

UNIVERSITY OF KWAZULU-NATAL

**A comparison of IT projects' team performance of internal
versus outsourced employees**

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Declaration

I Surika Chaithram declare that

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Abstract

The performance of an employee is an integral part of a project's success. In order for companies to realise their project objectives, it is essential that both internal and outsourced employees are performing optimally. This study aims to identify the factors that affect internal and outsourced employees, as well as to determine if there is a difference in employee performance in terms of information technology project deliverables.

A sample of 74 employees was used from Derivco, which is based in La Lucia Ridge, Durban. The sample included both outsourced and internal employees. The data was collected by means of a questionnaire which included likert based questions. The data showed that outsourced employees performed better than internal employees as they had a greater probability of meeting the business requirements of a project. The literature review suggested that there were 20 possible variables that could influence employee performance. The results of this study concluded that 17 of the 20 variables identified from the literature review were important.

The results of this study will benefit both employees and the organisation. Employees can gain a better awareness of their performance as well as helping the organisation in developing a better program to improve both internal and outsourced employees' performance.

The study extends the work of several models such as the Bennet and Franco *et al.* (2001) performance model and Develin's (1989) organisational model. These models created a foundation for understanding teams, employees and the employer characteristics, in order to determine their performance patterns. However, particular attention is given to the Bennett and Franco model (2001) as well as the Sharpley model (2002). The reason for selecting these models is that the factors investigated in these frameworks are similar to those investigated in this research. The research aims to investigate whether South African organisations face similar impacts to the models described. The Bennett and Franco *et al.* (2001) and Sharpley (2002) models are based on perception, motivation, performance and an individual or internal motivation process. The findings of this research indicate that employees face similar factors to those shown in the Bennett, Franco and Sharpley models.

Glossary of terms

Acronym	Term	Definition
BABOK	Business Analyst Body of Knowledge	This is a qualification that a business analyst can attain by writing the examination. This examination gives the business analyst an in-depth understanding of the theory of business analysis as well as how to apply it. Theiiba.org (2009)
	Bingo	This is a game where a person strikes out a number on their cards. This number that they will strike out will correspond with the number that was randomly drawn out. Snowden (1986)
DBA	Data Base Administrator	This person is tasked with designing, implementing and maintaining an organisation's database. Computer economics report (2010)
DBD	Data Base Developer	The term given to someone, that develops software that works closely with a database.
	Derivco	This an organisation that develops software for online gambling companies. Derivco.com (2010)
e-Commerce	Electronic commerce	This is a form of buying and selling items or products over the internet. Mansor and Abidin (2010)
	Internal employees	Employees that are employed

		by Derivco
ISEB	Information systems Examination Board	ISEB is a qualification that testers can write. This exam focuses on code testing, procedures and policies.
MSCE	Microsoft systems certified engineer	The program is aimed towards technical professional, technicians. Taschek (1998)
PMBOK	Project Management Body of Knowledge	PMBOK is ultimately a guide that explains the essentials project management techniques. Reich and Siew (2006)
	Poker	Poker is a card game which involves betting rules and hand rankings. Hannum (2009)
	Poker Operator	An organisation that owns and operates an online poker rooms. Microgaming.com(2010)
	Sports Book	Gamblers can bet on various sport games online. In addition, poker and casino games are made available in the sports book. Microgaming.com (2010)
	Sports Book operator	A sports book operator is an organisation that owns and operates the online sport books rooms. microgaming.com (2010)

	Outsourced employees	These are contractors that are from other organisations and countries that work on the same premises of Derivco but are not directly employed by Derivco.
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1 INTRODUCTION

Employees are arguably the most important asset of an organisation. It is essential for employees to deliver the desired performance in order for a company to grow. In information technology, organisations determine their success of a project by how well an employee has implemented a project. Factors that can affect an employee delivering a project are organisational, management, people and project factors; which include aspects such as scope creep and time.

There are sufficient jobs for individuals however; they need to possess the right knowledge, skills and motivation (Friedman 2005). Friedman (2005) further explains that internal employees will now be competing with many outsourced employees and mediocre performances by internal staff will not be acceptable. The aim of this research is to determine if there is a difference in outsourced and internal employee's performance in terms of project deliverables and to identify factors that influence employee performance.

Employee performances are difficult to manage because they must cater for employees who have different skill levels and requirements. This leads to an environment with mixed employees from various background and different countries. As a result there are many performance gaps, which only team leads are attempting to manage. It is therefore the responsibility of both employees (internal and outsourced) and the organisation to make efforts in improving performance.

1.1 Motivation and rationale of study

This research is to investigate whether there is a performance difference between outsourced and internal employees. Outsourcing in this research refers to contractors who are from other organisations and countries who work at the Derivco premises together with their internal staff. Derivco, which is an IT company, is ideal for this study as outsourcing is used extensively in the IT industry. Results obtained from such a study would be important to managers, outsourcing consultants, internal employees and shareholders (customers and owners).

Firstly, the identification of these factors affecting employees can aid managers and team leads in assessing the current employee performance situation. Proactive interventions against potential performance barriers can be implemented. These interventions might include creation of competencies, skills and behaviours. Hence, the factors highlighted and their importance could assist companies in improving both outsourced and internal employee performances.

Secondly, outsourcing companies can benefit from studies of this nature. The appropriate skills and competencies can be acquired before a project is implemented. As a result, the findings of this study can contribute to developing models that can improve outsourced and internal employee's performance.

Finally, the research was conducted within a South African IT business environment. For that reason, the factors identified would be relevant to South Africa. This would allow for follow up efforts appropriate to S.A.

1.2 Research problem

Despite the attention, that outsourcing currently demands, little research has been done that that effects employees performance in delivering a project within time and scope. Derivco employs a substantial amount of outsourced employees. As a result it will be interesting to investigate if there is a difference in internal and outsourced employee performance, which can affect the overall performance of a project in terms of time, scope and quality of delivery. This will also help inform Derivco of its employee's performance status and what measures to take. The research problem is as follows:

To identify the factors influencing employee performance in internal and outsourced employees in terms of project deliverables

This study aims to answer the following questions:

- How do performances of outsourced employees differ from internal employees in terms of project delivery?
- Which employees, i.e. an outsourced or internal employee meet projects goals within time and scope?
- What are the factors that affect employee performance?
- What differences are there in the team methodology of an outsourced employee team as opposed to internal teams?
- How do leadership styles differ in outsourced and internal teams?

1.3 Objectives

The objectives of this study are to

- Describe the role of outsourcing in the Information Technology (IT) industry from an international and national perspective.
- Take an in-depth look at the importance of outsourcing as well determining the benefits of outsourcing to the employees and the organisation.

- Investigates and determine the importance team methodology used for outsourced and internal employees.
- Determine factors affecting employee performance.
- Investigate the leadership styles used inn outsourced employees and internal employees.
- Provide descriptive frameworks for employees (outsourced and internal employee).

1.4 Limitations

- Due to the sensitive nature of information, management withheld information. E.g.: the budget for a project as well as incentives for different grades of employees.
- Furthermore, the researcher of this thesis was an employee of the organisation used. Employees at Derivco felt disclosing information might violate their work privacy as well as their colleagues especially if there is a difference in opinion.
- English was not the first language for some outsourced employee. It was therefore difficult for some employees to interpret the questionnaire.
- Both internal and outsourced employees had project deadlines to meet, for this reason some employees had no time to answer the questionnaire.

1.5 Structure of the study

Below is an overview of the structure of the thesis.

Chapter 1: Introduction

In this chapter, the overall structure of the thesis is explained. In addition, the motivation, objectives and aims of this study are discussed.

Chapter 2: Literature review

This chapter discusses the concepts and importance of outsourcing. Several models that show the factors that affect an employee's performance will be discussed in detail followed by the Bennett and Franco model (2001) and the Sharpley model (2002). Other models included are Devlins organisational model, which include aspects that management should oversee. The job characteristics model shows the link between the employee and the job characteristics. These models will assist in understanding outsourcing and employees performance. The review is aimed at identifying factors that are related to employee's performance in both internal and outsourced employees. There are a limited number of articles focusing on outsourced or internal employee's performance project delivery hence the literature will take a general look at performance of employees. The literature review focus on the following areas:

- An in-depth discussion of outsourcing.
- Factors affecting employees performance.
- Frameworks that emphasise the factors that are influencing employees performance.
- Competencies that are required from team leads/managers for guiding the performance of employees.

Chapter 3: Research methodology

This chapter explains how the research was conducted. The sampling techniques and process for data collection were discussed as well.

Chapter 4: Findings

The findings of this research are presented in this chapter. The results are discussed in relation to the questions posed. The findings of the research are also interpreted and discussed in relation to the literature.

Chapter 5: Recommendations

This chapter contains suggestions for further research based on the findings. Recommendations are outlined to improve employees (outsourced and internal) performance.

Chapter 6: Conclusion

This is the final chapter in the thesis. Nadworny (2007) suggests that information technology delivery is highly labour intensive. “The quality, efficiency and equity of services are dependent on the availability of skilled and competent IT professionals”, (Nadworny 2007, pg 52). As a result, there is a skills shortage, which puts pressure on companies to retain their employees. In addition, the slowing economy has put the issue firmly in the spotlight (Kotze, 2004). For this reason, it is important, more than ever, to assess the factors that affect employee’s performance to ensure that both internal and outsourced employees are optimally performing so that the organisation is making the most of the skills that they currently have.

1.6 Conclusion

The introduction served as an overview of the study. The literature that follows provides the reader with an in depth understanding of outsourcing and employee performance. Theoretical frameworks on employee’s performances as well as factors and competencies affecting the organisation, employees and team leads/managers will be discussed. The research methodology explains the tools and techniques used for gaining results. Results will be discussed from the questionnaire administered. Thereafter recommendations shall be presented.

2 LITERATURE REVIEW

2.1 Defining outsourcing

“Outsourcing has many faces, but in short it can be defined as the purchase of a value creating activity from an external supplier”, (Hitt, Ireland and Hoskisson 2001) cited in (Kotze 2004, pg 2). Lee (2008) explains that an organisation that resorts to outsourcing is in effect admitting that it is not capable of achieving its return on assets by itself, therefore it has to hire assistance. A company will subsequently resort to giving the right of their business framework and model to the outsourced partner (Samuel 2001) cited in (Kotze 2004). Studies conducted indicate that the number of companies that outsource have increased from 35 percent to 38 percent since 2005, (Dolezalek 2005) cited in (Friedman 2005). Nadworny (2007) attributes this increase to a strain on IT resources. Research carried out in Australia showed that three in four companies outsource their IT and almost 60 percent of the organisations are involved in some kind of outsourcing, (Lee 2008). The reason for this, according to Friedman (2005), is that when there are too many projects and not enough time, the answer is to outsource. Outsourcing was initially targeted at large organisations but with the increase in demand in smaller organisations, outsourcing has gained popularity in this concentrated market. Nadworny (2007) explains that possible reasons for smaller organisations outsourcing is the reduced cost factor.

Outsourcing becomes more difficult to define as its popularity increases; however, Kotze (2004, pg 2) summarizes it as a course of action, “which takes place when the organisation transfers the ownership of a business process to a supplier”.

In a business relationship, the buyer has total control of one or many processes, and the buyer will tell the supplier what and how to assign a task, (Samuel 2001) cited in (Kotze 2004). However, in outsourcing there is a transfer of ownership from the organisation to the supplier. This is a critical and challenging task in the outsourcing process. Outsourcing allows the organisation to communicate their desired result; in addition the supplier is not told how to

perform their work but rather told what the end goal is that they want to achieve (Samuel 2001) cited in (Kotze 2004). Nadworny (2007) is of the view that outsourcing is an approach taken by management where service providers are given more non-core functions in the company to work on. For example in the case of Derivco, the employees from the outsourcing company Zenzar were delegated the task of handling Derivco's backend systems. Outsourcing can therefore be summarized, "as the transferring of an internal business function or functions plus any associated assets to an external supplier or service provider who offers a defined service for a specified period of time at an agreed but probably qualified price", as stated by Heywood (2001) cited in Kotze (2004, pg 32). The following are key concepts used in outsourcing (Refer to figure 2-1).

<p>Outsourcing or Offshoring: Key Terms</p> <p>The off shoring debate has spawned its own jargon to describe contracting out:</p> <p>Outsourcing: Contracting out services to an outside firm</p> <p>Off shoring: Used to denote contracting services to a firm located outside the country.</p> <p>Near shoring: Contracting out to neighbouring or very close countries is used in a more positive context.</p> <p>In shoring: Essentially the same definition as outsourcing, used to emphasize the fact that the contracting activity does not occur "off shoring"</p>
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Figure 2-1 Terms

Adapted from the Canadian chamber of commerce (2005)

2.2 Context of outsourcing

Outsourcing in today's highly competitive market place is critical to a company's survival and success (Bettis, Bradely and Hamel 1992). Once an outsourcing plan has been formulated, companies struggle with the implementation impact it will have on its employees (Quinn, 2000). Every company seeks to have an outsourcing plan that makes it adaptive and agile so that it can take advantage of any opportunities that may arise. With the recent meltdown of financial markets globally, having the right implementation of outsourcing is imperative. The ability to implement outsourcing successfully in an organisation could allow the company to be in a better position to survive the current recession and additionally, to take advantage of the upturn in the economy when it does arrive. An outsourcing plan may look good on paper but may be difficult to implement (Bettis *et al.* 1992). Communication, coordination and scheduling requirements are all the more intricate with complex outsourcing (Quinn, 2000). Oversights and misunderstandings become more difficult to avoid. This adds more stress to a company's ability to implement successfully (Bettis *et al.* 1992). Quinn (2000) suggests keeping it simple. Outsourcing is an

abstract concept and is not something that can be easily communicated or translated into action when complex.

2.3 Outsourcing in IT

Outsourcing is not a new concept. Organisations have been outsourcing their functions to contractors for many years. “However outsourcing wasn’t always a successful venture to follow, but it became more apparent as time passed that there is actually major cost saving potential when outsourcing is attempted where both parties are sufficiently motivated” , (Kotze 2004, pg 33). According to Friedman (2005), in the late 1990’s, India gained momentum in terms of outsourcing. Firstly, fibre optic cables increased in popularity therefore connecting India and the USA. However, Cooper, Madigan and Thornton (2004) says that outsourcing to India has lead to a significant decrease in job loss over the three years in the USA. The reason for this is a result of outsourcing cheap labour to the USA as opposed to hiring expensive USA based employees. For India, this created much opportunity even more so when the Y2K crisis was presented, as the USA and other countries required additional developers to assist with their data problems. “Any service, call centre, business support operation or knowledge work that could be digitalized could be outsourced to the cheapest, smartest and most efficient provider”, (Friedman 2005, pg 109). This has lead to the USA outsourcing valuable and inexpensive resources from India to address the Y2K crisis. This opportunity resulted in India being placed on the map as the leading outsourcing choice. Research conducted in South Africa revealed that outsourcing would be the primary form of IT in 2010, (Core 2007) cited in (Pengilly 2007). Possible reasons for this according to Pengilly (2007) is that the outsourcing market is rapidly growing in South Africa as more organisations are considering outsourcing their IT functions.

2.4 Reasons for outsourcing

Gunther and Christine (2004) explain that the reasons for outsourcing can vary from organisation to organisation. A common and popular reason for outsourcing is that it improves the company’s return on investment (Marshall 2002). In a survey, organisations were asked what the top three reasons for outsourcing were. The results showed cost and pricing as the most popular reasons. Marshall (2002) adds that when companies embark on outsourcing their focus is on cost cutting. Gunther and Christine (2004) explains that this is a result of the outsourcing organisation attempting to lessen its assets, for example the organisation’s expensive technology or equipment. Kumar, Eickhoff and Jason (2006) clarify that most companies choose to keep their core functions internal and outsource the rest of the functions, as this brings in other skills and competencies to the business. Furthermore, many companies also expect reductions in operating costs.

Palm (2001) conducted an annual analysis of current and potential outsourcing end users' top 10 reasons why organisations consider outsourcing and cited the list below by the Outsourcing Institute (1998).

- To decrease and manage day to day costs
- To develop better organisational focal points
- To increase access to the most recent technological capabilities
- To free inside resources for other people
- To make the right skilled people accessible by the organisation
- To increase reengineering benefits
- To allow capital finances to be accessible

2.5 Advantages and disadvantages of outsourcing

2.5.1 Advantages

Hiring the right partner can bring many benefits to an organisation Alders (2002) explains the following benefits of outsourcing:

2.5.1.1 A suitable way of promoting cultural change

Change is always an aspect that is difficult to respond to as well as to introduce. Alders (2002) adds that many employees experience distress with the culture in an organisation, which leads to IT problems. This will in turn affect the result of the project and could delay delivery. Marshall (2002) observed that outsourcing could be a solution in breaking down cultural barriers, which can lead to better results overall.

2.5.1.2 Access to specialist skills and knowledge

Alders (2002) describes the specialists in the IT industry as data architects, strategic planners, network designers or change control specialists. Due to their specialisation, these specialists are quickly employed by outsourcing partners. Good outsourcing companies generally have access to a large range of these specialists. For this reason a particular outsourcing vendor becomes popular in the industry as it can retain the best talent and obtain a contract from an organisation. A company of such is 2AdPro who employs individuals from Chennai, Bangalore, and Gurgaon as there is a steady stream of high-quality, inexpensive workers, (Saba 2008). Sunday times media group was one such company who makes use of 2AdPro by outsourcing their ad production work to them because of the highly skilled individuals they possess.

2.5.1.2.1 Quality of Staff

Owing to the popularity of outsourcing, employees need to reconsider their skill set and identify what they need to do to compete with these outsourced employees, (Hira, Diesta, Spanoudakis, Visaggio, Wirtz, and Chang 2007). During projects an organisation will have a number of people working in a team to complete a task quickly, however when this project is completed the organisation is left with an excess of staff. These permanent employees end up doing mundane tasks to occupy their time until another project comes about. However, in the case of outsourcing an organisation can hire people when they require them without keeping them on for an additional cost when the project ends, (Alders 2002). This also ensures that they are receiving the best employees with the right skills for that particular project. According to Nadworny (2007), an outsourced partner will also bring employees with the most up-to-date skills in the industry. Outsourced employees can also provide assistance and support to internal employees in a project, as they possess a vast amount of experience (Dickerson 2004). The upside for the organisation is that their internal employees are attaining skills and knowledge from an outsourced employee (Nadworny 2007). Lebharr (2002) adds that when hiring outsourcing employees it is important to get a feel for their personalities. The reason for this is that an organisation can determine whether an outsourced employee will have a correct fit with the team.

2.5.2 Disadvantages

Arabe (2002) describes outsourcing as the best move any company can make in this century. While this may be true, several aspects can arise which can dampen the relationship. The factors are described below:

2.5.2.1 Loss of jobs

Outsourcing can create anxiety in internal employees as they fear they may lose their jobs, (Nadworny 2007). As a result it is important to reassure employees of their role in the organisation or it can lead to a case of the Evershed's scenario. Evershed's is an organisation in Cambridge, England. They had decided to outsource their document processing but first ran a pilot for this process, (Berris 2009). During the pilot stage employees were not notified of the change. After successful implementation of the outsourced process many disgruntled employees lost their jobs.

2.5.2.2 Loss of mission

When an outsourced partner comes aboard on a project, they do not necessarily adopt the mission and vision of the organisation and this may become a concern. Alders (2002, pg 45) states that "an experienced, long-term strategic partner understands that the success of the relationship will depend, in large measure, on actively taking on the mission and values of the

organisation with which it is working however, the same may not be true of a shorter-term partner". Scouller (2000) explains that outsourced employees will not always deliver in the same manner that an internal employee would. This is evident when a contractor from a USA fuel company did not deliver fuel to local garages. He was of the opinion that the fuel would further damage a minor faulty component in the truck that was transporting the fuel. However, the internal employees wanted to place the customer's needs first and deliver the product (Sculler 2000). This situation resulted in the organisation losing much revenue as things were conducted according to the outsourced vendor, as the vendor was not customer focused.

2.5.2.3 Not making the right decision

It is important to select the right outsource partner as they can understand and gain knowledge of the organisation's facilities. This is supported by Barthe'lemy (2001) cited in Wang, Zhu and Gwebu (2008) who says that companies spend a substantial amount of three percent of their budget on outsourcing. Organisations believe by investing a large amount of their budget up front would result in finding the right outsourcing partner rather than incurring team problems during a project. The outsourcing vendor will also take care and integrate with the organisation's own people. However if this is not done correctly the organisation can suffer deeply from change (Arabe 2002). Wilson (2009) points out that some organisations will go as far as not revealing that they have not hired an outsourced vendor to work for them, more so if their delivery is of high quality. The reason for doing this is that it may give away their competitive advantage to another organisation, which can utilise this specialised skill from the outsourced vendor to increase their own revenue.

