Knowledge Management and IT Project Success: A Meta-analytic Review

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Abstract

There are fragmented and contradictory findings in relation to the factors influencing IT project success. The aim of this study is to examine the antecedents of IT project success. A meta-analytic review was undertaken using the Comprehensive Meta-Analysis Software. A systematic review of the literature identified 612 articles on IT project success. Of these, 46 articles used a range of constructs in studying IT project success. The meta-analytic review resulted in 24 antecedents of IT project success. The result could be explained by adopting a knowledge management perspective as the antecedents (such as team environment, team process, team integration and social factors) were necessary for the creation, storage and transfer of knowledge in leading to IT project success. Theoretical and practical implications are discussed in relation to understanding the contributions of knowledge management to IT project success.

Keywords

Meta-analysis, knowledge management, project success, IT project.

INTRODUCTION

Organisations today recognise the important value of successful IT project implementations which contribute to positive organisational performance. Despite the extensive research on IS project success, research findings about the impact of project success on organisational performance have shown conflicting results across studies. A plausible reason is that project success is a complex construct which has different dimensions such as technical, economic, behavioural, business and strategic (McLeod et al., 2012). Also, with respect to project success, there are numerous lists of success factors that have been proposed in the literature. Thus, the existing literature in this context is largely fragmented.

The objective of this study is to address the issue of fragmented research on IT project success by conducting a meta-analysis of the literature. This meta-analytical review is a first attempt to empirically identify important antecedents of IT project success. Thus, this study makes an important contribution by presenting a meta-analysis of empirical evidence to assess these antecedents.

Organisations have been utilising knowledge management to manage their IT projects (Reich et al., 2012; Thomas and Mengel 2008). While prior research has affirmed that knowledge management as an effective

means to enhance project performance, there are not many studies that have focused on the effects of knowledge management process on IT project success. This study adopts a knowledge management theoretical perspective which underpins the meta-analytical review of IT project success. In particular, the paper seeks to examine knowledge creation, knowledge storage and knowledge transfer as a whole knowledge management process on on IT project performance (Alavi and Leidner, 2001; Chow and Chan, 2008).

The paper is organised as follows. In the next section, the knowledge management perspective is presented. We then discuss the research methodology, present the main findings resulting from this analysis, before discussing the results of our analysis. We conclude with a discussion of managerial and practical implications.

KNOWLEDGE MANAGEMENT PERSPECTIVE

Knowledge management plays an important role in facilitating project success. A project is considered to be successful if it can be completed on time and within the budget, also it has to meet certain quality specifications or standards. In order to satisfy these project success criteria, a project team has to possess relevant knowledge. In particular, it is crucial for the project team to develop a systematic process of creating knowledge, storing knowledge and transferring of knowledge (Alavi and Leidner, 2001).

Knowledge is a multi-dimensional construct, with data, information and tacit knowledge dimensions (Darroch and McNaughton, 2001). Knowledge is seen as a process of acquiring data, converting data into information, and transforming data into tacit knowledge. More specifically, this process can be regarded as knowledge creation. There are several factors that can have an impact on knowledge creation. For instance, Wang et al. (2010) found a positive relationship between collectivism, as an aspect of organisational culture, with knowledge creation capability. The qualitative case study of Kodama (2007) depicted that leadership plays an important role in facilitating organisational knowledge creation.

There is a tendency for organisations to forget their created organisational knowledge, i.e. they lose track of important and acquired knowledge. Therefore, it is crucial for organisations to store their organisational memory, in the form of written documentation and structured information, in electronic knowledge depositories (Alavi and Leidner, 2001). Such knowledge storage/retrieval technologies comprise of e-mail, Internet, Intranet, portals, computers, software, databases management systems and expert systems. Therefore, IT infrastructure capabilities are important enablers for supporting organisational knowledge storage.

After knowledge has been created and stored, the next crucial step for organisations is how to transfer their organisational knowledge to the other different divisions. The transferring of knowledge can be occurred through four channels: informal or formal, personal or impersonal (Alavi and Leidner, 2001). These knowledge transfer channels can be facilitated through process of socialisation, education and learning (Robert, 2000). Past research affirmed that trust, communication and commitment have a positive impact on knowledge transfer (Chow and Chan, 2008; Ramasamy et al., 2006).

