Key Issues for Implementing Knowledge Management in Relational Contracting Project Settings

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Abstract

The necessity of relational approaches or inter-organisational relationships in construction industry might due to the nature of construction itself which often highly specialised, complex projects, involving various participants, and also with extended durations for commencement and completion. Since the construction project teams works as a disparate collection of separate organisations rather than as a unified team, the project teams suffers from lack of integration. Besides this, there is still an unwillingness to share knowledge between the construction participants, thus, there is poor knowledge flow. Relational Contracting (RC) is one way to solve the problems of fragmentation. It is believed that RC when integrated with Knowledge Management (KM) can successfully address the major problems of the industry. RC and KM are two significant management paradigms where communication is a common issue. The concepts of trust, knowledge sharing, cooperation and commitment are significant in both literatures. The issue of culture is also important to be considered. Implementing effective KM in RC project settings involves various challenges that need to be considered. Therefore, the aim of this paper is to highlight the key issues in order to give better understanding before any construction participants could embark into a RC project setting and at the same time considering to implementing KM in order to improve project performance within the construction industry.

Keywords: Knowledge Management, Relational Contracting, Challenges, Construction Industry

1. Background to the study

The construction industry involves a wide range of different activities and participants from the design to the construction stages of a project. The industry is often typified as fragmented where the traditional construction process involves players that are disconnected from each other and work in isolation resulting inefficiencies (Latham, 1994). It has long been suffering from little cooperation, limited trust and ineffective communication, thus resulting in an adversarial relationship between different parties (Chan *et al*., 2004b). Generally, construction project teams are composed of different hierarchically and interlinked parties, such as clients/owners, architects, engineers, quantity surveyors, main contractors, subcontractors, specialist contractors and suppliers. As a result, this situation creates complicated relationships within project teams and they can adversely affect a project's performance if they are not managed effectively (Walker *et al*, 2000a). Over the last decade, Relational Contracting (RC) has thus been introduced to be an innovative and non-confrontational relationship-based approach to the procurement of construction in many countries, such as the UK, the USA, Australia and Hong Kong (Rahman and Kumaraswamy, 2005; Palaneeswaran *et al*., 2003). RC is an approach to manage such complex relationships between the players in construction teams (Chan *et al*., 2010).

Construction project teams have to work together to realise a successful construction project. Working together involves sharing of ideas, information and knowledge which underpins the successful execution of complex construction projects. Each construction participant contributes its knowledge in a form of people, processes and technologies (Maqsood *et al*., 2003), at varying degrees of intensity to the construction process. Therefore, the management of knowledge within construction project settings is very important since information and knowledge are scattered over different processes, trades, and people in different construction projects and in different organisations (Fong and Chu, 2006). Therefore, Knowledge Management (KM) has a role in improving more collaborative behaviour among organisations and individuals involved in the construction processes (Fong, 2005). Although the importance of KM has been widely promoted and recognised, it seems that only few organisations are capable of leveraging and managing knowledge in their organisations (Robinson et al., 2005) and also in construction projects. KM is one of the importance ways for organisations to identify, transfer and internalise external knowledge. Kogut (1988) highlighted that one of the organisations main motivations for entering into collaborative arrangement was to transfer organisational knowledge. KM through knowledge sharing and knowledge transfer is important for the effective communication and collaboration. Within a complex environment of construction works, knowledge flow and sharing are the backbone of effective communication of project teams. There are different organisations working in a construction project and the documents shared between these organisations vary from technical drawings, contract documents, project reports, and schedule (Titus and Brochner, 2005). Besides the tendency to keep knowledge, the nature of the construction projects is also a disadvantage for knowledge sharing. Construction projects usually consist of temporarily designed teams from different organisation to produce a unique product. The project team members are generally new to each other and have not necessarily worked together before. Thus, it is difficult to set up channels to exchange information and knowledge within the construction project teams. In addition, lack of common goals make project participants focus only in their part of work and ignore the knowledge needs of the other project members (Titus and Brochner, 2005). Therefore, it is significant to enhance the use of RC concepts such as partnering, strategic alliancing, joint venture

and public-private partnerships in the construction industry in order to improve integration/ collaboration and project performance. At the same time, KM can be used to facilitate better relationships within project teams by giving more focus on the aspect of trust, communication, cooperation, and teamwork. Besides all this, it is also important to understand some barriers of effective KM within RC project settings. This paper therefore aimed to highlight the literature review of several key issues of implementing KM in RC projects.