2.5.2.4 Loss of control

Keeping things the way they are often prevents organisations from hiring an outsourced vendor. It requires a lot of time and effort from the organisation to design their strategy and processes to include an outsource partner. According to Muller (1993), most outsourcing partners tend to bring their own management system and try to integrate this into the organisation's systems. This can become complex and cause disruption. Many organisations fear that they will lose control of their functions, as the outsourced partner will gain access to their systems and functioning. Alders (2002) adds that the selection process is therefore essential to ensure the success of the project, however; this can become a difficult task.

2.6 When to outsource

Applegate, Austin and McFarlen (2007) state that there are four factors that determine when to outsource. They are listed as follows:

2.6.1 Development portfolio

The more information technology resources working on a project the greater the chance that the project will be outsourced. Outsourcing vendors, for example, Zensor, which Derivco makes use of, are good candidates for outsourcing as they have good quality labour at an affordable price. Applegate *et al.* (2007) further explains that specialized projects are also good candidates for outsourcing, as they require specific skills. She goes on to say that on the downside, structured projects can be problematic because they can become difficult to co-ordinate. Sheats (2004) supports this in saying that projects that require an entire team to complete a task will require a lot more work.

2.6.2 Organisational learning

The way the organisation and its staff learns, greatly influences the way an outsourcing agreement is carried out. Applegate *et al.* (2007) adds that software programming or development tend to become hard to outsource. Possible reasons for this are that staff have not worked in this type of environment which results in complications. Derivco similarly had to learn and adapt quickly to outsourcing vendors as the company and its projects grew rapidly in size and number.

2.6.3 Company's position in the market

Often companies still make use of legacy IT systems, which position them far behind their peers, (Applegate *et al.* 2007). As a result, these companies do not have the IT leadership or staff skills to implement newer technologies. On the other hand, outsourcing vendors cannot afford the expense of keeping these obsolete systems. For the outsourcing vendor it is important to remove these systems and not to focus on how the organisation got to where it is, (Applegate *et al.* 2007).

2.6.4 Current IT organisation

Applegate (2007) is of the opinion, that if an organisation has an IT or accounting department, it is easier to outsource these units. If these departments do not exist then the functions would be handled in an ad hoc basis and thus would be difficult to outsource. This could lead to potential problems, such as no framework for solving issues or no current technical approach to the problems.

2.6.5 Position on the Strategic Grid

Table 2-1 illustrates the above points. The figure is divided into four quadrants:

<p>Factory: Uninterrupted Service Orientated Information Resource Management</p> <p>Outsourcing Presumption : Yes , unless company is huge and well managed</p> <ul style="list-style-type: none"> • Reasons to think about outsourcing: • Increased and better quality service and backup • Drive through of top management focus • Fibre optic and extended channel technologies facilitate international IT solutions. 	<p>Strategic Information Resource Management</p> <p>Outsourcing Presumption :Mixed</p> <ul style="list-style-type: none"> • Reasons to think about outsourcing: • Tap source of money • Facilitate cost flexibility • Facilitate management of divestiture • Provide access to technology application and staffing skills otherwise not available
<p>Support Oriented information Resource Management</p> <p>Outsourcing Presumption : Yes</p> <p>Reasons to think about outsourcing:</p> <ul style="list-style-type: none"> • Possibility of laying off staff is of low priority and problematic. • Access to current IT technologies • Risk of inappropriate IT architecture reduced. 	<p>Turnaround Information resource Management</p> <p>Outsourcing Presumption: Mixed</p> <p>Reasons to think about outsourcing:</p> <ul style="list-style-type: none"> • The IT department not fully equipped in the field of project management skills if the need arises. • Access to technology applications and staffing otherwise not available.

Table 2-1 Strategic grid

Adapted from: Applegate *et al.* (2007) Strategic grid for information resource management.

2.7 What to outsource

Gomolski (2004) explains too often organisation become naive on what to outsource. They often eliminate the most obvious areas in a company and this leads to loss of revenue (Gilly

and Rasheed 2000). The following is a guideline of what functions an organisation can outsource.

2.7.1 IT Infrastructure

Often managers disregard the need to outsource infrastructure (Gomolski 2004). For the purpose of this study infrastructure refers “to the nuts and bolts of an organization's information systems, including data center operations, networks, desktops and help desks”, (Gomolski 2004, pg 1). Applegate *et al.* (2007) often sees organizations making the mistake of outsourcing its entire data center. Instead she suggests they retain a few internal employees so they are still involved in the process as well as own it. By retaining internal employees, the organisation can see continual success. This is supported by (Gomolski 2004, pg 1) who states that a, “A company that outsources data center operations might retain a business continuity and disaster recovery process owner because it will feel that function is critical”.

2.7.2 Innovation

Mobile, notebook and digital manufactures need to be a step ahead of their competitors, (Engardio, Einhorn, Kripalani, Reinhardt, Nussbaum and Burrows 2005). By predicating, next year's trends incorrectly can lead to a loss in the market share. Often these companies can not handle the pressures to go to market and therefore resort to outsourcing. “Companies such as Dell, Hewlett-Packard, Sony, and even Apple use designs by contract manufacturers, handsets by second-tier brands like Phillips and Siemens and operators like T-Mobile are based on designs by outside firms”, (Engardio *et al* 2005, pg 84).

2.7.3 Accounting functions

Fraser (1994) is of the opinion that larger organisations (employing 10,000 or more people) are more likely to outsource financial and accounting task as opposed to smaller organisations. Research supports this as the highest percentage of three-year contracts was awarded to the accounting departments as opposed to the one-year contracts for other departments. Internal staff can also benefit from this as they can concentrate on more strategic aspects of the company. Another benefit to an organisation is that the internal financial systems function can run smoothly and efficiently as a result of the extra outsourced employees, (Fraser 1994).

2.7.4 Software support

As an organization grows in size their support services becomes difficult to handle. Common problems received by desktop services are from the finance department as they have continuous problems with spreadsheet and finance applications, (Jaffe 1998). Many

organizations are discouraged from outsourcing this function as they fear the costly per hour rates however the productivity and satisfaction out ways the price.

Jaffe (1998) explains it is not all about the money spent on outsourcing but rather the performance and satisfaction from the employees. Outsourcing administrative and non essential departments in an organization can prove to be successful as employees can focus on their core job responsibilities, (Fraser 1994). Having determined what to outsource, an organization can then decide on what type of outsourcing will best suit their department and organization.

2.8 Types of Outsourcing

An organisation can be exposed to many outsourcing options. Subramanian and Williams (2007) describe the following:

2.8.1 Ad hoc staff augmentation

Ad hoc staff augmentation is a basic form of outsourcing. In this type of outsourcing, the organisation has total control and ownership over their IT business process but at the same time still uses outsourced human resources. The organisation can still save on expenditure through low cost resources as well as retain employees with specific skills.

2.8.2 Out tasking

In this type of outsourcing the organisation has a certain responsibility in a project and they are held accountable for that function; for example, the testing company SQS used by Derivco is responsible for the testing of games.

2.8.3 Project based outsourcing

An organisation will task day-to-day operational activities for a certain project to an outsourced company. The outsourced employees are responsible for project level deliverables. Projects that occur in the information technology environment differ from projects in other industries. Projects may range from a small team implementing a shelf-ready product or a large team developing a product from scratch (Schwalbe, 2004). Owing to this, the nature of the team in an IT project varies. The team is often comprised of people from several different fields, for example: programmers, mathematicians, process analysts and solution architects, (Atkinson 1999).

2.8.4 Managed services

In this type of outsourcing the outsourced employee is accountable for delivering the services as well as the design, process and programs to be used in a project. The outsourced vendor is involved from the start to the end of the project.

2.9 Labour brokers

2.9.1 Background to labour broking

According to Jauch (2008), labour broking can be defined as a form of outsourcing. In other words, a company will hire employees and lend them out to another organisation at a fee. A report produced by July (2009) explains that labour broking is an “international phenomenon”. Magnani and Prentice (2010) argue that outsourcing may be a threat to union members as they can cause their market to decrease in size, as there may be fewer jobs for them. Countries like Belgium, Spain, Portugal, France and Norway allow labour brokers to be employed but have implemented certain terms and conditions as a result of similar events occurring in their countries. Examples of some of these laws included are that labour brokering can occur when a current employee does not come to work or when there is an abundance of work and the current employees cannot handle the workload (Macgregor 2001). Macgregor (2001, pg 1) explains that there are several reasons for the need for labour brokers, for example, “coping with peaks in demand, reducing costs, avoiding industrial relations problems, greater flexibility, as well as avoiding retrenchment procedures and trade unions”. However, Jauch (2008) explains that these employees do not have the security of a permanent job and its benefits. In addition, it is the trade unions that find it difficult to represent these employees in collective bargaining, as they are not permanent workers (Jauch 2008).

2.9.2 Labour broking in South Africa

South Africa saw a turn for the worse in the labour broking market in mid 2009. Several threats arose from COSATU on the banning of labour brokers, as it was perceived, as they do not provide value. This was supported by the labour minister, Membathisi Mdladlana as he voiced his agreement of the ban of labour brokers. This came about after Namibia had passed a law to ban labour brokers. However, the Labour Relations Act allows for temporary employer services i.e. labour brokers (July 2009). A report produced by July (2009) explained that the labour broking companies provided people with jobs and training and aided companies to effectively utilize their design and structure; if there was no need for this industry they would have not evolved and grown so rapidly. On the other hand, News.24.co.za (2009, pg 1) stated that, “companies sold workers to the highest bidders, while paying them minimum wages and pocketing the difference without making essential

deductions for, among other things, the unemployment insurance fund, pensions and tax". According to Jack (2008) if labour brokers were banned from South Africa, SA would be placed in a situation where thousands of people would be out of jobs. July (2009) suggested that a solution for this problem is not to ban labour brokers but rather have the trade unions monitor labour brokers closely and ensure collective agreements and BCEA are abided by.

2.9.3 Growth of labour broking in South Africa

According to Macgregor (2001), there has been a staggering growth in labour broking in the past five years. Possible reasons for this growth as stated by him are as follows:

- It is expensive to adhere to the cost associated with employment laws.
- Generally, employees that the labour brokers bring to an organisation are specialists in their field; therefore, they can help an organisation for a specific project.

The labour broking employer makes a profit from the fee it charges. In South Africa the temporary employment services (TES) charges an approximate fee of 10% for using its services (Macgregor 2001). However, certain foreign countries prevent the use of temporary services but countries such as Belgium, Spain, Portugal, France and Norway allow the use of labour brokers. A report produced by July (2009) explains that the labour broking market still manages to make a profit of R23 billion per annum, as well as providing jobs for more than 500 000 people, making this a lucrative industry.

2.10 The outsourcing Life Cycle

It is important for an organisation to make the right decision when outsourcing. Figure 2-2 describes the different stages in the outsourcing cycle that an organisation needs to follow, (Kumar, Edgardo and Anderson 2007).

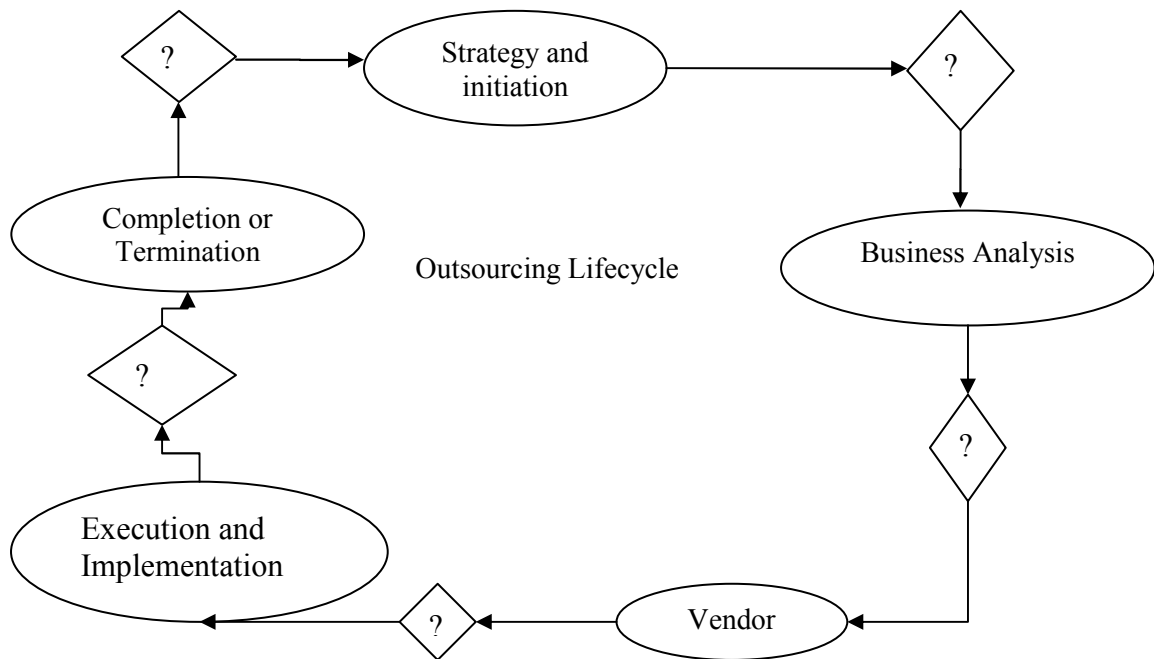


Figure 2-2 Outsourcing lifecycles
Adapted from: Kumar *et al.* (2007)

2.10.1 Strategy and initiation phase

It is important for an organisation to develop a strategic plan. This plan needs to take into consideration the company's goals, their competitors and their weakness (Kumar *et al.* 2007). Ninety percent of both successful and non successful companies, consider explicit strategy (i.e. clear and written) which is essential for successful implementation, (Brenes, Mena and Molina 2008). Hrebiniak (2006) mentions that a poor or vague strategy severely limits implementation efforts and this presents a major obstacle to implementation. Good execution cannot overcome the shortcoming of a bad strategy or poor strategic planning effort. Hence, it is important to have a good strategy before the process can start. Beer and Eisenstat (2000) suggest that vague strategy could result in the creation of two competing strategies, which could destroy a company. This can result in conflicting priorities, poor coordination and misuse of resources, (Sterling 2003). A clear strategy assists in bringing employees together towards achieving a single vision. It is thus important to have a good and clear strategy before strategy implementation can start.

Other aspects that the organisation needs to take into account before outsourcing is the feasibility of this venture. For this a clearly developed business plan should be in place explaining the costs during implementation and post implementation of outsourcing (Zhu, Hsu and Lillie 2001). A detailed plan is important in outsourcing. The lack of planning produces inefficiencies, omissions, overlaps and anxiety for all involved (Porter and Harper 2005). Detailed planning enhances implementers, stakeholders' and managements'

understanding of the problem because it requires methodically thinking through the situation (Lorange 1998). This reduces the likelihood that oversights may occur.

2.10.2 Business analysis phase

After the feasibility is conducted the decision to outsource may be taken. In this phase the organisation will have a dedicated team who identifies areas of the organisation that will be outsourced (Kumar *et al.* 2007). This will involve identifying critical components of the company and thereafter mapping these processes.

2.10.3 Vendor selection phase

In this phase, the organisation needs to make a decision as to which company will get the contract to be an outsourced partner. A contract will be signed which will cover all legal aspects (Duarte, Sackett and Evan 2004). In order to gain success in outsourcing a good agreement needs to be in place detailing exactly what the organisation wants (Zhu, Hsu and Lillie 2001).

2.10.4 Execution and implementation phase

This phase involves the actual handover of tasks to the vendor. Change management is also an important aspect in this phase as many of the internal employees will be affected by vendor appointment. As a result the organisation will need to communicate this change early and notify the employees of any change in the company's structure (Kumar *et al.* 2007). People do not like change but when they undergo effective change management and they accept it, it forms part of their learning, creating growth in their own lives as well as that of the organisation (Argyris 1989; Brenes *et al.* 2008). A transition document is also essential. This document outlines what needs to be done and contain details of what the vendor needs to do (Zhu *et al.* 2001).

2.10.5 Completion or termination phase

The company will than analyze the work that has been completed by the vendor and decide on whether to renew their contract or end it (Moneta and Dillion 2001). Several discussion with the involved teams and departments will take place to understand if there is a future need for the vendor.

2.11 Departments affected by the decision to outsource

When an organisation decides to outsource several disciplines in the organisation take this decision and it is not decided by one person (Pengilly 2007). A company can outsource for several reasons as explained in section 2.4. These reasons affect decision-making areas such as strategy, finance and human resources. These areas are explained in detail below:

2.11.1 Strategy

Burgelman, Maidique and Wheelwright (2001) explained that only in the 1980s was information technology considered an important component in competitive strategy but it was not until 1989 that outsourcing was considered an integral part of strategy (Mullin 1996). It is essential first to consider all aspects of the business and its process before deciding to outsource. Lacity and Willcocks (2001) suggest a matrix that can assist an organisation in making a decision. This matrix aligns each of an organisation's services and functions in the matrix, allowing the organisation to make the final decision. Lacity and Willcocks (2001) cited in Pengilly (2007) explain that functions and services that fall in the bottom left can be outsourced, whilst those functions and services falling in the top right corner ought to be kept internal to the organisation. The matrix is highlighted below:

Contributions of IT activities to business operations	Critical	Best Source	In-source
	Useful	Outsource	Eliminate or Migrate
		Commodity	Differentiate

Contribution of an IT activity to
business positioning

Figure 2-3 Business matrix

Adapted from: Pengilly (2007)

2.11.2 Finance

Cost saving is the main reason most organisations outsource according to the Outsourcing Institute (1998) cited in (Palm 2001). However, a financial analysis needs to be conducted to determine if an organisation will actually have a cost saving (Pengilly 2007). Figure 2-4 is a financial assessment that an organisation can conduct to determine a cost saving.

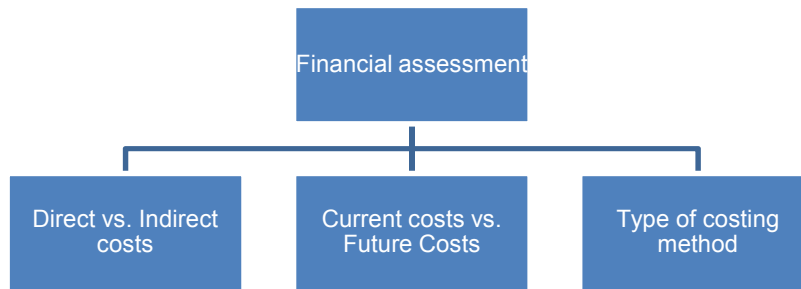


Figure 2-4 Financial assessment

Adapted from: Power *et al* (2006) cited in Pengilly (2007)

2.11.3 Human resources

According to Schwalbe (2004) the people of the organisation will ultimately be responsible for the success or failure of a project. If an organisation decides to outsource it will have a direct impact on human resources, as the organisation's staff will be impacted. The impact needs to be determined in advance, for example, it needs to be determined if the outsourced employees are going to be on the premises of the organisation during their contract. In addition, HR needs to take into account the impact outsourcing will have on the organisation's employees as it may affect their morale, which can in turn affect performance, (Dominguez 2006). As a result, it is important to enhance current employee skills, which can lead to an increase in project performance (Schwalbe 2004).

2.12 Importance of software development lifecycles methodologies in outsourcing

Sarma and Hoek (2004) deduced that teamwork is at the centre of software development. Most organisations will have a number of developers working in their project. However, 70 percent of these developers spend time doing tasks related to administration, (Sarma and Hoek 2004). Outhwaite (2003) is of the opinion that there are various methodologies that can assist employees in their task and reduce their administrative tasks. This can lead to an increase in employee performance (Gasson 1995). The following are the types of methodologies that can assist the employee in achieving a project within time and scope.

2.12.1 Agile

Many software development companies in India who are outsourcing vendors makes use of the agile methodology as this is the preferred method, (Brandl 2009). It is simpler to introduce the agile methodology into an outsourcing environment as organisations are integrated with their vendors, (Batra 2009). According to Asproni (2004), agile methodology requires a

combination of technical people as well as people with personal skills. Subramanian, Klein, Jiang and Chien (2009) adds that people with personal skills are important as at the end of a project they will have the most impact on the success of the project. However, Asproni (2004) questions the debate that an agile methodology requires more technically skilled employees than employees with personal skills.

2.12.2 Spiral

This methodology is known as a risk driven approach. As a result, it avoids many potential problems from arising. According to Boehm (1988), the main benefits of the spiral methodology are the various options it gives. It gives a programmer the opportunity to integrate features from other software methodology models into the spiral methodology. However, Boehm (1988) explains that in a different project situations this type of methodology tends to lean toward adopting one of the other methodology models used by teams.