Elements drawn from the previous paragraphs are used to ground our understanding of knowledge management for this study. Knowledge management can be described as a process by which organisations create, assimilate and dissimilate their organisational knowledge (Alavi and Leidner, 2001). Prior research has identified a range of technological, organisational and social factors that can contribute to the success or failure of knowledge management (Alavi and Leidner, 2001; Chow and Chan, 2008)

There are several studies which examined the impact of knowledge management on project success. For instance, Kotnour (2000) emphasised that organisational learning drives knowledge creation, which in turn has a positive impact on project performance. Atkinson et al. (2006) suggested that knowledge management and organisational learning are important elements in reducing project risks and project uncertainties. Similarly, Thomas and Mengel (2008) contended that with dynamic organisational environments and increasing complexity of projects, it is crucial for the project managers to possess a higher level of know-how knowledge by having an advanced level of project management education. The empirical results from the study by Reich et al. (2012) showed that knowledge management, entailing three aspects (knowledge stock, enabling environment and knowledge practices), was associated with positive project performance.

Many studies have looked at the relationship between different phases of knowledge management (i.e. the phase of knowledge creation, the phase of knowledge storage and the phase of knowledge transfer) and project success, however not many researchers have looked at the relationship between the three phases of knowledge management as a whole and project success. For example, Fedor et al. (2003) studied the impact of knowledge creation and knowledge transfer on project success. The empirical study of Yang et al. (2012) asserted that knowledge storage facilitates an effective management of project knowledge, it stores useful ideas and new knowledge and updates frequently on a project. As such, one of objectives of this study is to use the three phases of knowledge management as a whole perspective in studying IT project success.

Factors Influencing Project Success

Research on project success is grounded in organisational theory, organisational behavior, and project management. For instance, Wu and Fang (2010) emphasised that organisational learning had a positive impact on IS projects. Along the same vein, Wang et al. (2008) further suggested that organisational learning enhanced knowledge transfer which was crucial for project success. The organisational behaviour literature suggests that organisational factors such as specific leadership skills (Kissi et al., 2013; Muller et al., 2011; Patankul and Aronson, 2012; Yang et al., 2014); culture (Patankul and Aronson, 2012; van Marrewijk, 2007; Yazici, 2009); commitment (Liu et al., 2011; Wang et al., 2005); and coordination mechanisms (Liberatore and Luo, 2010; Parolia et al., 2007), as the critical determinants as project success. Lastly, the project management research literature covers both technical and social aspects that influence project success or failure. Xu et al. (2010) studied how infrastructure capabilities can drive IT project success through the enhancement of teamwork quality. Research on social dimensions of project success tends to focus on the working relationship of the project members (Kendra and Taplin, 2004). For example, McLeod et al. (2012) developed a framework in examining how the perspectives of different stakeholders can influence the perceived outcomes of a project. Studies further suggested that trust and team culture, which are factors affecting project relationship, have a positive influence on project success (Korzaan, 2009; Lee et al., 2013; Park and Lee, 2014; Rai et al., 2009).

Over the years, studies have been conducted that have examined the critical success factors for project success. Past research has identified various lists of critical success factors that are crucial to project success consistently appear (see Table 1).

Table 1. Critical success factors

Authors	Critical Success Factors
Slevin and Pinto (1986)	Project mission, top management support, project schedules/plan, client consultation, personnel, technical tasks, client acceptance, monitoring and feedback, troubleshooting, and communication
Phan et al. (1995)	Good communication and feedback, project leaders possesses good managerial skills, quality assurance to meet schedule and budget, full compliance to requirements, problems and goals well-defined, environment and resource dependence well controlled
Belassi and Tukel (1996)	Top management support, client consultation, scheduling, planning and control, monitoring and feedback, availability of resources, preliminary estimates
Cooke-Davies (2002)	Project mission/common goal/direction, monitor performance and feedback, personnel/teamwork, troubleshooting/risk management, project ownership, duration and size of project
Finch (2003)	Initial clarity of goals and general directions, top management support, communication, provision of training to project team members, availability of the required technology and expertise to accomplish technical tasks, detailed project schedule/plans of the individual actions steps
Westerveld (2003)	Leadership and team, policy and strategy, resources, stakeholder management, project management, contractual relationships
Turner and Muller (2005)	Project manager selection criteria, project manager leadership/empowerment, commitment to planning and control, monitor performance and feedback, personnel/ teamwork, project ownership

From the above, we contend that few studies have attempted to empirically validate the impact of knowledge management process on project success. Our review of the literature suggests that past empirical studies on antecedents produced various effect sizes, thus it is difficult to examine the sources of this heterogeneity across studies. For that reason, the current study will comprehensively examine these studies to identify the antecedents of IT project success. Subsequently, we would combine empirical findings from the multiple studies to determine the strength of the relationship between antecedents and IT project success.

