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Revisiting learning outcomes from market led ICT outsourcing

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Abstract

Purpose – Today's global business is heavily dependent on information and communication technology (ICT). The reality for most organisations is that the rate of technology change has been extremely fast. To cope with these changes, some organisations are committing a large amount of resources. Such challenges make it difficult for some companies to invest in ICT, resulting in a need to re-think their business models. One such approach which has proved popular over the last few years is to outsource ICT. However, not all ICT outsourcing projects have been totally successful. The paper aims to explore various constructs in ICT outsourcing.

Design/methodology/approach – The aim is achieved by conducting studies on 11 ICT outsourcing projects within the service sector.

Findings – In future, customers will be looking for value-added services while focusing less on outsourcing as a cost-cutting exercise. There is also an added pressure on the customers and vendors to ensure that the original business case to justify outsourcing is robust.

Research limitations/implications – The research is conducted with a limited sample of ICT outsourcing projects. For this reason, many of the conclusions in this paper are generalisations. Further research will need to be conducted in order for the lessons that emerge to be applicable across a wider business perspective.

Originality/value – The paper takes a longer term perspective on the interface between customers and vendors in outsourcing projects. However, globally, this sector is very fluid and it is crucial that organisations understand the complexity of the relationships. This paper does not specifically seek to add to the existing body of knowledge on ICT outsourcing, but rather it serves as an opportunity to reflect on the full complexity of ICT outsourcing.

Keywords Outsourcing, Process management, Project management Paper type Research paper

1. Introduction

Information and communication technology (ICT) is a set of products offering data and value-added services including remote access, desktop management and public switched telephone networks (Ojiako, 2005). ICT plays a significant role in the global economy (Ojiako et al., 2005), and within organisations, it serves as a core intellectual component of the organisation's resilient infrastructure (Maguire and Ojiako, 2007). ICT also enables business transformation; supports re-design initiatives and also enable organisations to deliver flexible services in step with constantly changing customer demands (Maguire and Ojiako, 2008). This means that the ability of an organisation to link its business goals and ICT implementation goals is essential for the survival of majority of organisations (Maguire, 2002, 2004; Ojiako et al., 2004).

Over the last few years, there has been an increase in academic and business research on the perceived role of ICT and the role of ICT on business performance (Leek et al., 2003; Melville et al., 2004; Tallon, 2007). Primarily, this has been by organisations which have recognised that they lack the necessary competence and capabilities to leverage their ICT infrastructure (Pai and Basu, 2007). For most organisations seeking to leverage their technology competencies (Tippins and Sohi, 2003; Gonzalez-Alvarez and Nieto-Antolin, 2005), ICT outsourcing has continued to appear as an attractive option (Allen et al., 1998; Austin et al., 2001; Aubert and Croteau, 2005; Pai and Basu, 2007). Overall, the organisations should ensure that the ICT they develop is "market-led" otherwise their staff will be disappointed with the service that is provided by either internal ICT or outsource vendors (Maguire and Ojiako, 2008). ICT outsourcing often involves many parties and stakeholders. As a business process, outsourcing is a complex process (Baldwin et al., 2001), involving more than simply transferring resources and functionalities. Usually, there are other factors which have to be taken into consideration. These include legal (Pai and Basu, 2007), and management factors (Gottschalk and Karlsen, 2005). Other factors include organisational structure (Barthelemy and Geyer, 2005), security (Power and Forte, 2005; Hunter, 2003; Karabulut et al., 2007; Kennedy and Clark, 2006; Khalfan, 2004; Todd et al., 2006) and cultural (Barthelemy and Geyer, 2000; Aubert et al., 2005).

A development from the world of electricity power generation (Austin et al., 2001), ICT outsourcing as a concept is not new. It has existed since around the 1960s when organisations began to explore the possibility of procuring their ICT products and services from outside their firms. It was very common for firms to outsource payroll when hardware and software were expensive. Sparrow (2003) highlights that as early as 1963, companies such as Frito-Lay and Blue Cross were already outsourcing parts of their ICT service provision to EDS. In this paper, through an exploration of various constructs in ICT outsourcing we will attempt to reflect on the full complexity of ICT outsourcing through the re-examination of the critical success parameters of 11 ICT outsourcing projects within the service sector.

2. Literature review

For ICT projects, changes in the business environment, both on a project level and at an organisational level, have had a major impact on how organisations think about their future resource management. There is now an increased acceptance that global markets have undergone regulatory changes. This means that the once familiar models of public monopoly have given way to an open competition market.

