



**A CRITICAL LITERATURE REVIEW ON KNOWLEDGE
MANAGEMENT, COMPETITIVE ADVANTAGE AND
ORGANIZATIONAL PERFORMANCE: A RESEARCH AGENDA**

Rosemary Nduta Gakuru

PhD Candidate, Department of Human Resource Management

School of Business, Kenyatta University

Dr Muathe SMA (PhD)

Department of Business Administration

School of Business, Kenyatta University

ABSTRACT

Knowledge management is an important weapon for sustaining competitive advantage and improving performance. Knowledge management (KM) enable organizations to enhance their performance and competitiveness. The aim of this study is to examine the effect of knowledge management (Infrastructure capability, processes capability and knowledge management dimension) mediated by competitive advantage and moderated by government policies on organizational performance. The specific objectives are to investigate the impact of knowledge processing capability on organizational performance, to analyse the impact of infrastructure capability on organizational performance, to find out the effect of knowledge management processes on organizational performance, to determine the moderating effect of government policies on the relationship between knowledge management and organizational performance and finally to establish the mediating effect of competitive advantage on the relationship between KM and organizational performance. Multiple regression analysis will be used for data analysis. The study is grounded on social exchange theory which provides in-depth information relevant to knowledge management. In conclusion, other researchers show that there is a significant positive statistical relationship between knowledge management and organizational performance of manufacturing sector. Recommendation is that future research should focus on extending KM study in other sectors to support generalisation of findings in all sectors.

Key Words: Knowledge management, Infrastructural capability, Processes capability, Knowledge management dimensions, Government policies, Competitive advantage and Organizational performance.

1.0 Introduction

Organizations are facing many difficulties and challenges due to globalization and the resulting intensification of competition between organizations. This is promoting the use of management concepts that increases competitive advantage and performance (Lee & Choi, 2003).

Mosoti and Mesheka (2010) found out that most of the challenges experienced by organizations in Nairobi are how to create and implement KMP as part of organizational culture, organizational strategy and organizational leadership. They established that most organizations experience significant resistance when implementing knowledge management practices.

Despite the much contribution of KM to organizational performance, there are many issues that have not been addressed in the existing studies. First, there lacks a standard way of measuring and interpreting performance, ranging from innovativeness ([Darroch and McNaughton, 2003](#); [Gloet and Terziovski, 2004](#); [Kiessling et al., 2009](#); [Kianto, 2011](#)) and product and employee improvement ([Kiessling et al., 2009](#)) to product leadership, customer intimacy and operational excellence ([Zack et al., 2009](#)) and competitive position ([Lee and Choi, 2003](#)). Only few studies have addressed productivity and market share. ([Tanriverdi, 2005](#); [Darroch, 2005](#); [Marqués and Simón, 2006](#); [Zack et al., 2009](#)).

According to Riege (2005) the successful organizations and competitive advantage of the same is determined by application of knowledge. It facilitates connecting the right knowledge to the right people at the right time for timely decision-making (O'Dell and Hubert, 2011).

2.1 Theoretical review

Organizational capability theory was advanced by [Gold et al., \(2001\)](#) who approached knowledge management effectiveness from the perspective of organizational capability. They proposed that a firm's ability to effectively manage knowledge lies in its infrastructure and process capabilities. According to them, infrastructure capabilities include culture, structure and technology while process capabilities include knowledge acquisition, conversion, application and protection. The gap in the theory is that it only addresses the KM infrastructural capability and processes as the only aspect of KM that determine organizational performance

Most of the literatures addressing the role of knowledge and its management in organizational performance are grounded on resource-based view of the firm (e.g. [Penrose, 1959](#); [Barney, 1991](#)) and the knowledge-based view of the firm ([Kogut and Zander, 1992](#); [Grant, 1996](#); [Spender, 1996](#)). They assumed that competitiveness of a firm depends largely on the internal environment but not on the external environment. This theory is relevant to the study since knowledge is a resource that gives a firm competitive advantage. The gap in the theory is that it treats knowledge just like any other resource and fails to emphasize on its management (Alavi & Leidner, 2001).

