

THE GROWING TREND OF SMALL TO MEDIUM-SIZED ENTERPRISES ADOPTING ENTERPRISE RESOURCE PLANNING SYSTEMS: AN ANALYSIS OF BUSINESS CASES IN ZIMBABWE AND SOUTH AFRICA

Carrington M Mukwasi and Lisa F Seymour

Centre for IT and National Development,
Department of Information Systems, University of Cape.

Corresponding Author: Lisa F Seymour

Abstract

A growing trend in developing countries is the implementation of ERP systems by SMEs. Yet, these implementations have high failure rates. This study investigated how ERP project investments are approached and justified by Small to Medium-Sized Enterprises (SMEs) in Zimbabwe and South Africa. In particular, the research explored the business case development practice and the cost elements considerations. The qualitative study used data collected through semi-structured interviews and subsequently analysed by using elements of the grounded theory method. The multiple case study approach allowed current practices around ERP system business case development to emerge. The findings show that although SMEs know what they want to achieve when they implement ERP systems, ERP investments are not justified through business cases. Rather, ERP projects are driven by a few targeted benefits known to SMEs' managers resulting in many unforeseen risks and costs. The study proposes guidelines on how SMEs adopting ERP systems can develop realistic business cases. The study also suggests a resultant cost estimation model, which can be used by ERP vendors and consultants when they draw up their budgets

Keywords: SMEs, ERPs, business case, cost, developing countries

INTRODUCTION

This study explored the business case development practice in Small to Medium-Sized Enterprises (SMEs) adopting Enterprise Resource Planning (ERP) systems. ERP systems are packaged enterprise systems that cover most core business functions including finance, accounting, sales, operations management, purchasing, and human resource management (Hestermann et al., 2010). ERP vendors have realised that the next area of sales growth lies within the SME sector (Laukkanen et al., 2007) and in developing countries and this has fuelled the increasing trend of SMEs adopting ERP systems in these countries. SME definitions vary from one country to another, depending on the country's level of development and include definitions incorporating number of employees, turnover and assets (Abor, 2010). This research was performed in Zimbabwe and South Africa and employee numbers were merely used to identify SMEs. The Zimbabwe Association of Microfinance Institutions (2000) defined a SME as "one that employs not more than 100 people". In South Africa, the definition of an SME varies with industry but broadly has between 10 and 200 employees (National Small Business Amendment Bill Gazette, 2003). SMEs in emerging economies lack information management and often lack systems and procedures (Van der Walt, 2004). ERP success rates are low (Nafeseh and Al-Mudimigh, 2011) and many SMEs fail within the first three to five years as a result of these weaknesses (Huang & Palvia, 2002). ERP systems are seen to be the solution to these problems and are able to provide SMEs with the opportunity to align and integrate all business processes and units into one information system (Moon, 2007).

However, ERP implementation projects suffer from being unable to identify and estimate costs due to a lack of proper representation of cost factors (Daneva, 2004; Seddon, 2003). Cost is a crucial aspect of an ERP implementation to every organisation irrespective of size, the overall cost is often underestimated due to costs that are hidden (Tarn et al., 2002; Yusuf et al., 2004). In the majority of ERP projects, direct IT and indirect costs rise above anticipated figures (Love et al., 2005). In addition, due to the rise of ERP expenses, the need to justify their investment through a business case as the initial step of implementation has become apparent (Al-Twairesh & Al-Mudimigh, 2011). A Business case "provides the context for an investment decision, a description of viable options, analysis thereof, and a recommended decision. The recommendation describes the proposed investment and all of its characteristics, such as benefits, costs, risks, time frame, change requirements, impact on stakeholders, and so forth" (Treasury Board of Canada Secretariat Business Case Guide, 2008, p.7). The purpose of a business case is to examine the business needs (resources and capital investment necessary) and to make a case for capital funding (Robertson, 2004). This is where all the project facts are tied together to build a meaningful story. While business cases are designed to secure funding approval, they can also be used for effective project management to facilitate the identification of priorities for the distribution of resources and funds to form a benefits' realisation plan; and finally secure the commitment of management (Ward et al., 2008; Sammon and Adam, 2007). While, the process of building a business case for IT investments has become a common practice in organisations, not many companies are able to build a robust and convincing business case (Eckartz et al., 2009; Ward et al., 2008).