2. Relational Contracting (RC): a brief overview

Theories that emphasise the benefits of close, long-term relationships among different organisations are receiving increasing emphasis throughout the academic literature. One of the theories that have received high attention is Relational Contracting (RC). Relational contracting (RC) (also known as relational contract theory) has been defined as "the relations among parties to the process of projecting exchange into the future" (Macneil, 1980, p4). Previously, Macaulay (1963) defined RC as the working relationship amongst the parties who do not always follow the legal mechanism offered by the written contracts, and the parties themselves govern the transactions within mutually acceptable social guidelines, Therefore, the relationship itself develops obligations among the construction parties (Chan *et al*., 2010). In RC theory, a need for enforcement of formal contract or agreement is of less importance than the need to maintain the relationship for future cooperation (Arrighetti *et al*., 1997). RC is an appropriate way forward to provide the necessary flexibility in smothering contractual relationships and overcoming transactional barriers to teambuilding (Rahman and Kumaraswamy, 2004). Colledge (2005, p31) defines RC as "a transaction or contracting mechanism that seeks to give explicit recognition to the commercial "*relationship between the parties to the contract. In essence, the terms of the contract assume less important than the relationship itself, with mechanisms for delivery that focus on trust and partnership*." Key issues that have been arisen from literature include trust (e.g. Swan *et al*., 2002, McDermott *et al*., 2005), commitment, mutuality, openness, flexibility, long-term perspectives, teamwork and honesty (Cheng *et al*., 2004). It was also suggested by Kwawu and Hughes (2007) that the success of the relationship is basically dependent on mutual trust, commitment and cooperation in both performance and further planning.

2.1 RC in the construction industry

RC has been proposed as substitutes to traditional or formal contracting in overcoming inadequate organisational systems, adversarial contractual relationships and mistrust in the construction industry (Latham, 1994; Egan, 1998). RC is an approach to manage complex relationships between the players in construction contracts or teams (Chan et al., 2010). Recognition of mutual benefits and win-win scenarios through more cooperative relationship between parties are the foundations of RC (Macneil, 1978; Rowlinson and Cheung, 2004b; Kumaraswamy *et al*., 2005). RC underpins different collaborative approaches such as partnering, alliancing, joint venture (JV), and public-private partnership (PPP) (Macneil, 1978; Alsagoff and McDermott, 1994; Rahman and Kumaraswamy, 2002a, 2004). Table 1 shows the various types/forms of RC approaches that are commonly used in the construction industry.

Table 1: Summary of definitions, comparisons and similarities in various types/form of RC.

Types of RC	Definitions	Gain-/ Pain share	Legal Binding	Formal contract
Project partnering (PP)	*A long-term commitment between two or more organisations for the purpose of achieving specific business objectives by maximising the effectiveness of each participant's resources. This requires changing traditional relationships to a shared culture without regard to organisational boundaries. The relationship is based on trust, dedication to common goals and an understanding of each other's individual expectations and values (Construction Industry Institute, 1991).*	*No*	*No*	*No*
Strategic partnering (SP)	*The major difference between project partnering and strategic partnering is that the former is for a single project (Construction Industry Institute, 1991) but the latter involves at least two projects (Bennett and Jayes, 1998).*	*No*	*No*	*No*
Project alliancing (PA)	*A cooperative arrangement between two or more organisations that forms part of their overall strategy and contributions to achieving their major goals and objectives for a particular project (Kwok and Hampson, 1996). With alliancing, there is a 'joint' rather than 'shared' commitment. Parties agree on their contribution levels and required profit beforehand and then place these at risk. If one party in the alliance under-performs, then all other alliance partners are at risk of losing their rewards (profit and incentives) and could even share losses according to the agreed project pain-sharing/gain-sharing model (Walker et al., 2000a, 2002).*	*Yes*	*Yes*	*Yes*
Strategic alliancing (SA)	*The major difference between project alliancing and strategic alliancing is that project alliancing has a defined end, which is most commonly the practical completion date of a project (Peters et al., 2001). However, a strategic alliance usually exists between two companies that extends beyond a specific project (Walker et al., 2000a).*	*Yes*	*Yes*	*Yes*
Joint venture (JV)	*Involve two or more legally distinct organisations (the parents), each of which shares in the decision-making activities of the jointly owned entity (Geringer, 1988).*	*Yes*	*Yes*	*Yes*
Public-private partnership (PPP)	*The collaborations where the public and private sectors both bring their complimentary skills to a project, with different levels of involvement and responsibility, for the sake of providing public services (Hong Kong Efficiency Unit, 2003).*	*Yes*	*Yes*	*Yes*