Knowledge based view was advocated by [Penrose \(1959\)](#) and later expanded by others ([Wernerfelt 1984](#), [Barney 1991](#)& [Conner 1991](#)). It considers knowledge as the most significant

resource of the firm that is difficult to imitate and the major determinant of sustained competitive advantage and increased performance. According to the knowledge-based view, different firms perform differently depending on their ability to acquire, share and utilize knowledge ([Penrose, 1959](#); [Kogut and Zander, 1992](#); [Grant and Spender, 1996](#); [Grant, 1996](#)). The

Eisenhardt and Santos (n.d), argues that KBV could be used together with other theories since on its own, it is not sufficient. It is also questionable whether knowledge can truly be a firm's most strategic resource without considering whether the knowledge is actually used or just retained within individuals..

Social exchange theory (SET), evolved from Thorndike's (1932, 1935) reinforcement theory and Mill's marginal utility theory (1923). It stipulates that knowledge exchange in a firm contributes to innovation processes (Janssen, 2000).

Jarvenpaa and Staples (2000) considered in greater detail contextual aspects of information and knowledge sharing such as the information culture of organisations and task interdependence of individuals. This study will be grounded on social exchange theory.

2.2 Empirical review

Deborah, and monicah (2009) conducted a research on the relationship between governance and knowledge management and their impact on university's future success. They used both observations and interview data collection instruments. The study found that effective governance and strategic success are dependent on appropriate knowledge manipulation activities.. However, this is a single case study and further research would be required in order to confirm the exploratory findings.

Michael, *et al.*, (2009) conducted a research to report the results of an exploratory investigation of the organizational impact of knowledge management (KM). The findings were that KM practices were found to be directly related to organizational performance which, in turn, was directly related to financial performance. Research gaps are that majority of the research constructs were formative, thus, improving the measurement of KM practices will prove vital for validating and extending these findings. The findings were based solely on organizations from North America and Australia and may not reflect KM practices in other geographic, economic or cultural settings.

Annette, and Trevor (2011) conducted a study to evaluate the impact of specific knowledge management resources (i.e. knowledge management enablers and processes) on organizational performance. The results show that some knowledge resources (e.g. organizational structure, knowledge application) are directly related to organizational performance, while others (e.g. technology, knowledge conversion), though important preconditions for knowledge management, are not directly related to organizational performance.

The research gap is that the survey findings were based on a single dataset, so the same observations may not apply to other settings. The survey also did not provide in-depth insight

into the key capabilities of individual firms and the circumstances under which some resources are directly related to organizational performance. The study did not consider employee

[Leonor](#), [Andreia](#), and [Carlos](#) (2012) conducted a study to present and empirically validate a conceptual model for social economy organizations that includes organizational commitment, knowledge-centered culture, and training as critical variables for the success of formal and informal knowledge management practical

The research is a cross-sectional study and involved collection of quantitative data. Path analysis was applied and results showed that the proposed model has a good fit with the data.

However, the research is focused on social economy organizations therefore, generalization of results to other sectors must be cautious. Although a comprehensible model is presented, it does not cover an exhaustive list of critical factors for knowledge management. Additionally, this research is of a cross-sectional nature, which does not capture dynamic changes.

[Tatiana](#), and [Aino](#) (2012) conducted a study to examine the link between KM practices, firm competitiveness and economic performance. This study proposes a framework of KM practices consisting of human resource management (HRM) and information communication technology (ICT). The results show that HRM and ICT practices for managing knowledge are quite strongly correlated and have a statistically significant influence on both financial performance and competitiveness of the firm. However, the data are limited to companies from Finland, Russia and China. The study contributes to managerial practice by pointing out the importance of utilizing a combination of both social and technical means for KM and illustrating that they do matter for the company bottom line.

[Satyendra](#), [Pandey](#), and [Andrew](#) (2013), in their study on the role of knowledge infrastructure capabilities in knowledge management employed a single case study strategy to explore the objective. Research methods included in-depth, semi-structured interviews with key informants, as well as non-obtrusive participant observation. Researchers have asserted that it is mostly organizational factors that pose a challenge to the management of knowledge. The study's findings show the relevance of knowledge infrastructure capability in KM excellence.

