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Responsiveness to Knowledge and Organisational Performance of Listed-Companies in the Construction Sector

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Abstract: In order to improve performance, the place of tangible and intangible resources deployed in operations has become critical. However, reliance on tangible resources as the bastion of better organisational performance seems to be waning; partly due to the ease with which these are copied. This implies that reliance on intangible resources, of which knowledge is a prime component, becomes inevitable. Rather than take on the titanic knowledge management construct holistically, the interest of this study is in the sub-construct of responsiveness to knowledge (RTK) largely because of its relevance in the construction sector in South Africa where client expectations, work methods and indeed, project employees are in a constant state of flux. Empirical in nature, the study uses a census of construction companies listed on the Johannesburg stock exchange (JSE) and focussed on the issue of responsiveness to knowledge and its association with the organisational performance (OP). Quantitative data collected from employees in a cross-sectional manner, were analysed. In terms of results, the study points to a positive association between RTK and OP in construction companies. Despite this finding, it would appear that companies undertake knowledge management on an ad-hoc and informal manner rather than by following a systematic process. Consequently, the study contends that attention, investment and institutionalisation of a mechanism for responding to knowledge as an integral part of the knowledge management bouquet, can enhance organisational performance.

Keywords: *Knowledge management, Responsiveness to knowledge, Construction companies, JSE, South Africa*

1. Introduction

In the current business environment, where survival and growth have become a prime challenge owing to, among others, the intense level of competition between businesses, the hunt for improved organisational performance has become an ever-present concern. The complexity and distinctiveness of intangible resources over tangible resources make them more difficult to imitate and therefore a more likely basis for the generation of competitive edge (Aramburu, Sáenz, Buenechea, Vanhala & Ritala, 2014) that would arguably be sustained over time. Currently, due to the effect of globalisation, countries in the African continent find themselves in a situation where they must, out of necessity, compete with other organisations from across the globe. In many cases, construction companies from the developed world, are more equipped with tangible resources like equipment and the like, compared to their counterparts in developing parts of the world like Africa. This leaves the playing field substantially uneven and the only route to survival and continued success in an intensely competitive business environment appears to be the usage and management of intangible resources, of which knowledge is critical part. In the African context, sound knowledge of the local terrain, business climate and social dynamics can generate a competitive edge. This is a position corroborated by Marr (2006), who opines that sustainable strategic edge appears to be more and more embedded in intangible resources such as knowledge. Consequently, the value of knowledge in modern business can therefore hardly be over-emphasised. This may be why many organisations are invariably turning to knowledge management for leverage so as to derive competitive edge (Stevens, 2010).

Eftekharzadeh (2008:45) suggests that effective knowledge management heralds an organisation's ability to remain competitive in the long run. Knowledge management can be an important ingredient of the success of organisations as it allows for knowledge to be retained within the organisation rather than be resident only among employees (Eresia-Eke & Makore, 2015:481). In a labour-rich African continent, reliance on a human-related resource like knowledge rather than dependence on machines and equipment that are generally

expensive to acquire and nevertheless easy to imitate seems a reasonable prospect. In the specific case of the South African construction industry, the all-important role of knowledge becomes truly evident as major construction initiatives are government-driven and the securing of such jobs largely depends on the extent to which the organisation demonstrates its competence; which are precursors to the awarding of construction contracts. To signal competence, the knowledge base of the organisation becomes the major resource. So, it would seem compelling for organisations to properly manage their knowledge assets as they invariably form the basis for the development of a sustainable advantage. To do this effectively, however, organisations may need to focus on specifically selected factors or practices that enable improved knowledge management. Chauvel and Despres (2002:210) define knowledge management enablers (or barriers) as the structural or functional conditions in an organisation that are responsible for the success or failure of a knowledge management initiative. Wong and Aspinwall (2005:68) view knowledge management enablers as those activities and practices that need to be attended to in order to ensure successful knowledge management implementation. These practices are reflected by the company's ability to organise, combine, integrate, structure and coordinate knowledge. If this is indeed the case, then such practices would need to either be nurtured or be developed if they are non-existent in the organisation. It is from this perspective that the study examines the issue of the organisation's responsiveness to knowledge, as an important factor of knowledge management that may then invariably relate to organisational performance.