Within the ICT industry, for the larger service providers and suppliers, there was now a major emphasis on reducing the transaction cost of projects especially with more aggressive competition from smaller software organisations (the majority created during the dot.com boom of the late 1990s) who are recognised as having smaller overheads. As a result, in order to remain competitive, the big ICT providers are now getting involved in major ICT projects which are often recognised as being cutting edge and difficult to implement.

3. ICT outsourcing

The basic purpose of outsourcing is to create value (Samuel, 2004). Its underlying theory is primarily driven by work conducted by Porter (1985), who suggested that

firms should manage their resources by optimizing transaction cost involved in outsourcing. In effect, ICT outsourcing works on the premise that there is a potential to reduce overall cost of ownership, take away the difficulties of running non-core ICT functions, while introducing new, high value functionalities which will enable user efficiency and business agility (Ojiako, 2005).

The ability of an organisation to outsource it ICT infrastructure depends on various factors (Gottschalk and Solli-Sæther, 2005; Oh, 2005; Claver et al., 2002a, b). These factors include for example the organisation's culture (Allen et al., 2002; Graf and Mudambi, 2005), its ability to manage customer-vendor relationships (Lee, 2001; Kedia and Lahiri, 2007; Goo et al., 2007), security capabilities (Power and Forte, 2005; Hunter, 2003; Karabulut et al., 2007; Kennedy and Clark, 2006; Khalfan, 2004; Todd et al., 2006) and people management (Jensen et al., 2007).

To an extent, it appears that the question of outsourcing relates to the firm's existence itself (Nellis and Parker, 2002; Hafeez et al., 2007). Another perspective is provided by Lonsdale (1999), who suggested that the old issue of defining a firm's boundary is a critical component of outsourcing. This is especially true as the firm's very existence depends on the managers' perception on what is to be produced internally, what is to be acquired from the external market and the organisational competencies required to support the required transformation. Firms may outsource any activity where transaction cost is lower than the in-house production cost (Nellis and Parker, 2002). They will also consider outsourcing their ICT infrastructure and supporting processes where there is clear evidence of a lack of ICT competency (Tippins and Sohi, 2003; Ritter and Gemunden, 2004). In effect, ICT outsourcing has to be driven by a need to achieve organisational efficiencies.

There are various reasons why ICT outsourcing is popular. For example, Udo (2000) highlights a realisation amongst companies that ICT outsourcing provides an opportunity for organisations to access cheap and skilled resources. Chen and Soliman (2002) suggest that some firms view ICT outsourcing as a means of coping with a fast changing technology, while Tiwana and Keil (2007) point to organisations recognising the advantages of specialisation which is enhanced by removing non-core activities from the focus of the organisation's operations. Other reasons have been identified by scholars such as Florin et al. (2005), Tafti (2005), Gonzalez et al. (2005a, b) and Kshetri (2007).

It is however important to note that not all ICT outsourcing initiatives are successful (Hirschheim and Lacity, 2000), with as many as 44 per cent of ICT outsourcing customers actively considering changing their vendors (Cox et al., 2005).

4. Theoretical framework and data collection

The research follows exploratory, descriptive methods of case study approach. Here, each ICT outsourcing project was regarded as a case unit of research. Using this approach, data were collected from the various cases by interviewing managers responsible for the delivery of each of the projects in question. The research employs the analysis of current practices (exploratory) against the existing theory (descriptive) to explain what is happening in practice (Collis and Hussey, 2003). Since the prospective cases were global in nature, participative enquiry and action research were not seen as practical. During the case study, a cross-case analysis was conducted in order to identify the patterns across various cases by analyzing the similarities and differences between various cases (Collis and Hussey, 2003).

It was seen as feasible to use multiple cases as no attempt at statistical generalisation was being attempted. As a result, there was no reason to use a single generalised case in our study.

A total of 11 senior managers working across ICT outsourcing projects were interviewed to gleam as much information possible. The interviews were carried out over a three-month period. Table I provides the details of the cases.

The following section interprets the key findings from the 11 research cases. A total of ten parameters (Figure 1) are presented.

These themes are based on top critical success factors identified by scholars such as Kini (2007), Pai and Basu (2007), Tafti (2005), Power et al. (2004), Claver et al. (2002a) and Zhu et al. (2001). The parameters include as follows.