Despite the importance of business cases in IT investments, there are few research studies that focus on the ERP business case (Al-Twairsh & Al-Mudimigh, 2011) and studies that focus on business cases in SMEs are even scarcer. SMEs are more important to developing nations, such as Zimbabwe where levels of poverty and unemployment are high (Chidoko et al., 2011). They have the potential to generate employment and upgrade human capital (Berry et al., 2002; Zoepfel 2011). In South Africa SMEs account for approximately 61 percent of the total employment sector (Berry et al., 2002), while in Ghana, they account for over 80 percent (Abor & Quartey, 2010). Yet despite this important role in sustaining the economies of developing countries, SMEs which implement ERP systems face a number of challenges which hinder them from operating at full capacity. Dixit and Prakash (2011, p.82) argue that “*some SMEs who have implemented ERP earlier have failed. This has led SMEs to believe that ERP implementations are a waste of time and effort and can even lead to the demise of company*”. Thus it is important for researchers to understand how ERP project investments are approached and justified by organisations (Sammon & Adam, 2007). The high rate of failure of ERP adoptions by SMEs and the subsequent effect to national development in third world countries calls for immediate attention. Hence, there is a need to research the business case development practice for SMEs adopting ERP systems. In response to the identified need, this study investigated the SME ERP business case development practice and the ERP cost elements considerations for SMEs adopting ERP systems. Further, the study sought to understand the barriers that hinder the development of business cases and propose measures which enhance the abilities of SMEs to achieve sustainable results in third world countries. The study answered the following research questions:

1. How is the ERP business case developed in SMEs?
2. What influences current business case development practices in SMEs?
3. How can SMEs adopting ERP systems develop realistic business cases?
4. What are the cost element considerations for SMEs adopting ERP systems?

OVERVIEW OF POTENTIAL ERP COST ELEMENTS

This section reviews the cost elements associated with the adoption of ERP systems identified in the literature. Considering that ERPs are expensive (Yang et al., 2010) and SMEs suffer from financial constraints, the operational and financial risks become critical. The identified potential cost elements are listed in Table 1. Direct costs for implementing an ERP system identified in the literature include: IT infrastructure, hardware costs and software costs. Hardware costs can further be broken down into the cost of servers, clients, storage and networking. Software costs consist of Operating Systems (OS), ERP licence and Database Management Systems (DBMS). The other direct cost element identified in the literature is that of implementation. These include the initial cost of the system, customisation costs; costs of migrating data from the old system to the new ERP

system; costs of integrating the different modules; annual maintenance costs; update costs, and vendor project management. Indirect costs of implementation comprise costs of training, reorganisation costs, consultation fees, on-going support and hidden implementation costs (Yang et al., 2010), costs of hiring (IT and business expertise); training (IT and business), project management (planning and executing) and business management. Costs for services include services such as Virtual Private Network (VPN), Internet hosting as well as planning and execution of the BPR process (Haddara, 2011). The process of estimating both direct and indirect costs for an ERP adoption is challenging for SMEs (Haddara, 2011).

Table 1: Potential ERP Cost Elements

Hardware Costs	Reference	Other Cost element	Reference
Servers	Elragal and Haddara, 2010; Haddara, 2011	Training (IT and Business)	Elragal and Haddara, 2010; Haddara, 2011; Davenport, 2000; Mckie, 1998
Clients	Elragal and Haddara, 2010; Haddara, 2011	Project Management	Elragal and Haddara, 2010; Love et al; 2005
Storage	Elragal and Haddara, 2010; Haddara, 2011	External Consulting	Elragal and Haddara, 2010; Love et al; 2005; Davenport, 2000
Networking	Love et al; 2005	Business Management	Elragal and Haddara, 2010
Software Costs	Reference	Change Management (Planning and executing)	Reference
Database Management System	Elragal and Haddara, 2010; Haddara, 2011	Cost of migrating data and integrating modules.	Elragal and Haddara, 2010; Haddara, 2011; Love et al; 2005; Davenport, 2000
Operating System	Elragal and Haddara, 2010; Haddara, 2011	Customization	Elragal and Haddara, 2010; Haddara, 2011
ERP License	Elragal and Haddara, 2010; Haddara, 2011	Vendor Project Management	Elragal and Haddara, 2010; Haddara, 2011
Maintenance fees	Elragal and Haddara, 2010; Haddara, 2011; Love et al; 2005	Virtual Private Network (VPN)	Elragal and Haddara, 2010;
Upgrading	Elragal and Haddara, 2010; Haddara, 2011	Business process re-engineering	Elragal and Haddara, 2010; Haddara, 2011; Love et al; 2005
		Hosting	Haddara, 2011