[Massingham](#) (2014) conducted a study to evaluate a range of best practice knowledge management (KM) ideas used to manage knowledge flows and enablers. The results provide empirical evidence about what KM tools work and which do not and why, and outcomes for practitioners, researchers and consultants. However, it is based on a single case study organisation, offset, to some degree, by the longitudinal nature of the empirical evidence. It is ambiguous and the findings may be controversial. However, the depth of the study and its findings provide rare longitudinal empirical evidence about KM and the results should be useful for practitioners, researchers and consultants. This approach allows generalisability of the findings to enable others to apply the research findings in their organisational contexts.

Li Pin, and Kuan (2015) conducted a research to examine the effect of knowledge management (KM) on manufacturing performance and the relationships among three KM measures, namely, knowledge resources, KM processes and KM factors. Data were collected using questionnaires. The analysis and hypotheses testing were implemented using structural equation modeling. The results showed that the constructs of knowledge resources, KM processes and KM factors have significant and direct effects on manufacturing performance.

The results obtained would help managers to better understand the linkage between KM and manufacturing performance. However, the sample over-represented large firms and the study was a cross-sectional approach that collected data at a single point in time.

Galati (2015) did a study to combine different perspectives concerning knowledge management (KM), thus developing a theoretical framework that could be used, as a basic strategic tool, both to control and to plan KM level of implementation. The approach is bringing together previous research in KM and providing an analysis of the main issues discussed in the literature, an integrative framework for evaluating the level of implementation of knowledge management within organizations is proposed. Unlike previous literature on KM, this paper combined numerous perspectives in the field and provides a useful strategic tool.

Peter *et al.*, (2016) conducted a study to examine the views of the global knowledge management (KM) community on the research area of KM and business performance and identify key future research themes. Their findings are that value contribution of KM requires more research despite experts agreeing on the complexities involved in solving this challenge. Further research areas identified were related to the influence of KM to support business strategy, intellectual capital, decision-making, knowledge sharing, organizational learning, innovation performance, productivity and competitive advantage.

The research is unique, in that it reports on the views of 222 KM experts from 38 countries representing both academia and practice, on the issue of future research needs in terms of KM and business outcomes. As such it provides valuable guidance for future studies in the KM field and related subjects. However, the sample is dominated by European-based KM experts and the self-selecting sampling approach that was used by relying on the networks of each partner could have biased the structure of this sample.

According to Davenport and Dörflinger, 2001; Paisittan and *et al.* (2007), a supportive and effective knowledge infrastructure is necessary in knowledge management. Knowledge infrastructure capability comprises of technology, organizational culture and organizational structure (Gold *et al.*, 2001)

Information technology (IT) systems enable the organization to integrate information and knowledge. It also facilitates the creation, transfer, storage and safe-keeping of the firm's knowledge resource. Appropriate technology infrastructure is essential for effective knowledge management although studies fail to demonstrate whether IT is directly related to performance or not (Powell & Dent-Micallef, 1997; Webb & Schlemmer, 2006).

Organizational culture is a collection of values, beliefs, behaviors and symbols that influences knowledge management in organizations (Ho, 2009). A knowledge-friendly culture influences

the ability to acquire share and utilize knowledge in an organization (Alavi *et al.*, 2005-2006; Davenport *et al.*, 1998; Ho, 2009).

Organizational structure is comprised of organizational hierarchy, rules and regulations, and reporting relationships (Herath, 2007). Knowledge management concludes that a flatter structure is essential for KM processes to improve organizational performance (Nonaka & Takeuchi, 1995, 2001; Grant, 1996; Gold *et al.*, 2001; Beveren, 2003).

Knowledge acquisition is the process by which knowledge is captured in an organization. Firms with good capability to acquire external and internal knowledge gain competitive advantage and improve performance. (Yli-Renko, *et al.*, 2001; Sarin & McDermott, 2003).

The knowledge that is captured from both internal and external sources is converted to organizational knowledge for effective utilization within it (Lee & Choi, 2003). This conversion process according to Bhatt, (2001) is expected to improve performance.

Knowledge sharing can be defined as the transfer of knowledge from one person to another within and without the organization. It enables employees to access relevant information, build and use it within the organizations (Hogel, *et al.* 2003).