Source: adapted from Chan et al., 2010

Kumaraswamy *et al*. (2005) points out that the core of RC is to establish the working relationships between the parties through a mutually developed, formal strategy of commitment and communication aimed at win-win situations for all parties. In earlier research, Manley and Hampson

(2000) viewed RC as an umbrella concept which implying an approach to projects that emphasizes teamwork and cooperation. Palaneeswaran et al. (2003) viewed that win-win RC approaches such as partnering and alliancing provide vehicles for clients and contractors to drive towards excellence by achieving quality with greater value. Kumaraswamy *et al.* (2005) stressed that RC is a philosophy that has to be tailored for each situation to which it is applied. Therefore, it is important for companies considering RC to evaluate their business objectives, analyse the roles of RC in assisting them to achieve those objectives and determine the appropriate style of collaboration to implement (Chan *et al.*, 2010). RC provides a more efficient and more effective contracting mechanism for certain types of transactions particularly where these demand close collaboration of parties to realise a complex construction project or long term development programmes (Colledge, 2005). At a project level in construction, RC can improve working relationships between all project stakeholders, can facilitate efficient and effective construction, can enhance financial returns and can minimise the incidence and make easier the conflict resolution (Colledge, 2005). RC can benefit clients, main contractors, consultants, sub-contractors and on-site employees (Palaneeswaran *et al.*, 2003). Several benefits have been identified from previous literature and Chan *et al.* (2010) concluded that the main benefits that was most frequently cited was i) better cost control; ii) better working relationship; iii) sharing of risk; iv) better time control; v) efficient problem solving; and vi) enhanced communication.

3. Knowledge Management (KM): a brief overview

Knowledge has become one of the critical driving forces for business success. It is one of the most important organisational resources, the one sure source of lasting competitive advantage (Nonaka and Takeuchi, 1995). Organisations are becoming more knowledge intensive and the needs for leveraging the value of knowledge are increasing. As a result, knowledge has been treated systematically just like other tangible resources and many organisations are exploring the field of knowledge management (KM) in order to improve and sustain their competitiveness. Internal knowledge, such as operational procedures, special skills, and technical know-how, makes the most valuable asset for organisations (Spender, 1996).

Davenport and Prusak (1998, p.5) has defined knowledge as "*a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. The knowledge is originates and applied in the minds of knower. In organisations, it often becomes imbedded not only in documents or repositories but also in organisational routines, processes, practices, and norms.*" Earlier, Nonaka (1994) have defined knowledge as a justified belief that increases an entity's capacity for effective action. It is also important to understand different perspectives on knowledge and different taxonomies of knowledge from various literatures such as i) individual, social, causal, conditional, relational, and pragmatic (Alavi and Leidner, 2001); ii) embodied, encoded and procedural (Venzin *et al.*, 1998); iii) declarative and procedural knowledge (Singley and Anderson, 1989; Kogut and Zander, 1992); and iv) tacit and explicit knowledge (Polanyi, 1966; Nonaka and Takeuchi, 1995). The most common taxonomy is the tacit and explicit knowledge introduced by Nonaka and Takeuchi where their theory of knowledge creation depends on the idea that tacit knowledge can be transferred. They argued that to transfer tacit knowledge successfully, the organsiations must plan by using tacit methods appropriate to tacit

knowledge transfer (Esmi and Ennals, 2009). It is not sufficient to have knowledge assets, patents, or other intellectual property. The firm must be capable of translating the knowledge into value for customers.