4.1 Business objectives

It was found from the cases that the most common reason for ICT outsourcing is cost cutting and the focus on core competences. This is in line with the views expressed by Barthelemy (2001), Costa (2001), Buel et al. (2001), Kakabadse and Kakabadse (2002) and Kern and Willcocks (2002). In a majority of the cases, the impression generated was that cost optimization had been achieved through ICT outsourcing. In addition, the majority of the respondents were of the opinion that the outsourced project had fulfilled the need of a superior quality standard.

Even though the majority of the respondents suggested that functionality was the most important success criteria for ICT outsourcing projects (along with conformance to budget and schedule), less than half of the respondents felt that the delivery of value or a memorable customer experience was a success factor:

Organisation	Location
Customer	
Government transportation service provider	USA
Telecommunication service provider	UK
State owned power supply organisation	India
Two healthcare organisations	USA
UK government organisation (transportation related)	UK
Telecommunication company	Malaysia
Utility provider	UK
Energy provider	UK
Insurance service provider	USA
Retailing company	UK
Vendor	
IT/ITES organisation	USA
Subsidiary of German IT/telecom company	India
Subsidiary of German IT/telecom company	India
IT solution and service provider	India
Subsidiary of German IT/telecom company	India
Subsidiary of a German IT/telecom company	Malaysia
IT company	India
IT company	India
IT service provider	India

Table I.
List of organisations
and cases

Figure 1.
Study parameters
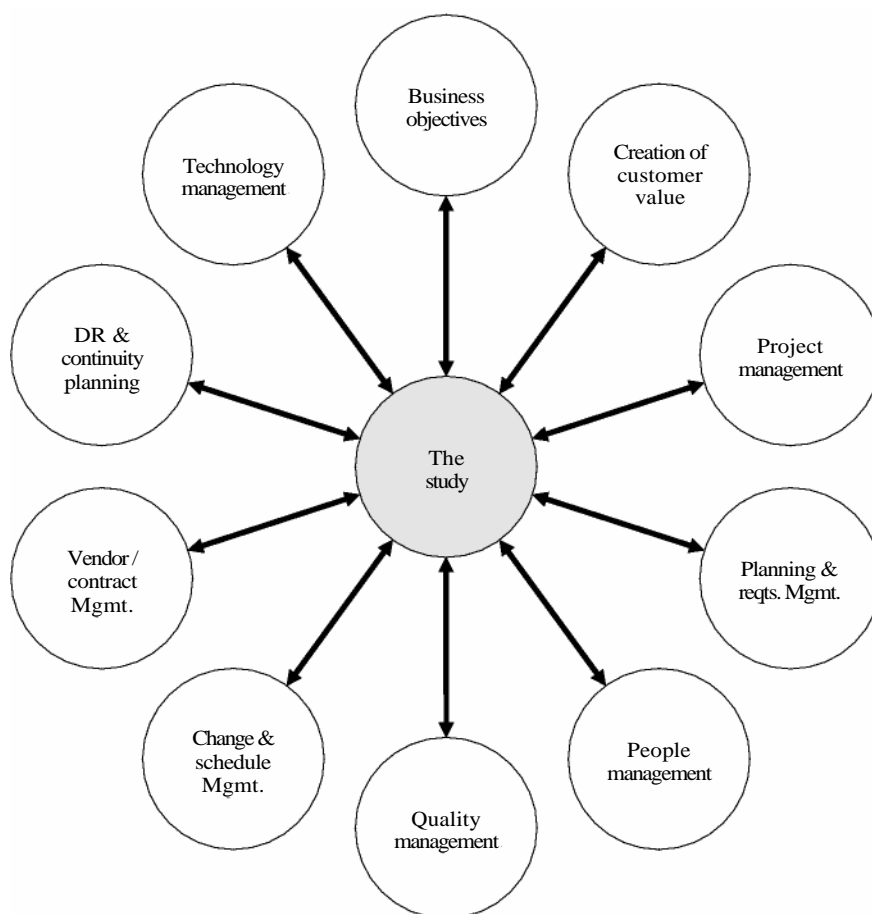
Lessons. These results shows that more emphasis is given on the technical superiority of an ICT infrastructure over the actual business benefit realized from the ICT system in outsourcing projects. The results serve as a reason for reiterating propositions put forward by Barthelemy (2001), Lane and van der Vyver (2006), Osei-Bryson and Ngwenyama (2006) and Lin et al. (2007) on the need for a robust analysis of ICT outsourcing initiatives due to the fact that the perceived business advantages of ICT outsourcing may actually be much lower than expected due to the considerable hidden costs associated with such projects.