Knowledge application capability can be defined as an ability of employees to use knowledge acquired to make decisions, solve problems and deal with challenges in the organization. Proper utilization of knowledge reduces employee mistakes, improves their efficiency and reduces redundancy (Grant, 1996, Gold, *et al.* 2001).

Knowledge can be protected by the use of copyright and patents along with information technology systems that allow knowledge to be secured by filename, user name, password and file-sharing protocols that ascribe rights to authorized users (Lee & Yang, 2000). Protecting knowledge from illegal and inappropriate use is essential for a firm to establish and maintain a competitive advantage and can create value for an organization (Lee & Sukoco, 2007).

Nonaka (1998) describes knowledge as explicit, implicit and tacit. According to Davenport and Prusak, tacit knowledge exists in the mind of people. It cannot be articulated easily in writing and is acquired through personal experience (Nonaka, 1991). According to Polanyi (1962), tacit knowledge cannot be fully explained even by experts but can be transferred easily from one person to another through apprenticeship. According to Sunassee and Sewry (2003, p, 25), explicit knowledge is knowledge, which can be articulated, captured and distributed in different formats. It is formal and systematic.

Implicit knowledge is knowledge that is yet to be articulated and can only be implied by or inferred from observable behavior or performance (Nickols, 2000). Implicit knowledge is the middle ground of tacit and explicit knowledge.

2.4 Suggested Conceptual Framework

The independent variable in this study is knowledge management which is indicated by infrastructure capability, processes capability and knowledge management dimensions. The dependent variable is organizational performance, the mediating variable being competitive advantage and the moderating variable is government policies.