The increase of understandings on the value of knowledge has brought more interest on the management of it. Knowledge management (KM) has been defined in many different ways. Wiig (1997) suggests that KM deals with the management of knowledge-related activities which includes creating, organising, sharing and using knowledge in order to create value for an organisation. A more formal definition of KM, given by the American Productivity and Quality Center, is the strategies and processes of identifying, capturing and leveraging knowledge (Carrillo and Chinowsky, 2006). Within the KM literature, there are at least two classifications of knowledge processes. Nonaka and Takeuchi (1995) define one in which there are four processes: internalisation, externalisation, combination, and socialisation. Another classification of knowledge processes is focuses on the lifecycle of knowledge within an organisation (Alavi and Leidner, 2001; Davenport and Prusak, 1998; Teece, 1998). It includes knowledge generation (creation and knowledge acquisition), knowledge codification (storing), knowledge transfer (sharing), and knowledge application. The present state of KM is primarily concerned with the capture, codifying, transfer and sharing both tacit and explicit knowledge (Nonaka, 1994) which both types of knowledge can be manage through the use of technology, and soft human-related factors such as leadership, vision, strategy, reward systems and culture (Maqsood, *et al.*, 2003). Such knowledge generally resides in employees' heads in a tacit form. Organisations have been provided with new tools for the capture, coding, transfer and sharing of knowledge such as the internet, intranets, and ICT (information communication technologies) (Maqsood *et al.*, 2003). Unfortunately, these initiatives resulted in ineffective KM (Davenport and Prusak, 2000; Fernie *et al.*, 2002). Storey and Barnett (2000) points out that the failure of KM initiatives was affected from the role of human factors such as top management support, organisational culture, motivation, and training.

3.1 KM in the construction industry

KM is not entirely new to the construction industry. In some form, construction organisations have always managed their knowledge. They always relied on the expertise of key members of staff (Carrillo *et al.*, 2004). The role of effective management of knowledge is evident in improving innovation, reducing project time, improving quality and customer satisfaction (Kamara *et al.*, 2002; Love *et al.*, 2003). In projects, KM can improve communications within teams, and provide more informed knowledge. The failure to capture and transfer project knowledge leads to the increase risk of reinventing the wheel, wasted activity, and impaired project performance (Siemieniuch and Sinclair, 1999). KM has always been a challenge to the construction industry, which is predominantly a project-based industry (Kamara *et al.*, 2002). Information overload, lack of time to share knowledge, not using technology to share knowledge effectively and difficulty capturing tacit knowledge are few challenges in implementing KM (Carrillo *et al.*, 2004). Other identified barriers include lack of management support, employee resistance to sharing knowledge, poor ICT infrastructure, lack of dedicated resources, poor organisational culture, poorly articulated strategy, and difficulty in evaluating benefits (Robinson *et al.*, 2005; Dainty *et al.*, 2005). There are two categories requiring

KM in the construction industry: at inter-organisational level, which is within projects, across temporary, multidiscipline project organisations; and at intra-organisational level, i.e. within individual firms (Kamara *et al*., 2002). Kamara *et al.* (2002) points out that tacit knowledge is gaining attention and the management of it is very important, as engineers, architects and other professionals are not ready to use and follow best practice from the past, due to the unique and complex nature of construction projects. Tacit knowledge evolves from past practices and experience of individuals, and the company's intangible assets come from shared practices of individuals. When tacit knowledge is made explicit, it becomes the basis of new knowledge such as concepts, images, and written documents. The challenge of KM is to make it explicit through the balanced use of technology, and soft human-related factors like leadership, vision, strategy, reward systems and culture (Maqsood *et al*., 2003). Previous researches results revealed the importance of tacit knowledge in relation to organisational performance and achievement of competitive advantage and has further highlighted the relevance of tacit knowledge in the construction industry (Pathirage *et al*., 2007). Several problems for tacit knowledge are loss of experience, loss of know-how, problem-solution loss and loss of innovation (Tsergn and Lin, 2004). Therefore, the above mentioned problems can be solved by the implementation of KM by construction organisations and can be extended to construction project settings.

3.2 KM in the context of RC

KM and RC are two significant management concepts. Communication is at the heart of both concepts, and issues such as trust, knowledge sharing, loyalty and commitment are to be found in both literatures (Rowley, 2004). Similarly, repositories of data or information can be used as a platform for processes associated with both relationships and knowledge. Both RC and KM recognized the value to be created through appropriate synergies of technology, people and process. KM principles and techniques play an important part in the success of RC. In the construction industry, organisations come together with their specialities and knowledge to complete a construction project. They contribute their knowledge in a form of people, processes and technologies, to the construction process (Maqsood *et al*., 2003). However, the large number of organisations in construction and their complexity make it difficult to facilitate fluent knowledge flow and sharing (Titus and Brochner, 2005). Moreover, because the organisations in construction industry come from different disciplines, the shared information and knowledge may not have the same meaning for the construction project team (Love *et al*., 2005). Various literatures highlighted the importance of knowledge in different types of inter-organisational relationships (Khamseh and Jolly, 2008). It is one of the precious ways for organisations to identify, transfer and internalize external knowledge. Kogut (1988) highlighted that one of the organisations' main motivations for entering into collaborative or relationship contract was to transfer organisational knowledge. The diverse settings brought under the umbrella of RC such as partnering, joint ventures, alliances (Ingirige and Sexton, 2006) and supply chain management, have create unique knowledge sharing and learning opportunities for the partner organisations (Inkpen, 1996). Through systematic KM, project team in RC projects settings are able to minimise wasteful activities and improve productivity and efficiency. KM, together with RC will ensure that knowledge as well as information is shared by various project participants. In RC, collaboration is very