RESEARCH METHOD

The research purpose was to explore and describe ERP business case practice and cost elements for SMEs adopting ERP systems. The approach to theory adopted by the researcher was inductive. Inductive research develops theory from the observation of empirical study (Welman et al., 2005). The cross sectional study applied an interpretive philosophy and a multiple case study approach. The study was approved by the University of Cape Town Ethics Committee.

Table 2: Summary of case descriptions

Case description	Employees	ERP system	Respondents
C1 specialises in importing, warehousing and distributing confectionaries and biscuits.	25	Alpha re-implemented	Chief Financial Officer(C1a); Accountant(C1b)
C2 specialises in importing communication equipment from America and distributing it.	27	From Beta to Alpha	Commercial and Financial Manager
C3 supplies laboratory equipment and consumables	150	From Bespoke to Omega	Finance Manager (C3a); Systems Developer (C3b)
C4 procures pharmaceutical stock, warehouses it, packs it and dispatches it to customers.	80	From Bespoke to Omega	Operations Manager
C5 specialises in manufacturing, supplying and servicing of mining equipment and gear boxes.	94	From Omega to Alpha	Managing Director
C6 is a manufacturer and distributor of footwear and shoe-care products. It imports and exports.	65	From Bespoke to Omega	Managing Director
C7 is engaged in the manufacturing of roofing materials and steel equipment.	75	From Manual to Beta	Finance Director
C8 distributes, installs, services and repairs air conditioning and refrigeration equipment.	88	From Bespoke to Beta	Finance Director

SMEs which had used an ERP system for at least 2 years were purposively selected and to create diversity within the sample, companies were located in 3 different cities, four from Harare, two from Johannesburg and two from Cape Town. The ERPs implemented were anonymised as Alpha, Beta and Omega. The number of ERP re-implementations (3 out of 8) is alarming. The senior manager responsible for operations and finance was interviewed from these cases. The descriptions of cases investigated and the respondents are listed in Table 2. Both structured and unstructured questions were used during in-depth semi-structured interviews. This allowed the researcher to use both closed- and open-ended questions. Thus interviewees were given an opportunity to explain situations in their own words. However, some participants required further prompting, which was done by the researcher whenever it was necessary. Semi-structured interviews allow key questions to be asked and at the same time give the interviewer an opportunity to pursue interesting subjects with the respondents (Walsham, 2002). Each participant signed the participation consent form before the interview commenced. The participation consent form outlined that

participation in the study was voluntary and no person would be forced to divulge information unwillingly. Participants were allowed to withdraw from the study whenever they wished to do so. Myers (2009) argues that a document review can give an overall view of a situation. In this study, we intended reviewing Business Case documents yet only one e-mail document was obtained from C3A. While the research strategy for this study was a multi-case approach and not grounded theory, the researcher did use certain elements of the “grounded theory method”, such as open coding and selective coding to conduct data analysis (Strauss and Cobin, 1998).

ERP SYSTEM BUSINESS CASE DEVELOPMENT PRACTICE IN SMES

The SMEs investigated had a big gap in education and skills’ levels between SMEs managers and subordinates. The managers were educated and skilled people while the subordinates were less educated. As stated by the respondents: *“In terms of our staff, they are not very well educated people”* (C4). *“the people we have are not very well educated”* (C2). Also, there were high levels of power distance between senior managers of the SMEs and the subordinates. As stated by the participants: *“There is no other person who knows in detail what is happening here except me”* (C2). The subordinates were not empowered enough to be involved in day to day operations so that they know in detail what was going on in their organisations. In addition, due to a small knowledge base and lack of education skills, the subordinates were unable to make informed decisions. As stated by one participant: *when you implement a new system and there is a problem in the process you would want someone to be able to make an informed decision on the next step and obviously report back on that problem. But because of limited knowledge (of the subordinates), that sort of decision making is not there”* (C4). The power gap which existed between managers and subordinates was compounded by the inequalities in the education levels and skills base. As a result of the above mentioned reasons, the administration and management of the SMEs was centralised to the managers of the SMEs. Due to the inequalities in education levels and the gap that existed between the managers and the subordinates, the researcher could not secure a second interviewee in six of the cases investigated. Since only senior managers knew what was happening in the companies, interviewing a second respondent proved to be useless. The attempted two interviews were shallow as the respondents kept on referring the questions to the senior manager.

