Loughborough University

This item was submitted to Loughborough's Research Repository by the author.
Items in Figshare are protected by copyright, with all rights reserved, unless otherwise indicated.

Exploiting benefits from IS/IT investments: an IT culture perspective

PLEASE CITE THE PUBLISHED VERSION

https://balsa.man.poznan.pl/indico/getFile.py/access?contribId=199&sessionId=56&resId=0&materialId=paper&confId=44

PUBLISHER

European Conference on Information Systems (ECIS)

VERSION

AM (Accepted Manuscript)

PUBLISHER STATEMENT

This work is made available according to the conditions of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) licence. Full details of this licence are available at: https://creativecommons.org/licenses/by-nc-nd/4.0/

LICENCE

CC BY-NC-ND 4.0

REPOSITORY RECORD

Odusanya, Kayode A., Crispin Coombs, and Neil Doherty. 2019. “Exploiting Benefits from IS/IT Investments: An IT Culture Perspective”. figshare. https://hdl.handle.net/2134/18354.

EXPLOITING BENEFITS FROM IS/IT INVESTMENTS: AN IT CULTURE PERSPECTIVE

Research in Progress

Odusanya, Kayode, School of Business and Economics, Loughborough University, Leicestershire, UK, k.odusanya@lboro.ac.uk

Coombs, Crispin, School of Business and Economics, Loughborough University, Leicestershire, UK, c.r.coombs@lboro.ac.uk

Doherty, Neil F., School of Business and Economics, Loughborough University, Leicestershire, UK, n.f.doherty@lboro.ac.uk

Abstract

Despite huge global spend on IS/IT, empirical evidence shows many of these investments do not deliver expected benefits. Benefits are realized when organizations attend to contextual factors surrounding the implementation of IT and not just its technical implementation. Culture, as a contextual factor, has been shown to have a strong influence on the way IS/IT is adopted, used and exploited. We draw from IS organizational culture studies to show how individual/group IT cultures (IT culture archetypes) offer a user-centric perspective on benefits exploitation from IS/IT investments. The majority of benefits are achieved later into the lifecycle of an IS/IT investment, after implementing the IS/IT resource. Thus, this study investigates post adoption experience of an organization's IS/IT investment, an important systems lifecycle stage that has received less attention in the IS literature. We adopt a single in-depth case study approach incorporating a three stage mixed data collection strategy. From a theoretical perspective, IT culture offers an intuitive approach to address IS/IT benefits management challenges during the post-adoption stage. From a practitioner perspective, we believe findings from this study, will offer several managerial implications for business and IT managers on specific actions to realize greater benefits from their IS/IT investments.

Keywords: IT culture, post-adoption, benefits management, benefits exploitation

1 Introduction

Global spend on IS/IT was estimated to be $3.7 trillion last year (Gartner, 2013), a figure greater than the GDP of every country except the United States, China and Japan (World Bank, 2014). Unfortunately, empirical evidence has shown that most of these investments do not deliver expected benefits (Peppard and Ward, 2005; Doherty et al., 2012). Research on benefits management reveals that benefits are realized from IS/IT investments when organizations attend to contextual factors surrounding the implementation of IS/IT and not just its technical implementation (Ward and Elvin, 1999). According to Doherty (2014), these benefits are typically achieved much later into the lifecycle of an IS/IT investment, after implementing the IS/IT resource. It is therefore a major concern that organizations give only very limited attention to benefits exploitation opportunities from their IS/IT investments (Ashurst et al., 2008). It is at this post-adoption stage that culture has been shown to be particularly

significant, because culture is not fixed and changes occur as a result of the implementation and diffusion of IS/IT across the entire organization (Gallivan and Srite, 2005). The ability to manage these changes may have an important influence on the long term exploitation of business benefits from IS/IT investments. However, to date there remains a lack of clarity on how culture influences benefits exploitation opportunities during post-adoption stage of IS/IT investments.