important and it requires high level of trust, commitment, and knowledge and information sharing based upon partners who share a common vision of the future (Maqsood *et al*., 2003). The next section discussed these key issues of implementing KM within the RC project settings.

4. Key issues for implementing KM within RC project settings

4.1 Knowledge sharing

Lee (2001, p.324) has defined knowledge sharing as "activities of transferring or disseminating knowledge from one person, group, or organisation to another. Knowledge sharing is defined as the process by which individuals mutually exchange their knowledge or ideas and collaboratively generate new knowledge (Magnini, 2008). Nonaka and Takeuchi (1995) emphasized KM by creating new knowledge continuously within organisations, where KM and sharing is achieved through the interactions and conversion between tacit and explicit knowledge: socialisation, externalisation, combination, and internalisation, which also indirectly facilitates the knowledge sharing between organisation and its members (Choo, 2003; Meso and Smith, 2000). They argued that effective knowledge sharing depends on the mutual understanding and respect of team members. Hendriks (1999) contended that knowledge sharing is a process of communication. He argued that knowledge is not like other commodity that can passed around freely, it is tied to a knowing subject. Knowledge sharing presumes a relation between at least two parties, one that possesses knowledge and the other that acquires knowledge, and as a result, effective communication becomes essential in the process of knowledge sharing. Eriksson and Dickson (2000) and Senge (1997) point out that organisation should create a conducive environment for knowledge sharing. They argued that knowledge sharing is different from information sharing in that knowledge sharing requires more than just communicating the information to the other party; knowledge sharing includes helping the other party understand the contents of the information communicated and learn from the information so as to reconstruct the information into his/ her own knowledge and to develop new capabilities.

Nonaka and Takeuchi (1995) contended that knowledge is created by individuals and knowledge sharing in organisations is accomplished through knowledge conversion where existing knowledge is converted into new knowledge. With knowledge sharing wherein individuals socialise and internalise knowledge, project participants obtain project knowledge such as knowledge about project progress, costs, and quality. According to Nonaka and Takeuchi (1995), organisational knowledge is created through the conversion of tacit knowledge to explicit knowledge and vice versa. They further explained that organisational knowledge comes from individual knowledge and project knowledge, and convert it as organisational technology, patents, production and management know-how, and further as organisational norms and culture, organisational procedures or work habits. Knowledge sharing in organisations involves i) knowledge sharing between individual and individual; ii) knowledge sharing between team and team; and iii) knowledge sharing between organisation and organisation (Ma *et al*., 2008). While knowledge is created by individuals, the context or internal environment of project teams such as in RC project settings will influence individuals' willingness to share knowledge with other project participants. Wherever knowledge sharing takes place, it is

necessary to understand the characteristic of the knowledge itself (tacit or explicit knowledge), in order to obtain effective knowledge sharing. Before any KM initiatives can take place in effective manner in any RC project, it is important to first identify the types of knowledge that can be shared between the project participants.

4.2 Trust

Trust has been considered as one of the most complex issues within construction project teams, and is a critical factor for the success of RC implementation. Rowlinson and Cheung (2004b) viewed that trust between RC partners is vital because it creates an opportunity and willingness for further alignment, reduces the need for partners to continually monitor one another behaviour, reduces the need for formal controls, and reduces the tensions created by short-term inequities. In the context of KM, it is very important for each project participants in a RC project setting to build a high level of trust between them in order to success in both RC and KM implementation. Chan *et al.* (2010) identified several key elements of trust such as relationship, contact people with the information, truthfulness, reliability of information, perform what is said, exchange and sharing of ideas, having faith in the person, and sharing good and bad information. In construction industry, trust is negatively affected by many factors such as lack of honest communications and reliability, and the problems in the delivery of the project (Khalfan *et al.*, 2007). It is more important to build trust between employees and employer in order to motivate and retain knowledge workers in the organisations. Goman (2002) points out that trust and confidence in construction leaderships makes a more cooperative knowledge sharing environment. For construction project to be completed on time, every member of a construction project must feel confident that they can trust the other team members and can make real contribution. In this way, team members' knowledge, views and contribution will be shared among themselves. This point is very much relevance to the implementation of KM especially during the sharing of knowledge within different project participants in a RC project setting. Good KM initiatives create trust that helps to break down cultural barriers and alter the way individuals and group share their knowledge (Low and Mohammed (2005). Without trust, project participants may be less willing to share knowledge with others. Once knowledge is shared, it becomes public to every one, and this creates a situation where some team members may be afraid of losing their privileged status if they share their own expertise or special skills (Ma *et al.*, 2008). As a result, it is necessary to have a high level of trust to make sure knowledge sharing is perceived fair and well recognised within the project participants in order to encourage more knowledge sharing.