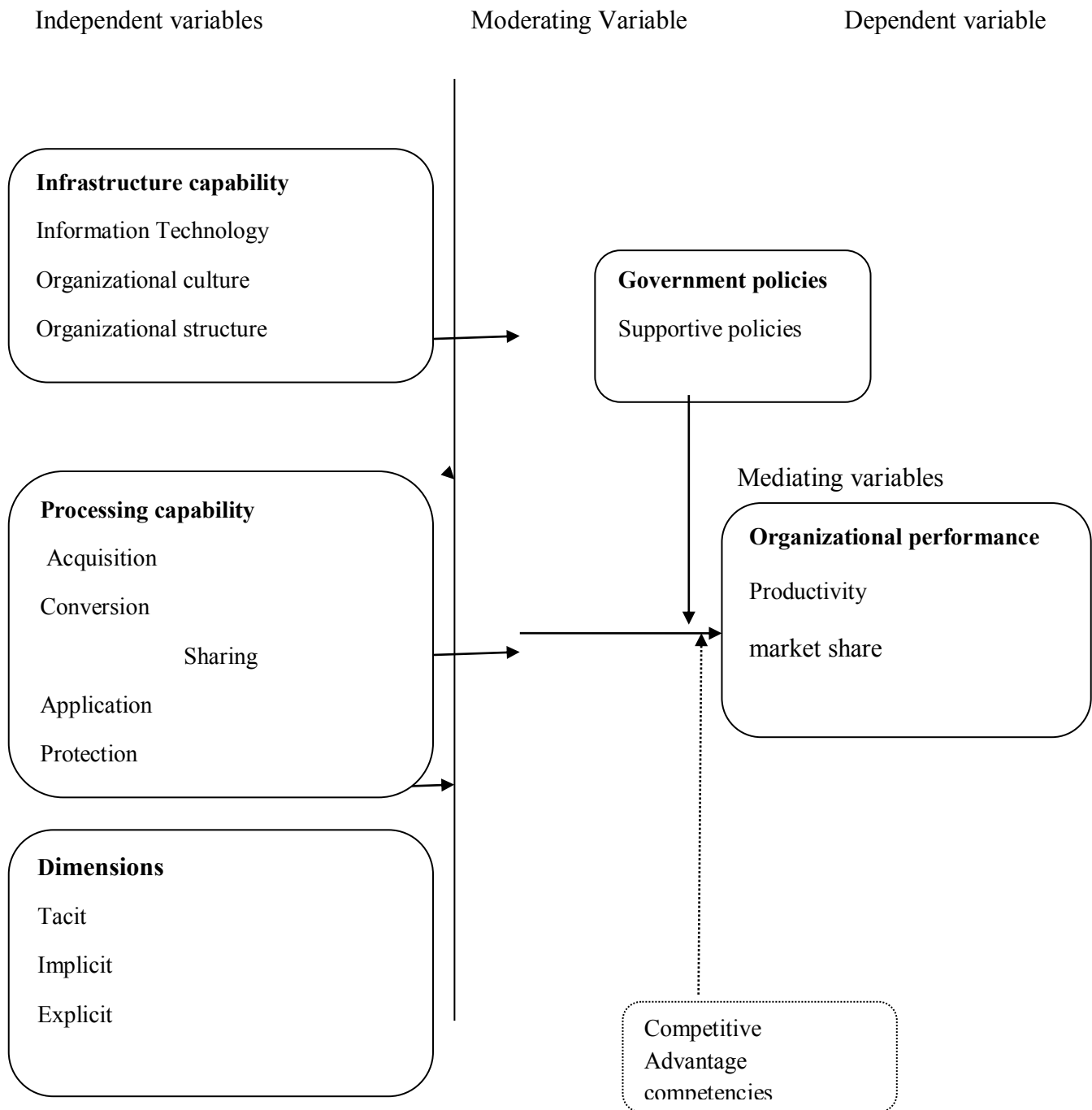


Figure 2.1: suggested conceptual framework

Source: Researcher (2016)

2.5 Suggested empirical model

Regression model is preferred for this study as recommended by Muthen and Muthen (2007) because the dependent variable is continuous. Multiple regression analysis will be used to regress step by step the relationship between the various variables (infrastructure capability processes capability and knowledge management dimensions, competitive advantage and government policies) to understand the strength of each predictor variable and get the suitable variables to regress against dependent variable (organizational performance).

The multiple regression analysis model will be used, whose equation is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \text{model 4.1}$$

Where: Y=Organisational performance

β_0 =Constant

X1=Knowledge management capability

X2=Knowledge management processing capability

X3=Knowledge management dimensions

ϵ =Error Term

To determine the effect of the moderator or competitive advantage and organizational performance and to determine whether it is simply an explanatory variable, the following steps wise regression will be estimated. Model 4.1 will be estimated as the base model to determine the relationship between the dependent variable and the independent variable. Model 4.2 which include government policy as the moderating variable will be estimated.

$$Y = \beta_0 + \beta_1 X + \epsilon \dots \text{model 4.2}$$

Where

Y= organizational performance

X= government policy

Model 4.3 will be estimated to give the direction & effect of the moderator on the variable & its total effect on dependent variable original performance.

$$Y = \beta_0 + \beta_1 X + \beta_3 X^* + \epsilon \dots \text{model 4.3}$$

Where

X* = Government policy

To test whether competitive advantage mediates the knowledge management and organizational performance, three models will be estimated as recommended by baron and Kenny (1986) will be estimated. Model 4.4 will be estimated as the base model to determine the relationship

between the independent variable, knowledge management and dependent variable organisational performance. Model 4.5 will estimate the relationship between mediating variable competitive advantage and the dependent variable, organizational performance. Finally; model 4.6 will be estimated to determine whether there was complete, partial or no mediation between the independent variable and the dependent variable.

Regression equation for competitive advantage (X) predicting mediating variable (M)

$$M = \beta_0 + \beta_1 X + \epsilon \dots\dots\dots \text{Model 4.4}$$

Regression equation of organisation (Y) predicting (M)

$$Y = \beta_0 + \beta_1 M + \epsilon \dots\dots\dots \text{Model 4.5}$$

2.6 Summary of Conceptual and Empirical Gaps

Most of the literature reviewed lacked moderating, mediating variables and philosophical foundation. There is need to identify the moderating, mediating variable and philosophical foundation in knowledge management. Most researchers used one data collection instrument. Combining both interview and questionnaires as instrument for data collection is essential to enhance reliability and also to make comparison of the results possible.

A gap is identified in the adequacy of respondents. Inclusion of all relevant stakeholders as respondents is necessary to be able to get a wide perspective of the concept. A gap is identified in the sampling design. Most researchers used non probability sampling. This study will use probability sampling.