Although the majority of the ERP implementations were described as successful, the SMEs did not develop a formal business case prior to ERP implementation. For example, as expressed by some participants: *“We did not do any business case analysis”* (C8). *“There was no written business case document”* (C3A). None of the SMEs could present a business case document which explicitly listed the benefits which they expected to get from an ERP system; the potential risks they expected to face and the costs they anticipated incurring during the implementation process. Two out of eight of the cases

investigated did a business case analysis. However, C3A claimed that the business case analysis was not comprehensive. The company did only a basic analysis of the anticipated costs, benefits and risks. As expressed by the participant for C3: *“It was a pretty simple basic document laying out benefits, the usual advantages, disadvantages and the costs (...) I documented really why we had to move from the old system (...) I did in an email format and it was very basic stuff”* (C3A). However, C3A was hesitant to share the email with the researcher. C1A acknowledged that they did a business case analysis but it was not documented.

Despite the failure of all the SMEs to present a business case document to the researcher, the majority of them were able to state their main objective for implementing an ERP system. All had a general expectation of what the ERP system was going to offer despite failing to document such expectations. They were fully aware of their problems and why an ERP system was a potential solution to their challenges. As reported by some of the participants: *“We wanted a live system; we wanted live information”* (C2). *“The main thing was to be able to integrate with distributors”* (C1). *“so we were running a package which down the line did not integrate, it did not have the modules we needed and essentially it was not running. It was as poor as Pastel if I may say that. It was very basic (...) it was a matter of where do we move to as opposed to could we move? We had to move, we had no choice!”* (C3A). Failure to produce a comprehensive business case document as evidence that a business case analysis was done prior to ERP adoption was common across all the SMEs investigated. Although the majority of the SMEs could state a few targeted benefits they were expecting to get from an ERP, there is enough evidence from the study that the majority of the SMEs never considered the worst case when they adopted an ERP system. They could not state upfront the many risks they expected to realise prior to implement an ERP system. Instead, the majority managed to state the risks they realised rather than those they anticipated. The lack of a business case resulted in inadequate planning and an underestimation of costs and risks.

It was noted in this study that the failure to develop a comprehensive business case was a prevailing phenomenon. One of the reasons which emerged to explain this was a lack of resources, such as manpower and time among the SMEs. It is generally known that SMEs suffer from lack of resources (Levy and Powell, 2000). In all the investigated cases, the senior manager responsible for operations and finance was always busy. As a result, it was difficult to divert attention from core business activities to develop a business case. They were always deeply engrossed in day to day activities hence time to do a business case analysis was not always available. Some participants who were questioned as to why they did not do a business case analysis prior to ERP implementation had this to say: *“We are always busy and time to document such things* (referring to a business case document) *is not always available”* (C8). *“Senior management are very involved in the business (...) sometimes it’s not easy to divert attention”* (C7). Also, as

mentioned earlier, and important to reaffirm here, the senior managers were the only people who were fully aware of what was happening in each company hence assigning additional manpower to focus on devising a business case was not possible. This was compounded by high power distance between subordinates and managers and a big gap in education levels and knowledge base between managers and subordinates within SMEs.

How Can Smes Adopting ERP Systems Develop Realistic Business Cases?

From a theoretical perspective this study elucidated some of the causes of ERP project failure although this wasn't the initial goal. In practice, SMEs can follow the following steps so that they come up with realistic business cases:

1. Forecast a best-case scenario. SMEs adopting ERP systems can develop a realistic business case by devoting time and human resources to first creating a realistic best-case projection and documenting it. This can be achieved through considering the potential benefits.
2. Forecast a worst-case scenario. SMEs need to create a realistic worst-case projection. The worst case projection might comprise potential ERP risks. The information which SMEs get from ERP vendors may not always be explicit in bringing out the most serious risks associated with ERP system adoption. As a result, there is a need to consider the risks in detail.
3. Forecast expenses and revenues. SMEs need to start the adoption of ERP systems by forecasting business revenue and expenses. This will help identify hidden benefits and risks. The identified cost elements considerations described in the next section can be used to project budgets.