4.2 Creation of customer value
Our findings on value-related objectives indicate that a significant number of the projects were choosing to invest resources in product and service design based on the assumption that a mix of tangible and intangible benefits will be realised.

Generally, although there appeared to be some realisation of the need to create value (at the top level), this was not being effectively managed to the point of

implementation. At the same time, we found that not only were customer's value realisation strategies failing due to a lack of engagement by the vendor, but also that the majority of the vendors sampled appeared to have a misconception or difference in perception of value from the customers.

One perception is that the customers had not carried out a thorough examination of the vendors proposals in order to assess the viability of the initial claims on value creation. To enhance the possibility of ensuring that not only is the customer more familiar with the vendors proposals, especially as relates to the projects ability to create value, it is suggested by Simister and Turner (2000) that organising a value management workshop is a good strategy:

Lessons. ICT outsourcing projects should involve the creation of value for the customer. This creation of value can be regarded to an extent as two-dimensional, beginning with the actual design and initiation of the outsourcing. It should result in the delivery of a service that is used as a means for the customer organisation to obtain value.

Our findings suggest that even though the majority of the respondents created an impression that they were both working within the context of a partnership, we did not find any evidence that core business outlook had changed to the desired extent described by Ayre et al. (2006), Millar and Audisio (2006) and Todd et al. (2006) who all conducted extensive studies on factors that had driven the success of the £1.5 billion BT-HP outsourcing alliance. To an extent, it is difficult to see the potential of organisations realising their value objectives if they are unable to recognise that the locus of value creation no longer resides within the boundaries of a single firm, but occurs instead at what Gottschalk and Solli-Sather (2007) describe at the nexus of relationships between the parties.

4.3 Project management

Various scholars (Allen et al., 2002; Khan et al., 2003; Kennedy and Clark, 2006; Oughton et al., 2006; Tho, 2005; Bonifazi et al., 2004; Pai and Basu, 2007) indicate that there are many elements such as uncertainty; the lack of legal protection, copyright, lack of competence in technology that may give rise to failure of ICT outsourcing projects. Other risk includes factors such as the non-specification of appropriate security controls (Todd et al., 2006; Kennedy and Clark, 2006). These failure drivers are similar to what has been previously discussed by scholars (Ojiako, 2005; Saleh and Alshawi, 2005; Standing et al., 2006), as generic drivers for failure of ICT-related projects.

In order to apply some elements of control and management, it is seen as reasonable to apply principles, including that of project management (Ngwenyama and Sullivan, 2007; Erickson and Ranganathan, 2006), and risk management (Aubert et al., 2001, 2005; Bahli and Rivard, 2001, 2005; Tas and Sunder, 2004; Reza, 2005), to such projects.

The case reviews indicated that some form of risk management was being employed within the cases. This supports work earlier referred to Aubert et al. (2001, 2005), Bahli and Rivard (2001,2005) and Tas and Sunder (2004), which emphasises the need of formal risk management within ICT outsourcing projects:

Lessons. It was apparent that a detailed auditing and review process is essential for effective management (project, risk and technology). Identification of the dependencies

of each and every phase of the projects was also considered to be very important. A single line of communication between customer and vendor along with regular status reporting was also seen as a critical success factor.

It was found that risk management practices are generally very much project specific. Only three out of the 11 respondents suggested that a company wide risk management framework exists, which can be related with the project risk management activities. In line with views expressed by Osei-Bryson and Ngwenyama (2006), risk management approaches within the cases appeared to be rudimentary. For example, there is no awareness of inter-organisation risk management practices crossing the firms' boundary's as would have been expected based on recommendations by Todd et al (2006). In addition, although earlier work by Millar and Audisio (2006) suggest the need to define the level of service from each supplier in such a way that when they are chained together to deliver the end-to-end service, there was no evidence within any of the cases of an attempt to consider the value chain partners and suppliers and sub contractor as a part of risk management plan.