RESEARCH METHODOLOGY

A meta-analysis approach (Hunter and Schmidt, 1990) was adopted to synthesize the findings from the existing research on IT project success factors. Meta-analysis is a quantitative approach that aggregates findings across individual studies (see Hunter and Schmidt, 1990). The advantage of meta-analysis is to reconcile conflicting results among the research findings so as to study the strength of the variables underlying relations and causalities. This study follows the meta-analysis process recommended by Hunter and Schmidt (1990) and it consists of these steps:

1. Identifying studies to be included in the analysis
2. Coding variables from the sample of studies
3. Performing the statistical meta-analysis

Identifying relevant studies

To identify relevant studies that examine the key factors contributing to IT project success, we did a computer search with databases such as ACM Digital Library, Computer Source [EBSCO], IEEE Xplore, IGI Global, Proquest Computing, ScienceDirect, Scopus, SpringerLink, Web of Knowledge. Keywords searched included "project success", "Information Technology project", "Information Systems project" and "software project". The search process resulted in a total of 612 papers that were published between 2003 and 2014. The search captures a wide review of publications that cover the topics of software/IT/IS project and project success. It is plausible that our search may have excluded some potentially interesting studies from the selected sample of publications. However, a limited review of such interesting studies did not present additional insights.

After identifying the 612 relevant papers, we adopted several criteria to determine whether the study should be included in the meta-analysis. First, we excluded studies that were purely theoretical and or review. Second, we excluded studies without quantitative empirical data. Third, we identified studies that focused on software/IT/IS projects because we are studying technological implementation projects. Applying these criteria, we ended up with 46 studies forming the basis for this investigation.

Coding variables

For each study, we obtained the following information: sample size, the reliability of constructs (as reported using Cronbach's alpha or if not available the reported composite reliability or internal consistency scores) and correlations for each pair of relationship.

Each of the 46 independent studies was coded by the authors. We identified 33 antecedents that exhibit a relationship with project success (see Table 2). Subsequently, the antecedents were further clustered according to the knowledge management theory (Alavi and Leidner, 2001).

Clustering of the antecedents of project success followed these steps. In the first instance, two authors read the definitions of these factors used in the 46 empirical studies. These were then manually clustered into higher order factors, according to the knowledge management theory (Alavi and Leidner, 2001). These were then reshuffled for the third author to re-categorise the factors according to the theoretical framework. Any deviation in coding was discussed and agreement was reached prior to a re-cluster by the final author. This process resulted in the classification of the antecedents into four categories: team environment, process, team interaction and social factors.

The team environment category includes conditions which facilitate members of the project team to work efficiently in completing the project. The factors consist of collectivism, commitment, co-ordination, leadership, managerial leadership competency, social leadership competency, mission/goal, organization culture and organisational support. The second category is team process which consists of factors that would influence operational performance of the project team. These include IS quality, organisational processes, project risk, prototyping, user-IS interaction and project control. Team interaction category studies technology characteristics that would impact on project success. The factors in this category are IT infrastructure capabilities, organisational technology learning and team capability. The social factors category looks at how internal influences affecting interactions among project team members. The factors include bonding social capital, bridging social capital, communication, conflict, partnering and trust.

Table 2. Coding of variables

Variable	Number of studies (K)	Sample size (N)	Antecedent
Bonding social capital	3	680	Antecedent
Bridging social capital	2	312	Antecedent
Mission/goal	2	493	Antecedent
Managerial leadership competency	3	558	Antecedent
Social leadership competency	2	404	Antecedent
Leadership	2	480	Antecedent
Collectivism	3	397	Antecedent
Commitment	6	1025	Antecedent
Communication	2	420	Antecedent
Conflict	4	612	Antecedent
Co-ordination	5	1013	Antecedent