COST ELEMENT CONSIDERATIONS

This section focuses on the cost elements for SMEs implementing an ERP system. The emphasis is not on specific cost figures of the hardware and software which SMEs bought but is on identifying and describing specific elements against which SMEs incurred costs when they implement an ERP system. The costs varied from country to country and from company to company depending on factors, such as company size. The aim was to create a model which SME organisations can use to estimate their costs. The model can also be used by ERP vendors and consultants when they give advice to SME organisations. Table 3 gives a summary of the cost elements described in this study.

Table 3: ERP Cost elements (cost estimation model)

Cost category	Theme		Theme	
Hardware Costs	1.1	Servers	1.3	Clients
	1.2	Networking	1.4	Storage
Software Costs	2.1	Database Management System	2.3	ERP Licences
	2.2	Operating Systems	2.4	Application licenses
Implementation Services Costs	3.1	Training	3.3	Customisation
	3.2	Consulting		
Broader Organisational Costs	4.1	Initial Productivity losses	4.2	Management Time

Hardware Costs

The purchase of hardware is one of the major cost elements incurred by SMEs. One participant said: *"We had other additional hardware expenses of another half a million rand"* (C4). The purchase of hardware formed part of the infrastructure development process. The participants were asked about the specific hardware they purchased during the ERP implementation. Four themes emerged, which are: servers, storage client computers and networking equipment.

Servers and Storage Devices

The participants indicated that they purchased servers which would be dedicated to running the ERP system. As described by the participants: *"We have a dedicated server for the system"* (C8). *"We had to purchase a new server in 2006. Even now we had to buy another one end of last year"* (C2). *"We bought additional hardware that we saw in conjunction working with OMEGA like the scanners, new server and all that"* (C4). The findings indicated that some SMEs bought servers with less capacity than were required to run an ERP system. This resulted in having inadequate infrastructure. As a result of the need for an increase in processing power, SMEs ended up upgrading their servers. This may also be attributed to cost overruns experienced by some SMEs. Additional hardware such as scanners were also bought. The need to purchase servers was reported as a cost driver in previous studies (Davenport, 2000; Love et al., 2005). Different organisations invested money in purchasing storage facilities. This is evident in the following statements made by the participants: *"We purchased back software and other storage facilities"* (C7). *"We have spent a lot on infrastructure. We have put a much better infrastructure in and around our backups and our server"* (C3). The quotes indicate that in line with literature the need for storage devices and software is one of the direct costs realised by SMEs (Love et al., 2005).

Networking and Clients

After implementing an ERP system, SMEs changed and/or upgraded their network systems. As described by one participant: *"We changed our networking, (...) we spend a lot of money in IT and networking and we also changed other areas"* (C3A). The need to have a new network or to upgrade an existing network is consistent with the literature (Love et al., 2005). The analysis revealed that SMEs purchased desktop computers and laptops for operational use, as illustrated by the following comments: *"We have just upgraded our computers. Everything is running smoothly"* (C1B). *"We bought 70 laptops and that was 6 or 7 Grand (thousand Rands) each and it was quite a lot of money ... the moment we bought Omega we moved away from reps being desk bound and we moved them to laptops with 3G cards pretty much immediately, that was a very big investment"* (C3A). From this statement it is noted that some organisations purchased laptops to be used on a wireless connection. The laptops were to be used on Internet based systems. Due to the need for an increase in processing power, some SMEs upgraded their computers.

Software Costs

Four themes emerged from analysis of the results. SMEs incurred costs when they purchased Database Management Systems (DBMS); Operating Systems (OS) and when they acquired the required ERP licences. All these are direct costs. Few studies have reported these costs.

Database Management System (DBMS) and Operating Systems (OS)

The ERP systems were associated with different Database Management Systems (DBMS), these include Oracle and Microsoft SQL. SMEs purchased the DBMS so that they would be able to manage their databases and for reporting purposes. As stated by the participants: *"I can access data in Microsoft SQL and I can write any report I want"* (C2). *"We did not go the CSM route for our database; we went on to Microsoft SQL"* (C3). Operating Systems (OS) was also one major theme that emerged. Certain SME organisations changed their operating systems completely; others upgraded their OS to the latest version at that time. Some ERP systems had minimum OS requirements. According to some of the participants: *"The ERP system uses Microsoft Windows"* (C2). *"At that time Microsoft Windows 98 was the minimum requirement. We still had some computers with Microsoft Windows 95 so we had to upgrade the software and hardware"* (C5). *"We moved from a Linux set up (...) we started running Microsoft Windows"* (C3A). *"I entered in to a fixed price contract. Our competitors are on the same system as ours but it cost us R350 000 and it cost them 1.2 million Rand for the same software and implementation"* (C2).