2.12.3 SCRUM

According to Salo and Abrahamsson (2008), SCRUM is developed from the agile methodology and depicts one of many software development methodologies. In this type of methodology the team will assess the dangers and shortfalls throughout the SCRUM cycles as well as prepare for counter measures and possible solutions, (Ionel no date). These types of changes occur frequently in the software development projects. For this reason SCRUM becomes a popular choice for teams (outsourced and internal) as it has the ability to absorb change during a project. This leads to a project to be finished quickly and gain the desired results. Another advantage of the SCRUM methodology is that it allows the team's developers to focus on programming or designing the product and not on other administrative functions (Joseph and Desikan no date). This allows the developers to accommodate changes in the project and prepare for it in advance. Bushra Sattar, and Mustafa (2010) explains that under 10 developers can be used in a project but 4-5 developers will suffice for a team. On the downside if the SCRUM methodology is used to develop for an outside customer then the team will have to get the external customer involved as much as possible. This could become a time consuming task, (Highsmith and Cockburn 2001). In addition, the customers must make themselves readily available on a monthly basis to test the software as well as make recommendations on improvements.

2.12.4 Prototyping

According to research conducted by Walonick (2005, pg 1), prototyping is "not a standalone, complete development methodology but rather an approach to handling selected portions of a

larger more traditional development methodology i.e. Rapid application development (RAD)”. Liguó (2008) adds that the participants, i.e. the team members are involved throughout the prototyping process. The reason for this continuous involvement leads to acceptance by the user. In essence prototyping allows the user to gain a fair knowledge of the problem and in doing this the right solution is achieved (Liguó 2008).

2.12.5 Waterfall

When a project manager gets guidance that a project is approved he / she will then schedule meetings with the relevant people, for example the business analyst who does the business specification as well as the developers and product managers who will do the marketing plan. The project manager will thereafter ensure that documents such as the marketing plan, financial modelling and business documents are on track and within budget as well. Initially the project manager will create a high level or draft project plan to gain an understanding of dates as well an estimate of the end date. This is done with the assistance of the core team as they will be able to give the duration of each task they have to complete (Campion 1996). During the lifecycle, the project manager will then schedule time with the team members to gain understanding of where they are in the project and thereafter update the project plan. In addition, risks are highlighted in these meetings as this can affect the overall date. All risks are documented and the project manager will be responsible for all closure documents as well, Loser (2006).

2.13 Factors that affect performance of outsourced vs. internal employees

According to Davis-Blake and Broschak (2009) there is much written about outsourcing but little literature on the actual effects of outsourcing on an employee’s performance in delivery a project. Therefore it is important investigate the factors leading to an employee’s attitude and behaviour as well as organisational structure and culture when outsourcing. McGee (2005, pg 1) states “Sixty-one percent of the 12,158 IT pros who participated in information week research's 2005 national IT salary survey say outsourcing causes lower employee morale”. Gonzalez, Gasco and Llopis (2009) adds that when a company signs (or is poised to sign) an outsourcing contract, various employee issues may occur, such as a decline in motivation as well as anxiety. In Section 2.14 the actual performance models of employees will be discussed. For the purpose of this study, the following factors have been categorized that can affect outsourced or internal employees. The components below represent the factors influencing employee performance in delivery a project as identified from literature. Each factor, individually or combined, can cause a delay or can stop an employee performing effectively. They can be broadly grouped as follows:

Organisational factors	Management factors	People factors	Project Factors
Company culture	Leadership styles	Job satisfaction	Project factors (Scope, time and budget)
Communication	Poor communication	Education	Project rewards
Goals and strategies	Implementation model	Work stress	Lessons learnt
Organisational structure	Training	Motivation	Job allocation
Human resource management	Having the right equipment	Community exposure and peer pressure	
	Allocation of resources		

Table 2-2 Factors affecting employees

2.13.1 Organisational factors

Organisational factors are those that are associated with an employee’s day-to-day activities and the environment in which they work in. These factors can affect the level of performance of an employee. Awases (2006, pg 28) explains that organisational factors can include the following examples “managerial support, colleague and supervisor support as well as organisational culture associated with high performance”. Other factors that will be explained are company culture, communication, human resource management, goals and strategies of an organisation and organisational structure.

2.13.1.1 Company culture

A company’s culture has been described as the organisational glue that holds the company together (Heide, Grønhaug and Johannessen 2002). Culture needs to be reinforced and monitored during a change such as an outsourcing implementation (Hrebiniak 2006). Cultural changes do not occur in a simple and linear manner. Differences in values, knowledge and skills present difficult challenges that must be overcome before implementation is achieved (Buller 1998). Having the appropriate culture gives a company a competitive edge when it comes to outsourcing, (Homburg, Krohmer and Workman 2004). O’Hara (2009) suggests that senior managers need to create this culture by setting an example. O’Hara (2009) goes on to

add that they must be active in maintaining a balanced work and personal life before preaching to their employees.

2.13.1.2 Communication

Communication can be time-consuming and may not be sufficiently executed by top management due to time constraints (Heide *et al.*, 2002). Management do not inform their people of the objectives and direction the company is moving towards (Heide *et al.* 2002; Brenes *et al.* 2008). Hence ineffective communication limits employees in their day-to-day decision-making about what activities are most helpful in making the business successful (Beer and Eisenstat 2000; Raport *et al.* 2002). Beranek (2006) adds that it is important for team members to establish social communication i.e. covering each team member's background and interests. Possible examples are inductor lunches or after work get-togethers which are out of the work environment. Without the involvement of management, employees can become resistant to change and neglect organisational needs (Panthaworn 2005).

2.13.1.3 Human resource management

Careful consideration of the human element is one of the key factors that need to be focused on during an outsourcing implementation (Buller 1988; Fryxell, Butler and Choi 2004). Human resource management is important in outsourcing implementation because employees have aspirations, needs and feelings that affect the organisation's performance. Organisations and their staff tend to be interdependent (Heide *et al.* 2002). A change in one affects the other. Employees expect to be kept informed about any changes, especially when it affects their jobs or them directly (Buller 1988; Heide *et al.* 2002). Employees need to be informed when the organisation has decided to outsource and when it will occur. A prolonged period of outsourcing implementation puts pressure on managers and employees. It causes stress and uncertainty in their lives, which affects their job performance.

Front line managers and employees are the ones facing many of these challenges while trying to make top management dreams and vision a reality (Chebat 1999). Staff in different areas and operational levels in the firm have a better sense than top management of the kind of co-ordination that is required to implement successful outsourcing (Brenes *et al.* 2008). Outsourcing implementation and employee performance should be seen as a team effort. Management must hire the right people to make the implementation model work. Just as importantly, they must also create an environment that encourages people to use innovative new ways to achieve and increase employee performance (Crittenden and Crittenden 2008). Crittenden and Crittenden (2008) claim that ninety-five percent of company employees are not aware of or do not understand outsourcing. Hence, they are prevented from implementing

outsourcing, resulting in poor company performance, leading to a decrease in employee performance

2.13.1.4 Goals and strategies of an organisation

Bennet and Franco *et al.* (2001) cited in Awases (2006) stress that in order to achieve the organisational goals the company need to communicate their goals to their employees so they can understand the process. Other important goals that ought to be achieved by the organisation are to empower the employees with new skills and knowledge as well as having an organized and efficient feedback system. Derivco aims to create a world-class business-process management environment throughout the organisation. The management has identified the goals of the company to improve the productivity and efficiency of operations, as well as improving on the quality of the software produced. To support the above, the following high-level requirements have been identified as part of an organisation's goals:

- Information must be provided to all areas of the organisation where necessary in an accurate and timeous way.
- The processes must support and assist in bringing about common practices.
- Correct outputs must be received, issued, manufactured and dispatched in the process. Interfaces to both the business and development systems must be established.
- The solution must offer real-time integrated information with as little human intervention as possible as well as remove non-value add activities either via automation or elimination.

2.13.1.5 Organisational structure

Organisational structure affects implementation and employee performance indirectly through its influence on information, control and the decision processes (Hrebiniak 1992; Heide *et al.* 2002). Departments that work in silos create silo mentality. Hrebiniak (2006) mentions that imposing the same structure on all business or divisions simply because they are part of the same organisation are not a logical and appropriate way to determine structure. Business structure should reflect, and be driven primarily by the nature of business strategy in order to implement that strategy successfully. Optimal fit depends on total flexibility of the structure (Gupta and Govindarajan 1984; Reed and Buckley 1988). Size and geographical dispersion also play a role in appropriate structure design (Oslen, Slater and Hult 2005). A company's performance can be drastically affected by the way it is structured during the outsourcing process. It is important to implement the right structure to ensure success in a project.

2.13.2 Project factors

Before understanding the project factors it is important to gain an understanding of project management and what a project is. Schwalbe (2004, pg 4) defines a project as “a temporary endeavor undertaken to create a unique product or service”. Project management can be defined as, “a set of methods, processes, and practices that are repeatedly carried out to deliver projects on time and within budget, while meeting all specifications and expectations”, (Lasbuschagne and Steyn 2010, pg 70).

2.13.2.1 Scope, time and budget

The project manager is key in coordinating that these factors are implemented, (Karlsen and Gottschalk 2006). Schwalbe (2004 pg: 10) explains that scope is “what a project is trying to accomplish, time is how long should it take to complete a project and cost is what it should cost to complete a project”. A survey conducted in the USA found that more than 31 % of projects in the IT industry did not reach completion date (Whittaker 1999). Reasons attributed to this are poor planning and scoping, (Anantatmula and Vittal 2010). Schwalbe (2004) adds that project managers cannot satisfy all three constraints (scope, time and budget) to meet a project deadline hence they may have to trade one off to meet the other or reduce the scope of a project. According to Walker and Borne (2004) project managers that do deliver projects within time, scope and budget generally are knowledgeable about the workings of the organisation and have the necessary corrective actions.

2.13.2.2 Lessons learnt

Schwalbe (2004) stresses that it is important to have management involved in the lessons learnt discussions so the project manager can gather their inputs on what went wrong in the project or what correctives can be taken so it does not happen again. The project manager must schedule a meeting inviting all key members from the project e.g. developers, business analysts, managers and testers. Often there are changes to a project months later and project managers can go back to these lessons learnt documents to help them understand the difficulties experienced earlier in a project. From this, a new project can begin by analysing the old lesson learnt documents. This can help aid the team in preventing similar problems occurring in their projects.

2.13.2.3 Project rewards

Incentive schemes based on project objectives can be used to motivate staff and ensure appropriate behaviour in relation to the implementation of outsourcing (Ammeter and Dukerich 2002). Alexander (1985) suggests that rewards and penalties can be used to bring about the desired results. Panthaworn (2005) says that motivation is one aspect; for example,

an individual's expectation that an amount of effort will lead to a certain level of performance and this in turn will then guide them to desired outcomes or rewards. Project managers should schedule lunches or get-togethers with the team after each milestone. Doing this motivates the team to look forward to another event and gives them a sense of value. Outsourcing implementation and return on the project needs to be aligned to incentive schemes to ensure that people in the company have the right focus in achieving the overall end result. Ammeter and Dukerich (2002) add that these rewards, which can be in the form of bonuses, can act as motivators for future projects.

2.13.2.4 Job allocation

Beer and Eisenstat (2000) mention that inappropriately resourced (funding, manpower, time) allocations severely hinder implementation efforts. The appropriate number of people with the appropriate skills sets, need to be assigned to the right teams, or suffer from misalignment of resources. There is normally competition between functional departments for resources, to the effect that certain areas or functions of the business start to suffer. Speed to market is considered critical whether a company wants to be a first mover or a fast follower. This considerable focus on time can have serious repercussions such as wasting resources that could be used elsewhere. Time pressure can be a major factor for effective implementation (Porter and Harper 2003).

2.13.3 Management factors

Some top-level managers believe that employee performance is below them and should be left for lower level employees (Imitiaz and Ahmad, no date). They believe that top-management's role is to plan and think strategically and the role of lower level employees is simply to carry out the top management's requirements. In most cases, if the project is not successful then the problem lies with the doers not having implemented a perfectly sound and viable project (Atikison 1999). However, the outsourcing process and project execution is a key responsibility of all managers and employees, not something that "others" need to do or focus on. The line managers' role is to guide employees in their day-to-day jobs as well as to align employees to achieve company success. Aspects that a manager can influence or is responsible for can be referred to as management factors which will be discussed below.

2.13.3.1 Implementation model

Having a model to guide implementation efforts makes the jobs of managers and employees less difficult and ambiguous when implementing outsourcing (Hrebiniak 2006). Without guidelines, individuals do the things they think are important, resulting in uncoordinated, divergent and even conflicting decisions and actions (Reed and Buckely 1988). Managers

need to know what their priorities are in the execution process and why it is critical to focus on each of these steps. Having a model or road map positively affects execution success. Advance planning for the implementation and the building of models, provides more guidance for managers to achieve their objective of strategy implementation (Alexander 1985; Crittenden and Crittenden 2008).

2.13.3.2 Poor communication

Plans to outsource need to be communicated to all the individuals whose performance is important to successful implementation (Reed and Buckley 1988; Rapert *et al.* 2002). There should be sufficient communication from the top down to enable the implementation of outsourcing i.e. transfer of knowledge on actions to be carried out (Reed and Busckley 1988). Top management sometimes fails in terms of their communication with the lower organisational levels. Communication can be time-consuming and may not be sufficiently executed by top management due to time constraints (Heide *et al.* 2002). Management do not inform their people of the objectives and direction the company is moving towards (Heide *et al.* 2002). Ineffective communication limits employees in their day-to-day decision making about what activities are most helpful in making the business successful (Beer and Eistenstat 2000; Rapert *et al.* 2002). Top-down and bottom-up communication are major factors in the implementation process (Beer and Eisentat 2000). An open culture allows employees to speak openly to top management about their concerns and possible problems that they notice when they start implementing. Top management should be open to potentially threatening and embarrassing issues and keep in mind that an open communication channel is pivotal to outsourcing success and which leads to effective performance from employees (Noble 1999).

2.13.3.3 Training

Rabemananjara and Parsley (2006, pg 7) state that, “training is a formal and systematic modification of behaviour through learning, which occurs as result of education, instruction, development and planned experience”. According to Afaq and Khan (no date) training can influence an employee’s performance at an organisation. Figurelli (2004) suggests teaching employees and giving them the skills and knowledge to do something rather than dictating to them how to do something. Training is needed to teach employees new skills for their role (Thibodeaux and Faden 1994). Afaq and Khan (no date) add that research shows that when an employee has received the relevant training they can directly influence an organisation’s success rate and performance. Ginsberg (1997) cited in Afaq and Khan (no date) says that it has been found through research that training that is expensive and effective works better than training that is less expensive and is inefficient. It has been found that smaller organisations tend to give their employees less training as compared to larger businesses (Rabemananjara

and Parsley 2006). In addition, smaller organisations are also inclined to lean towards on the job training as opposed to planned training, (Baldwin and Johnson 1995) cited in (Leckie *et al.* 2001). Reasons attributed for this include shortness of time, soaring costs and less information. “Compared with large firms, small firms are less capable of absorbing the possible temporary reduction in productivity that can occur during training periods”, (Rabemananjara and Parsley 2006, pg 9). In other words, these larger organisations can afford to give these employees time off from their jobs or get another employee to do their job during training sessions.

2.13.3.4 Having the right equipment.

Companies need to ensure that information systems are in line with their requirements (Hrebiniak, 2006). Malouff and Sims (1996) are of the opinion that if an employee works harder at his/her tasks they will in return gain a higher reward but this will only occur if they have access to the correct resources (e.g. raw materials, time). Information systems must be up to date and have accurate information as management use this when outsourcing. Noble (1999) suggests that systems may need to be flexible in order to evolve as an implementation effort unfolds. The quality of information technology present in the firm is important to outsourcing. Information and control systems are used as a tool by managers to monitor the organisation’s outcomes and to correct deviations by adjusting the variables in their control (Gupta and Govindarajan 1984; Mankins and Steele 2005).

2.13.3.5 Allocation of resources

The lack of planning produces inefficiencies, omissions, overlaps and anxiety for all involved (Porter and Harper 2003). Management and team leads needs to focus on getting a meaningful and detailed plan for the implementation phase, to ensure they have all the necessary equipment, systems and resources (Alexander 1985). As mentioned earlier by Beer and Eisenstat (2000) inappropriate resource (funding, work force, time) allocation severely hinders implementation efforts. Managers need to know what their priorities are so that they can ensure that the team has all the necessary resources to complete the project. Resource allocation affects an individual’s job and the way he/she performs. Generally, in most organisations there are an abundant or projects which leads to a shortage in resources. As a result this can lead to projects suffering due the shortage of employees working on a project (Crittenden and Crittenden 2008).

2.13.3.6 Leadership

Leadership is defined “as a series of steps of leading the behaviours of people in general or employees in an organisation, it can be described as a vibrant and interactive process”,

Booyens (1993) cited in Awases (2006, pg 90). These leadership styles explained below have both pros and cons but it depends on the place and scenario where it is being utilised, as well as the type of company it will be implemented in, (Ismail , Zainuddin and Ibrahim 2010). For the purpose of this study, the following have been identified as the most common leadership styles.

- Autocratic or authoritative leadership style
In this type of leadership, the team lead or person in the leadership role has a regular behaviour pattern, (Jooste 1996) cited in (Awases 2006). This behaviour includes aspects of making decisions alone or making one-sided decisions. This type of leader prefers a formal position with his or her team and has a united authority. Employees generally would feel de motivated as they feel as if they do not fit in the organisation, this will result in them losing interest in their work, (Ismail *et al.* 2010).
- Bureaucratic leadership style
According to Hodgkinson (2009), this type of leadership is specific to where authoritarian requirements have to be achieved. When this type of leadership style is used on a consistent basis, it reflects the team as having a poor capability to deal with risk, Hodgkinson (2009).
- Democratic or participative leadership style
According to Greiner (1973), the participative leader is a touchy leader who is always in contact with his or her employees that reports to him and is familiar to their needs. Swansburg and Swansburg (1999) further explain that a democratic leadership style encourages human relations, teamwork and participation of employees in decision-making.
- Permissive style
This leadership style is also referred to as Laissez-Faire Style, (Hodgkinson 2009). Leaders or managers allow their employees to complete a task or activity as they wish to do so. The leaders will only give guidance and direction to their employees but they will not supervise them, (Greiner 1973). For employees this style provides a sense of empowerment that they have control of their work without having constant management or leadership.

2.13.4 People factors

These factors consist of aspects that affect the employees.

2.13.4.1 Job satisfaction

An employee's individual perceptions, experience of work and tasks outcomes or accomplishments are important aspects for their work motivation, which affects positive

performance, (Sharpley 2002). All employees in an organisation react differently to a situation, for example, a setback in a project can cause disappointment and in another employee, it can cause anger. Employees who are satisfied with their work generally display a positive behaviour and show reduced levels of stress and anxiety, (Klassen, Usher, Bong 2010). It is therefore important to consider all issues as they directly impact an employee performance and their motivation, (Sharpley 2002).

2.13.4.2 Work stress

Griffiths *et al.* (2003, pg 6) explain that, “workers who are stressed are more likely to be unhealthy, poorly motivated, less productive and less safe at work”. This can lead to the company that they are employed in to achieve less success than their counterparts in a similar market can. Griffiths *et al.* (2003) explain that a lack of communication, limited leadership and an organisation not clearly stating their objectives and goals can also add to stress. Other aspects include employees not being placed in the correct areas or jobs in an organisation as well as team leads not involving employees in decision making (Imtiaz , Atul and Chen no date). These cause can added stress to a situation. Work stress is not just a problem experienced in South Africa but a global issue. However, stress is more of a problem experienced by developing countries, as they are not fully aware of the impact of employee stress on the organisation, (Griffiths *et al.* 2003).

2.13.4.3 Community expectations and peer pressure

In-depth issues related to these factors include society expectations and peer pressure as well as social values that both the employee and the manager bring to the workplace, which can directly influence motivation. Every individual belongs to a bigger society and this may clash with that of an organisation. An individual may bring to the workforce his or her own set of values and morale to a company but this may be in conflict with the organisation and its process, Bennet and Franco *et al.* (2001) cited in (Awases 2006). For example, Derivco is an online gambling company that outsources to India. These outsourced employees do not feel comfortable with working for a gambling company as their culture forbids any form of gambling. This leaves an employee in a clash of beliefs and values with the organisation. According to Bennet and Franco *et al.* (2001) cited in Awases (2006) these individuals whose values and morals conflict with the organisation may be less dedicated to the company.

2.13.4.4 Education

McGill, Bradshaw and Huges (2007) conducted research to determine if a diploma course will have an impact on the way employees perform. It was found that when employees completed their diploma they had showed an increased knowledge of the industry as well as

performance. This may be the case however a university degree does not guarantee you a better performance on the job, (Mead 2010). Research conducted by Breaux , Chiasson, Mauldin and Whitney (2009) indicated that organizations are not concerned about higher tertiary course work during recruiting an individual. Breaux *et al.* (2009) suggested that simplified and shorter course work could be introduced to enhance the employee's knowledge rather than a lengthy tertiary education.