4.4 Planning and requirements management

Among the 11 respondents, over half (seven) suggested that incorrect planning and estimation was a major driver behind the project slippage (specifically budget and schedule). About half of the respondents felt that frequent changes in customer requirements were a main driver behind both project delays and cost overrun. The majority of the respondents pointed out that they regularly engaged in re-planning and re-estimation to correct any estimation or planning mistakes. Seven out of the 11 respondents highlighted that they will seek additional resources to cover up any delay in project execution. Only a minority of the respondents alluded to actually seeking to de-scope project requirements in cases of potential overruns.

Lessons. There are very few ICT projects that are absolutely "green-field", that is absolutely blank. The reality is that most ICT projects are usually changes or enhancements to existing systems. Whatever the case, in order to put together a robust requirements management operating model for ICT outsourcing projects, it is necessary for both the customers and the vendors to appreciate the various sources of requirements evolution, the nature of these requirements and the way in which these requirements are channelled for analysis. Maguire and Ojiako (2008) highlight that the measurement of successful requirements measurement is at the point that there is a direct linkage to the solution designers who can inform of what is possible. In order to enable this, in-life support requirements have to be addressed in a manner that supports new and changed services. In addition, it is necessary to appreciate that a rapid approach to requirement evolution will involve numerous stages which will include various checkpoints and quality gates. Another factor that also needs to be considered relates to establishing the perception of the existence of a partnership between the customer and the vendor. This close relationship between the customer and vendors (and other stakeholders); will encourage the development of a co-ordinated solution design. It also ensures that changes to requirements can be quickly acted upon.

It is also important to note that although generally, ICT outsourcing projects may have a single owner; a number of stakeholders will usually have an interest in the project. These stakeholders may also have separate requirements, and it is essential that the nature of these requirements, their means of expression and capture will be

understood. This means that it is perhaps prudent not to express these requirements in terms of systems, but on functionality and processes.

4.5 People management

People and human resource management is one highly critical area in ICT projects (Maguire and Redman, 2007). It was found that the majority of the respondents (seven out of 11) confirmed the existence of measures to train employees. Similarly, programmes geared at ensuring work satisfaction and morale boosting initiatives were also highlighted. The majority of the respondents agreed on the benefits of training as a means of facilitating partnerships and also ensuring familiarity with the technology and product being offered:

Lessons. To an extent, our findings demonstrated that people, human resource management and development were high on the agenda of the case projects. This is in line with earlier work (Davidson and Olfman, 2004; Millar and Audisio, 2006; Bi, 2007), highlighting the importance of such programmes. It is also specifically important because of the potential impact of national cultural differences that can impact on ICT outsourcing projects of a global nature (Tsohou et al., 2007; Lo and Chung, 2007), and also cultural differences within the actual organisations themselves (Millar and Audisio, 2006).

4.6 Quality management

The research shows a positive response in favour of the growing importance of quality of service requirements in ICT outsourcing projects (Yang and Huang, 2000; Claver et al., 2002b; Millar and Audisio, 2006):

Lessons. In a similar way, to standard quality management approaches, any quality programme to be initiated for an ICT outsourcing project should include considerations of various factors. These factors include for example, ensuring the availability of standards (as relates to documents, processes, etc.), internal systems configurations and systems integration/design processes.

4.7 Change and schedule management

Changes within an organisation are bound to occur as a result of the outsourcing of ICT (Bridgman and Willmott, 2006), with these changes impacting various factors such as managerial structure, task and job changes, people, relationships, information technology and infrastructure changes (Chou, 2007). To consider managing the resultant change, it is essential that formal structures in the form of change management are employed. This enables a system of change control to be established in order to ensure that all changes are consistent with the project goals (Lewin, 2002):

Lessons. It was found that unmanaged changes were instrumental in many schedule and cost slippages in ICT outsourcing projects. Overall, feedback on change management was mixed. No particular trend could be developed.

4.8 Vendor and contract management

The result of the study demonstrates an awareness of the importance of vendor and contract management discussed in earlier research conducted by various scholars including Domberger et al. (2000) and Kern et al. (2002). Vendor experience and reputation was generally regarded as the most important factor in vendor selection.

This corroborated earlier work conducted by Fink and Shoeib (2003) in which studies of Australia's largest organisations and government agencies showed that selecting vendors and determining suitable contracts were a dominant parameter in ICT outsourcing projects. A demonstrable ability to deliver to customer targets was also high on the agenda, which in line with work conducted by Ernst et al. (2007). Perhaps, surprisingly we found that prior business relationships and personal contacts were no longer the main reasons for outsourcing projects to be awarded. Increasingly, it appeared that customers were looking for evidence of value-added services to be offered (Fitzgerald, 1997; Samuel, 2004).