ERP and Application software Licences

The SMEs invested in the required software licences. The licences were for the ERP systems and application software (e.g. Microsoft Office); and Microsoft Exchange software. This was evident in the following statements made by the participants: *"We have Microsoft Office on all our machines. We have licences for all our machines (...) we have 28 concurrent licences for Omega users (...) we have 60 licences for our sales team (...) we rolled out Microsoft Exchange about a year ago (...) it integrates with Omega"* (C3). *"We are on Tapex now; it's a good system but very expensive, the licences are expensive"* (C2). The cost of an ERP implementation is determined by the type of an ERP system deployed and the number of modules to be implemented (Equy et al., 2008). An increase in the number of modules implemented results in increased total cost.

Implementation Services

Three themes emerged in this category, which are training, consulting and customisation. One participant commented that: *"The biggest expenses are the labour; installing the system; customising and training the people. Those are the biggest expenses"* (C3A). These themes were common across the cases investigated. One participant described how they incurred implementation service costs: *"We had half a million and when we finished because of implementation costs it was close to a*

million when we stopped. It almost doubled our budget” (C5).

Training

Training is one theme which emerged from the study. SMEs incurred the cost of having their employees trained so that they are able to use the system. One participant emphasised that training is very important during ERP implementation. The participant said: *“The other thing is training. Training is very important”* (C3). One participant from a company which incurred the cost said: *“We paid the consultants who were training our people”* (C7). In the majority of the cases, the training cost was part of the initial installation agreement.

Customisation

Due to differing organisational requirements, SMEs had to customise the ERP system to suit their specific needs. The process is on-going because needs change. SMEs have to be aware that sometimes customisation can go beyond the scope of what had been agreed initially. A participant shared how they incurred additional customisation costs: *“Once you start billing a report, the scope of work said you get 10 reports of this, 5 reports of that, when you circulate to managers, they say, it’s nice but can you change this, can you add this, can you add that and that cost you extra. That exercises never stop, its on-going”* (C2). The findings of this study indicated that customisation and additional functionality requirements were some of the major cost drivers. The ERP vendors and consultants did not inform SMEs upfront that the system needs to be customised and is also a continuous process. As described by one participant: *“They (ERP vendors and consultants) do not tell you that you must customise every single form for your company”* (C5). The cost rise in customisation was as a result of lack of vendor transparency. Also, as indicated by C2 above, reporting became a continuous exercise among SMEs and this was not expected. As a result, the cost of the project escalated more than anticipated. Researchers have identified customisation as a cost driver during ERP implementation (Haddara, 2011; Wu et al., 2008).

Consulting

The cost of consulting includes: the initial installation of the system; continuous system maintenance; and correction of errors. The participants described how they incurred these costs: *“We probably spent about R400 000 on consulting, for getting the software in (...) we now use our consultant she is here on average 2 days a month, full day at a time (...) I think one of the main things is you will never really know until you have used it (referring to an ERP system) is how much constant maintenance it will cost you”* (C3A). *“I had IT here almost 3 times a week to fix something, they fix something today it works then we get an error and tomorrow it’s not working again”* (C2). *“Our initial cost for implementing Omega was a million Rand or just short of a million Rand”* (C4). Consulting includes the costs of data migration; costs of integrating different modules and/or systems; labour costs; cost of ERP ownership; annual maintenance costs, and any other forms of external consulting. Consulting is one of the major expenses realised by SMEs implementing an ERP

system. The quote from C2 indicated that, after ERP implementation, SMEs had consultants coming for trouble shooting and supporting the system. C5 made the same assertions *“the only thing that costed us more was the implementation, the consultants’ fees. They were more than double than we originally planned”* (C5).