2.13.4.5 Motivation

Zurn, Dolea and Stilwell (2004) explains that there is evidence that aids the link between job satisfaction and employee motivation. If an employee is not motivated it could lead to them leaving their job because of dissatisfaction, (Huitt 2004) From this, we can deduce that “there is an interconnection between social, individual and organisational factors has been recognized as a dimension of motivation that eventually affects performance”, Bennet and Franco *et al.* (2001) cited in (Awases 2006, pg 49). Empowering those responsible for implementing various project actions can be seen as a key factor to achieving implementation. However, this is a function of the company culture and structure. There needs to be alignment before empowerment, otherwise responsibility and accountability are not present (Judge and Stahl 1995). Empowerment of employees entails entrustment with sufficient power to make decisions, communicate effectively and to implement the project. A lack of ability by management to adequately delegate leads to delays in the success of a project and employees feeling a sense of de motivation, (Latham and Locke 2003). The Bennett and Franco framework (2001) stress, there are numerous intricate factors that affect motivation. According to Bennet and Franco *et al.* (2001) cited in Awases (2006) other aspects associated with the employee motivation. They are as follows:

- the feedback process given to an employee
- the way their tasks are undertaken
- way managers supervisor their employees
- and delegation and authority

2.14 Theoretical frameworks

In this section of the literature review, various models are discussed. The factors discussed above will be illustrated in the models below. These models emphasise the factors identified thus far as influencing the performance of both outsourced and internal employees. It is not feasible to include every factor in a model hence the models below contains most of the important factors in outsourced and internal employee's performance.

2.14.1 The Job characteristic model

This theory explains the link between job characteristics and an employee or individual's response to the way they work. Hackman and Oldham (1967, 1980) cited in Faturochman (1997, pg 2) states that "there are the five job characteristic dimensions prompting three psychological states that lead to some beneficial personal and work outcomes". They are depicted in figure 2-5 and explained below:

- Skill variety: This type of job characteristics involves an employee having many skills and talents to complete a task. This type of job has various tasks that employees are required to complete hence it is essential for an employee to possess various talents, Hackman and Oldham (1967, 1980) cited in Faturochman (1997).
- Task Identify: Faturochman (1997) explains this characteristic as an individual identifying a task and then completing the work from start to finish.
- Task Significance: This category of job characteristic involves a job having an impact on other people. These people can be in the organisation or outside of the organisation.

Hackman and Oldham (1967, 1980) cited in Faturochman (1997) discovered that each employee would respond differently i.e. positively or negatively to a job that is high in motivating potential. They further characterized people into groups, which are important in accessing the job. They are characterised as psychological state and outcomes. Knowledge and skill which are used to do the work, grow, strengthen, and lastly place work in context. Hackman (1967) and Oldham (1980) cited in Faturochman (1997) explain that positive feelings result from a person performing well in a job and an individual performing negatively causes negative feelings. However a review of the text done by Jelstad (no date) reveals that there are numerous gaps to the job characteristics theory. Parker *et al.* (2001) claims that present attempts do not make an impact in adding to the work characteristics or outcomes, which is of great importance. There has not been much research or development regarding the processes that join work features, (Parker *et al.* 2001). With its criticism this is still the most widely and popular theory used today, Jelstad (no date).

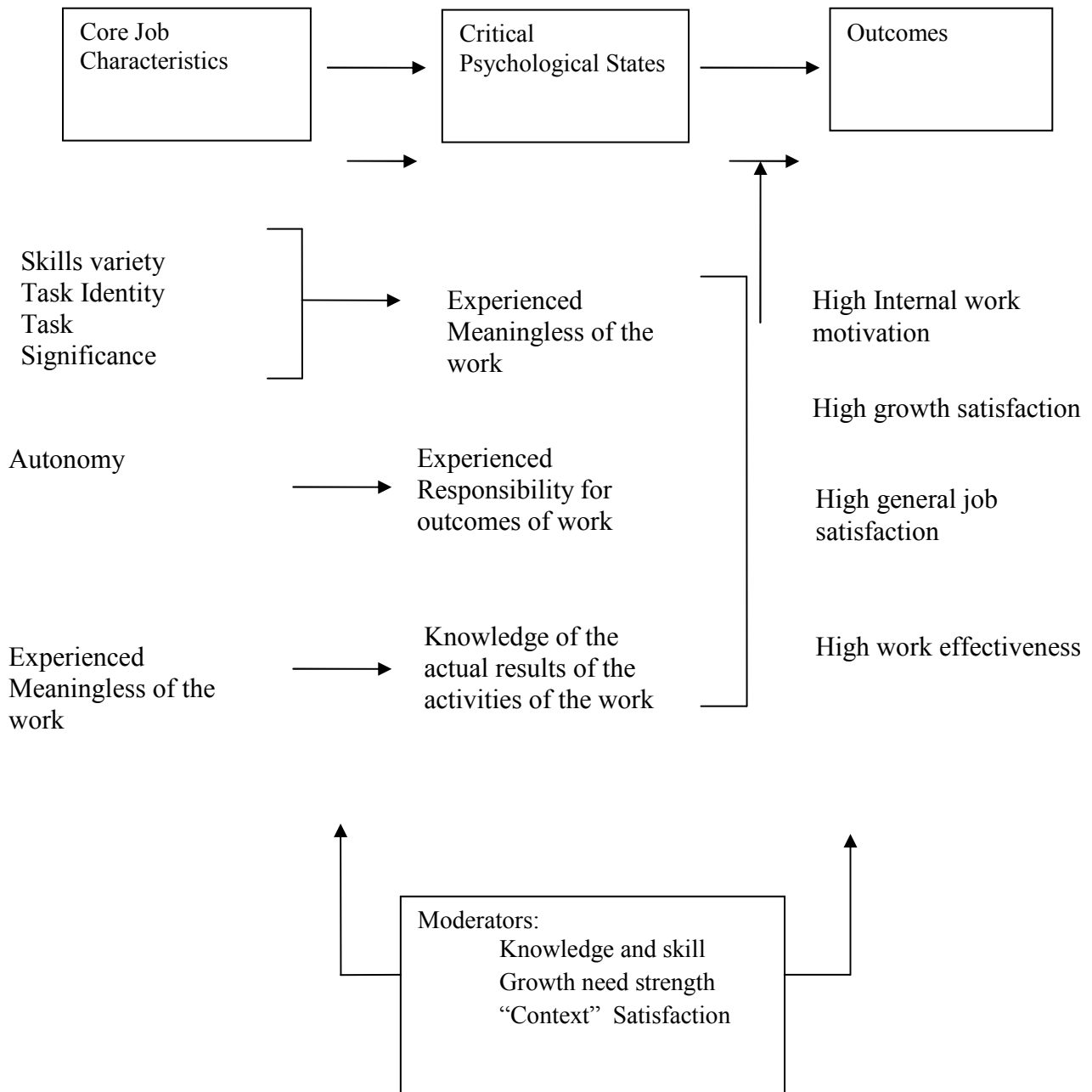


Figure 2-5 The job characteristic model

Adapted from Heckerman and Oldham, 1980

2.14.2 Organisational model

Devlin's (1989) model has identified a number of the factors that play a role in outsourcing. What he does is establish the links or the pathways between these factors and indicate how they interact with each other. Devlin (1989) suggests that senior management should manage these critical linkages and pathways that connect the different parts of the organisation's functional systems and value activities as illustrated schematically in Figure 2-6.

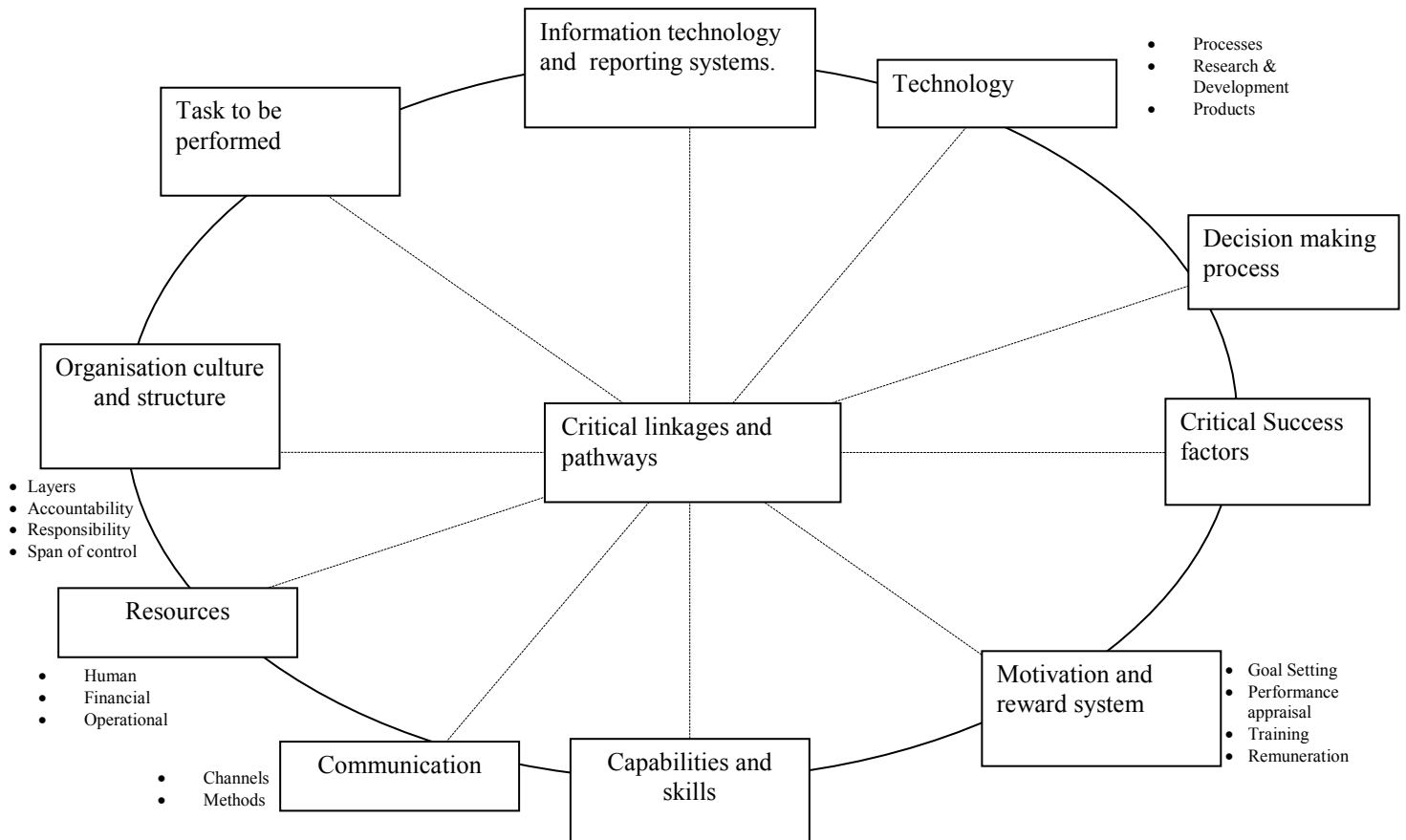


Figure 2-6 Devlin's model
Adapted from Devlin (1989)

2.14.3 Project Performance

The project performance model identifies the link between project performance and job performance, (Cheng, Heng and Fox 2007). The model indicates that an organisation requires aspects of job performance to improve the project performance. This model consists of the following factors: demographic, job performance and project performance. For a project to be deemed successful the project performance factors such as time, scope, quality and profit need to be achieved. However, Cheng *et al.* (2007) explains that employees may not have had appropriate leadership or understanding of a project. As a result the project will suffer as the clients requirements will have not been met.

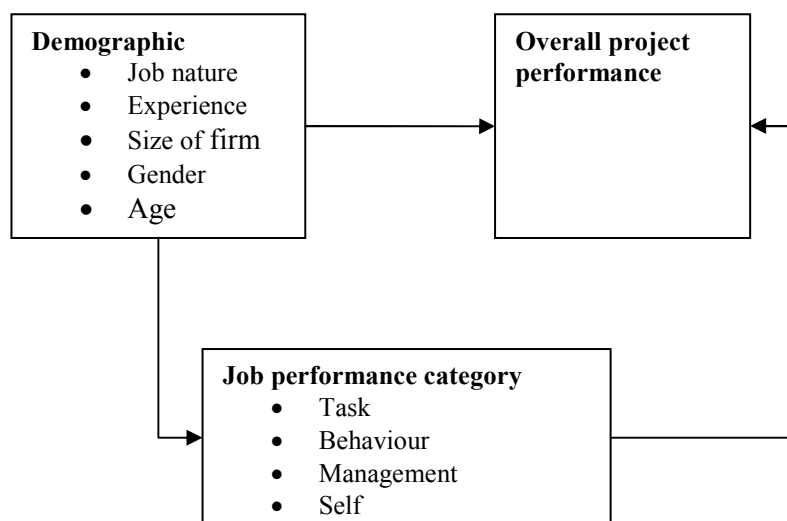


Figure 2-7 Project Performance

Adapted from: Cheng *et al.* (2007)

2.14.4 The Bennett and Franco's model on work motivation.

The Bennett and Franco's model (1999) is derived from individual or internal motivation process. "Individual factors that include issues of individual perception (values, beliefs, critical thinking, anticipating of success and work attitude) experience of work (needs, self concept, personnel impact, skills competence, feedback, incentives and rewards) and individual work outcomes: job satisfaction, empowerment, motivation worker capability and achievement", (Awases 2006, pg 17). These factors are explained in the figure below, 2-8. Bennett and Franco (1999) cited in Awases (2006) explain that a persons inward level is described as a progression in which various factors such as the employee's needs, anticipation and awareness about their own work competence can possibly lead to performance outcome. She further explains that it is vital that a company provides the essentials in surplus so it can aid in a supportive and a good working environment for the employee to feel motivated which will result in a good performance. "The outcomes of motivation are mainly affective (perception, or what workers feel about their work), cognitive (what they think) and behavioural (what they do)", (Bennett and Franco 1999) cited in (Awases 2006, pg 17).

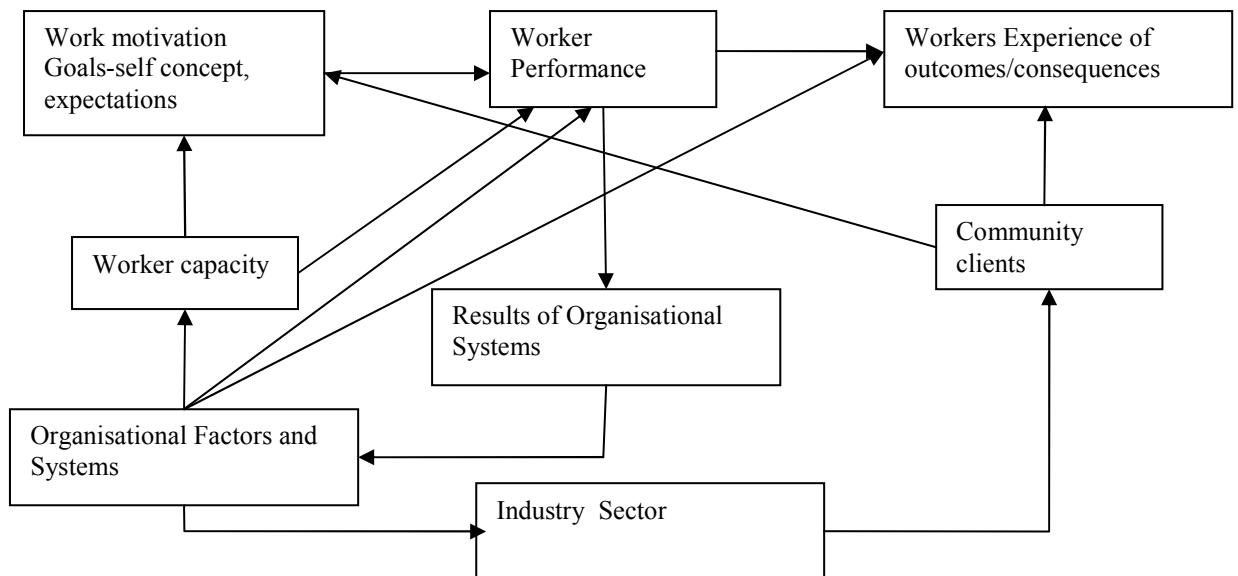


Figure 2-8 Bennet and Franco work motivation model

Adapted from Bennett and Franco (2001)

2.14.5 Shapley's model

This model is based on perception, motivation and performance. Sharpley (2002, pg 19) proposed a model, as depicted in Figure 2-9 that centres on three individual factors as the most important:

- Perceptions – self belief, anticipation of success and critical thinking
- Experience of work - personnel impact, meaningful work, feedback and discretion
- Work outcomes – job satisfaction, work stress empowerment and motivation

Sharpley (2002) is of the opinion that factors such as achievement and perceptions are important for motivation. This leads to better performance and ultimately determines the success of a project. He adds that negative aspects such as a set back in a project such as not reaching a milestone can lead to disappointment. This results in de motivation and a lack of performance. It is therefore important to consider both positive and negative factors that affect an employee.

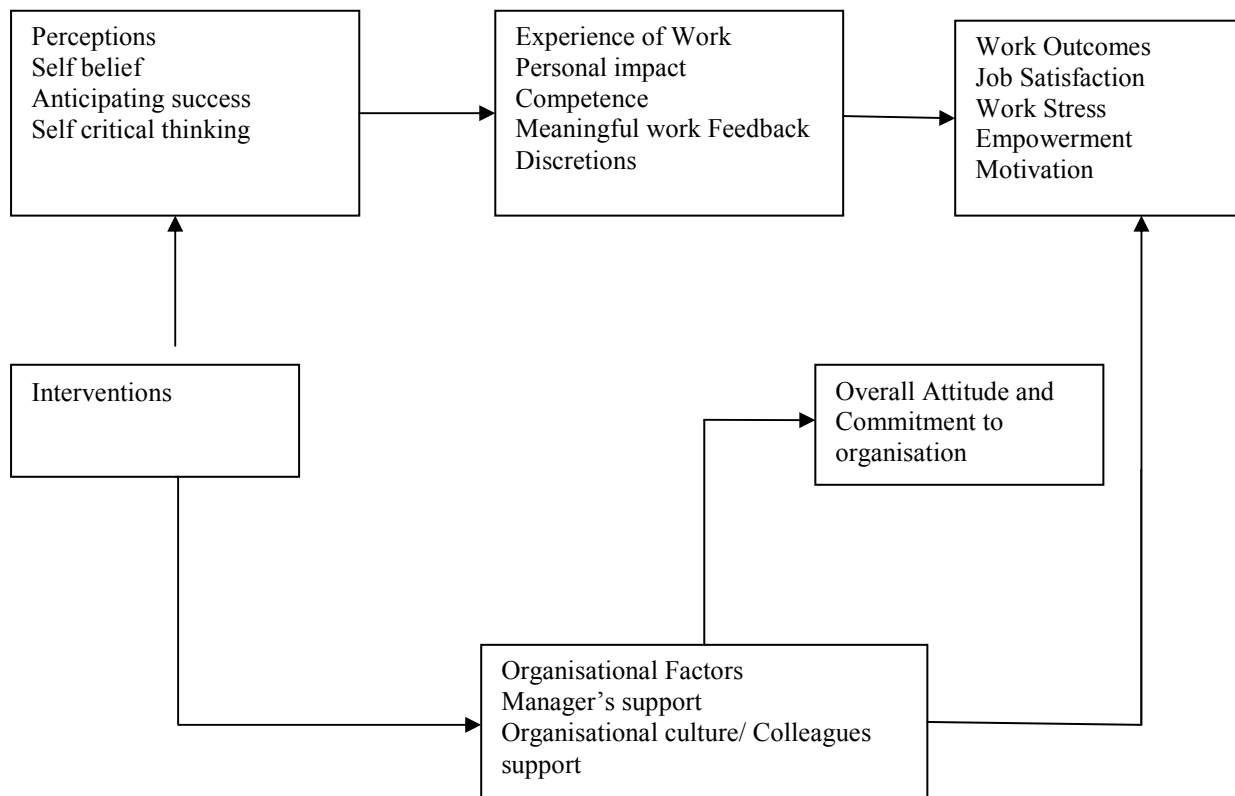


Figure 2-9 Sharpleys model

Adapted from: Sharpley (2002)

2.14.6 Combined performance model

This study proposes that the conceptual framework of Bennett and Franco (2001) in combination with the model of Sharpley (2002) will be used as the theoretical base. Awases (2006) combined these two models and called it the Performance model, as illustrated in figure 2-10. This model will consider the following factors such as social factors, which include expectation from the community, peer pressure, cultural beliefs and social values. According to Price (2000), three key factors are important for an organisational to operate effectively. They include:

- Sturdy , goal focused leadership
- High levels of employee enthusiasm and skills
- A drive to recognize management as valuable human capital

This model explains both external and internal forces that can affect an employee's performance. External can refer to cultural change, environmental issues and client or stakeholder pressures. Internal forces refer to incentives, leadership and stress.