A gap is identified on variables used by different researchers. Most of them used only one component of knowledge management but use of several independent variables will give adequate conclusions.

A gap is identified in the theories informing the study. Most researchers used resource –based theory which considers knowledge just like any other resource but this study will be informed by social exchange theory which states that exchange of knowledge through sharing leads to creation of knowledgeable organization. Organizational capability theory is concerned with knowledge infrastructure neglecting other aspects of knowledge management. Knowledge based view should be used together with other theories.

2.0 Conclusions and recommendation

The reviewed literature showed that, conceptualization of knowledge management vary, depending on the perspective that one is taking. It is evident that KM may be different from one organization to another and from one country to another. Other researchers show that there is a significant positive statistical relationship between knowledge management and organizational performance.

A proper conceptualization is necessary to enable appropriate interventions in order to boost levels of knowledge management in organizations. It is important to conduct a study in those contexts in order to make general sable conclusions. It is also necessary for studies to be geared towards different aspects of knowledge management and their influence on organizational

performance. Recommendation is that future research should focus on extending KM study in other sectors to support generalisation of findings in all sectors

REFERENCES

Alavi, M. and Leidner, D. (2001), “Knowledge management and knowledge management systems: conceptual foundations and research issues”, *MIS Quarterly*, Vol. 25 No. 1, pp.107-136. , [Google Scholar](#) [[CrossRef](#)], [[ISI](#)] [[Infotrieve](#)]

Annet, M.M. (2011). Knowledge management and organizational performance: A decomposed view, *Journal of Knowledge Management*, Vol. 15 Iss: 1, pp.156 – 171.

Bhatt, G.D. (2001). Knowledge management in organizations: examining the interaction between technologies, techniques and people. *Journal of Knowledge Management*. 5 (1) 68-75

Darroch, J. and McNaughton, R. (2002), “*Examining the link between knowledge management practices and types of innovation*”, *Journal of Intellectual Capital*, Vol. 3 No. 3, pp. 210-22. , [Google Scholar](#) [[Link](#)] [[Infotrieve](#)]

Davenport, T.H., & Prusak, L. (1998). Working knowledge. How organizations manage what they know? Boston, MA: Harvard business school press.

[Deborah, B.](#), & [Monica, K.](#) (2009). Knowledge management and effective university governance, *Journal of Knowledge Management*, Vol. 13 Iss: 6, pp.547 - 563

[Francesco, G.](#) (2015). At what level is your organization managing knowledge? *Measuring Business Excellence*, vol. 19 Iss: 2, pp.57 – 70

Gold, A., Malhotra, A. & Segard, A. (2001), “*Knowledge management: an organizational capabilities perspective*”, *Journal of Management Information Systems*, Vol. 18 No. 1, pp. 185-214. , [Google Scholar](#) [[ISI](#)] [[Infotrieve](#)]

Grant, R. (1996), “*Toward a knowledge-based theory of the firm*”, *Strategic Management Journal*, Vol. 17, Winter, pp. 109-22. , [Google Scholar](#) [[CrossRef](#)], [[ISI](#)] [[Infotrieve](#)]

Hogel, M., Parboteeah, K.P. and Munson, C.L. (2003), “*Team-level antecedents of individuals' knowledge networks*”, *Decision Sciences*, Vol. 34 No. 4, pp. 741-70. , [Google Scholar](#) [[CrossRef](#)], [[ISI](#)] [[Infotrieve](#)]

Ho, L.A. (2008), “*What affects organizational performance? The linking of learning and knowledge management*”, *Industrial Management & Data Systems*, Vol. 108 No. 9. , [Google Scholar](#) [[Link](#)], [[ISI](#)] [[Infotrieve](#)]

Kianto, A. (2011), “*The influence of knowledge management on continuous innovation*”, *International Journal of Technology Management*, Vol. 55 Nos 1/2, pp. 110-21. [\[CrossRef\]](#), [\[ISI\]](#) [\[Infotrieve\]](#)

Kiessling, T.S., Richey, R.G., Meng, J. & Dabic, M. (2009), “*Exploring knowledge management to organizational performance outcomes in a transitional economy*”, *Journal of World Business*, Vol. 44 No. 4, pp. 421-33. , [Google Scholar](#) [\[CrossRef\]](#), [\[ISI\]](#) [\[Infotrieve\]](#)