Broader Organisational costs

Management and staff resources costs and cost of software ownership (i.e. systems support and troubleshooting costs) are some of the indirect costs realised by organisations implementing an ERP system (Love et al., 2005). Other indirect costs identified in literature are productivity losses and management time (Love et al., 2004). These indirect costs were confirmed in this study. As described by the participants: *“Other than time, effort and business disruptions it did not cost us extra money”* (C1A). The statement indicated that they lost on time, business disruptions and management efforts during an ERP re-implementation. Lack of consultant skills was a major cost driver among SMEs. Consultants did not have enough skills hence SMEs ended up spending more than they estimated resulting in budget overrun. The cost of an ERP project is determined by the level of management involvement, experience of consultant's and employee's involvement (Equey et al., 2008). Equey et al. (2008, p. 5) stated that *“The involvement of employees in the ERP project increases the cost, but this involvement may probably be considered as a way to facilitate the adoption of a new system”*.

CONCLUSION

The aim of the study was to understand how SMEs develop their ERP business cases. The findings show that although SMEs know what they want to achieve when they implement ERP systems, there is lack of documented ERP business cases. Rather, ERP projects are driven by a few targeted benefits known to SMEs and potential risks are not identified. This is despite the fact that IT business cases are common practice in larger organisations (Eckartz et al., 2009). From a theoretical perspective this paper contributes to identifying the causal factors of the lack of business cases. The SMEs identified factors such as inadequate preparation and lack of manpower and time as the main causes of their failure to come up with business cases before investing in ERP systems. In addition, the manager interviewed was the only person who was fully aware of what was going on in terms of the day to day running of the business. This was exacerbated by high power distance and differing education levels between managers and subordinates and was compounded by insufficient internal expertise. As a result, delegating tasks to other employees was not possible. This paper argues for the need to develop business cases and suggested a minimum list of steps that would assist SMEs. However, broader empowerment and skills development is clearly needed. The majority of SMEs did not forecast their expenses and revenues. As a result, the majority could not explicitly point out whether they had spent more than what was expected and on which areas. However, some admitted to having spent more on hardware acquisition and implementation services costs. The identified cost elements are described

in this paper and summarised in Table 1 and 3. These can act as cost estimation models when adopting an ERP system. The main limitation of this study stems from the inability to get frank feedback from respondents other than the CFO, future action research studies are recommended to investigate SME ERP implementations more fully.