In existing IS research, national and organizational cultures have regularly been used as paradigms to investigate IS phenomena within organizations (Leidner and Kayworth, 2006). Organizational and national cultures offer nuanced explanations of IT adoption based on cultures that exist at both subculture and national levels respectively (Leidner and Kayworth, 2006; Lee et al., 2007). However, these lenses do not give a clear understanding of the cultural effects to IS phenomena from an individual perspective. Technology features appropriate for users with one set of cultural dispositions (i.e. their values, assumptions and behaviors to IT), may not be appropriate for users with different dispositions (Lee et al., 2007). The need for an individual unit of analysis is based on the understanding that IS phenomena exert a strong influence in organizations, first at an individual level, and then extrapolated to a group of users within the organization. According to Barki and Hartwick (1994), individuals maintain distinct natural tendencies in behavior towards adoption and use of IS/IT resources. Walsh and Kefi (2008) refer to this as the individual's IT culture, portrayed using the individual as a cultural being. The idea of individual IT culture draws from human behavior and cultural concepts that have explored how groups evolve within organizations, based on unique sets of features shared by individuals within the group. The IT culture perspective offers a new line of inquiry to study user interpretations of IT through the assumptions they make about IT, the espoused values they share concerning IT, and particular user behaviors surrounding the use of IT. A group of individuals sharing similar dispositions concerning IT in this way, represent an IT culture archetype. We utilize this understanding of IT culture archetypes to study individual/group behavior during post-adoption phases of IS/IT investments.

Our focus on the post-adoptive phase of IS/IT investments is guided by Jasperson et al. (2005). Jasperson et al. (2005, p. 531) situates individual post-adoptive behavior within a three-stage model of IT adoption and use. The first stage is the organization's justification to initiate an IS/IT investment and this could be either voluntary or mandatory. The second stage occurs when users in the organization make a voluntary or mandatory decision to accept the installed IS/IT resource. The third stage occurs further into the post-adoption period when users begin to explore further adoption and use of the IS/IT resource, including extending its use innovatively. Our research fits into the third stage of this model. Indeed the use of IT culture allows us to identify specific values that might enhance or undermine the exploitation of benefits from IS/IT investments. To our understanding few IS studies have focused on benefits exploitation opportunities (Ashurst et al., 2008) and no study has attempted to study benefits exploitation opportunities from an IT culture perspective. Thus, we address the research question: *How do IT culture archetypes influence the exploitation of benefits during post-adoption phases of IS/IT investments?* The remainder of this research-in-progress paper is organized as follows. In the next section, we review the literature on IT culture and benefits management, after which gaps are identified. In response to these gaps, we introduce the method and critically examine the anticipated contributions from our research.

2 Literature Review

There are variations in the theorizing of IT culture in the literature. While one stream of literature has developed investigating the cultural characteristics of individuals, with respect to various IS phenomena (see Kaarst-Brown and Robey, 1999; Walsh et al., 2010; Walsh, 2014), others have used it to refer to the culture evident within the IT function in an organization (see Leidner and Kayworth, 2006; Nord et al., 2007; Guzman and Stanton, 2009; Leidner, 2010), and the culture of the IT occupational group (see Jacks and Palvia, 2014). Our focus is on user behavior that enhances or mitigates the management of benefits from IS/IT investments. Thus, we adopt Walsh et al.'s (2010) conceptualization of

IT culture. This allows us to examine the cultural characteristics of users involved with IT in organizations at an individual level of analysis. In this section we discuss the extant literature regarding: 1) IT culture, 2) benefits management and 3) provide an integrated critique of IT culture and post-adoption benefits management.

2.1 IT Culture

IT culture has been defined as "*the set of IT related visible or audible behaviors, IT related values and IT related underlying assumptions shared by a group*" (Walsh et al. 2010, p. 259). The IT culture concept is one which can be traced back to a number of human behavior and cultural concepts, such as Social Identity Theory (SIT) (Tajfel, 1978), the Virtual Onion Model (Straub et al., 2002) and the Spinning Top Metaphor (Walsh and Kefi, 2008). SIT is part of an individual's self-concept which derives from knowledge of his/her membership of a social group (or groups) together with the value and emotional significance attached to that membership (Tajfel, 1978, p. 63). According to SIT, who we are depends on which groups/affiliations we have or currently belong to. These groups may be based on attributes such as nationality, organization or gender. This understanding has enabled IS researchers to propose theoretical frameworks for studying cultural beliefs at an individual level (Ford et al., 2003). These cultural layers reflect how certain deeply held beliefs may shape people's views and behavior toward uniquely identifying one 'in-group' from other 'out-groups'. So, by understanding individual beliefs and behavior through the lens of SIT and transferring this into IS research, we can study not only the underlying cultural layers framing a person, but can also examine how each layer of cultural identity influences their activities within organizations.