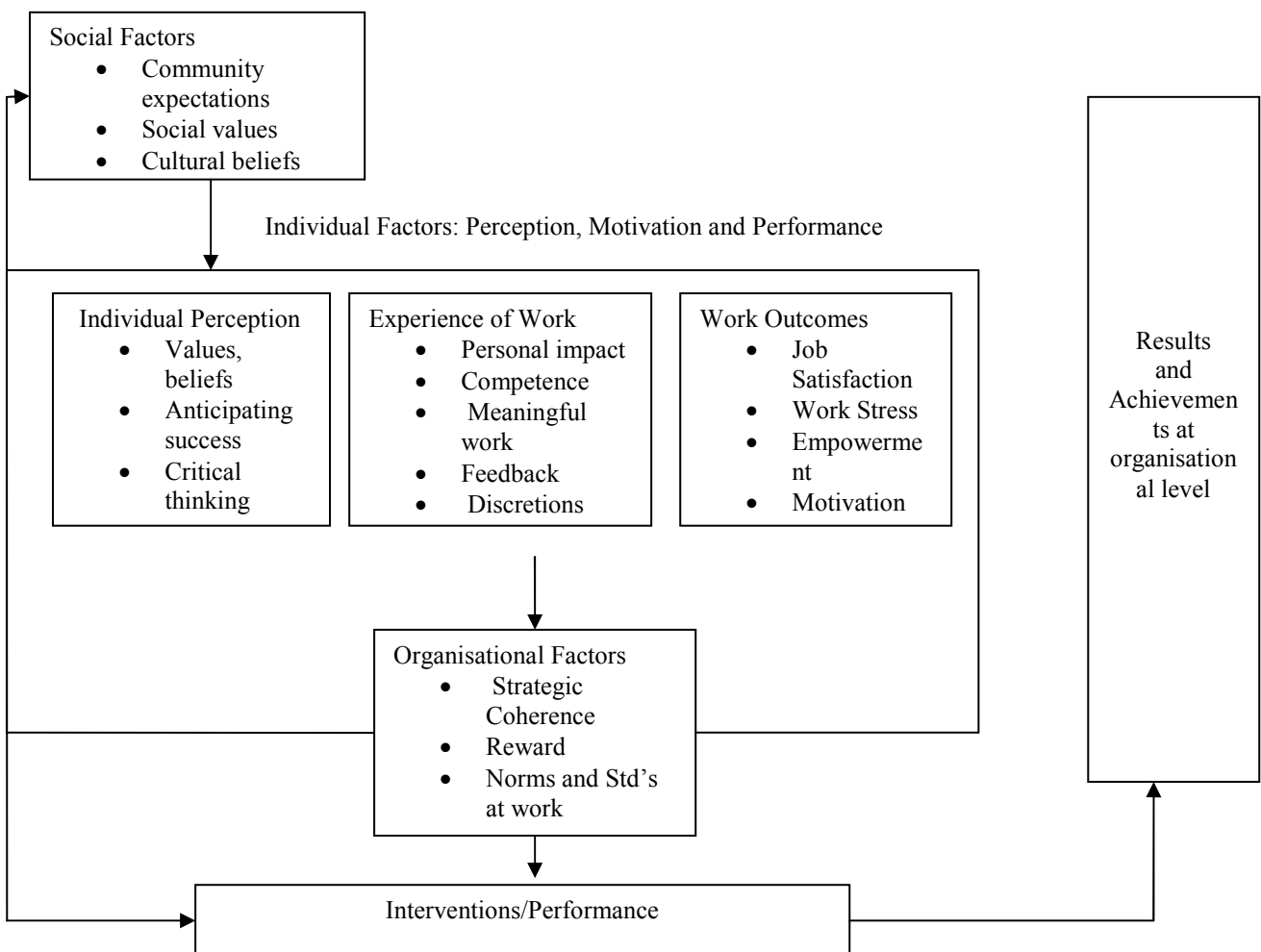


Figure 2-10 Combined performance model
Adapted from Awases (2006)

2.15 Conclusion

An introduction to outsourcing and terms associated with it were discussed. A detailed explanation of the reasons of outsourcing, importance of teams in relation to employee performance as well as factors affecting employee performance was presented. A theoretical framework for analyzing the factors that affect performance of staff was discussed as well. The frameworks by Bennett and Franco (2001) and Sharpley (2002) show evidence that social, cultural, organisational and individual factors affect employee performance. Other models depicted like Devlins organisational models illustrate organisational factors that influence an employee. These models used confirm the factors identified in the literature earlier. They indicate the links and possible interactions of these factors, and the effect that these, or a combination of these can have on internal and outsourced employees. The performance model illustrated combined various works that presented performance of staff. The literature review also looked at management competencies required by managers and leaders in an organisation to effectively manage and guide employees. The above literature review shows the existence of a correlation linking the level of performance of employees and the social, organisational and individual factors that affect their work performance.

The proposition formulated through the literature review is as follows:

Proposition 1: The groups of factors influencing employee performance include the following:

1. Organisational
 - Company culture
 - Communication
 - Goals and strategy
 - Organisational structure
 - Human resource management
2. Project
 - Scope time and budget
 - Project rewards
 - Lessons learnt
 - Job allocation
3. Management
 - Leadership styles
 - Poor communication

- Implementation model
- Training
- Having the right equipment
- Allocation of resources

4. People

- Job satisfaction
- Education
- Work stress
- Motivation
- Community exposure and peer pressure

3 RESEARCH METHODOLOGY

3.1 Background of company

Microgaming is a software licensor based in the Isle of Man, United Kingdom. They are a privately owned company in existence for more than 10 years. Microgaming supports more than 120 casinos and 40 poker rooms but boasts the world's largest poker and progressive jackpot networks. Table 3-1 below briefly shows a few of Microgamings successful clients.

Microgaming Poker Clients	Microgaming Casino Clients
Unibet	BetWay
Ladbrokes	Crazy Vegas
RoxyPoker	Roxy Palace Casino
Tell Poker	VIP Lounge
JBet Poker	Pigs Peak
32 Red Poker	Red Flush
Purple Lounge	My Jackpot Casino
Spin Palace	Fortune Junction
Poker Rewards	999 Casino
Poker Share	Prime Casino
Grand Bay Poker	7Win7

Table 3-1 Microgamming casino and poker clients

However, Microgaming does not develop their own software but rather purchase the software from independent software development houses. Figure 3-1 below explain the relationship between Microgaming and its software developers. To sustain the numerous games going into the market Microgaming receives its software from several development houses such as Derivco, SDU, and Ash Gaming. Support for these games is managed by outside companies such as Spiral and CFC who manage fraudulent activities of players.

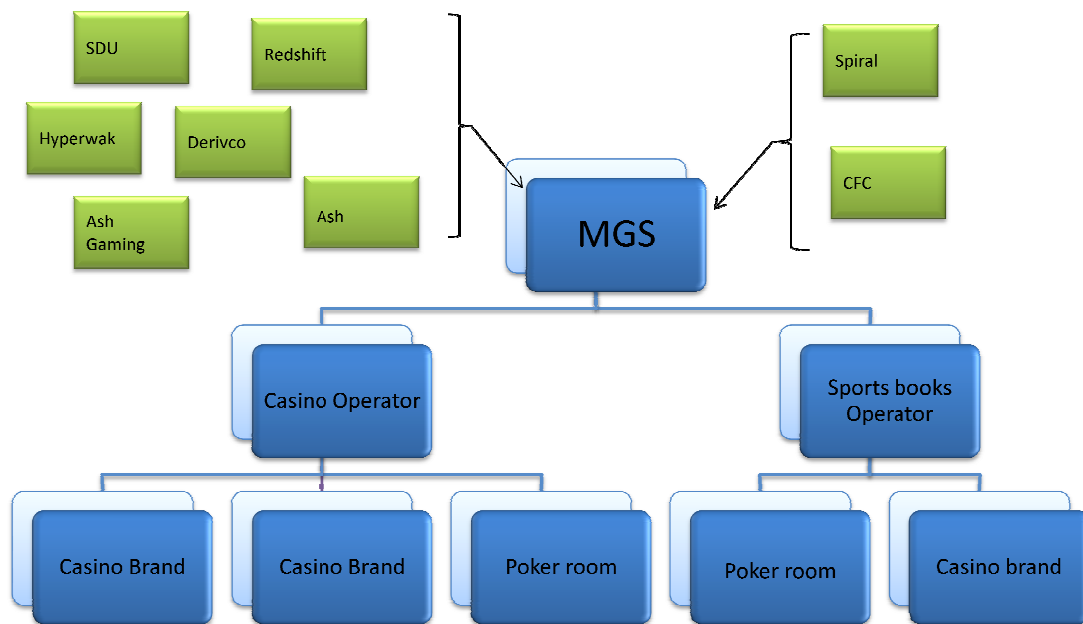


Figure 3-1 Structure of Microgaming in relation to Derivco

This therefore brings us to the organisation that will form the basis of this research, Derivco. As mentioned previously Derivco is one of many software houses that produce front end and back office software for its only customer being Microgaming (MGS). Derivco develops games for the casino, poker and sports book industry. Examples of casino games developed are tomb raider for operators such as Piggs Peak and poker rooms such as Party poker. Spiral and CFC as depicted in the diagram provide services such as monitoring fraudulent players. Derivco saw much opportunity in services like this and is now expanding in the area by developing such software.

The IT Company that the research is based on was formed in 1996 and is a pioneering software company servicing the e-commerce industry. It has grown from a handful of talented individuals, to a diversely disciplined team of over 700 professionals. The IT Company's end-to-end e-commerce and administration software suites are internationally recognised as industry leaders in terms of innovation and quality. New and competitive thinking is the centre of everything the IT Company does.

The IT Company is one of the few dotcom success stories and is progressing rapidly from a successful dotcom to a successfully structured corporate. Coupled with these changes in formal structures, methodologies, processes, procedures and communication protocols are also being implemented. At Derivco, there are at any given time, well over a hundred projects

and these vary greatly from three man teams to 40 man teams with a time span of 2 months to 2 years. The company is changing in both structure and culture from a formal silo structure to a matrix structure. Furthermore, the vision of the company is to be a more project driven entity (project centric) and customer focused. Due to company changes and growth, there are areas that need to be improved upon, such as the knowledge and experience in the roles. In the past, the IT organisation would employ people from all aspects of South Africa in pursuit of retaining the best talent. However as the organisation grew from strength to strength the company needed to employ more people to cater for the demand of its customers. However, South Africa was lacking in IT expertise thereby resulting in the organisation turning to outsourcing. Not only would this ease the load of work but also create a high performance team allowing diverse talent to form an integral part of the team. The organisation turned to outsourcing companies like Zensar, a company based in India. Various positions for example project managers, DBD and DBA developers were outsourced to Zensar. Other companies included SQS where a vast amount of testers was outsourced to the organisation to cope with the abundance of projects ready to be released.

3.1.1 Company culture

Derivco's stands by the following three core values:

- Ownership
- Passion
- Care

Derivco claims that their values give their employees direction for consistent behaviour in order to deliver great gambling games. Derivco instills the culture that employees ought to apply in their every task. According to Derivco.com (2010), employees "must be driven to perform beyond their personal best, in an environment that are both challenging and supportive, individual qualities and personalities are greatly valued within the Derivco team, and individual interests are taken seriously". The organisation is avid about creativity, original ideas as well as innovators. Derivco.com (2010) state that, "in our drive for innovation, and the sustained growth of the business, Derivco offers you the potential for an interesting career trajectory as well as our flat corporate structure encourages you to take ownership of your projects and enables growth, both professionally and personally". Derivco has erected a statue, which has the following, engraved on it: "Dedicated to all those dreamers and realist that come together and keep our feet on the ground while reaching the sky". This message is set to encourage employees to work jointly to attain a universal organisational goal. Derivco aims to create an excellent business-process management environment throughout the organisation. The management has identified the need to improve the productivity and efficiency of operations, as well as improving on the quality of the software

produced. Therefore, objectives would then also bring about a management and control of information change and create available capacity

3.2 Background to the research methodology

Research methodology helps understand what tools and techniques the researcher has used to collect data for the research. This research methodology used in this study is qualitative and it will be discussed in detail. The sections in the chapter describe the method, population and sample, research instruments as well as the data collection.

This chapter defines the tools and techniques that will be used, how the researcher will proceed to carry out these activities, how progress will be measured and what constitutes success. According to Joppe (2001), basic quantitative and qualitative research techniques, concepts and terminology should be able to provide this information in an early accessible format and non technical language.

In addition, the research methodology will form a basis for the researcher to prove that her results are valid and reliable. According to the Walonick (2005, pg 1), “validity determines whether the research truly measures what it was intended to measure or how truthful the research results are”. Therefore the methodology framework is of importance in ensuring that reliable and valid results are obtained (Leed andOrmrod 2001).

3.2.1 Sampling technique used

The research method employed in this study was quantitative in nature and utilised surveys. The type of research undertaken was exploratory in that, although the factors investigated have been well documented, they have not been investigated in respect to the online gambling industry in South Africa. The population used in this research were project teams at Derivco, which were used to determine the performance of outsourced and internal employees. A sample of projects was selected randomly from the total number of projects in the organisation. Table 3-2 below describes the different projects that were selected. They are as follows:

- Small projects with a short-term time line
- Small projects with a long term time line
- Large projects with a short-term time line
- Large projects with a long term time line

	Short-term time line	Long term time line
Small Project	3 projects	3 projects
Large projects	3 projects	3 projects

Table 3-2 Project selection

3.2.2 Rules for project selection criteria

There were approximately 50 IT projects that were occurring in Derivco at the time of this research. A sample of 12 projects was selected for the purpose of this study.

Three projects in each category were randomly selected i.e. 3 small projects with a short-term time line was selected (refer to table 3-2).

The random process involved the researcher obtaining the project list from the project management department. Projects were categorised according to Table 3-2 above. The researcher proceeded to allocate a number to each project thereafter writing the numbers on pieces of paper and shuffling it. A work colleague selected 12 pieces of paper and the researcher used those projects for the basis of this research. Small and large projects were classified by the number of team members that are in that project.

- Teams having six or less developers are considered a small project.
- A large project have six to 10 developers in the team
- A short-term project is a project that takes no longer than 4 months. This includes the deployment date.
- A long term project is a project has duration of 6 to 10 months.

3.3 Projects

The table below explains the projects in details that this research is based on.

Number	Project type	Number of members in a project	Duration of project	Methodology used	Purpose of project
1	Small project	Four	Short-term time line	Scrum	<p>Free games</p> <p>This provides the capability to give away free spins on selected games at an individual player level.</p> <p>When the Virtual Pit boss functionality is fully operational it will be possible to automatically trigger free spins based on a predetermined event.</p>
2	Small project	Five	Short-term time line	Waterfall	<p>Virtual pit boss</p> <p>This involves changes to the server and architecture to enable a host of event based actions such as:</p> <ul style="list-style-type: none"> • Event based chat • Event based bonuses (including free spins). <p>The operator will be able to set up the parameters or conditions (triggers) that need to be met in order for the system to take a predetermined action (event).</p>
3	Small project	Four	Short-term time line	Spiral	<p>Real time analytics</p> <p>Will enable the operator to make recommendations based on the player's behavior.</p>
4	Small project	Five	Long term time line	Waterfall	<p>Multi language platform</p> <ul style="list-style-type: none"> • Foreign language for flash and Viper casinos • Ability to capture multi-byte fields • Catering for multi-languages by providing a language pack for the specific language with the core build. • Ability to ship the entire product to the translators so that they can translate in context. <p>Unified platform</p> <p>This initiative will enable the following features:</p> <ul style="list-style-type: none"> • Single wallet • Single sign-on • Player home page
5	Small project	Five	Long term time line	SCRUM	Setting Infrastructure

					<p>The purpose of this initiative is to give operators the ability to manage all player facing settings on a system, casino, player profile and player level.</p> <p>Settings would include such things as:</p> <ul style="list-style-type: none"> • Purchase limits • Game limits • Specific functionality for individual users
6	Small project	Four	Long term time line	Scrum	<p>Download to Banking</p> <p>This is aimed at improving the entire download, registration and banking process for players. Key features include:</p> <ul style="list-style-type: none"> • Simultaneous download and registration • Player to choose either their e-mail address or alias as their login name • Player to have the ability to change their login name and password at any time • Staggered registration process <p>Allow guest and real play at time of login</p>
7	Large project	Seven	Short-term time line	Waterfall	<p>This is aimed at improving the entire download, registration and banking process for players. Key features include:</p> <ul style="list-style-type: none"> • Simultaneous download and registration • Player to choose either their e-mail address or alias as their login name • Player to have the ability to change their login name and password at any time • Staggered registration process <p>Allow guest and real play at time of login</p>
8	Large project	Eight	Short-term time line	SCRUM	<p>Error reporting and monitoring</p> <p>This will enable error messages to be sent to the server whenever a certain event occurs. Such events may include:</p> <ul style="list-style-type: none"> • Failure to download • Error in a player being able to

					<p>deposit money</p> <p>The information may be acted upon immediately and also used to highlight and analyse the points of weakness in a host of processes, applications and UIs.</p>
9	Large project	Seven	Short-term time line	Spiral	<p>Lobby design</p> <p>Obtain input from operators to feed into the design of new lobbies being developed</p> <p>Setting Infrastructure</p> <p>The purpose of this initiative is to give operators the ability to manage all player facing settings on a system, casino, player profile and player level.</p>
10	Large project	nine	Long term time line	Prototyping	<p>Automated promotion manager with trigger based events.</p> <ul style="list-style-type: none"> • Ability to segment the players into multiple market segments for targeted promotions • Create and administer promotion campaigns with budgets and timelines • Identification of triggers and events to automate execution of promotions • Personalized player experience through tailored UIs • Personalized player experience through human interaction • Gaining a complete player profile • Increase the player's perceived value of gaming • Accurate promotion management reporting
11	Large project	Nine	Long term time line	SCRUM	<p>Ongoing Dev requests</p> <ul style="list-style-type: none"> • Enterprise software releases • Web development • Support for third party software (Medium/low) <p>Open systems integration</p> <p>In the short-term this involves integrating with third parties such as Next Gen and</p>

					KG Soft. In the longer term this initiative involves designing our system around the open systems model to allow for easy integration with third party software.
12	Large project	Ten	Long term time line	SCRUM	<p>Update Software architecture</p> <ul style="list-style-type: none"> • Redesign of overall architecture to ensure scalability and enhanced functionality • New / improved game (ongoing)Improvements to games include enhanced graphics and features • While this is an ongoing effort, particular attention is being paid to additional games • Live Dealer. This initiative will enable operators to offer live dealer as part of their gaming portfolio.

Table 3-3 Summary of project types

3.4 Sample size

Seventy-four employees at Derivco filled out the questionnaire that was distributed. The employees comprised of both internal and outsourced employees.

3.5 Data collection method

This refers to the way data is collected from the selected sample. Sekaran (1992) cited in Singh (2001) found that researchers select the information gathering methods based on facilities available, accuracy required, time span, expertise of the researcher and financial resources. It is thus far vital that appropriate and reliable methods are used, in order to achieve optimum results. Interviews, surveys, observation, focus groups and questionnaires are methods frequently used.

Trochim (2002) explains that, interviews are among the most challenging and rewarding forms of measurement. It allows the researcher the opportunity to gather information regarding his or study from respondents involved in the study's investigation and promotes their co-operation. Interviewing is as much an art as a science (Scott 1986). There are various types of interviews that exist, however, the method of administration depends on the researcher. Surveys are popular techniques that involve the researcher in collecting data from the research sample i.e. the individuals from the sample itself (Walonick 1993). This information is primary data and done with a questionnaire. Joppe (2001, pg 28) is of the opinion that "it allows for standardization and uniformity both in the questions asked and in the method of approaching subjects, making it easier to compare and contrast answers by the respondent group". Observation as a technique focuses on watching behaviour, with a strong emphasis being placed on non-verbal cues. However, listening is also important. Many consider it a method of studying behaviour as it occurs in a natural environment. This method is useful when it does not manipulate or intervene a particular aspect or behaviour. Joppe (2001, pg 30) described questionnaires as a "formal approach to measuring characteristics, attitudes, motivations and opinions as well as past, current, and possible future behaviours, thus information produced from a questionnaire can be used to describe, compare or predict these facts". Sekaran (1992) cited in Singh (2001) defined a questionnaire as an efficient data collection method, especially if the researcher knows what is required, and understands the analysis of the responses.

3.6 Data collection tool to be used

A questionnaire was chosen to administer among the sample of 74 as opposed to other methods like interviews and observation, as they are time consuming. The approach used was non-experimental in nature. A quantitative descriptive survey was constructed as can be seen in Appendix A. The questionnaire included input mainly from the literature (Robson, 2002). There was one open-ended question included in the survey, to probe for factors that might not have been covered by the questionnaire.