2. Literature Review

Responsiveness to knowledge (RTK): The actions taken in response to the knowledge gathered and filtered characterises the responsiveness to knowledge of an organisation (Liao, Welsch & Stoica, 2003). Darroch (2003:42) defines responsiveness to knowledge as when the organisation reacts to the various types of knowledge it has access to. The timing and quality of the response mirrors the agility of the organisation (Dove, 1999). The organisational perspective of being responsive to knowledge proposes that a knowledge infrastructure made up of a knowledge process architecture comprising acquisition, conversion, application and protection are vital organisational competencies or pre-conditions for effective responsiveness to knowledge. The structural infrastructure entails the presence of norms and trust mechanisms (Schoenherr, Griffith & Chandra, and 2014:11). In order to acquire, convert, apply, store and protect organisational knowledge and leverage on the infrastructure, knowledge processes must be available. These processes would empower the organisation to better undertake knowledge management activities in an effective and efficient manner. Gold, Malhotra and Segars (2001:190) argue that the more frequently an organisation carries out its knowledge responsiveness processes, the more routine the norms become and the more efficient the integration process becomes. In contrast, the more erratic the usage of responsiveness to knowledge processes is, the less the efficiency of knowledge integration efforts. Due to this, the organisation will find itself in a position where it would have to deal with more knowledge integration exceptions (Kim, Lin, Chun & Benbasat, 2014:402).

The main objective of an organisation's use of the responsiveness to knowledge component is to "gain an awareness of its knowledge, individually and collectively, and to shape itself in a way that enables the most effective and efficient use of the knowledge the firm has or is able to obtain" (Donate & Sanchez de Pablo, 2015: 361).Conversion-inclined responsiveness to knowledge practices are the ones that are oriented towards making existing knowledge useful. These knowledge conversion processes are anchored in the company's ability to organise, combine, integrate, structure, coordinate and distribute knowledge (Gold et al., 2001:210).Developing processes and practices for structuring or organising knowledge is critical to the organisation because without them, there would be no consistency or common dialogue of knowledge and this would make the asset very difficult to manage (Kruger & Johnson, 2013). Knowledge management practices are conceptualised as organisational routines whereby knowledge is acquired and then responded to immediately or disseminated and then responded to (Darroch, 2003:41). Theory generally alludes to the fact that some common practices in organisations include having a formal knowledge management programme in place, having time for random & open discussions (breaks, coffee session discussions etc),valuing the knowledge/experience/contacts of employees(Schoenherr et al., 2014), having sufficient infrastructure and good spaces at work for formal or informal meetings, identifying and protecting strategic knowledge in the organisation and recognising the importance of human capital among others (Gold et al., 2001).

Responsiveness to knowledge is also interpreted through the social perspective of knowledge management practices whereby recognition is given to the manifestation of human and social dimensions as its major components, with the leadership style and technology still having a part to play (Donate & Sanchez de Pablo, 2015). Thomas, Kellogg and Erickson (2001) propose that managing knowledge is deeply social in nature and therefore must be approached by taking cognisance of human and social factors. Sometimes referred to as the social ecology of an organisation, emphasis is placed on social discourse such as personal communication, construction of individual meaning and cultures of sharing and trust (Kruger & Johnson, 2013; Martin, 2000; Southon & Todd, 1999).The social ecology defines the social system in which people operate and so in an organisational context, it would be linked to the company's formal and informal associations of employees and the type of people who will fit into it. Freedom of individuals to pursue actions without prior approval is also shaped by the social ecology in responsiveness to knowledge and knowledge management. Also included in the social ecology framework would be how employees interact with parties inside and outside of the firm. These variables would have great implications on the management style and systems, organisational structure in terms of networks, and alliances and communities of practice (Donate & Sanchez de Pablo, 2015).