Kogut, B. and Zander, U. (1996), “What firms do? Coordination, identity, and learning”, *Organization Science*, Vol. 7 No. 5, pp. 502-518. , [Google Scholar](#) [\[CrossRef\]](#), [\[ISI\]](#) [\[Infotrieve\]](#)

Lee, C.C., & Yang, J. (2000). Knowledge value chain. *Journal of management development*. 19(9), 783-793

Lee, H. & Choi, B. (2003), “*Knowledge management enablers, processes, and organizational performance: an integrative view and empirical examination*”, *Journal of Management Information Systems*, Vol. 20 No. 1, pp. 179-228. , [Google Scholar](#) [\[ISI\]](#) [\[Infotrieve\]](#)

[Leonor, C.](#), [Andreia, M.](#), & [Carlos F. P.](#) (2012). Knowledge management and its critical factors in social economy organizations, *Journal of Knowledge Management*, Vol. 16 Iss:

[Li, P.T.](#), & [Kuan Y. W.](#) (2015). Linkage between knowledge management and manufacturing Performance’’: a structural equation modeling approach, *Journal of Knowledge Management*, Vol. 19 Iss: 4, pp.814 – 835

[Michael, Z.](#), [James, M.](#), & [Satyendra, S.](#) (2009). Knowledge management and organizational performance: an exploratory analysis, *Journal of Knowledge Management*, Vol. 13 Iss:6 pp.392 – 409.

Mosoti, Z., & Masheka, B. (2010). Knowledge management: the case for Kenya. *The journal of language, technology & Entrepreneurship in Africa*. 2 (1).

Muthen, L.K., & Muthen, B.O. (2007). *Mplus User’s Guide*, 5th edn. Los Angeles, CA: Muthen & Muthen.

Nickols, F. W. (2000). The knowledge in knowledge management. In: J. W. Cortada and J.

A. Woods (Eds). *The knowledge management year book 2000-2001*. Boston,

B. MA: Butterworth-Heinemann.

Nonaka, I. & Takeuchi, H. (1995), *The Knowledge-creating Company*, Oxford University Press, New York, NY. , [Google Scholar](#).

Penrose, E. (1959), *The Theory of the Growth of the Firm*, Oxford University Press, Oxford.

[Google Scholar](#).

Polany, M. (1962). *Personal knowledge: Towards a post-critical philosophy*. Chicago: University of Chicago Press.

O'Dell, C., & Hubert, C. (2011). *The New Edge in Knowledge: How Knowledge management Is Changing the Way We Do Business*. USA: John Wiley.

Riege, A. (1995). Tree-Dozen knowledge sharing barriers managers must consider. *Journal of knowledge management*. 9 (3), 18-35.

[Satyendra, C. Pandey](#), & [Andrew, D.](#) (2013). Role of knowledge infrastructure capabilities in knowledge management, *Journal of Knowledge Management*, Vol. 17 Iss: 3, pp.435.

[Susanne, D.](#), & [Stefan, W.](#) (2012). Knowledge management and succession planning in SMEs, *Journal of Knowledge Management*, Vol. 16 Iss: 4, pp.637.

Tanriverdi, H. (2005), “*Information technology relatedness, knowledge management capability, and performance of multibusiness firms*”, *MIS Quarterly*, Vol. 29 No. 2, pp. 311-34. , [Google Scholar](#) [[ISI](#)] [[Infotrieve](#)]

[Tatiana A.](#), & [Aino K.](#) (2012). Does knowledge management really matter Linking knowledge management practices, competitiveness and economic performance, *Journal of Knowledge Management*, Vol. 16 Iss: 4, pp.617 – 636

Yli-Renko, H., Autio, E. and Sapienza, H.J. (2001), “*Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms*”, *Strategic Management Journal*, Vol. 22 Nos 6/7, pp. 587-613. , [Google Scholar](#) [[CrossRef](#)], [[ISI](#)] [[Infotrieve](#)]

Zack, M., McKeen, J., & Singh, S. (2009). Knowledge management and organizational performance: an exploratory analysis. *Journal of Knowledge Management*, 13(6), 392 409