3.6.1 Design of the questionnaire

The researcher began by first conducting an extensive literature review in order to develop the questions being asked. The questionnaire was simple so that respondents would not have a problem understanding the language as there was various respondents from India whose first language was not English. The questionnaire did not require the respondent to fill in a name or employee number therefore, anonymity was guaranteed resulting in respondents being more willing to participate in the research. The questionnaire contained dichotomous questions that are yes or no questions. The questionnaire also contained closed ended questions. These were Likert based questions where the scale ranged from strongly agree, agree, neutral, strongly disagree to disagree. The questionnaire was not piloted as it was based on the following existing questionnaire. The questionnaire is described as follows:

Introduction of the questionnaire

The questionnaire gave a brief description of the research and requested the individuals to participate in the study. The questionnaire provided the anticipated average time a respondent would require filling in the questionnaire as well information on the procedure to answer the questionnaire.

Question 1 to 4

These questions were aimed at gathering demographic information from the respondents. E.g. gender and age.

Question 5 and 6

These questions helped the researched to gain an insight into the educational background of the respondent as well as their position in the organisation.

Question 7 to 24

Likert based question were used in the remaining of the questions. This was used to ascertain how employees felt about project situations and environments. Questions included in this section were leadership style, project and social factors, which are discussed in Chapter 2 of the literature review. This section of the questions made is possible for the researcher to gain further insight regarding the investigation of performances between in sourced and outsourced employees.

The questionnaire was not piloted as it was based on various previous questions. Question 8, 9 10, 11 are leadership based questions. This was adapted from Clarks (2002) leadership style survey. Question 23 and 24 was aimed at investigating the employees understanding of the organisation strategies and goals. The Humming corporate culture questionnaire which was designed by Alford (no date) made use of similar questions. The remaining questions were based on the work of Awases (2006).

3.6.2 Administration of the questionnaire

The researcher administered the questionnaire over 5 days at Derivco (La Lucia Ridge). Once the respondent had confirmed their willingness to participate the purpose of the survey was explained. The researcher physically handed each questionnaire to a respondent.

3.1 Validity and reliability

3.6.3 External validity

External validity deals with the ability of the research to be generalised across persons, settings and times (Golafshani 2003). External validity is affected by the research being set in the real world or being laboratory based. In terms of this, the research was carried out in a real world setting so external validity is confirmed. External validity is also affected by sample choice. The sample selected was partly for convenience because only a limited number of people in the gambling industry were accessible. This reduces the external validity of the study. To counter this, a sample of not less than 74 employees was randomly selected.

3.6.4 Internal validity

Internal validity is also known as face or content validity and deals with the extent to which the measuring instrument provides adequate coverage of the topic under study (Golafshani, 2003). In order to increase internal validity, the questionnaire was constructed based on an extensive literary review. By basing the questionnaire on other questionnaires explained in section 3.6.1, it was possible to improve the construct validity.

3.6.5 Reliability

Reliability refers to the measurement procedures of accuracy and precision (Golafshani 2003). The reliability of the study was enhanced by the use of a standardized questionnaire for all respondents.

3.7 Conclusion

This chapter explained the research method employed by the researcher as well as the method used to conduct the study, in order to obtain valid and reliable results. In addition, the tool and techniques adopted by the researcher were discussed.

(A copy of the questionnaire can be found in the Appendix 1)

4 DATA ANALYSIS

4.1 Demographics

This chapter aims to analyse and present the data that has been collected by means of a questionnaire. A critical analysis of the study's results is discussed. The statistics are presented on graphs and tables and thereafter analysed.

4.1.1 Outsourced vs. internal employees

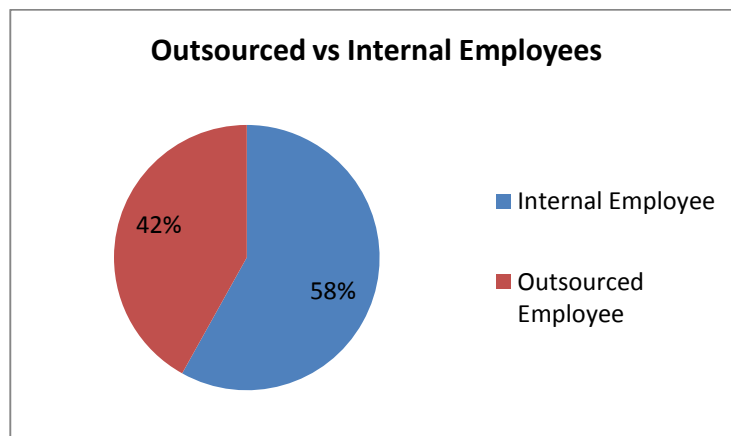


Figure 4-1 Outsourced and internal employees.

A total of 74 respondents who are employees at Derivco were used in this study. Respondents were asked to indicate if they are an outsourced or internal employee. Forty-two (42%) of the respondent have indicated that they are outsourced employees. These findings contradict the findings put forth by the Watson Wyatt's research (2004) whose findings revealed that (67%) of outsourced employees made up the organisations which is much higher than that of this research. Derivco has more internal than outsourced employees. Possible reasons for this could attribute to Derivco only recently implementing an outsourcing policy. This was put in place for the last three years due to its growing demand of customers.

4.1.2 Gender and position in the company

		Position						Total
		DBD/DBA/Developer	Tester/ QA	Team Lead	Business Analyst	Project Manager	Other	
Gender	Male	24	5	7	4	5	3	48
	Female	6	6	2	6	3	3	26
Total		30	11	9	10	8	6	74

Table 4-1 Gender and position in the company

The information captured in the table above aims to investigate respondent’s position in the organisation. A cross tabulation was done regarding employee’s gender and position in the company. Six categories were chosen as they make up the project team. The categories are as follows: DBD/DBA/Developer, Tester/QA, Team Lead, Business Analyst, Project Manager, Other. The first education level group DBD/DBA/Developer shows that the majority of the respondents fall here. It is clear that males dominate the population comprising a total of 65%. However, this is much higher than the South African population, which comprises 49% of males, (Statsa.gov.za 2010). On the other hand, this figure of 65% is still on par with the total population of Derivco, as there is a total of 61% male. A possible reason for this is Derivco’s core business is developing games, for this they require many programmers. The majority of developers are male as depicted in table 4-1. The sixth category being “Other” includes positions such as product managers. Depending on the project, this role can be filled by a business analyst however; on larger projects, a product manager may be required.

4.1.3 Age group

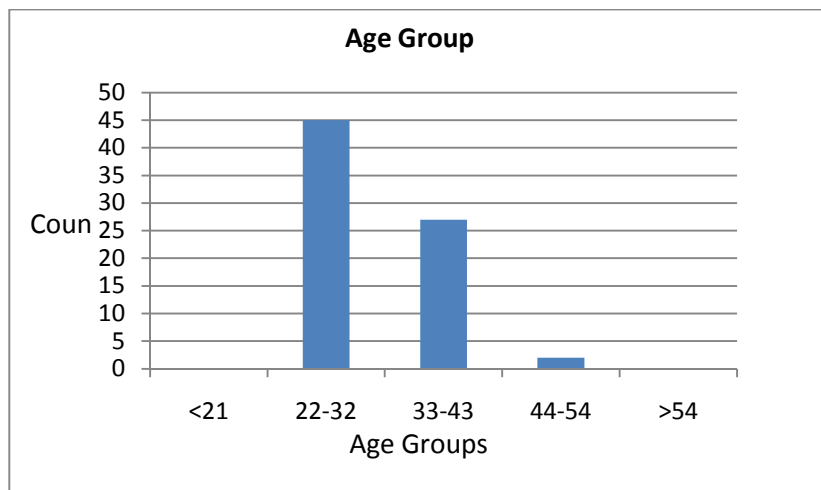


Figure 4-2 Age group

The age groups were divided into four categories. It is evident from the graph that the majority of the respondents fall into the second category (22-32). Possible reasons for this can include that testers and developers are in this age categories. Derivco generally employs University graduates for the position of testers. University graduates are normally between the ages of 22 to 25. Derivco is a company that strongly believes in fresh young, talent, which is clear from the graph as the majority of the population fall between the 22 to 32 age group.

The age group (45 – 54) consists of less than five employees of the sample population. Management and executive roles can attribute to this category. The third age category 33 – 43 being the second largest of the population consisting of 36% of the respondents. Possible

reasons for this can be attributed to the fact that the organisation requires experienced employees with prior knowledge to implement projects successfully.

4.1.4 No of work years experience

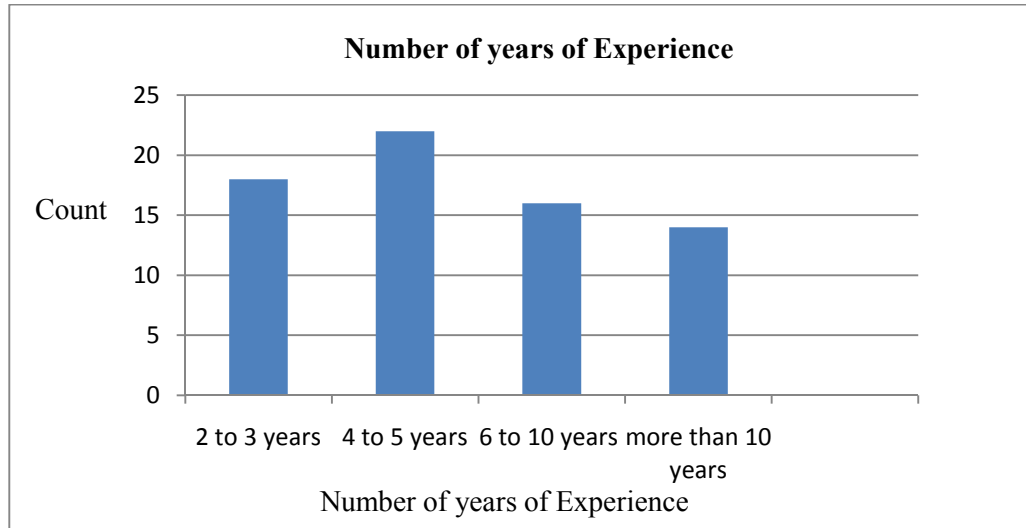


Figure 4-3 Number of years of experience by employees

Respondents were asked to indicate how many years of experience they have in the industry. Figure 4-3 illustrates that 29% of the sample fall into the 4 to 5 year category. As mentioned Derivco employs a younger set of employees therefore this can attribute to the majority of the respondents falling into this category employees with 2 to 3 years of experience making up 24% of the employees while employees with more than 10 years of years experience followed closely behind making up 18% of the sample. It is clear from the Figure 4-3 only a mere 5 % of the employees have less than one year of experience. Possible reasoning for this can attribute to the tester position, as they are usually graduates with limited amount of experience.

4.2 Major findings

To determine the performance in internal and outsourced employees a factor analysis was conducted. Analysis is then carried out to determine which groups of questions actually measure a latent or unobserved variable that affects the performance of employees (factor analysis). Factors are subsequently, extracted and grouped together. This information will aid in the validity testing (principal component analysis). The questions used in the questionnaire are then correlated to the factors extracted during factor analysis to determine validity of the factors (Cronbach's alpha testing). By calculating the p value of questions, a difference in the results from the questions between outsourced and internal employees can be determined

(Pearson chi square). Reliability of the data is then tested thereby leading to analysis of variance.

4.2.1 Investigation of differences between internal and outsourced employees

Questions 5 - 23 were used to determine the independent variables. Questions 5-23 were selected as they represent possible differences in the employees whereas questions (1-4) represent demographic information. The Pearson Chi Square shows the statistics tests as well as the classification on any of the variables below is independent of whether the employee is internal or outsourced. The researcher rejected independence findings at the 95% significance level when the p-value returned by the test (shown as Sig. in the tables below) is less than 0.05. In this case, we have statistical evidence that there is a difference between outsourced and internal employees.

4.2.1.1 Education

Respondents were asked to indicate their education levels. A value of .241 was established therefore this indicates there is no statistical evidence that there is a difference in education levels between outsourced and internal employees as the p-value is greater than 0.05.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
Education	undergraduate	16	9
	honours	2	1
	masters	15	8
	PhD	2	6
	not defined	6	7

Table 4-2 Education

Pearson Chi-Square Tests

		Employee Status
Education	Chi- square	6.732
	df	5
	Sig.	.241(a,b)

Table 4-3 Pearson Chi Square Test: Education

4.2.2 Professional education

ISEB and c# showed the highest count with a value of five and five respectively for outsourced employees and MSTS and MSDBA with the lowest count. The outsourced employees may not be familiar with MSTS and MSDBA. Therefore, they shy away from these qualifications. Although the p value is .288 it is not above 0.55, which was the ideal indicator for differentiating between the employees. It therefore shows an increase in efforts needs to be made to make both internal and outsourced employees aware of programs and qualifications, which can aid in the increase of performance.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
Professional Qualification1	MSTS	3	0
	MSDBA	2	0
	c#	4	5
	ISEB	4	5
	not defined	30	21

Table 4-4 Professional Qualification 1

Pearson Chi-Square Tests

		Employee Status
Professional Qualification 1	Chi-square	4.996
	df	4
	Sig.	.288(a,b)

Table 4-5 Pearson Chi Square Test: Professional qualification 1

4.2.3 Professional qualification 2

Derivco, which is a gold certified Microsoft partner, sponsors Microsoft courses as well as PMBOK and BABOK to their internal employees. The aim of the question was to determine if there were differences in professional qualifications that employees have. Respondents were asked to indicate their education level. It was found that only four internal employees had a MSCE qualification whilst two outsourced employees had it. It can be deduced that there is statistical evidence that there is a difference in professional qualification 2 levels

between outsourced and internal employees as the p value is 0.748. Possible efforts made from Derivco to educate their internal employees to improve their work performance could be the possible reason for the difference.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
Professional Qualification2	MSCE	4	2
	BABOK	0	0
	PMBOK	0	0
	Other	12	11
	not defined	27	18

Table 4-6 Professional qualification 2

Pearson Chi-Square Tests

		Employee Status
Professional Qualification 2	Chi-square	.579
	df	2
	Sig.	.748(a)

Table 4-7 Pearson Chi Square Test: Professional qualification 2

4.2.4 Team methodology

Respondents were asked to indicate what methodology their team uses. It is clear from the table that majority of the respondents answered SCRUM, the largest of the group being internal employees comprising 19 employees. Only 12 internal employees used an agile methodology whilst the outsourced employees compromised of 7. It can be deduced that more internal than outsourced teams used the SCRUM methodology. This could be the result of Derivco supporting internal employees to attend scrum courses but Derivco's training strategy now suggests that outsourced employees attend a SCRUM course. However Sliger (2006) states that "agile approaches promise faster delivery of working code, higher quality, and an engaged development team that can deliver on its commitments whereas traditional waterfall, with its long phases and heavy investment in big up-front design, lacks the flexibility to swiftly respond to the market". As a result no outsourced employees were using the waterfall methodology. Furthermore, a large number of outsourced employees, being 11, did not know

what methodology their teams were using. The results from this research indicate that there is no statistical evidence that there is a difference in methodology between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
Methodology	Waterfall	6	0
	Agile	12	7
	Spiral	1	2
	Scrum	19	11
	Prototyping	2	0
	Don't know	3	11

Table 4-8 Methodology

Pearson Chi-Square Tests

		Employee Status
Methodology	Chi-square	14.797
	Df	5
	Sig.	.011(*,a,b)

Table 4-9 Pearson Chi Square Test: Methodology

4.2.5 Democratic/participative leadership

This question tested the type of leadership style, being democratic or participative leadership. Jooste (1996) and Booyens (1993) cited in Awases (2006, pg 43) state that, “this is one of the most preferred leadership styles where employees have a degree of freedom to express their views”. This research indicates the p-value is marginally greater than 0.05, therefore it is there is some statistical evidence on the way outsource and internal employees view the democratic or participative leadership.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
My team lead listens to my ideas but will make the final decision	strongly agree	7	6
	agree	16	19
	neutral	10	5
	disagree	10	1
	strongly disagree	0	0

Table 4-10 Leadership Style 1

Pearson Chi-Square Tests

		Employee Status
My team lead listens to my ideas but will make the final decision	Chi-square	7.619
	df	3
	Sig.	.055(a)

Table 4-11 Pearson Chi Square Test: Leadership Style 1

4.2.6 Team lead, leads by infusing energy

There is no statistical evidence in this question that there is dissimilarity in perceptions of leadership among outsourced and internal employees. It is evident from the results that both types of employees agree when asked that their team leaders lead by infusing energy. The research findings could aid Derivco in enforcing this type of leadership as a substantial amount of internal and outsourced employees agreed to this question being true.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
My team lead by infusing energy	strongly agree	3	3
	agree	19	18
	neutral	16	7
	disagree	5	3
	strongly disagree	0	0

Table 4-12 Leadership style 2

Pearson Chi-Square Tests

		Employee Status
My team lead leads by infusing energy	Chi-square	2.160
	df	3
	Sig.	.540(a)

Table 4-13 Pearson Chi Square Test: Leadership style 2

4.2.7 Team lead has the power to make decisions on his own

Respondents were asked if their team lead has been given the power to make decisions on his own. Twenty-three of the internal respondents agreed to this statement whereas only 10 outsourced employees indicated they had agreed. This research proves that senior managers do not have to micromanage their team leads as the decision making process lies with them. However statistically there is no evidence that there is a difference in perceptions of team lead authority between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
My team lead has been given the power to make decisions on his own	strongly agree	2	3
	agree	23	10
	neutral	11	10
	disagree	6	8
	strongly disagree	1	0

Table 4-14 Leadership style 3

Pearson Chi-Square Tests

		Employee Status
My team lead has been given the power to make decisions on his own	Chi-square	4.836
	df	4
	Sig.	.305(a,b)

Table 4-15 Pearson Chi Square Test: Leadership style 3

4.2.8 Need for supervision

The p-value is greater than 0.05, therefore there is no statistical evidence that there is a difference in the need for supervision between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
I need little supervision from my team lead	strongly agree	21	8
	agree	15	17
	neutral	5	4
	disagree	2	2
	strongly disagree	0	0

Table 4-16 Need for supervision

Pearson Chi-Square Tests

		Employee Status
I need little supervision from my team lead	Chi-square	4.229
	df	3
	Sig.	.238(a)

Table 4-17 Pearson Chi-Square Test: Need for supervision

4.2.9 Work related problems

The p-value is greater than 0.05, therefore there is no statistical evidence that there is a difference in work related problems between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
When I incur a work related problem	strongly agree	12	8
	agree	26	20
	neutral	5	3
	disagree	0	0
	strongly disagree	0	0

Table 4-18 Work related problem

Pearson Chi-Square Tests

		Employee Status
When I incur a work related problem	Chi-square	.140
	df	2
	Sig.	.932(a)

Table 4-19 Pearson Chi Square Test: Work related problem

4.2.10 Suitability of equipment

The p-value is greater than 0.05, therefore there is no statistical evidence that there is a difference in perceptions of equipment suitability levels between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
In my day to day activities I have the necessary equipment to complete my work	strongly agree	14	8
	agree	24	16
	neutral	5	6
	disagree	0	1
	strongly disagree	0	0

Table 4-20 Suitability of equipment

Pearson Chi-Square Tests

		Employee Status
In my day to day activities I have the necessary equipment to complete my work	Chi-square	2.446
	df	3
	Sig.	.485(a,b)

Table 4-21 Pearson Chi Square Test: Suitability of equipment

4.2.11 Meeting of project timelines

A similar research conducted by Loser (2006) revealed a p value of 0.26. The results of this study being .329 indicate a consistency with previous studies but it also indicates an increase in employees meeting project deadlines. This research however indicates that there is no

statistical evidence in the difference in perceptions of meeting project timelines between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
I'm meeting due dates on my project	strongly agree	10	5
	agree	21	20
	neutral	11	4
	disagree	1	2
	strongly disagree	0	0

Table 4-22 Meeting of project deadline

Pearson Chi-Square Tests

		Employee Status
I'm meeting due dates on my project	Chi-square	3.435
	df	3
	Sig.	.329(a)

Table 4-23 Pearson Chi Square Test: Meeting of project deadline

4.2.12 Scope

A study reported by Atikison (1999) that only 27% of projects deliver proposed benefits, such as scope. Supporting, earlier studies suggest that fewer than 10-20% of projects deliver the expected benefits. The results from this research illustrates that 30% of internal employees indicate they met the scope of the project whereas 26% outsourced employees met the project scope. This depicts that the research results concurs with previous research. However the p-value is greater than 0.05, therefore there is no statistical evidence that there is a difference in meeting of project timelines between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
The scope of my project deliverables are being met	strongly agree	7	3
	agree	25	17
	neutral	11	10
	disagree	0	1
	strongly disagree	0	0

Table 4-24 Scope

Pearson Chi-Square Tests

		Employee Status
The scope of my project deliverables are being met	Chi-square	2.286
	df	3
	Sig.	.515(a,b)