Secondly, the Virtual Onion Model builds on SIT to offer a model of different layers of culture (Straub et al., 2002). It suggests that like layers of an onion, each individual is composed of different layers of cultural identity and experiences (Gallivan and Srite, 2005). Based on external triggers (or circumstances), these cultural layers shift to express and define unique reactions – unique reactions common to a particular in-group and alien to another out-group. Walsh and Kefi (2008), introduce the concept of individual IT culture using the Spinning Top Model which they describe as "*a modelization of the individual as a cultural being*". The study offers a conceptual understanding of an individual as the combination of the innate core and the various levels of culture acquired through socialization leading according to Walsh and Kefi (2008) to 'specific groups of people'. Applying the model gives a fuller understanding of the individual as a cultural being and helps explain their acceptance and use of IS/IT in globally intercultural settings. The study gives managers a different IT strategy perspective for managing different individual IT culture needs observed within their organization.

Doherty et al. (2006) have shown that since technology can hold a variety of meanings for different individuals within an organization (interpretive flexibility), the way in which it is adopted can change over time. According to Gallivan and Srite (2005), "*the same technology will be understood differently by different users, depending on their specific beliefs, assumptions and values*". Schein (1985) proposes that in order to get a complete picture of culture in organizations, studies should attend to different levels of cultural manifestations. In line with this thinking, Kaarst-Brown and Robey (1999) have used the notion of metaphors and magic to highlight how users' assumptions reflect varying IT cultures and as a result, IT management within organizations. Through an ethnographic study of two case organizations, the authors identified five archetypal patterns: revered; controlled; demystified; integrated; and fearful IT culture archetypes. Each cultural archetype reflects different underlying assumptions about the magic of IT (Kaarst-Brown and Robey 1999, p. 192). Using these cultural archetypes, the study showed the need for IT managers to integrate different IT archetypal needs into their strategies to ensure the successful alignment of IT to business needs. This need is consistent with Martin's (1992, p. 58) observation that many studies assume an objectivist stance to studying culture within organizations, thereby failing to account for cultural differences and fragmentation that occur among users and subgroups in organizations.

In a more recent study, Walsh et al. (2010) applied a values perspective to IT culture examining cross-cultural behaviors and how they influenced IT use in an organization. The study proposed a framework to inform IT adoption and usage strategy by identifying nine IT culture archetypes: studious; passionate; dangerous; interested; disciplined; frightened; disenchanted; constrained; and dodger, as members of three attitudinal groups based on IT use. The attitudinal groups were: pro-active; passive; and refusal. The groups were formed by relating the users' needs and motivation to engage with IT with the concept of values. Two main findings resulted from this study. First, by way of a proposed framework, the study shows how IT managers could influence the migration of less supporting user profiles to a more supporting profile, within the context of successful implementation of IT-enabled change. Second, three types of IT needs emerged from the study: global; contextual; and situational. Walsh et al. (2010, p. 262) explains that global IT needs refer to the *"need for IT in all aspects of one's life"*; contextual IT needs refers to the *"need to use IT globally in some context(s)"*; while situational IT needs are needs *"for specific IT in order to fulfil given tasks"*. The findings underscore the importance of culture-based interventions mediating strategic adoption and use of IS/IT resources within organizations by IT managers and business leaders.

Finally, Walsh (2014) used mixed-method grounded theory to propose a strategic path to study IT use through users' IT culture and needs. One key finding of this study was that highly acculturated users of IT, who could have been seen as 'ambassadors' have quite high expectations during IS/IT implementation. If their situational IT needs are not satisfied, these users may prove difficult to motivate and even turn into 'nemesis-type' characters hindering implementation and exploitation of strategic IT. These studies show the value of investigating IS phenomena by examining the effects of various IT archetypes. We argue that the variation in use and adoption of IS/IT that these studies reveal is likely to influence the ongoing innovation and exploitation of benefits from IS/IT investments within organizations. The successful realization of benefits from IS/IT investments has been a topic of study for a number of scholars and it is this stream of literature that we examine in the following section.

2.2 Benefits Management and the Post Adoption Stage

Benefits Management (BM) has been defined as *"the process of organizing and managing, such that the potential benefits arising from the use of IT are actually realized"* (Ward and Elvin 1999, p. 197). It facilitates the realization of value from IS/IT investments by enabling effective governance towards achieving intended benefits (Serra and Kunc, 2015), and has emerged as a way to help facilitate the realization of benefits from IS/IT investments.