All of these knowledge management practices are embedded in the organisational structure, culture and a knowledge process architecture comprising acquisition, conversion, application and protection (Appolloni, Mavisu & Ozeren, 2014:172).Combining or integrating knowledge reduces redundancy thereby enabling the firm to replace out-dated knowledge through these processes. The frequently-named mechanisms for facilitating integration are routines, sequencing, rules and directives, group problem-solving and decision-making. Application-based responsiveness to knowledge processes is inclined towards actual use of the knowledge. Effective application is presumed or implied once knowledge has been created (Nonaka & Takeuchi, 1995; Ajmal, Helo & Kekale, 2010). Here, process elements that are associated with responsiveness to knowledge are linked to storage, retrieval, sharing and contribution. Protection processes that characterise an organisation's responsiveness to knowledge are security-oriented and are designed to safeguard the knowledge in an organisation from unlawful use or theft. For competitive advantage to be sustained, it is critical that knowledge is protected. Protection measures can be built into the technology infrastructure or measures that govern the conduct and behaviour of employees can be established (Gold et al., 2001; Grandori & Soda, 2006; Massey & Montoya-Weiss, 2006). Instructively, ensuring the validity and relevance of knowledge and the protection of knowledge assets from unauthorised exposure or theft comes through a designed process that is fit for the purpose (Wong & Aspinwall, 2005). To cap, responsiveness to knowledge (RTK) entails developing processes and practices for creating new ideas and knowledge, documenting key knowledge and efficient processes for classifying and storing knowledge, creating efficient processes for finding the required knowledge, and sharing knowledge using electronic and face to face channels (Kruger & Johnson, 2013). For the organisation's products or services to be reflective of its knowledge, it is imperative, through the organisation's responsiveness to knowledge, to develop processes for applying the best knowledge to it (Schoenherr et al., 2014).

Responsiveness to knowledge and organisational performance: Knowledge is recognised as a resource and knowledge management as a dynamic capability and competence that can possibly contribute to high organizational performance (Alavi & Leidner, 2001:108). A review of knowledge management literature that concentrates on the knowledge-based theory (KBT) affords discernments and basis for exploring the relationship between responsiveness to knowledge and the performance of an organisation. The knowledge based theory (KBT) proposes that the ability of an organisation to deploy resources efficaciously is a function of interrelated knowledge across organisational structures, with organisational routines and processes as instruments that determine the organisational responsiveness to knowledge and knowledge integration (Grant & Shahsavarani, 2006; Eresia-Eke & Makore, 2015:478). However, the key knowledge-based question that the manager faces is not how to organize so as to exploit already developed knowledge or capability but rather how to organize to efficiently generate knowledge and capability for organisational performance (Kianto, Ritala, Spender & Vanhala, 2014; Nickerson & Zenger, 2004).

Covey (2004) argues that managers still apply industrial age control models to knowledge-workers and this constrains optimisation of the expertise of knowledge workers. In a study that explored the organisation design elements and competencies that contribute to optimising the expertise of knowledge workers, Ramsey and Barkhuizen (2011) found that to be sustainable, an organisational design must allow an organisation to

recognise, create, transform and distribute knowledge. The same study also revealed that the respondent organisations were not designed in a manner that allows structure, culture and codifying systems to optimise the expertise of knowledge workers. Perhaps the belief of Thomas et al. (2001) in a knowledge community as one of the most vital aspects of a knowledge responsiveness puzzle could also be considered when designing organisations: a place in which people discover, use and manipulate knowledge whilst interacting and having encounters with others who are doing the same. The essential characteristic of a knowledge community is the presence of conversation and other forms of narrative, such as stories and informal discussions among people who know each other, share professional interests and understand the contexts under which the conversation is taking place (Kruger & Johnson, 2013).

Thomas et al. (2001) offer a variety of techniques that could effectively contribute to knowledge responsiveness in this regard, such as supporting new forms of group interaction, using metaphors so as to enhance creativity and supporting expressive communication. The incorporation of such techniques into knowledge communities, results in organisational opportunities for building social capital that includes trust and cooperation (Schoenherr et al., 2014). It is always challenging for organisations and system designers to have a truly trusted place as a knowledge management environment. The eventual aim of acquiring and sharing knowledge, in the equation of responsiveness to knowledge, is to transform all individual know-how and experiences into organisational competencies (Mwila, 2013). The strength of organisational competencies and their effectiveness in organisational performance would increase if more of the personal intellectual capital is transmitted to, and converted into organisational assets. Alhammad, Al Faori and Suleiman (2009) argue that the appropriate transfer of individual knowledge would result in knowledge appreciation, and consequently, improve the results of organisational learning and organisational effectiveness. This may be seen as suggestive of a relationship between responsiveness to knowledge and organisational performance. It is from this inference that the study derives impetus to empirically determine whether there is indeed a relationship between the independent responsiveness to knowledge (RTK) variable and the dependent variable of organisational performance in the specific context of construction companies that are listed on the Johannesburg stock exchange. .