Table 4-25 Pearson Chi Square Test: Scope

4.2.13 Meeting of business requirements

Although there is no statistical evidence that there is a difference in levels of meeting business requirements between outsourced and internal employees, there is a large amount of both internal employees (24) and outsourced employees that agreed with this statement.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
The business requirement of my project is being met	strongly agree	12	4
	agree	24	18
	neutral	7	6
	disagree	0	3
	strongly disagree	0	0

Table 4-26 Meeting of business requirements

Pearson Chi-Square Tests

		Employee Status
The business requirement of my project is being met	Chi-square	6.150
	df	3
	Sig.	.105(a)

Table 4-27 Pearson Chi Square Test: Meeting of business requirements

4.2.14 Understanding of team role

The p-value is greater than 0.05, therefore there is no statistical evidence that there is a difference in understanding of the team role between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
I understand	strongly agree	14	6

the team role and expectation			
	agree	22	20
	neutral	6	3
	disagree	0	2
	strongly disagree	1	0

Table 4-28 Understanding of team role

Pearson Chi-Square Tests

		Employee Status
I understand the team role and expectation	Chi-square	5.494
	df	4
	Sig.	.240(a,b)

Table 4-29 Pearson Chi Square Test: Understanding of team role

4.2.15 Conflict management

According to Porter (2005, pg 23) “work relationships are prone to breakdowns, in large part because the workplace naturally encourages change and growth that often lead to conflict, modern work environments are beset by employee turnover, organisational restructuring, limited resources, and other organisational challenges”. Porter (2005) further explains that these factors could lead to employees not communicating efficiently or developing work stress and difficulty in operating in the team. However, it is evident from the results that this does not occur at Derivco as the majority of outsourced and internal employees agreed that conflict was handled well in their team. Nevertheless, there is no statistical evidence that there is a difference in perceptions of equipment suitability levels between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
Conflict is well handled in my team	strongly agree	7	6
	agree	25	18
	neutral	9	3
	disagree	2	4
	strongly disagree	0	0

Table 4-30 Conflict Management

Pearson Chi-Square Tests

		Employee Status
Conflict is well handled in my team	Chi-square	3.017
	df	3
	Sig.	.389(a)

Table 4-31 Pearson Chi Square Test: Conflict management

4.2.16 Quality of communication

Derivco makes use of tools like Microsoft SharePoint as a central point for employees to communicate work related information. This is supported by research conducted by Treem, Grates and Feather (2006) which revealed that in twelve companies; more than 10 percent of respondents use Microsoft SharePoint to facilitate collaborative communications. This research revealed that a substantial amount of employees were happy with the communication that being 27 outsourced employees and 14 internal employees. Treem *et al.* (2006) also suggested that the technology being Microsoft SharePoint already exists to meet most of the corporate communications needs. However, this research depicts is no statistical evidence that there is a difference in satisfaction with levels of communication between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
I'm happy with the quality and frequency of communication I receive from my team members	strongly agree	6	9
	agree	27	14
	neutral	9	6
	disagree	1	2
	strongly disagree	0	0

Table 4-32 Quality of Communication

Pearson Chi-Square Tests

		Employee Status
I'm happy with the quality and frequency of communication I receive from my team members	Chi-square	3.810
	df	3
	Sig.	.283(a)

Table 4-33 Pearson Chi Square Test: Quality of communication

4.2.17 Team members completing a piece of work

The p-value is greater than 0.05, therefore there is no statistical evidence that there is a difference in team dynamics between outsourced and internal employees.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
I can rely on my team members to complete a piece of work	strongly agree	6	7
	agree	24	18
	neutral	11	2
	disagree	1	3
	strongly disagree	1	1

Table 4-34 Team member completing a piece of work

Pearson Chi-Square Tests

		Employee Status
I can rely on my team members to complete a piece of work	Chi-square	6.387
	df	4
	Sig.	.172(a,b)

Table 4-35 Pearson Chi-Team member completing a piece of work

4.2.18 Understanding of goals and strategy

Respondents were asked if they understand the organisational goals and strategies. Thirty-five internal employees indicated they had agreed to this statement whereas only nine outsourced employees agreed. A larger number of employees agreeing to this statement can be the result of Derivco CEO having regularly updates with employees about the company strategies and goals. Field (no date) is of the opinion that by clearing these aspects of uncertainty of the organisations goals the employee will feel as if they are part of a team as well as part of the larger picture that is the company. This research revealed that there is no statistical evidence

that there is a difference in understanding of the organisations goals and strategies between outsourced and internal employees as the p value is less than 0.05.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
I understand the organisations goals and strategies	strongly agree	2	5
	agree	35	19
	neutral	4	6
	disagree	1	1
	strongly disagree	1	0

Table 4-36 Understanding of goals and strategies

Pearson Chi-Square Tests

		Employee Status
I understand the organisations goals and strategies	Chi-square	5.629
	df	4
	Sig.	.229(a,b)

Table 4-37 Pearson Chi Square Test: Understanding of goals and strategies

4.2.19 Understanding of policy

This research further revealed that there is no statistical evidence that there is a difference in understanding of the organisations goals and strategies between outsourced and internal employees as the p value is less than 0.05.

		Employee Status	
		Internal employee	Outsourced employee
		Count	Count
The organisations policies and procedures are clearly communicated to me	strongly agree	2	5
	agree	35	19
	neutral	4	6
	disagree	1	1
	strongly disagree	1	0

Table 4-38 Understanding of policy

Pearson Chi-Square Tests

		Employee Status
The organisations policies and procedures are clearly communicated to me	Chi-square	5.629
	df	4
	Sig.	.229(a,b)

Table 4-39 Pearson Chi Square Test: Understanding of policy

4.3 Analysis of variance

Analysis of variance is done to test for a difference in mean response between internal and outsourced employees on any of the questions. The output below shows that the only question on which there was a statistically considerable disparity in the mean response among internal and outsourced employees was: The business requirement of my project is being met, which the outsourced employees scored higher. Based on the analysis variance one can deduce that outsourced employees perform better than internal employees. A possible reason for this might be that in rapidly growing companies such as Derivco; communication is poor, thus resulting in the outsourcing process poorly communicated or being vaguely communicated to the management and employees at the lower levels. This leads to employees being unclear regarding the projects as well as their responsibilities. People's aspirations and perceptions need to be handled sensitively, as they are still employees implementing the project. Resource allocation, company culture, implementation plan and collective participation in a project in an outsourcing environment are other aspects that need attention. These variables seem to be centred on the formulation process where planning needs to be done up front. Focus from management needs to be on these factors as this is what has been highlighted in the analysis.

4.3.1 Exploratory factor analysis and reliability analysis

Appendix 2 shows the correlations between responses. The correlation ranges from -0.5 to one. A value from one to -0.5 is a strong negative correlation, a value from -0.5 to zero is a weak negative correlation, a value from zero to 0.5 is a weak positive correlation and a value from 0.5 to one is a strong positive correlation. The correlations are examined to see if there are any relationships between counter intuitive responses or those, which contradict the theory. This could indicate that respondents filled the questionnaire in a random manner, which would suggest that the data is meaningless. However, the correlations do not suggest that this is the case.

4.3.2 Factor analysis

According to Decoster (1998, pg 46), "factor analysis is a collection of methods used to examine how underlying constructs influence the responses on a number of measured variables".

Factor analysis can be utilized to verify a model or concept of a latent construct that is being researched. An example of a latent construct on a questionnaire could be a concept like team

dynamics, which may be measured by a list of questions on a questionnaire. The questionnaire can be validated by doing an exploratory factor analysis and observing the extent to which the factors that are extracted correspond to the theoretical constructs that we are trying to measure. It can be observed what factors are extracted which have not yet been hypothesized. This may indicate significant influences on the data not yet considered or discovered. This will be especially relevant, if these factors are tested for reliability and turn out to be valid factors. Extraction of factors is done using principal components analysis. Part of the output of the principal components analysis is an Eigen value for the factor extracted and the percentage of difference in the data that is explained by the factor removed. The number of factors extracted is determined using the Eigen value larger than one criterion. Injazz, Atul and Chen (1996) explain that all factors with Eigen values greater than one are retained in the model. The solution below shows that seven principal components or factors with Eigen values are greater than one are extracted (Injazz *et al.*1996). These values represent 76% of the data. This is shown in the percentage of variance column below. Seven factors were extracted on this basis. These factors in combination explain 76.85% of the variation in the responses received. (Refer to Appendix 3

4.3.3 Extraction method: Principal component analysis.

Appendix 4 is a rotated component matrix. According to Cadima (2009, p 3) “Standard principal component analysis replaces a set of p variables with p new variables, called principal components (PCs), which are uncorrelated linear combinations of the original” (centered) variables”. In other words, the rotated component matrix is used to determine which questions make up each of the seven factors extracted. The values in the rotated component matrix are factor loadings. A factor loading is the correlation of a question to a particular factor. A question is part of the factor that it has the highest loading on. The highest loading for each factor is highlighted below.

4.3.4 Reliability analysis

Reliability analysis is used to validate the questions that make up a factor using Cronbach’s (1951) alpha test. According to Reynaldo and Santos (1999), Cronbach’s alpha is a statistic analysis used to measure the internal consistency and reliability of scales that are used to measure constructs such as the factors extracted above. The test is based on the inter-item correlation between the items that make up the latent construct or factor. Reynaldo and Santos (1999) further explains that if a group of items measures an individual latent construct then it would be expected to show a particular correlation structure that is consistent across multiple respondents. Frumkin (2009, pg 32) state that “Cronbach's alpha assesses the extent to which a set of variables measures a single one-dimensional latent construct based on the inter-item correlations of the items, if the data have a multidimensional structure”. Cronbach's alpha (which ranges from 0 to 1) will be low. A reliability coefficient (alpha) of value 0 .70 or higher is a very good level of reliability for social science research situations. Moss *et al.* (1998) indicate that an alpha score of 0.6 is acceptable. Values of alpha lower than this would indicate that the latent constructs are not reliably measured by the items that make up the scale or hypothesis, in other words indicating that the factor is not reliable.

4.3.4.1 Reliability analysis: Factor 1

Factor 1 is made up of the following questions:

- The scope of my project deliverables are being met
- I understand the team role and expectation
- Conflict is well handled in my team
- I can rely on my team members to complete a piece of work

Cronbach's Alpha	N of Items
.810	4

Table 4-40 Reliability analysis: Factor 1

The factor is highly reliable as indicated by the value of alpha, 0.810. It explains 25.4% of the variation in the data.

4.3.4.2 Reliability analysis: Factor 2

Factor 2 is made up of the following questions:

- I understand the organisations goals and strategies
- The organisations policies and procedures are clearly communicated to me

Cronbach's Alpha(a)	N of Items
-.9354	2

Table 4-41 Reliability analysis: Factor 2

As shown in table 4-41, the factor is not reliable and therefore it cannot be interpreted.

4.3.4.3 Reliability Analysis: Factor 3

Factor 3 is made up of the following questions:

- As an internal employee I take greater ownership
- As an outsourced employee I take greater ownership

Cronbach's Alpha(a)	N of Items
1.000	2

Table 4-42 Reliability analysis: Factor 3

It is reliable and explains 14% of the variation in the data.

4.3.4.4 Reliability analysis: Factor 4

Factor 4 is made up of the following questions:

- My team lead leads by infusing energy
- I am happy with the quality and frequency of communication I receive from my team members.

Cronbach's Alpha	N of Items
.289	2

Table 4-43 Reliability analysis: Factor 4

As shown in table 4-43, the factor is not reliable and therefore it cannot be interpreted.

4.3.4.5 Reliability analysis: Factor 5

Factor 5 is made up of the following questions:

- When I incur a work related problem
- In my day to day activities I have the necessary equipment to complete my work

Cronbach's Alpha	N of Items
.576	2

Table 4-44 Reliability analysis: Factor 5

As shown in table 4-44, the factor is not reliable and therefore it cannot be interpreted.

4.3.4.6 Reliability analysis: Factor 6

Factor 6 is made up of the following questions:

- I need little supervision from my team lead
- I'm meeting due dates on my project

Cronbach's Alpha	N of Items
.322	2

Table 4-45 Reliability analysis: Factor 6

As shown in table 4-45, the factor is not reliable and therefore it cannot be interpreted

4.3.4.7 Reliability analysis: Factor 7

Factor 7 is made up of the following questions

- My team lead listens to my ideas but will make the final decision

- My team lead has been given the power to make decisions on his own
- The business requirement of my project is being met

Cronbach's Alpha	N of Items
.461	3

Table 4-46 Reliability analysis: Factor 7

As shown in table 4-46 the factor is not reliable and therefore it cannot be interpreted.

4.3.5 Interpretation of factor analysis

The aim of this section was to discuss and explain the factors identified. Factor analysis was used for two primary reasons: to reduce the number of variables in the system and to detect the structure in the relationships between variables. From the results of the factor analysis, 7 factors were identified. These factors consisted of the following variables for each factor 17, 19, 20, 22 and 23, 24 and 12, 13 and 21, 10 and 14, 15 and 11, 16 and 8, 18. Please see appendix 5 for the factor analysis results.

The commonality in Factor 1 seems to be managers influence towards the team; Factor 2 is more based on the organisation and policies; Factor 3 primarily focuses on the ownership of employees; Factor four focuses on leadership and the communication in a team; Factor five focus is allocating of resources. Factor six is based in on leadership and enforcing due dates while Factor 7 primarily adheres to the leadership and the business requirement, hence:

Factor 1: Managerial influence

Factor 2: Organisational understanding, procedures and policies

Factor 3: Employee ownership

Factor 4: Leadership and communication

Factor 5: Resource allocation

Factor 6: Leadership and due dates

Factor 7: Influence of leadership and business requirement.

These seven factors are now discussed individually as to their influence on employee performance.

4.3.5.1 Factor 1: Managerial influence

The factors, which the researcher summarized, were grouped as Managerial influence which included the team role in the project, how is conflict handled in the team, the scope of a project, employees trusting other team members. Top management, and especially the general manager, play central roles in the performance of employees. They affect the quality and success of the implementation (Anderson and Narasimhan 1979; Herbert and Deresky 1987). Beer and Eisenstat (2000) indicate that if the top management team operates within silos and refuses to cooperate effectively for fear that, managers lose some of their power, this influences the employees. Power struggle and company politics (Brenes *et al.* 2008) are present in organisation due to the complexity of their organisational structures and the characteristics of the people they hire in terms of being ambitious and driven. These are matters that management of Derivco have come to realise and understand.

The human element is one of the key factors during implementation (Buller 1988; Fryxell *et al.* 2004). Management needs to be aware of the aspiration, needs and feelings that affect the people working in the organisation and be aware that the only reason the organisation exists is that there are people who work together towards a common goal. A change in one affects the other, hence part of management's role is to ensure that all the company's employees are aware of, and are focused on, the end goal of the project. Some of the identified variables were how conflict is handled. Looking at all the models from the literature reviewed the Bennet and Franco *et al.* (2001) and Sharpley (2002) models in Figure 2-8 and 2-9 seems to best represent this factor of managerial influence. These models highlights two of the four variables that are grouped under this factor and illustrates the dynamics of these variables in this factor.

4.3.5.2 Factor 2: Organisational understanding, policies and procedures

The variables that were grouped to make up this factor are organisational understanding, policies and procedures. Organisational policies and procedures affect implementation indirectly through its influence on information, control and decision processes (Hrebiniak 1992; Heide *et al.* 2002). Employees are often exposed to many waves of change; especially in a highly dynamic environment, therefore they often do not understand or are unaware of the latest version of policies of the organisation. Managers see this as an important variable as organisational policies and procedures can save time and energy when involved in outsourcing. Horizontal information sharing across organisational structures can be challenging. Obtaining the right information to ensure that departments are aligned to the policies and procedures provides many trails for management. Derivco has not yet found

effective ways to break down these barriers between business units within its self and that poses the biggest challenge in terms of information sharing.

Looking at all the models from the literature reviewed, Develins organisational model in Figure 2-6 and Sharpleys (2002) model in Figure 2-9 best represents this factor of organisational policies and procedures. This model highlights and illustrates the connectivity of these variables to the study and their effect on performance.

4.3.5.3 Factor 3: Employee ownership

Factor three focussed on whether outsourced or internal employees took more ownership of their tasks. Management influences the role of employees' ownership during the outsourcing process hence they require clarification. A top-down or "laid back" senior management style includes aspects such as discomfort with conflict, shying away from taking responsibility, decision making and use of the top teams for administrative matters rather than focusing on outsourcing implementation and clarifying job roles (Noble 1999; Beer and Eisenstat). This lead to having a negative impact on employee performance and leads to a less effective top management team. Managers that do not discuss clarification of the job role and responsibilities or do not hold subordinates accountable, undermine the entire team's potential and hold the whole team back. Managers need to solve conflict situations and see them as challenges in team dynamics in order to build teams capable of reaching their potential. Top-down management style builds frustration with lower level employees who do not feel valued. This leads to management being seen as disconnected from what is going on at lower levels (Buller 1988).

Managers should have the ability to coordinate across functions, businesses and borders (Beer and Eisentat 2000) especially in large and complex organisations. Employees need to know what they are responsible and accountable for and thus it is management's responsibility to ensure that this is communicated timely and correctly. A mistake in this part of the outsourcing process could cause confusion and dissatisfaction amongst employees. Hence only good communication can assist in ensuring that employees are aware of what needs to be done, by whom and when. This can than lead to both outsourced and internal employees taking ownership. These variables represented were not found in the models depicted in section 2.14. It can be concluded that this factor does not influence employee performance.

4.3.5.4 Factor 4: Leadership and communication

A leader will always encourage their employees to do well and motivate them to perform effectively; in return, the employees will be rewarded with a promising future, (Ismail *et al.* 2010). This view is supported by Awases (2006, pg 95) who emphasis that "leaders act as role models and mentors for their staff". Which style is more appropriate for outsourced and

internal employees cannot be determined rather adapted to each situation. Zurn et al (2004) explain that leaders still have the challenge to create long-term vision to grow their teams and build commitment to organisational change. It can be deduced that an effective and efficient leader will lead their team to lead themselves. This is commonly referred to as self-management, (Ismail *et al.* 2010).

Communication is one of the pillars of outsourcing; without it, outsourcing is destined to be a major problem (Reed and Buckley 1988). Managers often find it difficult to get the right method of communication with their teams. Communication takes time, energy and dedication from managers who are normally fully occupied with their normal day-to-day activities. More effective communication requirements put a strain on the management of the company. Top-down and bottom-up communication is something that management should encourage so that trust and a culture of openness allow for employees to bring to the attention of management any matters that they feel influence outsourcing (Beer and Eisentat 2000). Communication as a variable can be found in 2.14.6 suggested from the literature (i.e. see Figure 2-10). This suggests that it does form one of the factors that need to be paid particular attention when looking at outsourcing and employee performance in terms of delivery a project.

4.3.5.5 Factor 5: Resource allocation

The lack of planning produces inefficiencies, omissions, overlaps and anxiety for all involved (Porter and Harper 2003). Management and team leads needs to focus on getting a meaningful and detailed plan for the implementation phase, to ensure they have all the necessary equipment, systems and resources. Managers need to know what their priorities are so that they can ensure that the team has all the necessary resources to complete the project. Resource allocation affects an individual's job and the way he/she performs. The human resource department needs to plan to accommodate for a new outsourced team member. In addition, management needs to be hands on for example, a new outsourced employee who is a developer will require certain programs installed on their PC to begin coding. This variable can be found in Figures 2-6 and 2-7 models suggested from the literature. This suggests that it does form one of the factors that can influence an employee's performance.

4.3.5.6 Factor 6: Leadership influence on meeting due dates

Managers in the gambling industry in South Africa are highly skilled individuals with an array of backgrounds. It is important to identify the different leadership styles, as this will aid employees to work optimally. These managers view leadership as a key part of successful outsourcing. Derivco does empower their managers but with applicable responsibility and accountability that comes with trust from the organisation. Thus employees have limited

leadership to meet their end goal which is the within the time line. Top management, and especially the general manager, play central roles in leading their teams. They affect the quality and success of the project (Anderson and Naraimhan 1979; Herbert and Deresky 1987). When chief executive officer's and general managers bypass members of their senior team and give information and orders to those at lower levels, this creates confusion as to whose instruction the employees need to follow (Sterling 2003). Middle management is then unaware of senior management's instructions as well as being unaware of what their people are doing. Middle managers from different function or business units cannot be expected to work effectively when their managers are leading them in competing directions. Middle managers are not going to risk rejection by their own bosses or peers (Judge and Stahl 1995). Due to ineffective senior management leadership, new crises occur. Time and attention is then taken away from implementing the project directives (Alexander 1985).

This can lead to employees not successfully meeting the deadline. Possible reasons for this is that there are not sufficient resources, unclear understanding of the requirements and a lack of leadership. As this factor is focused on meeting of the project deadline, none of the implementation models identified in the literature reviewed in section 2.14 represent it. Project factors was a new aspect that was introduced this is depicted in 2.13.2 and in Figure 2-7.