In its relatively short history, some core themes have emerged over the course of several studies. Research suggests that benefits from IS/IT investments come from organizational changes surrounding implementation of IT and not from IT implementation alone (Ward and Elvin, 1999). This emphasis on organizational change is a core feature of BM. The '*process of organizing and managing*' suggests managerial interventions accompanying IT implementation to ensure benefits are realized. Indeed, *"the term "benefits management" emphasizes the crucial point that benefits arise only from changes made by individual users or groups of users, and these changes must be identified and managed successfully"* (Peppard et al. 2007, p. 3). However, only a handful of studies exist within benefits management literature that address contextual factors surrounding the implementation of IT in organizations and this has been raised as a fundamental concern (Doherty et al., 2012). The contextual factors refer to those issues that should be considered within the environment where the BM process is undertaken such as organizational culture and top management support. Ignoring contextual factors surrounding IS/IT investments creates an incomplete and unclear picture during project evaluation that has even been labelled 'dangerous', when encountered (Doherty and King, 2001). Unfortunately, despite scholars and practitioners developing several methodologies and frameworks for the successful realization of benefits (e.g. Thorpe, 1998; Ward and Elvin, 1999; Ashurst and Doherty, 2003), adoption of these tools remains stubbornly low in organizations (Ashurst et al., 2008; Ward et al., 2007). Existing low adoption rates of BM methodologies and frameworks coupled with empirical evidence

suggests the existence of a gap between theory and practice (Ashurst et al., 2008). To improve these adoption rates, scholars have highlighted the need for more focus on contextual factors surrounding IS/IT investments in order to facilitate the application of existing methodologies and frameworks in practice (Ward and Elvin, 1999; Coombs, 2015).

One way existing studies have attempted to investigate the low uptake of BM practices, is to apply theory from related disciplines to offer further insight into benefits management practice. Synthesizing theory to produce integrative theories in this way can help researchers to develop a broad understanding of a concept or process (LePine and King, 2010). Drawing from the resource-based view of firms, Ashurst et al. (2008) have offered insights into the competences within organizations that increase the likelihood of an organization's IS/IT investment strategy being successful. The authors developed a benefits capability model enacted through a set of dynamic competencies within the organization (Ashurst et al. 2008, pp. 359 – 360). Moreover, using the case of a computer-based information system during a merger, Dhillon (2005) examined the contextual factors that determine the realization of benefits from IS/IT investments. The study showed that conflicting behaviors to IT from users can lead to conflicting objectives if not properly managed within the organization. Here, the notion of culture not only at an organizational level, but also at an individual level is raised. Though, it is generally recognized in BM literature that organizational culture plays a significant role in management of benefits from IS/IT investments (Doherty et al., 2012), only very limited studies have focused on individual cultural orientations and their influence on the management and realization of benefits within organizations.

A further core theme in the BM literature is that BM activities should span the entire lifecycle of an IS/IT investment and not just during the implementation or go-live phases (Doherty et al., 2012). The problem according to Ashurst et al. (2008) is that project teams overseeing implementation of IS/IT projects tend to be dissolved soon after the go-live date. This leaves little or no dedicated resource for ensuring realizable benefits during the post-adoption phases of these investments. Organizations need to sustain the progress made after IS/IT implementation, by putting in place organization-wide changes reviewed on a regular basis, to ensure potential benefits are realized from IS/IT investments (Jenner 2012, p. 131). Much of the existing IS literature on technology adoption has a similar emphasis on implementation or go-live project phases. Studies that have addressed the post adoption stage tend to only consider immediate user experience after implementation. For example, the Technology Acceptance Model (TAM) examines potential users behavioral intention to use a technological innovation (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) was developed to present a synthesized model of understanding an individual's usage intention and behavior towards an information system (Venkatesh et al., 2003). These theories help to reveal how differences between individuals' perceptions of IS/IT usefulness and ease of use influence the adoption and use of technology (Jasperson et al. 2005, p. 527). However, these studies only consider initial use behaviors by individuals and are unable to provide a full understanding of the potential variations in post adoptive IS/IT exploitation activities that may occur organizations.