Lessons. Outsourcing is complex in nature (Casale, 2004; Zhu et al., 2001; Pai and Basu, 2007). According to Webb and Laborde (2005) this can be due to the emotions that are involved, especially for the first time outsourcer. For this reason, the success of an outsourcing arrangement depends greatly on the success of the customer and vendor relationship. Bi (2007) points out that this can be enhanced by establishing and maintaining a partnership in which the vendor is an integral member of the customer's team. The challenge is therefore to ensure that not only are responsibilities clearly articulated, but also that provisions are made within partnership agreements and contracts for an evolution into a real integrated team.

4.9 Disaster recovery and continuity planning

Business continuity planning has foundations in information system protection, evolving from traditional disaster recovery philosophy (Elliott et al., 2002). The possibility of disasters occurring during ICT outsourcing is very high (Adeleye et al., 2004), and could be caused by various reasons. Allen et al. (1998) highlight for example uncontrolled and unsecure access into an organisation's systems by a vendor, Antonucci et al. (1998) point to the possibility of being held hostage by a vendor as risk that could lead to a disaster. For this reason, disaster recovery and business continuity should be fully considered when exploring the possibility to outsource ICT services:

Lessons. The majority of the respondents demonstrated that the highest emphasis was given to the backup of crucial system and data at different premises. This result is very satisfactory and is very much in line with the recommendations by Savage (2002) and Hawkins et al. (2000).

4.10 Technology management (incorporating software testing and product acceptance)

The result of the research shows that almost all respondents agreed that they employed comprehensive testing programme characteristics with the use of jointly developed, implemented and tested scripts. The use of such approaches which involves collaboration between customers and vendors in ICT outsourcing scenarios has been extensively discussed by Ayre et al. (2006), Todd et al. (2006), Millar and Audisio (2006), Gopal et al. (2002) and Pai and Basu (2007).

It was found that it might be useful to have an in-house software expert team (perhaps operating within the office of the chief information officer), even if the firm is outsourcing its ICT infrastructure. Such in-house experts are useful from the perspective of knowledge management (Gottschalk and Solli-Sather, 2007) and control (Tiwana and Keil, 2007).

Functional, non-functional and performance testing was mentioned as a highly desired activity by most of the respondents. Experts suggested that co-functioning of

hardware and software needs to be tested thoroughly and also different software programs supplied by different vendors needs to be tested together to ensure smooth integration of all components supplied by different parties.

We found that generally, the majority of the projects have a predefined success/failure criteria or an acceptance criteria. This was not particularly surprising as the advantages of establishing success criteria for ICT projects is a well researched area which has attracted quite a lot of work by scholars (Ojiako et al., 2008; Standing et al., 2006; Nemati and Barko, 2003):

Lessons.

Out of the available software development and estimation frameworks it was found that the businesses are more comfortable in adopting their own company specific customized technology architecture and frameworks and management approaches. Overall, this approach conflicts with findings by Millar and Audisio (2006), who suggest the need to develop joint service delivery models will bring about an integration of standards and frameworks leading to harmonisation of technology and business interfaces. The overall effect according to them is to provide a seamless delivery of service to the outsourcing customer.

5. Conclusions

In this paper, we present the results of a re-examination of the critical success parameters of ICT outsourcing. The parameters are revisited by conducting a detailed analysis of data collected from both questionnaires and interviews. Two themes emerged. In the first place, we found that the critical success parameters associated with ICT outsourcing are a little different from those which are applicable from other ICT-based implementation projects. In addition, we found that in some cases, there appears to be major differences between presented theory and actual industry practice as relates to ICT outsourcing. In other cases, similarities between presented theory and actual industry practice were found. The problem however was that both scenarios were not clear cut, so an impression of conformance between theoretical knowledge and actual practice was often accompanied by caveats.

The final point relates to slight contradictions in the results from the cases and the need for organisations to attempt to reconcile these differences. We however recognise that to an extent, this rekindles the debate on the relationship between theory and practice, and perhaps fundamentally, whether theory should influence practice, or whether practice should influence theory, and possibly crucially, what happens in cases where there appears to be contradictions between the two. The contradictions are detailed in Table II, while the overall lessons learned are detailed in Table III.

