.1108/TLO-05-2013-0024>
- Kanchana, R., Law, K., Comepa, N., Malithong, P., & Phusavat, K. (2011). Interrelationships among knowledge management, organisational learning and innovation. *Int. J. of Innovation and Learning*, 9, 145–162. <https://doi.org/10.1504/IJIL.2011.038541>
- Kaplan, R., & Norton, D. (2004). Measuring the Strategic Readiness of Intangible Assets. *Harvard Business Review*, 82, 52–63, 121.
- Kaplan, R. S., & Norton, D. P. (1992, January 1). The Balanced Scorecard—Measures that Drive Performance. *Harvard Business Review*. <https://hbr.org/1992/01/the-balanced-scorecard-measures-that-drive-performance-2>
- Law, K. M. Y., Lau, A. K. W., & Ip, W. H. (2019). What drives success in product innovation Empirical evidence in high-tech and low-tech manufacturers in China. *International Journal of Technology Management*, 79(2), 165. <https://doi.org/10.1504/IJTM.2019.097525>
- Malhotra, Y. (2001). From information management to knowledge management: Beyond the “Hi-Tech Hidebound” systems. 115–134.
- Massey, A. P., Montoya-Weiss, M. M., & O'Driscoll, T. M. (2002). Knowledge Management in Pursuit of Performance: Insights from Nortel Networks. *MIS Quarterly*, 26(3), 269–289. <https://doi.org/10.2307/4132333>
- Muhammed, S., & Zaim, H. (2020). Peer knowledge sharing and organizational performance: The role of leadership support and knowledge management success. *Journal of Knowledge Management*, 24(10), 2455–2489. <https://doi.org/10.1108/JKM-03-2020-0227>
- Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *The Academy of Management Review*, 23. <https://doi.org/10.2307/259373>
- Nattapol, N., Peter, R., & Laddawan, K. (2010). An Investigation of the Determinants of Knowledge Management Systems Success in Banking Industry. *International Journal of Economics and Management Engineering*, 4(11), 8.
- Nonaka, I. (1998). The Knowledge-Creating Company. In *The Economic Impact of Knowledge* (pp. 175–187). Elsevier. <https://doi.org/10.1016/B978-0-7506-7009-8.50016-1>
- Obeso, M., Hernández-Linares, R., López-Fernández, M. C., & Serrano-Bedia, A. M. (2020). Knowledge management processes and organizational performance: The mediating role of organizational learning. *Journal of Knowledge Management*, 24(8), 1859–1880. <https://doi.org/10.1108/JKM-10-2019-0553>
- O'Dell, C., & C, J. (1998). If Only We Knew What We Know: Identification and Transfer of Internal Best Practices. *California Management Review*, 40. <https://doi.org/10.2307/41165948>
- Pandey, S., & Dutta, A. (2013). Role of knowledge infrastructure capabilities in knowledge management. *Journal of Knowledge Management*, 17. <https://doi.org/10.1108/JKM-11-2012-0365>
- Poston & Speier. (2005). Effective Use of Knowledge Management Systems: A Process Model of Content Ratings and Credibility Indicators. *MIS Quarterly*, 29(2), 221. <https://doi.org/10.2307/25148678>
- Waal, A. (2012). Characteristics of High Performance Organisations. *Journal of Management Research*, 4. <https://doi.org/10.5296/jmr.v4i4.2062>
- Wu, I.-L., & Chen, J.-L. (2014). Knowledge management driven firm performance: The roles of business process capabilities and organizational learning. *Journal of Knowledge Management*, 18, 1141–1164. <https://doi.org/10.1108/JKM-05-2014-0192>
- Yang, L. (2008). On Some Issues of Knowledge Management System: A Review. 1–6. <https://doi.org/10.1109/WiCom.2008.2574>
- Zaim, H., Muhammed, S., & Tarim, M. (2019). Relationship between Knowledge Management Processes and Performance: Critical role of Knowledge Utilization in Organizations. *Knowledge Management Research & Practice*, 17, 24–38. <https://doi.org/10.1080/14778238.2018.1538669>
- Zaim, H., Tatoglu, E., & Zaim, S. (2007). Performance of knowledge management practices: A causal analysis. *J. Knowledge Management*, 11, 54–67. <https://doi.org/10.1108/13673270710832163>