A further stream of IS literature that considers the uptake and application of IS/IT across organizations is IT diffusion research. Several theoretical models have been proposed in the IS literature to explain the diffusion patterns of IS implementations (see Davis, 1989; Cooper and Zmud, 1990; Roger, 1995). One of the most frequently cited models is the Cooper and Zmud (1990) IS implementation model. Cooper and Zmud's model highlights that in order for IS diffusion to be achieved in organizations, IS implementation will progress through six stages: initiation, adoption, adaptation, acceptance, routinization, and infusion. A feature of Cooper and Zmud's (1990) six-stage model is that it considers the continued organizational use of an IS after go live through the acceptance, routinization and infusion stages (Sundaram et al., 2007). It is in these last three stages that key IS exploitation activities are likely to occur, enabling an organization to use the IS to its full potential and attain higher performance (Jasperson et al., 2005). However, IT diffusion may be difficult to achieve in these post-adoption stages because of the need to overcome barriers to the assimilation of new work processes and designs by

users (Robey et al., 2002). Further, previously silent users that are now required to engage with the system in their everyday work may voice their dissatisfaction with the IS and there may be calls for modifications to the system (Wagner and Newell, 2007). Although strategies have been proposed to overcome these barriers, such as increased training for users (Robey et al., 2002) and increased user participation (Wagner and Newell, 2007) both of these actions are more commonly performed as pre-implementation activities, along with IS configuration and customization decisions. Similar to the benefits management literature, Robey et al. (2002) and Wagner and Newell (2007) acknowledge the post adoption stages are often devoid of the organizational resources necessary to facilitate IS diffusion. Thus, although some IS diffusion research places a greater emphasis on the post adoption phases of an IS/IT investment, these studies do not explain variation in the successful exploitation of IS/IT investments between organizations.

In sum, extant IS/IT research is lacking regarding the organizational exploitation of IS/IT benefits during post-adoption phases of the systems development lifecycle. While the BM literature has made significant progress since its inception, most of its progress has focused on the development of frameworks for supporting the implementation of IS/IT and not their ongoing exploitation. Consequently, we argue more studies are needed to examine the post-adoption phases of IS/IT investments as it is only in these latter stages that the full range of potential benefits from IS/IT will be delivered.

2.3 Critique of literature

From the review of literature so far, it is apparent that the IT culture and BM literatures are still at a nascent stage of their development. Despite being an emerging concept, IT culture has provided a useful perspective, particularly when combined with other research streams, such as demonstrated in Walsh (2014) and Walsh et al. (2010). For example, using an IT culture perspective, Walsh et al. (2010) showed how organizations can manage 'culture creep' to encourage enculturation processes toward diffusing the use of adopted technologies across the entire organization. In addition, IT culture archetypes have been utilized to examine IT management, manage IT acceptance and offer insights for strategic IT use within organizations (Kaarst-Brown and Robey, 1999; Walsh et al., 2010; Walsh, 2014). These studies have been driven by Schein's (1985) proposition for cultural analysis within organizations from three levels: assumption; values; and behavior. All three studies allude to the existence of different archetypal patterns at these levels and that different archetypal groups are likely to behave in contrasting ways in their use and attitudes toward technology. Thus, we argue that IT culture can shed more light on how and why individual and group behaviors undermine or support benefits exploitation activities from IS/IT investments. However, to date no studies have considered whether IT culture archetypes can explain the variation in the realization of benefits from IS/IT investments.

Our focus on benefits exploitation opportunities also draws attention to the post-adoption stage of IS/IT investment lifecycle, a stage that has received less attention in the IS literature. Previous IS/IT research that has studied technology acceptance (e.g. TAM, UTAUT) has concentrated on implementation and go-live phases, neglecting user behavior as it evolves over the full lifecycle of the IS/IT investment. IS diffusion research also tends to place greater attention on the implementation and go-live stages of projects. The diffusion studies that do consider post adoption stage provides little guidance on what motivates users to fully exploit benefits from IS/IT investments. We argue that user behaviors are a reflection of individual IT cultures (the set of IT characteristics unique to individuals), and can be used to explain why some users may be inclined to engage or disengage with the exploitation of benefits from such investments. For example, using Walsh et al.'s (2010) attitudinal groups, pro-active groups may be more likely to seek opportunities to exploit an IS/IT investment, passive groups may comply with using the system but not innovate, and refusal groups are unlikely to engage with any activities to exploit benefits from the IS/IT.

Consequently, there is a need for further research to examine the role culture plays in the successful realization and management of benefits in organizations. IT culture offers an appropriate medium to

investigate IT values, assumptions and behaviors among users, to classify them into particular archetypal groups. These IT culture archetypes may hold more positive or negative attitudes towards IS/IT and accordingly more or less inclined to engage with the long term exploitation of benefits from IS/IT. Thus, understanding the influence of IT culture archetypes on the exploitation of IS/IT benefits offers a path to more effective strategic use of IT in organizations.