Customer knowledge management	1	216	Antecedent
IT infrastructure capabilities	3	418	Antecedent
IS quality	2	709	Antecedent
Organisational culture	3	382	Antecedent
Organisational support	6	941	Antecedent
Organisational technology learning	5	986	Antecedent
Organisational process	3	501	Antecedent
Organisational citizenship behavior	1	252	Antecedent
Project control	2	231	Antecedent
Project risk	3	472	Antecedent
Prototyping	2	449	Antecedent
Partnering	2	305	Antecedent
PM KPIs	1	154	Antecedent
PM policy and strategy	1	154	Antecedent
Product performance	1	151	Antecedent
Trust	5	1096	Antecedent
Team dynamics	1	191	Antecedent
Team culture	1	124	Antecedent
Team capability	2	215	Antecedent
Team solving	1	167	Antecedent
User Influence	1	151	Antecedent
User-IS interaction	4	796	Antecedent
User training	1	212	Antecedent

N= Total sample size for the given meta-analysis; K= Number of studies included in the meta-analysis

Analysing data

We used the *Comprehensive Meta-Analysis Software* (Borenstein et al., 2009) to analyse the data. Before conducting the meta-analysis, we obtained a correlation for each relationship. The relationship is between an antecedent and IT project success.

This study measures an estimate of population correlation ρ by using Pearson's correlation coefficient r. We performed the bare-bones or weighted mean effect size (ř) to correct for sampling error. ř considers the sample size of each study and thus creates a weighted average of correlations. Based on Hunter and Schmidt (1990), the estimate of the population correlation is given by:

$\check{r} = \sum N_i r_i / \sum N_i$, where N_i is the sample size of each study and r_i is the observed correlation value of each study.

We calculated the correlation between the variables to correct for measurement error. According to Hunter and Schmidt (1990), the estimate of the true score correlation is given by:

$r_c = r_{xy} / (\sqrt{r_{xx}})(\sqrt{r_{yy}})$,where r_c is the effect size corrected for measurement error, r_{xy} is the reported correlation between the variables, r_{xx} is the reliability estimate for the independent variable and r_{yy} is the reliability estimate for the dependent variable.

RESULTS

Table 3 shows the results of the meta-analysis. We measured 95% confidence interval for each pair of correlation. For each pair of relationships, we report the sample size, population correlation, 95% lower and upper confidence interval and effect size.

After analysing our initial 33 antecedents, we excluded nine of the 33 antecedents in the 46 articles as they were studied once and thus were under-studied (Joseph et al., 2007). As a result, we were left with 24 antecedents to be meta-analysed. The total sample size from these 46 empirical studies is N= 13,895. Results of the meta-analytic review showed that all of the antecedents were found to be significant.

All team environment factors were found to be significantly related to project success: collectivism (ρ=0.573, p=0.031), commitment (ρ=0.473, p=0.000), co-ordination (ρ=0.502, p=0.000), leadership (ρ=0.274, p=0.005), managerial leadership competency (ρ=0.668, p=0.000), social leadership competency (ρ=0.540, p=0.000), mission/goal (ρ=0.743, p=0.000), organisational culture(ρ=0.644, p=0.000), and organisational support (ρ=0.514, p =0.000).

All team process factors were found to be significantly related to project success: IS quality (ρ=0.799, p=0.000), organisational processes (ρ=0.710, p=0.000), project risk (ρ= -0.603, p=0.000), prototyping (ρ=0.458, p=0.000), user-IS interaction (ρ=0.683, p=0.000), and project control (ρ=0.515, p=0.000).

All team interaction factors were found to be significantly related to project success: IT infrastructure capabilities (ρ=0.684, p=0.000), organisational technology (ρ=0.583, p=0.000), and learning team capability (ρ=0.721, p=0.000).

All social factors were found to be significantly related to project success: bonding social factor (ρ=0.425, p=0.026), bridging social factor (ρ=0.423, p=0.000), communication (ρ=0.530, p=0.003), conflict (ρ=-0.378, p=0.000), partnering (ρ=0.645, p=0.000), and trust (ρ=0.585, p=0.000).

DISCUSSION

There have been studies on IT project success, however the findings of these studies are inconsistent because of the differences in their reported effect sizes. Also, it is not clear in the literature which factors would have a positive impact on the relationship with project success. Our study addresses these gaps by using meta-analysis to collect all the available empirical correlational findings on the variables that would influence IT project success.