REFERENCES

- Abor, J., & Quartey, P. (2010). Issues in SME Development in Ghana and South, Africa. *International Research Journal of Finance and Economics*, Euro Journals Publishing, 39.
- Al-Twairesh, N., & Al-Mudimigh A.S. (2011). Business Cases for ERP Implementations. *Journal of Theoretical and Applied Information Technology*. 25(1) 43-49.
- Chidoko, C., Makuyana, G., Matungamire, P. & Bemani, J. (2011). Impact of the informal sector on the current Zimbabwean economic environment. *International Journal of Economics and Research*. www.ijeronline.com , pp 26-28
- Daneva, M. (2004). ERP Requirements Engineering Practice: Lessons Learnt. *IEEE Software*, 21(2), 26-33.
- Davenport, T.H. (2000). *Mission Critical: Realizing the Promise of Enterprise Systems*. Harvard Business School Press, Boston, MA.
- Dixit A.K. and Prakash, O. (2011). A Study of issues affecting ERP implementation in SMEs. *Journal of Arts, Science and Commerce*, 2(2), 77-85.
- Eckartz, S; Daneva, M; Wieringa, R; & Hillegersberg, J. (2009). Cross-organizational ERP management: how to create a successful business case?, *Proceedings of the ACM symposium on Applied Computing (SAC '09)*. ACM, New York, NY, USA.
- Elragal, A., & Haddara, M. (2010). The Use of Experts Panels in ERP Cost Estimation Research. *Enterprise Information Systems*, 110(N/A), 97-108.
- Equey, C. & Fragnière, E. (2008). Elements of Perception Regarding the Implementation of ERP Systems in Swiss SMEs. *International Journal of Enterprise Information Systems*, 4(N/A), 1-8.
- Haddara, M. (2012). Exploring ERP Adoption Cost Factors. *Computer Technology and Application*, David Publishing, 3 (2012) 250-261
- Haddara, M. (2011). ERP Adoption cost factors in SMEs. *European, Mediterranean & Middle Eastern Conference on Information Systems*, Athens, Greece.
- Hestermann, C., Anderson, R.P & Pang, C. (2010), Magic Quadrant for Midmarket and Tier 2-Oriented ERP for Product-Centric Companies. Gartner. [Online]. Available: <http://www.gartner.com/technology/mediasap>.
- Huang, Z., & Palvia, P (2002). "ERP implementation issues in advanced and developing countries," *Business Process Management Journal*, vol.7, no.3, pp.276-284, 2002.
- Laukkanen, S. Sarpola, S. & Hallikainen, P. (2007). "Enterprise size matters: objectives and constraints of ERP adoption," *Journal of Enterprise Information Management*, vol.2, no.3, pp.319-334.
- Levy M. & Powell P. (2000): Information Systems Strategy in SMEs – an organizational perspective, *Journal of Strategic Information Systems*, 9(1), 63-84
- Love, P.E.D., Irani, Z., Standing, C., Lin, C. & Burn, J.M. (2005). The Enigma of evaluation: benefits, costs and risk of IT in Australian small-medium-sized enterprises. *Information & Management*, 42, 947-964.
- Love, P. E. D., Irani, Z., & Edwards, D. J. (2004). Industry-centric benchmarking of information technology benefits, costs and risks for small-to-medium sized enterprises in construction. *Automation in Construction*, 13(4), 507-524.
- McKie S. (1998). *Packaged Solution or Pandora's Box?*, *Intelligent Enterprise*, November: 39-43.
- Moon, Y.B. (2007). "Enterprise resource planning (ERP): a review of the literature," *International Journal of Management and Enterprise Development*, vol. 4, no. 3, pp. 235-264.
- Myers, M. D. (2009). *Qualitative Research in Business and Management*. London: Sage Publications.
- Nafeeseh, R. & Al-Mudimigh A. S (2011). Justifying ERP Investment: The Role and Impacts of Business Case A Literature Survey. *International Journal of Computer Science and Network Security*, 11 (1) 185-193.
- National Small Business Amendment Bill (2003). Republic of South Africa: Minister of Trade and Industry. *Government Gazette*. ISBN 062133889.
- Robertson, S., (2004). Requirements and the Business Case, *IEEE Software*, September/October, 93-95.
- Sammon, D. & Adam, F. (2007). Justifying an ERP Investment with the Promise of Realizing Business Benefits, *Proceedings of 15th European Conference on Information Systems (ECIS)*, University of St. Gallen, St. Gallen Switzerland.
- Seddon, P. (2003). *Second-Wave Enterprise Resource Planning Systems*. New York: Cambridge University Press.
- Strauss, A., and Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.)*. Thousand Oaks, CA: Sage.

Tarn, J.M., Yen, D.C. & Beaumont, M. (2002). Exploring the rationales for ERP and SCM integration, *Industrial Management and Data Systems*, 102 (1), 26-34.

The Treasury Board of Canada Secretariat (2008). *Business Case Guide*, Ottawa.

Van der Walt, M.S (2004). "A classification scheme for the organisation of electronic documents in small, medium and micro enterprises (SMEs)," *Knowledge organisation*, vol.31, no.1, pp. 26–38.

Ward J., Daniel E. & Peppard J. (2008). Building Better Business Cases for IT Investments, *MIS Quarterly Executive*, 7 (1), 1- 15.

Walsham, G., (2002). Interpretive case studies in IS research: nature and method, in *Qualitative research in Information Systems*, Myers, M.D.& Avison, D.E. (eds.), 2002, London: Sage Publications.

Welman, C., Kruger, F. & Mitchell, B. 2005. *Research Methodology*. South Africa: Oxford University Press.

Wu, L., C. Ong, C.S. & Hsu Y.W. (2008). Active ERP implementation management: A Real Options perspective. *Journal of Systems and Software* 81(6), 1039-1050.

Yang, T., Yang H., & Wang. (2010). The Implementation of ERP in the SMEs Innovation. Available: <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=05563861>.

Yusuf, Y., Gunasekaran, A. & Abthorpe, M.S. (2004). Enterprise information systems project implementation: a case study of ERP in Rolls-Royce, *International Journal Production Economics*, 87(3), 251-266.

Zimbabwe Association of Microfinance Institutions (ZAMFI), (2000), *National Sector Survey for November 2000*. Research paper by Vulindlela Micro and Development Finance Consultants. Harare, Zimbabwe.

Zoephel, M. (2011). *Michael Porter's competitive Advantage Theory: Focus strategy for Small and Medium Enterprises*. GRIN Verlag.