3 Method

In this section, we explain our research method that has been designed to answer the research question. Several theoretical approaches exist in research that emphasize the role of individual interaction with various IS phenomena, such as the phenomenological perspective (Heidegger, 1962; Ciborra, 2002). Another of such theoretical approaches which we utilize for our study is the critical realist perspective (Bhaskar, 1978). As very few studies exist on IT culture archetypes, we adopt an exploratory approach of this perspective using a detailed case study to answer the research question. The case study is a UK-based company FZE Limited – a pseudonym - and therein, we examine the effect of IT culture archetypes on post-adoption benefits management.

3.1 Research Setting

We sought an organization with a technological implementation at least six months into adoption and post go-live. The organization needed to have more than 100 employees to ensure a good range of people and departments interacting with the selected IS/IT. FZE Limited was chosen because they had implemented an Enterprise Resource Planning (ERP) system to integrate information and business processes across different departments in the company in a centralized manner. The ERP implementation meant a wide range of individuals across the entire organization interacted with the ERP to perform their business processes and day-to-day work. The ERP system is widely adopted in the organization's industry, and it is used by many of FZE Limited's competitors. As a result, its implementation was seen as both a strategic decision to standardize business processes and an adoption of industry best practice. FZE Limited completed the implementation of the ERP system in April 2014. The system has therefore been in operation for over eight months. This period of post-adoption makes FZE Limited appropriate for our study.

3.2 Research Design

Our research design consists of a single in-depth case study investigation (Yin, 1994). The decision to adopt a single case study was based on two factors. First, our study attempts to demonstrate how IT culture can provide significant insight into individual IT values that can enhance or mitigate IT benefits management within organizations. Second, we believe a single case study is appropriate to provide an in-depth understanding of the complex relationship between different individuals IT culture archetypes and how they may influence behaviors toward IS/IT. In order to address the research question, we will identify the set of IT values that either enhance or mitigate benefits exploitation opportunities from the ERP system at FZE Limited. The research uses a multi-stage approach to data collection. We believe this approach is appropriate for our study for the following reasons. First, this study requires us to track how individual/group IT values affect benefits exploitation from IS/IT investments in an organization. It allows us to collect data, analyze and draw conclusions based on the specific context, thereby providing an empirical means to understand such interactions as they develop within the organizational context (Yin, 1994). Second, it is a research method which allows for exploration of areas where existing knowledge is limited (Cavaye, 1996). Our study seeks such purpose: we investigate the use of IT culture as a theoretical lens to analyze IS phenomena at an individual level of analysis. We are able to draw conclusions on possible new manifestations of IT culture archetypes and their influence on benefits exploitation activities. To do this, we will adopt a three-stage procedure for data collection.

The first stage will comprise of interviews with a wide range of individuals that are using the ERP. The interview data will be supplemented with on-site observations and document reviews. The purpose of the initial stage will be to collect data to identify and classify different IT culture archetypes that are present in the organization and the benefits exploitation activities that are occurring. Interviews will be conducted with employees working within finance, human resource, sales and marketing units. A semi-structured interview format will be adopted to allow informants to freely express their views. All interviews should range from 30 – 60 minutes and will be recorded. The interviews with be transcribed verbatim. N'Vivo software will used to facilitate coding of data and analysis as well as providing a database for observation and document reviews. In the second stage, the key findings from the initial interviews will be used to develop a survey tool. This survey tool will then be administered to the whole ERP user group at FZE Limited. Applying a survey tool will enable a wider assessment of the prevalence of particular IT culture archetypes across the organization and the perceived impact of the behavior of these groups on benefits exploitation. The development of the survey tool will draw on the existing IT culture and BM literatures as well as being informed by the stage one data analysis. SPSS software will be utilized to analyze the data.

Having established a broad understanding of the influence of IT culture archetypes on benefits exploitation activities, the third stage employs further qualitative data collection. This stage will comprise of further semi-structured interviews with individuals identified from the survey data to delve deeper into how and why IT culture archetypes may affect benefits realization. The use of both qualitative and quantitative methods is intended to provide richer insights to strengthen the validity of resulting findings from the case study. Applying these techniques will enable a more robust analysis with greater explanatory power of the influence of IT culture as well as a strong evidence base for explaining nature of the relationship between IT culture and benefits realization.