Our meta-analysis identified 24 antecedents from the 46 empirical studies. The findings show that there are significant relationships between the antecedents and IT project success. These antecedents could be explained by using the knowledge management theory (Alavi and Leidner, 2001). Results of the meta-analytic review enhanced our understanding of how organisations can deploy organisational knowledge to improve organisational performances via IT project success. To remain competitive, organisations must have an effective knowledge management process in creating knowledge, storing knowledge and transferring knowledge. Knowledge management factors which are regarded as organisational mechanisms, play an important role for managing knowledge effectively. Empirical research has studied organisational learning, organisational environment and knowledge practices as important knowledge management factors that can help to stimulate organisations to create knowledge and facilitate the transferring of knowledge within an organisation (Kotnour, 2000; Thomas and Mengel, 2008; Reich et al. 2012). Our empirical findings have provided insights into the relationship between various IT project antecedents and knowledge management process. These are further discussed below.

Table 3. Meta-analysis results

Antecedents	N	ρ	95% Confidence Interval Low	Upper	Effect size (p)
Team environment - Project success (TE –-> PS)					
Collectivism	397	0.573*	0.060	0.846	0.031
Commitment	1025	0.473*	0.250	0.648	0.000
Co-ordination	1013	0.502*	0.355	0.626	0.000
Leadership	480	0.274*	0.083	0.446	0.005
Managerial leadership competency	558	0.668*	0.371	0.841	0.000
Social leadership competency	404	0.540*	0.263	0.735	0.000
Mission/goal	493	0.743*	0.471	0.886	0.000
Organisational culture	382	0.644*	0.556	0.718	0.000
Organisational support	941	0.514*	0.330	0.660	0.000
Team Process – Project success (TP –-> PS)					
IS quality	709	0.799*	0.536	0.920	0.000
Organisational processes	501	0.710*	0.502	0.840	0.000
Project risk	472	-0.603*	-0.731	-0.432	0.000
Prototyping	449	0.458*	0.382	0.529	0.000
User-IS interaction	796	0.683*	0.515	0.800	0.000
Project control	231	0.515*	0.118	0.770	0.013
Team interaction - Project success (TI –-> PS)					
IT infrastructure capabilities	418	0.684*	0.503	0.807	0.000
Organisational technology learning	986	0.583*	0.515	0.645	0.000
Team capability	215	0.721*	0.636	0.789	0.000

Social factors – Project success (SF –-> PS)					
Bonding social capital	680	0.425*	0.054	0.692	0.026
Bridging social capital	312	0.423*	0.327	0.511	0.000
Communication	420	0.530*	0.204	0.750	0.003
Conflict	612	-0.378*	-0.485	-0.260	0.000
Partnering	305	0.645*	0.368	0.816	0.000
Trust	1096	0.585*	0.312	0.769	0.000

N= Total sample size for the given meta-analysis; ρ = Corrected population correlation; *p>0.05

Knowledge creation

Project team members are more likely to be able to create new knowledge when they are embedded in a favourable project environment (Park and Lee, 2014). Knowledge creation is regarded as a process therefore team process antecedents are crucial in facilitating the team members to create an environment for the continuation of knowledge. Our findings depicted that managerial leadership competency, mission/goal, organisational culture, organisational processes and project control are important antecedents of knowledge creation

Team environment: The characteristics of the environment in which the project team members are embedded play an important role in project success. Creating and fostering a supportive working environment is positively associated with project success (Thamhain, 2004). Our findings have shown that team environment antecedents have a positive impact on project success. This finding is consistent with the empirical study of Chow and Cao (2008) which depicted a significant relationship between project success and agile-friendly environment. Therefore, we conclude from the meta-analysis that that team environment factors are positively correlated to IT project success.

Team Process: Project control is significant to knowledge creation. Project controls refer to the managing of a project's processes so as to facilitate the project to meet its cost, schedule and any required specifications or standards. The empirical study of Chen et al. (2011) found that project techniques such as control charts and reports are effective means in monitoring overall project goals, budgetary, and scheduling targets that have a positive impact on the project performance. According to Nonaka and Takeuchi (1995), explicit knowledge is created through the documented charts, directives, and standards. Similarly, evidence to support this finding is in the empirical study by Wu and Fang (2010), who found that explicit knowledge is captured in organisational processes, thus enabling knowledge creation. Therefore, we conclude from the meta-analysis that project control and organisational processes are positively correlated to IT project success.