3. Methodology

The research is focussed on JSE-listed construction companies in South Africa with the aim of examining the relationship between responsiveness to knowledge and organisational performance. The underlying criterion for the choice of this type of industry and companies is that they have a variety of operations requiring various skills. Given the diverse skills and knowledge-workers involved and required in the construction companies, this seemed to present a fertile area for investigation. All of the ten construction companies that were JSE-listed were selected to participate in the study. The study was executed from a positivist philosophical standpoint. The approach allows the researcher to make an observation about a condition of interest without allowing personal value judgements to interfere in the process. It lends itself to an unbiased finding about the situation. In keeping with the positivist approach, empirical data of a quantitative nature was collected from study respondents. The use of quantitative data coupled with the reality that the study does not set out to build new theory but to test a scientific position that suggests that knowledge management adds value to an organisation, provide evidence that in terms of a research approach, the study has elected to travel the deductive reasoning as opposed to the inductive reasoning route.

The data to be utilised for the study was collected from employees of JSE-listed construction companies. Since the population of employees was substantial, it was decided that the data be collected through the use of self-administered questionnaires. Invariably, this choice meant that a survey research strategy was suited for the study. In executing the study, data was collected only at a point in time rather than over a time period, indicating that the preferred time horizon for data collection was cross sectional. Given the reality that it would be improbable to reach all members of the respondent population, it was imperative for the study to use a sampling method to create a group of respondents that would make data collection a more feasibly effort. Consequently, purposive sampling, a non-probability sampling technique, was used for selecting respondents in the study. The technique is suitable when small samples are drawn from the target population in order to gather data for the purpose of identifying themes that emerge (Davies, 2007:57; Saunders, Lewis & Thornhill, 2007:230). Furthermore, this sampling technique was chosen as it had been utilised by previous

researchers studying knowledge management (see Wong & Aspinwall, 2005:67; Eftekharzadeh, 2008:50). The use of the method helped to ensure that the questionnaire reached targeted knowledge-workers.

Through purposive sampling, the knowledge workers defined by Tobin and Magenuka (2007) as professional workers from such specialist fields as civil engineers, mechanical engineers, architects, surveyors, designers, technicians, electrical engineers and project managers were identified in the respective organisations and then replicated at each level for the various companies. Snowball sampling was also used when a respondent identified other potential respondents who could be targeted. So in some instances, management contacts in the various companies were used as key informants to identify potential candidates who could become study respondents. The instrument to be utilised for the study was shared with some management experts, whose comments were taken into consideration before the instrument was finalised and a pilot study conducted. Lessons from the pilot study especially related to getting the respondents at the right time, as well as condensing the questionnaire to fewer pages were useful in the context of the real data collection process. The research instrument for measuring RTK was adapted from an instrument originally developed and tested by Darroch (2003; 2005). The responsiveness to knowledge scale (RTK) comprised four sections based on the knowledge responsiveness factors (KRF1 to KRF4). Each factor and its component questions were meant to test the organisations' capacity on responsiveness to knowledge in particular business areas. These areas gauge how an organisation:

- responds to competitors
- responds to customers
- responds to technology
- is flexible & opportunistic

The responsiveness to knowledge scale was a 13-item 5-point Likert-type instrument. The organisational performance scale was also based upon 5-point Likert questions. Both scales were tested for reliability and validity. The Cronbach's alpha which is a commonly used to test for internal reliability and indicates the extent to which items/elements within a scale are correlated or homogenous (Wong & Aspinwall, 2005) was determined. Table 1summarises the reliability analysis for each scale. The results show that both scales have Cronbach's alpha in excess of 0.9, which is higher than the acceptable standard coefficient of 0.7, and this indicates that the questions combined in the scale are measuring the same thing.

Table 1: Outcome of reliability analysis

Cronbach's coefficient alpha Scales	No. of items	Raw alpha value	Standardised alpha value
Responsiveness to knowledge (RTK)	13	0.915519	0.905934
Organisational performance	7	0.950784	0.951231

Out of the 500 questionnaires distributed to the listed construction companies, 191 completed questionnaires were returned, yielding a return rate of 38,2%. Of these, 130 questionnaires were used representing 26% of the intended respondent population.

Discussion of findings: To ensure anonymity and confidentiality, the names of the participating organisations are not shown but are represented by letters ranging from A to J which are nominal labels. The universe of Johannesburg Stock Exchange-listed (JSE-listed) construction companies was the population of interest and this comprised ten organisations. The score-range on the RTK scale was between 13 and 65. The scores obtained from respondents in each organisation for the RTK scale were aggregated (on a question-to-question basis) and related averages were determined and assigned as the company's RTK score for the specific question. These RTK scores per question as well as the total RTK scores for the ten surveyed construction companies are presented in Table2.