4 Anticipated contributions

It is anticipated that integrating the IT culture and BM literatures through our research will yield contribution to both theory and practice. From a theoretical perspective, we will increase our understanding of IT culture and IT culture archetypes and demonstrate how IT culture can be used to explain the successful exploitation of IS phenomena. The study therefore has the potential to provide new contributions on the use of IT culture for IS/IT benefits management. This focus will allow us to theorize on individual IT values that influence exploitation of benefits from IS/IT investments.

From a practitioner perspective, we believe findings from this study will help facilitate a more holistic approach to BM from IS/IT investments. Findings will offer guidance for business and IT managers on the influence of the attitudes and beliefs of particular subgroups on IS/IT investments. This guidance will help managers develop strategies to manage the appropriation of technologies within organizations and ensure the delivery of benefits from their IS/IT investments.

References

Ashurst, C., and N. F. Doherty (2003). "Towards the formulation of 'a best practice' framework for benefits realization in IT projects." *Electronic Journal of Information Systems Evaluation*, *6*(2), 1-10.

Ashurst, C., N.F. Doherty, and J. Peppard (2008). "Improving the impact of IT development projects: the benefits realization capability model." *European Journal of Information Systems*, 17(4), 352-370.

Barki, H. and J. Hartwick (1994). "Measuring user participation, user involvement, and user attitude." *MIS Quarterly*, 59-82.

Bhaskar, R. 1978. *A Realist Theory of Science*. Harvester Press, Hassocks, England

Cavaye, A. L. (1996). "Case study research: a multi-faceted research approach for IS." *Information Systems Journal*, *6*(3), 227-242.

Ciborra, C. (2002). *The labyrinths of information: Challenging the wisdom of systems: Challenging the wisdom of systems*. Oxford University Press.

Coombs, C. (2015). "When planned IS/IT project benefits are not realized: a study of inhibitors and facilitators to benefits realization." *International Journal of Project Management, 33*(2), 363-379.

Copper, R., and W. Zmud, (1990). "Information Technology Implementation Research: A Technological Diffusion." *Management Science, 36*(2), 123-139.

Davis, F. D. (1989). "Perceived usefulness, perceived ease of use, and user acceptance of information technology." *MIS Quarterly,* 13(3), 319–340.

Dhillon, G. (2005). "Gaining benefits from IS/IT implementation: Interpretations from case studies." *International Journal of Information Management*, 25(6), 502-515.

Doherty, N. F. (2014). "The role of socio-technical principles in leveraging meaningful benefits from IT investments." *Applied Ergonomics*, 45(2), 181-187.

Doherty, N. F., C. Ashurst, and J. Peppard (2012). "Factors affecting the successful realisation of benefits from systems development projects: findings from three case studies." *Journal of Information Technology*, *27*(1), 1-16.

Doherty, N. F., C. R. Coombs, and J. Loan-Clarke (2006). "A re-conceptualization of the interpretive flexibility of information technologies: redressing the balance between the social and the technical." *European Journal of Information Systems, 15*(6), 569-582.

Doherty, N. F., and M. King (2001). "An investigation of the factors affecting the successful treatment of organizational issues in systems development projects." *European Journal of Information Systems, 10*(3), 147-160.

Ford, D., C. Connelly, and D. Meister (2003). "Information systems research and Hofstede's culture's consequences: an uneasy and incomplete partnership." *IEEE Transactions on Engineering Management, 50*(1), 8-25.

Gallivan, M., and M. Srite, M. (2005). "Information technology and culture: Identifying fragmentary and holistic perspectives of culture." *Information and Organization*, *15*(4), 295-338.

Gartner (2013). *Gartner Says Worldwide IT Spending Forecast to Reach $3.7 Trillion in 2013*. URL: http://www.gartner.com/newsroom/id/2292815 (visited on 23/10/2014).

Guzman, I. and J. Stanton (2009). "IT occupational culture: the cultural fit and commitment of new information technologists." *Information Technology and People*, 22(2), 157 – 187.

Heidegger, M. (1962). *Being and Time.* New York: Harper & Row.

Jacks, T., and P. Palvia (2014), "Measuring value dimensions of IT occupational culture: an exploratory analysis." *Information Technology and Management*, *15*(1), 19-35.

Jasperson, J. S., P. E. Carter, and R.W. Zmud (2005). "A comprehensive conceptualization of post-adoptive behaviors associated with information technology enabled work systems." *MIS Quarterly*, 29(3), 525-557.

Jenner, M. S. (2012). *Transforming government and public services: realising benefits through project portfolio management.* Gower Publishing, Ltd.