One example of this is in the area of customer value. A failure of the customer to engage with the vendor at an early stage can lead to major problems later on in the relationship. This research has been able to focus on the interface between the customer and the vendor. Even though the original signing of the contract is an important stage, it is crucial that the relationship is developed and nurtured by both parties for the good of the project. The slight contradictions between theory and practice identified in the study calls for further work to be conducted in this area. Further research using a wider study sample will need to be conducted in order for management lessons that emerge to be applicable across a wider business perspective.

Parameter	Empirical findings	Theoretical findings	Practice and theory comparisons
Business objectives	More emphasis is given on the technical superiority of an ICT infrastructure over the actual business benefit to be realised	Most common reason for ICT outsourcing is cost cutting and the focus on core competences	Our study agrees with earlier work by Barthelemy (2001), Lane and Van der Vyver (2006), Osei-Bryson and Ngwenyama (2006) and Lin et al. (2007)
Creation of customer value	No evidence of a large creation of customer value. No evidence of changes in vendor business outlook	Recognition of the need to create value for customers; however, creation of value at top management level is not being effectively managed at point of implementation. Customers and vendors appear to have varying perceptions of value	No evidence emerged from our study to support earlier work of Ayre et al. (2006), Millar and Audisio (2006) and Todd et al. (2006)
Project management	No evidence of excellent practice	Many generic themes are identified as critical failure factors of ICT outsourcing projects	The result of our study agrees with work carried out by Osei-Bryson and Ngwenyama (2006) and Todd et al. (2006)
Planning and requirements management	Recognition that an expansion of planning and requirements management will lead to ICT outsourcing success	Available studies emphasises the need of vendors and customers to work closely in order to successfully develop, implement and maintain robust requirements management operating models for ICT outsourcing projects	No available data from our research
People management	Our findings demonstrated that people, human resource management and development were high on the agenda of ICT outsourcing projects	There is now recognition of the relevance of national and cultural differences and their impact on ICT outsourcing projects. This is particularly relevant as most ICT outsourcing projects are of a global nature, spanning national and cultural boundaries	Outcomes of our study supports work conducted by Davidson and Olfman (2004), Millar and Audisio (2006) and Bi (2007)
Quality management	No major outcomes	Growing recognition of quality management as a critical success factor in ICT outsourcing	The outcome of our research supports work conducted by Yang and Huang (2000), Claver et al. (2002b) and Millar and Audisio (2006)

Parameter	Empirical findings	Theoretical findings	Practice and theory comparisons
Change and schedule management	Feedback was mixed	Organisational changes will impact on various internal parameters. Formal structures are most appropriate to manage these changes	No particular trend could be developed from our study. No available data from our research
Vendor and contract management	Recognised that the success of an outsourcing arrangement depends greatly on the success of the customer and vendor relationship	The selection of vendors and contact determination remains the dominant parameter in ICT outsourcing projects	The results of our study support work by Bi (2007)
Disaster recovery and continuity planning	Organisations tend to be concerned with the security and backup of crucial system and data	The possibility of disasters occurring during the outsourcing of ICT remains very high	Our research outcomes support work by Savage (2002) and Hawkins et al. (2000)
Technology management	Organisations tend to develop in-house technology which may not support calls for integration	Existing theory supports the need for more aggressive component integration testing that will lead to the development of joint service delivery models	This conflicts with findings by Millar and Audisio (2006)

Table II.

Parameter	Lessons learned
Business objectives	Need a robust analysis of ICT outsourcing initiatives as hidden cost may be considerable
Creation of customer value	ICT outsourcing projects should involve the creation of value for the customer
Project management	A detailed auditing and review process is essential for the effective management of risk, technology and the project itself
Planning and requirements management	A close relationship between the customers and the vendors will encourage the development of a co-ordinated solution that ensures changes to requirements are quickly acted upon
People management	Do not underestimated the potential impact of national cultural differences on the success, or otherwise, of global outsourcing
Quality management	Quality of service requirements should be adhered to, i.e. documentation, processes, and internal systems configuration
Change and schedule management	It is essential that formal structures in the area of change management are employed
Vendor and contract management	The customer and vendor relationship is of paramount importance and should evolve into an integrated team situation
Disaster recovery and continuity planning	A high emphasis should be given to the backup of crucial systems and data at different sites
Technology management	Businesses are more comfortable in adopting their own company-specific and customised technology architecture and frameworks, as well as management approache

Table III.
Lessons learned

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