Results presented in Table 2 show that, across the board, the companies studied, obtained low scores as it relates to actions concomitant with responsiveness to knowledge. In particular, low scores were collateral with actions that showed that the companies were not:

- responding to concerns raised by employees (RTK 4)

- quickly sharing information on competitor activity (RTK 5).
- being flexible and opportunistic by not often changing procedures of doing things (RTK 8)
- responding quickly to technological changes that have customer service implications (RTK 13)

Conversely, high scores obtained on the scale served an indication that companies were performing well as it pertains to:

- responding quickly to customers that were dissatisfied with product or service quality (RTK 1)
- speedily responding to customer complaints (RTK 3).
- frequently changing marketing strategies (RTK 10)
- staying abreast with technological advances that could affect the business (RTK 11)

Table 2: RTK scores of surveyed companies

RESPONSIVENESS TO KNOWLEDGE											
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**Average item-score**
RTK 1	3.8	3.8	2.5	3.7	3.7	3.8	3.7	4.3	4.2	4.5	**3.8**
RTK 2	2.3	1.8	1.2	2.3	2.1	3.5	3.9	4.2	4.3	4.2	**3.0**
RTK 3	3.4	3.5	2.5	3.6	3.7	3.7	3.6	3.9	4.1	4.4	**3.6**
RTK 4	1.6	1.0	1.2	2.1	1.8	3.2	3.6	4.0	4.0	4.3	**2.7**
RTK 5	1.8	1.9	1.5	2.0	2.2	2.9	3.2	3.5	4.0	3.9	**2.7**
RTK 6	2.0	1.2	1.3	2.3	2.0	3.5	3.6	3.8	4.2	4.4	**2.8**
RTK 7	2.6	1.3	1.3	3.1	2.1	3.0	3.3	3.7	4.2	4.3	**2.9**
RTK 8	2.2	1.9	1.8	3.0	2.3	2.9	2.9	2.5	2.9	3.8	**2.6**
RTK 9	3.0	3.0	2.5	3.5	3.4	3.2	3.6	3.7	3.6	4.1	**3.4**
RTK 10	3.2	3.9	3.4	3.9	3.8	3.4	3.4	3.6	3.7	4.3	**3.7**
RTK 11	1.9	2.9	3.4	3.4	3.6	3.9	3.8	4.2	4.1	4.6	**3.6**
RTK 12	1.7	1.6	1.6	1.6	2.1	3.3	3.2	3.9	4.2	4.4	**2.8**
RTK 13	1.7	1.7	1.4	1.2	1.9	3.5	3.4	4.0	4.2	4.3	**2.7**
Total Company Score	**31.2**	**29.5**	**25.6**	**35.7**	**34.7**	**43.8**	**45.2**	**49.3**	**51.7**	**55.5**	

Based upon overall scores obtained on the RTK scale, companies were categorised as having a low, medium or high responsiveness to knowledge. Companies with overall scores between 30 and 48 were in the medium category. Companies which scored higher than 48 or lower than 30 were placed in the high RTK and low RTK categories, respectively. As shown in Table 3, this meant that companies C (25.6) and B(29.5) were in the low RTK group while companies A(31.2), D(35.7), E(34.7), F(43.8) and G(45.2) belonged in the medium RTK range. Companies J(55.5), I(51.7), H(49.3) belonged in the high RTK group.

Table 3: Categorisation according to RTK performance

	High	**Medium**	**Low**
Responsiveness to knowledge ability	H; I; J	A; D; E; F; G;	B; C

The organisational performance scale was such that the scores ranged from seven on the minimum side to thirty-five on the maximum side. A summary of the findings on the organisational performance (OP) scale for the ten surveyed construction companies is presented in Table 4.The table shows that companies performed differently. 4 of the 10 companies had OP scores that were less than 20 out of possible 35-points. The same number of companies (4) also had OP scores above 20 bu below 30. 2 of the 10 surveyed companies had OP scores above 30.