Knowledge storage

Team interaction that comprises of IT infrastructure capabilities and organisational technology learning facilitates storage of organisational knowledge. Similarly, IS quality, one of the team process antecedents, which comprise of technology quality factors can affect the management of organisational knowledge (Alavi and Leidner 2001). Our findings depicted that IT infrastructure capabilities, organisational technology learning and IS quality are important antecedents of knowledge storage.

Team Interaction: Slevin and Pinto (1986) identified technical tasks as one of the 10 critical success factors, which is crucial to facilitate project success. Empirical studies by Finch (2003) and Belout and Gauvreau (2004) found that variables such as the availability of the required technologies and expertise to accomplish the specific technical action steps are positively correlated to project success. Evidence to support IT infrastructure capabilities are important for knowledge storage and integration is found in the empirical study by Yang et al. (2012). While the empirical study of Wang et al. (2008) supports the finding whereby organisational technology learning supports knowledge storage. Therefore, we conclude from the meta-analysis that team interaction antecedents are positively correlated to project success.

Team process: Team process "are members' transformative acts that convert inputs into team outcomes" therefore it is critical to project success (Mathieu and Schulze, 2006, p. 605). An efficient team process would detail project scope, project requirements, project operational procedures and risks (Chow and Cao, 2008; Cooke-Davies, 2002). Of our meta-analytical studies, Kuo (2009) reported a positive relationship between IS quality and IT project success. Nowadays knowledge is stored in electronic depositories therefore there is a need for an efficient knowledge repository system.

Knowledge transfer

As suggested by Robert (2000), knowledge is transferred through socialisation, education and learning, this emphasises the role of human behaviour plays in facilitating the transferring of knowledge. As such, social factor antecedents play an important role in managing relationships that are important enablers of knowledge transfer.

Our findings depicted that communication, partnering, trust and user-IS interaction are important antecedents of knowledge transfer.

Social Factors: According to Kendra and Taplin (2004), it is necessary to look at the social dimensions of project success. Of our meta-analytical studies, Lee et al. (2013) found that communication can reduce conflicts and strengthen inter-relational cooperation. The empirical study of Liu et al. (2011) emphasised that partnering plays an important role in facilitating co-operative relationships. Similarly, Liberatore and Luo (2010) reported positive relationship between trust and team collaboration. These three social variables form a basis for transferring knowledge at a group level. Social factors are necessary for effective knowledge transfer at a group level as they help in creating strong bonds that are based on frequent communication, co-operative partnering and trust building. Therefore, we conclude from the meta-analysis that social factors are positively correlated to project success.

Team process: User-IS interaction is important enabler for knowledge transfer. In order to have an effective knowledge transfer among individuals in a project team, project team members must possess the ability to acquire and assimilate knowledge from the knowledge repository system. To enhance the quality of user–IS interaction, comprehensive system training must be provided to the users. Evidence to support user-IS interaction is significant for knowledge transfer is found in the empirical study by Chen et al. (2011).

IMPLICATIONS FOR PRACTICE

The current study has a practical implication. IT project success relies on a social environment which requires effective communication, conflict resolution and trust. IT project managers have to create this type of social environment in order to build the necessary social capital for the creation, storage and transfer of knowledge essential for achieving success in IT projects. Socialisation and interaction can be enhanced through the creation of IT project teams where project team members possess technical and organisational skills and this can be supported by process such as project control and IT infrastructure. It explains the need to create, store and transfer knowledge, and includes attributes such as; well-articulated project goals, competent management leadership, internalisation of project quality, well-defined organisational processes, capable project team members, shared knowledge and the spirit of partnering.

CONCLUSIONS

This study performed a meta-analytical review on antecedents of IT project success through a quantitative review of the project success literature. Our meta-analysis identified 24 antecedents. Results provided evidence that all the antecedents are significantly related to IT project success. Subsequently, the antecedents are group into four categories: team environment, team process, team interaction and social factors. And finally, we map these categories to the knowledge management process of knowledge creation, knowledge storage and knowledge transfer.

Our results show that knowledge management process and IT project antecedents are significantly related. Team environment and team process antecedents are knowledge creation enablers. Team interaction and team process play an important role in storing organisation knowledge. Social factors and team process are necessary for the facilitation of knowledge transfer.