4.3 Commitment

Commitment is the physical and mental manifestation of the concept of trust. It is the proof of trust. It is the willingness to reciprocate energy invested through trust in the process of transformation of this energy into tangible results. Commitment means that another party will take this trust on board and "live up to" the spirit of the bargain by probably committing more personal pride and obligation to "do the right thing" than would otherwise be the case. Meyer and Allen (1997, p.11) identify three types of commitment; i) affective (want to) commitment requires intrinsic motivational responses; ii)

continuance commitment (a need to comply) relates to a transactional exchange in which extrinsic rewards are provided; and iii) normative (ought to) commitment results in obligation and duty in which grudging acceptance. In order to achieve successful implementation of KM within RC project settings, it is important to understand the impact of commitment. In the context of this study, commitment can be regarded as the willingness for the involved parties to integrate continuously to the unanticipated problems (Bresnen and Marshall, 2000a; Cheng *et al*., 2000). More committed parties are expected to balance the attainment of short-term objectives with long-term goals, and achieve both individual and joint missions without raising the fear of opportunistic behaviour (Mohr and Spekman, 1994). In implementing KM initiatives in RC projects, all parties should commit their best effort to support KM activities such as knowledge sharing within the project participants and the commitment should be established throughout all management levels (Stonehouse *et al*., 1996; Li *et al*., 2005).

4.4 Culture

Organisational culture is another important factor that needs attention for KM implementation (Davenport *et al*., 1998; Hung *et al.,* 2005; Wong, 2005; Hasanali, 2002). Wong (2005) had defined culture as the core beliefs, values, norms and social customs that govern the way individuals act and behave in an organisation. In the context of this study, the focus is on organisational culture. Organisational culture is defined as the shared value, beliefs and attitudes in an organisation (McDermott and O'Dell, 2001). It collectively guides how organisational members perceive, think about, and react to its environments (Smith and McKeen, 2003). In general, a culture supportive of KM is one that highly values knowledge and encourages its creation, sharing and application. The biggest challenge for most KM efforts actually lies in developing such a culture (Wong, 2005). A survey result reported by Chase (1997) affirmed that culture was the largest obstacle faced by organisations in creating a successful knowledge-based enterprise. In fact, it has been asserted that the success of KM is 90% dependent on building a supportive culture (Liebowitz, 1999). Important facets of a knowledge-oriented culture include such attributes as trust, collaboration and openness (Wong and Aspinwall, 2005). The influence of organisational culture on KM especially knowledge sharing is often manifested in the organisational values for knowledge sharing. Developing a knowledge sharing culture in an organisation is an effective means for promoting KM in RC projects. Such culture can encourage employees to voluntarily share knowledge within organisations. According to Davenport and Prusak (1998), knowledge sharing culture is usually embedded in organisational routines, processes, practices, and norms. The development of organisational culture supporting KM initiatives involves changing organisation culture (Smith and McKeen, 2004). It involves adjusting values and changing attitudes of individuals in an organisation. As a result, changing organisational culture is a long-term process which takes time and effort. Each project participant that enters into a RC project should prepare themselves to make a change on their organisational culture in order to successfully implementing KM.

5. Conclusion

In this paper, the key issues that need to be considered in order to implement KM within RC project settings are discussed based on previous literature review. Organisations need to value and manage both knowledge and relationships in order to improve integrations within construction players. It is important to understand the interaction between the complementary paradigms of KM and RC. Clearly, successful KM implementation or initiatives and the great potential of using RC to engage the construction industry clients and practitioners in overcoming the fragmentation and adversarial nature of contracting is not being fully realized in practice.

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