Table 4: Summary findings on organisational performance

ORGANISATIONAL PERFORMANCE (Scores on the OP scale)											
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**Average item-score**
OP1	1.6	1.3	1.9	3.0	2.5	3.6	4.0	4.2	4.4	4.5	**3.1**
OP2	1.6	1.8	2.8	2.7	2.6	3.6	4.3	4.4	4.4	4.4	**3.3**
OP3	2.0	1.5	2.0	4.3	2.6	4.3	4.1	4.5	4.5	4.2	**3.4**
OP4	3.6	1.6	1.7	4.1	3.1	4.2	4.4	4.4	4.3	4.6	**3.6**
OP5	3.2	1.8	1.6	3.3	3.1	4.1	4.5	4.3	4.5	4.5	**3.5**
OP6	2.3	1.8	1.8	2.9	3.0	4.1	4.2	3.8	4.0	4.7	**3.3**
OP7	2.3	1.3	1.7	2.8	2.8	3.7	4.4	4.1	4.4	4.5	**3.2**
Total Company Score	**16.6**	**11.1**	**13.5**	**23.1**	**19.7**	**27.6**	**29.9**	**29.7**	**30.5**	**31.4**	

Categorical scales of low, medium and high organisational performance were created. Companies that scored less than 16, between 16 and 25, and above 25 were placed in the low, medium and high organisational performance bands (see Table 5). On the overall organisational performance (OP) scale, companies B and C were perceived by their employees that responded to the study to be of low organisational performance as reflected in the low performance scores obtained on the scale. Conversely, scores obtained on the scale by companies F, G, H, I and J, placed them in the high performance category. In the range of medium performers were companies A, D and E.

Table 5: Categorisation of perceived organisational performance

	High	**Medium**	**Low**
Organisational performance	F; G; H; I; J	A; D; E;	B; C

The cross tabulation of a company's responsiveness to knowledge against organisational performance, as shown in Table 6, indicates that those companies that returned low scores in the RTK scale also obtained low scores when it came to the issue of organisational performance. These were companies B and C. The scores of companies A, D and E on the RTK scale placed them in the medium category and this was consistent with the medium category placement when the organisational performance scale was considered. At the upper end, the table shows that companies H, I and J that obtained high RTK scores also fell within the category of high performers in the OP category.

Table 6: Cross-tabulation of RTK and OP categories

		Organisational performance		
		Low	**Medium**	**High**
Responsiveness to knowledge	Low	B; C		
	Medium		A, D; E	F; G;
	High			H; I; J

The synchrony of company positions in categories across both scales was however violated by two of the ten companies and these were F and G. While both companies were found in the medium RTK category, employees perceived that they were of a high organisational performance. It is instructive to highlight the fact that both companies scores were however, at the high end of the medium RTK category, implying that they were almost tending to high performers in terms of RTK. This could explain why they transited into the high category of organisational performance.

5. Conclusion and Recommendations

An examination of the cross-tabulation suggests some kind of positive association between responsiveness to knowledge (RTK) and organisational performance (OP), particularly at the two extreme ends of performance. Essentially, a high rating for responsiveness to knowledge appears to be linked to high organisational performance; and a low score in responsiveness to knowledge is associated with poor organisational performance. This is true for companies H, I, and J that are in the high bracket for both responsiveness to knowledge and organisational performance. The same is applicable to companies B and C, whose poor organisational performance is related to poor performance on responsiveness to knowledge. Darroch (2003) posits that the main activity of responsiveness to knowledge is the use and development of an organisation's knowledge resources in order to meet organisational goals. The study established that JSE-listed construction companies are not being flexible and opportunistic due to reluctance to change work procedures and this is characteristic of rigid organisational structures that are the norm in the construction industry. The responsiveness to knowledge structure of an organisation is supposed to be multi-dimensional, while allowing for sufficient flexibility and possible adaptation to the ever changing environmental scenarios. Further, in a bid to foster better knowledge management, organisational structures need to encourage rather than inhibit interactions among employees, which according to Gold et al (2001:188) is critical for responsiveness to knowledge. Unfortunately it would seem that this is a position that generally holds scant appeal to the JSE-listed construction companies.

There is no gainsaying the fact that the studied construction companies need to find ways to enhance the systemic aspects of their projects in a bid to improve the responsiveness to knowledge processes in their organisations. Possible areas that deserve consideration include knowledge mapping, the introduction of knowledge teams, cross-functional working, business process refinement and investment in collaborative initiatives. It is pertinent to highlight that in the light of the findings of this study, there seems to be a need for an empirical investigation of relationships between disaggregated knowledge management components and organisational performance in order to draw the attention of managers to particular knowledge management components that deserve priority attention.

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