Although meta-analysis has its own strength as a research methodology, there remains some limitations. The current review relied on studies which have been published and indexed in the full text databases. We have yet to include all studies which have been presented at conferences, book chapters, monographs and thesis/dissertations. Therefore, our proposed model is unlikely to have captured all the factors that would influence IT project success. Consequently, this raises an external validity limitation. Further research is needed to examine other types of factors or mediators or moderators beyond those examined in this study.

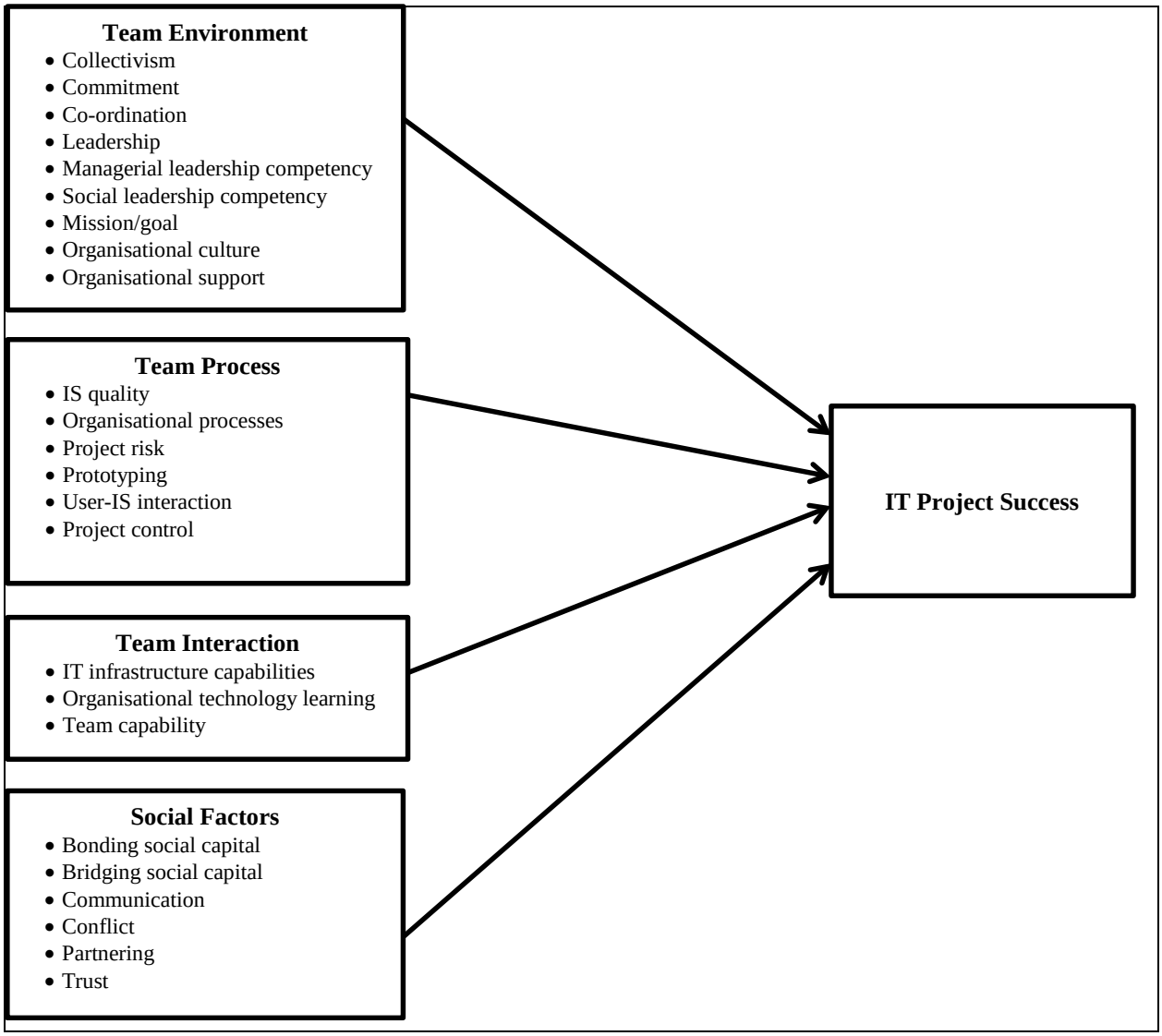

Figure 1: A Model of Knowledge Management View of IT Project Success

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