Kaarst-Brown, M. L., and D. Robey (1999). "More on myth, magic and metaphor: Cultural insights into the management of information technology in organizations." *Information Technology & People*, *12*(2), 192-218.

Lee, I., B. Choi, J. Kim, and S. Hong (2007). "Culture-technology fit: effects of cultural characteristics on the post-adoption beliefs of mobile internet users." *International Journal of Electronic Commerce*, 11(4), 11-51.

Leidner, D. E. (2010). "Globalization, culture, and information: Towards global knowledge transparency." *The Journal of Strategic Information Systems*, 19(2), 69-77.

Leidner, D. E., and T. Kayworth (2006). "Review: a review of culture in information systems research: toward a theory of information technology culture conflict." *MIS Quarterly*, 30(2), 357-399.

LePine, J., and A. King (2010). "Editors'comments: developing novel theoretical insight from reviews of existing theory and research." *Academy of Management Review*, *35*(4), 506-509.

Martin, J. (1992). *Cultures in organizations: Three perspectives*. Oxford University Press.

Nord, J. H., G. D. Nord, S. Cormack and A. Cater-Steel (2007). "IT culture: its impact on communication and work relationships in business." *International Journal of Intercultural Information Management,* 1(1), 85-107.

Peppard, J. and J. Ward (2005). "Unlocking Sustained Business Value from IT Investments." *California Management Review* 10(4): 52–69.

Peppard, J., Ward, J., and Daniel, E. (2007). "Managing the Realization of Business Benefits from IT Investments." *MISQ Executive*

Robey, D., J. W. Ross, and M. C. Boudreau (2002). "Learning to Implement Enterprise Systems: An Exploratory Study of the Dialectics of Change." *Journal of Management Information Systems,* 19(1), 17-46.

Rogers, E. M. (1995). *Diffusion of Innovations.* New York: Free Press.

Schein, E. H. (1985). *Organizational culture and Leadership*. Jossey-Bass, San Francisco CA.

Serra, C. E. M and M. Kunc (2015). "Benefits Realisation Management and its influence on project success and on the execution of business strategies." *International Journal of Project Management*, 33(1), 53-66.

Sundaram, S., A. Schwarz, E. Jones, and W. Chin (2007). "Technology Use on the Front Line: A Longitudinal Analysis of How Technology Enhances Individual Performance." *Journal of the Academy of Marketing Sciences,* 35, 101-112.

Straub, D., K. Loch, R. Evaristo, E. Karahanna, and M. Srite (2002). "Toward a theory-based measurement of culture." *Human Factors in Information Systems*, 61-82.

Tajfel, H. E. 1978. *Differentiation between social groups: Studies in the social psychology of intergroup relations*. Academic Press.

Thorp, J. 1998. *The information paradox - Realising the business benefits of information technology*. Toronto: McGraw-Hill.

Venkatesh, V., M. Morris, G. Davis, and F. Davis (2003). "User acceptance of information technology: Toward a unified view." *MIS Quarterly*, 425-478.

Wagner, E., and S. Newell (2007). "Exploring the importance of participation in the post-implementation period of an ES project: A neglected area." *Journal of the AIS,* 8(10), 508-524.

Walsh, I. (2014). "A strategic path to study IT use through users' IT culture and IT needs: A mixed-method grounded theory." *The Journal of Strategic Information Systems,* 23(2), 146-173.

Walsh, I. and H. Kefi, (2008). "The spinning top model, a new path to conceptualize culture and values: applications to IS research." In*: Twenty Ninth International Conference on Information Systems*. Paris, France.

Walsh, I., H. Kefi, and R. Baskerville (2010). "Managing culture creep: Toward a strategic model of user IT culture." *The Journal of Strategic Information Systems, 19*(4), 257-280.

Ward, J., and R. Elvin (1999). "A new framework for managing IT-enabled business change." *Information Systems Journal* 9.3 (1999): 197-221.

Ward, J., S. De Hertogh and S. Viaene (2007). "Managing benefits from IS/IT investments: An empirical investigation into current practice." In *System Sciences, 2007. HICSS 2007. 40th Annual Hawaii International Conference on* (pp. 206a-206a). IEEE.

World Bank (2014). "Gross Domestic Product 2013." URL: http://databank.worldbank.org/data/download/GDP.pdf (visited 23/10/2014)

Yin, R. K. (1994). *Case study research: Design and methods (2nd ed.)*. Newbury Park, CA: Sage.