4.3.5.7 Factor 7: Influence of leadership and meeting the business requirement

Meeting the requirement is core to a project-as ultimately the customer needs to be satisfied with the product. However, several aspects can influence the employee from meeting the requirement such as lack of resources, motivation and ineffective leadership. The line manager's role is therefore to guide employees in their day-to-day jobs as well as to align employees to achieve company goals. The business requirement is defined at the beginning of the project where the customer will define what they require. It is important at this stage for each team member to understand the requirement. This will guide the customer as to whether the requirement is achievable upfront and not leave the team in a situation where they are struggling to develop a product that is not realistic. Management has a direct influence on motivating and incentivising their employees to obtain the correct end goal of achieving the business requirement. Hence, management needs to understand and know what they need to drive in terms of their employees to ensure that the employees are correctly motivated and to incentivise accordingly (Crittenden and Crittenden, 2008). Derivco has implemented many of these schemes. However, a large number of these schemes are more focused on the day-to-day operations of the company rather than driving performance of employee. Thus mainly short-term goals are achieved, which results in employees being rewarded for attaining the goals. Senior management has the overall and end view of where they want to take the

company (Sterling 2003). This needs to be communicated and put into action throughout the company.

From the frameworks discussed in section 2.14 the Sharpley (2002) model in figure 2-9 and the combined performance model in 2-10 relate to this factor of leadership however, there is no specific model identifying the business requirement.

4.3.6 Proposition vs. Factors

The literature review and the models illustrated in section 2.14 suggest 20 variables that can widely influence employee performance. These variables were grouped into four proposed factor groups as shown below:

4.3.6.1 Proposition 1:

The groups of factors influencing performance of employees are:

- Organisational
- Project
- Management
- People

The factor analysis found that seven factor groups were responsible for influencing employee performance in the gambling industry in South Africa and these were as follows:

Factor 1: Managerial influence

Factor 2: Organisational understanding, procedures and policies

Factor 3: Employee ownership

Factor 4: Leadership and communication

Factor 5: Resource allocation

Factor 6: Leadership and due dates

Factor 7: Influence of leadership and business requirement

<i>Proposition Grouping</i>	<i>Factor Grouping</i>
Organisational factors: Company culture Goals and strategies Communication Human resource management Organisational structure	Organisational Policies and Procedures: Understanding the organisation goals Policies and procedures of the organisation
Management factors: Implementation model Poor communication Leadership styles Allocation of resources Right equipment Training	Managerial Influence : Team role in the project How is conflict handled in the team, The scope of a project Employees trusting other team members Managers influence on communication Motivating leadership styles Communication received from employer
People Factors Job satisfaction Work stress Motivation Community expectation and peer pressure Education	Leadership and meeting the business requirement Motivating leadership styles Business requirement met
Project Factors Scope, time and budget Project reward Lessons learnt Job allocation	Leadership and meeting deadline Leadership styles Meeting deadlines of the project
	Employee Ownership Internal employees take more ownership Outsourced employees take more ownership

Table 4-47: Proposition groups vs. Factor groups

The variable for both the proposed and factor groups were the same but they were not necessarily found in the same categories. The results of the factor analysis indicate that the performance in internal vs. outsourced employees is covered by the above four groups of factors in Table 4-47. However, the proposed groups do not cover all factors as one factor identified was not covered in the proposition groups.

The research has answered the following questions identified by the researcher:

- How do performances of outsourced employees differ from internal employees in terms of project delivery

Employees differed in performance, as outsourced employees were able to perform better in delivering the business requirement in a project.

- What are the factors that affect employee performance

It was identified that 7 factors affected employee performance they are as follows:

- Factor 1: Managerial influence
- Factor 2: Organisational understanding, procedures and policies
- Factor 3: Employee ownership
- Factor 4: Leadership and communication
- Factor 5: Resource allocation
- Factor 6: Leadership and due dates
- Factor 7: Influence of leadership and business requirement.

- What differences are there in the team methodology of an outsourced employee team as opposed to internal teams

There was a significant difference in the use of the SCRUM methodology as more internal employees made use of this methodology. This could be the result of Dericvo supporting internal employees to attend scrum courses but Dericvo's training strategy now suggests that outsourced employees attend a SCRUM course.

- How do leadership styles differ in outsourced and internal teams

There was a considerable difference in the democratic or participative leadership between outsourced and internal employees. This research indicates the p-value is marginally greater than 0.05, therefore that there is some statistical evidence on the

way outsource and internal employees view the democratic or participative leadership.

- Which employees, i.e. an outsourced or internal employee meet projects goals within time and scope?

It was found in the research conducted that outsourced employee performed better than internal employees in terms of project delivery.

4.3.7 Conclusion

The results obtained from the questionnaire were discussed and explained taking into account the literature review performed and the industry in which the data were surveyed. The demographics of the sample obtained of the South African gambling industry were discussed and explained. These are important variables to take into account when a manager leads a team in a diverse environment, as employee performance can be impacted. The commonality in factor one seems to be managerial influence; Factor two is based more on the organisation understanding, policies and procedures therein; Factor 3 primarily focuses on the ownership of employees; Factor four focuses on leadership and the communication in a team; Factor five main focus is allocating of resources. Factor 6 is based in on leadership and enforcing due dates while Factor 7 primarily adheres to the leadership and the business requirement, they are summarised as follows:

- Factor 1: Managerial influence
- Factor 2: Organisational understanding, procedures and policies
- Factor 3: Employee ownership
- Factor 4: Leadership and communication
- Factor 5: Resource allocation
- Factor 6: Leadership and due dates
- Factor 7: Influence of leadership and business requirement.

Factor one dealt with the managerial influence in the companies. These include team role in the project how is conflict handled in the team; the scope of a project; and employees trusting other team members. The leader's role and duties cannot be emphasised enough when it comes employee performance. The variables for factor two were grouped to make up organisational, which included the organisation and policies; Factor three primarily focuses on the ownership of employees; Factor four focuses on leadership and the communication in a team; Factor five mainly focuses on allocating of resources. Factor six is based on leadership

and enforcing due dates while Factor seven the final factor group primarily adheres to the leadership and the business requirement. The literature review and the models illustrated in section 2.14 suggest that there are 20 variables that can influence employee performance. These variables were then grouped into four proposed factor groups. The factor analysis found that there were seven factor groups responsible for influencing employee performance in South Africa. The variables for both the proposed and factor groups were the same but they were not necessarily found in the same categories. The aim of analysis of variance was to be able to determine if there was a difference in employee performance. The results of this showed that outsourced employees performed better.

5 RECOMMENDATIONS

5.1 Introduction

This study revealed that various factors could affect an employee's performance. These factors are explained in chapter two of the literature review however, there are only a few factors that influence internal and outsourced employees, which are explained in chapter four. The results covered the demographic of the sample that was used. These responses were then subjected to factor analysis to reduce the number of variables in the system and to detect structure in the relationships between the variables used in the questionnaire. The demographics of the sample obtained revealed that there were more males in the organisation (61%) and the age group was dominated by the 22-32 age categories. Based on the factor analysis seven underlying constructs were identified among variables influencing employee performance. These were managerial influence, organisational understanding, policies and procedures, employee ownership, leadership and communication, resource allocation, leadership and due dates, influence of leadership and business requirement. The analysis of variance was conducted in order to determine if there is a difference in outsourced vs. internal employee performance. The results showed that outsourced employees performed better in terms of project delivery. For employees (internal and outsourced) to improve their performance and for the organisation to increase the number of successful projects implemented, it is essential for everyone to take the necessary steps to be aware of the factors that affect their performance as well be proactive in improving their performance. Ultimately, the aim is to implement a project successfully; therefore, management has to tackle the issue of performance that effectively facilitates a projects success.

This chapter aims to suggest recommendations for future research and outlines recommendations, to educate employees and the organisations on how to improve performances.

5.2 Recommendations

5.2.1 Risk analysis techniques

An organisation that does not effectively identify factors that influence an employee's performance can expect to have projects exposed to various risks. Risk management comprises of various techniques, which will help the organisation identify performance factors. According to Stoneburner, Gougen and Feringar (2002) the risk management process

is made up of three key aspects: risk assessment, risk mitigation, evaluation and assessment. These three techniques will help provide the organisation with an effective and efficient performance model.

5.2.2 Risk assessments

Information was gathered by means of a questionnaire. The results from the questionnaire indicate that an outsourced employee performs better than internal employees do. Each of these areas will be explained further.

5.2.2.1 The business requirement of a project is met. This is important for employees to meet, only thereafter a project can be deemed successful. It is encouraging to note that internal employees also met the business requirement however; the outsourced employees performed better and scored higher in achieving the business requirement.

5.2.2.2 Leadership styles:

There was a discrepancy in results when both outsourced and internal employees were asked about the democratic or participative leadership. More outsourced employees agreed that their team lead listens to their ideas however fewer internal seemed to agree with this. Swansburg and Swansburg (1999) explain that a democratic leadership style encourages human relations, teamwork and participation of employees in decision-making. Hodgkinson (2009) adds that leaders or managers allow their employees to complete a task or activity as they wish to do so. It can be concluded that more outsourced employees were exposed to the democratic leadership style.

5.2.2.3 Professional Qualification 2

This is made up of the following: MCSE, BABOK, PMBOK and “other”. It was found that there were more internal employees that possessed this qualification. It is interesting to note that outsourced employees still delivered on their projects even though they did not have these qualifications. However, research conducted by Breaux *et al.* (2009) indicated that organisations are not concerned about higher tertiary course work during recruiting an individual. Breaux *et al.* (2009) suggested that simplified and shorter course work could be introduced to enhance the employee’s knowledge rather than a lengthy tertiary education. Possible reasons for this can be attributed to the fact that their experience in several organisations weighs far more than theoretical knowledge.

5.2.3 Risk mitigation

Mitigation involves evaluating and prioritising. Each of the following is possible solutions to the problem identified above. They are classified according to importance.

5.2.3.1 Performance model

The quality of a performance model can be enhanced by ensuring that it is appropriate and relevant for the project that will be implemented. It is essential to include all factors in a model. Bennett and Franco (2001), Shapley (2002) and Devlin (1989) are examples of models that can assist in identify areas of performance weakness and formulate an improved performance level. Outhwaite (2003) explains that there are various frameworks to assist in an employee's day to day activities which can reduce their administrative tasks, but these frameworks do not guide the developer as to what to do.

5.2.3.2 Clear developed plans needs to be developed and communicated

Appropriate involvement of outsourced employees in a project is essential therefore; a plan should be fostered and entrenched at an early stage. One way to achieve employee buy in, is to involve both internal and outsourced employees in the initial stages of planning of the project. The result of this approach can lead to the team understanding the scope and team methodology that will be used in the project. It was found in the results that large amounts of employees did not know what team methodology they were using therefore this approach could eliminate the issue. In addition, an employee's concern of a certain methodology used can be addressed at this stage.

5.2.3.3 Effective orientation, education and training.

Employees must be provided with appropriate job related, position related and company related information to perform. According to Afaq and Khan (no date) training has a direct association with an employees' performance. Research has also revealed that when employees are trained it has a positive and direct impact on corporate performance, (Rabemananjara and Parsley 2006). Inductions are one way of exposing not only internal but also outsourced employees to this information. It is essential that these induction programs take place as soon as the employee starts at an organisation and not during project implementation. The advantage of this is that the employee will have a good understanding of the product, process and requirement. Outsourced employees must also a have complete knowledge of customers needs and requirements, as this will aid in implementing the correct tasks for project success.

5.2.3.4 Ongoing coaching and feedback needs to be provided

Employee's need ongoing and consistent feedback that addresses both their strong and weak areas of performance. Mechanisms ought to be implemented that not only focus intensely on helping individuals build on their strengths but also encourages them through a structured feedback process. Performance development discussions should be held more frequently. The performance review should change from negative, one-sided evaluation to positive planning meetings. Frequent feedback sessions will help employees to know how they are performing and what are the next goals and challenges. Communication can be time-consuming and may not be sufficiently executed by top management due to time constraints (Heide *et al.* 2002). Hence, ineffective communication limits employees in their day-to-day decision-making about what activities are most helpful in making the business successful.

5.2.3.5 Having the right equipment

From the results in chapter 4, it was found that fewer outsourced employees had the right equipment to complete their tasks. The human resource department needs to plan to accommodate for a new outsourced team member. In addition, management needs to be hands-on for example, a new outsourced employee who is a developer will require certain programs installed on their PC to begin coding. Information systems must be up to date and have accurate information as management use this when outsourcing Noble (1999). This ought to be installed prior to the outsourced employee starting a project as this time delay can affect a project. According to Malouff and Sims (1996) if an employee works harder at his/her tasks he/she will in return gain higher reward but this will only occur if they have access to the correct resources (e.g. raw materials, time).

5.2.3.6 Feedback from exit interview

When a project or outsourced contract has been completed, a detailed exit interview must be conducted. This will help the organisation learn why a valuable outsourced contractor is leaving the organisation. This information can help to improve the work environment as well as to identify weak performance areas.

5.2.3.7 Defined leadership styles

In order to enhance employees' performance the most suitable leadership style must be implemented. Team leads need to possess the right competencies and be given the proper skills and training for a suitable leadership style that is implemented in a project. This is commonly referred to as self-management (Ismail *et al.* 2010). A leader will always encourage their employees to do well and motivate them to perform effectively; in return, the employees will be rewarded with a promising future (Ismail *et al.* 2010). This view is supported by Awases

(2006, pg 95) who emphasis that “leaders act as role models and mentors for their staff”. Which style is more appropriate for outsourced and internal employees cannot be determined rather adapted to each situation. Zurn et al (2004) explain that leaders still have the challenge to create long-term vision to grow their teams and build commitment to organisational change. The success of a leader depends on his/her authority, position, power, influence, personal success and respect. Good leaders need to posses power, this is necessary to convince people in their team to attain the ultimately the organisational goals. In doing this personalities will have been taken into account and create a better working relations in the team. An effective and efficient leader will lead their team to lead themselves.

5.2.3.8 Management role

Management must implement the new organisational structure as soon as possible. Making a transition while the old structure stays intact to any extent after the rollout has commenced, creates uncertainty and barriers to outsourcing. Managers must assess and develop the organisation’s state of readiness for outsourcing before implementation starts. They affect the quality and success of outsourcing implementation (Anderson and Narasimhan 1979; Herbert and Deresky 1987). Beer and Eisenstat (2000) indicate that if the top management team operates within silos and refuses to cooperate effectively for fear that managers lose some of their power, this will influence the employees. In addition, an organisation needs to match both an internal and outsourced employee correctly to a team leader. Management needs to ensure that their companies are stable and do not have any burning platforms that might negatively influence the end goal of implementation. Management should rally the entire company to engage in talking and living the outsourcing. Implemented outsourcing should be something one operates on a daily basis and should be treated as such. This assists the implementation of the outsourcing process as it presents itself in the daily activities of all employees.

5.2.3.9 Managing Change

Buller (1988) argues that outsourcing implementation ignores the many structural and behavioural forces that resist change. Restructuring and changing of people’s roles and responsibilities leads to confusion and anxiety, which leads to people leaving the company or the likelihood of a decline in performance (Alexander 1985; Hrebiniak 2006). People do not like change but when they undergo effective change management and they accept it, it forms part of their learning thereby creating growth in their own lives as well as that of the organisation (Argyris 1989 ; Brenes *et al* 2008). Management’s inability to manage change and reduce resistance to new implementation decisions or actions has major consequences for

outsourcing implementation (Buller 1988). People need emotional assistance at times of change. Managers must assess and develop the organisation's state of readiness for strategic change before implementation starts (Crittenden and Crittenden 2008). Strategic managers should become more sensitive in dealing with the human elements of change.

5.2.3.10 Education of team methodology used

The results of the analysis showed that the SCRUM methodology is the most widely used methodology because of Derivco's support towards it. However, it was found that a large amount of outsourced employees did not know what methodology they were using. As mentioned in the literature review many software development companies in India make use of agile methodologies and a vast amount of outsourced employees are from India. Therefore, their lack of education regarding the organisations processes and methodologies are justified, as they are not exposed to it. The onus is on the company to inform and train these employees on methodologies like SCRUM when they enter the company. It is also essential for employees to know what methodology their team is using for them to effectively participate and deliver in a team.

5.2.3.11 Lessons learnt

It is essential to keep track of a lessons learnt document after each project. This will aid team leads to understand where the downfalls of the project was. This can result in the next delivery of a project being implemented efficiently. It was found in the results that more outsourced employees felt they could not trust their team colleagues to complete a work task. Possible solutions could be an introduction of team events where both internal and outsourced employees can interact with each on a personal level. This will result in better relationships formulated and employees trusting each other.

5.2.4 Assessment and evaluation

Derivco is constantly changing due to changes in industry and as well as the growing size of the company. These changes experienced in Derivco indicate a possibility of new risk arising and risks that were previously solved may become risks again. The company therefore has to constantly update or replace training and education material so that both internal and outsourced employees are kept up to date on latest technology. In addition, the organisation needs to take into account each employee's need and their place in a specific team.

The models and factors explained in the literature need to be addressed in an organisations long and short-term strategic plan. In doing this, the organisation can go live with more successful projects as their employees are performing optimally. The table below (5-1)

incorporates the factors that can enhance and improve an employee (internal and outsourced) performance. This table incorporates aspects such as leadership, motivation, skills and knowledge development. This is merely a suggestion to an organisation and can be implemented with their strategic rollout.

Area of Investigation	Actions to be implemented	
	Internal	Outsourced
Enhancement and awareness campaigns about outsourcing	<ul style="list-style-type: none"> • Awareness campaigns to internal employees about the benefits of having an outsourced employee.eg: opportunity for support and learning curve. • Encouraging strengthening relationships which can lead to better team structure 	n/a
Development of leadership styles	<ul style="list-style-type: none"> • Create awareness to employees on how team leads or managers can lead their teams. • Create a fit between the team lead and the employee. • Develop a leadership plan • Leadership and management courses. 	<ul style="list-style-type: none"> • Develop early awareness to the outsourced employee of the different leadership style of the organisation • Develop a separate leadership plan that can accommodate outsourced employees
Motivation	<ul style="list-style-type: none"> • Development of feedback processes • Development of a strategy for motivating employees: incentives, recognition. • Develop a strategy to match a personality type to team. 	<ul style="list-style-type: none"> • Development of regular feedback from key stakeholders which can address ways to improve performance. • Development of a non-momentary plan to incentivise employees. • Definition of personality types of an outsourced employee so they can be matched correctly to a team.
Skill and knowledge development	<ul style="list-style-type: none"> • Development of training programs • Development of cross function in job roles, which can give internal 	<ul style="list-style-type: none"> • Development of short courses to manage the knowledge gap. • Develop a job contract that

	employees an opportunity to learn from a specialist, outsourced employee.	clearly states the job role and responsibility.
Project (Scoping)	<ul style="list-style-type: none"> • Development of a team-building exercise before the actual scoping and definition of a project. This will form an icebreaker. • Improvement in the communication to outsourced employee 	<ul style="list-style-type: none"> • Early involvement of outsourced employees in a project. • Strengthening communication.
Organisation support	<ul style="list-style-type: none"> • HR to meet with team leads and employees to assist with change issues i.e. working with outsourced employees. 	<ul style="list-style-type: none"> • Develop a plan to have an outsourced employee set on the day of arrival • Create regular sessions with HR to assist the employee with outstanding matters, e.g.: access to the building, passwords etc.

Table 5-1 Framework for enhancing employees (internal and outsourced) performance

In addition, to the above the recommendations the below focus on suggestions for outsourcing implementation.

- A well-defined, uncomplicated strategy assists in outsourcing implementation.
- The management team should simplify the outsourcing process for everyone in the organisation to understand and should communicate the outsourcing process in a simple understandable fashion.
- Management should rally the entire company to engage in talking and living the outsourcing process. Outsourcing should be something one operates on a daily basis and should be treated as such. This assists the implementation of outsourcing as it presents itself in the daily activities of all employees.
- Communication and feedback sessions on how the outsourcing is working or not working must be carried out on a regular basis in order to get buy-in from the employees.

- Management should map the outsourcing dynamics that are specific for their company so that they are aware of the intertwined variables that are at play in the implementation of the outsourcing and the effect it can possibly have on employees.
- The frequency of outsourcing change should be reduced by management. High frequency of change trivializes the need for change and causes uncertainty, which stifles growth of both the employee and the company. This can lead to a decline in employee performance.
- Education and practical experience by management in the industry is important in setting realistic outsourcing goals which employees can perceive as valuable.
- Outsourcing implementation must be given more attention in training and educational programs at companies and higher educational institutions to increase the implementation skills of managers.
- It is essential to have a senior manager (preferably someone on the executive committee) to be the "flag bearer" for implementation. Decision-making is then much quicker.
- Management needs to show the employees the vision and benefit that the change of outsourcing will have from the onset so that the end goal is clear in their minds.
- Management must implement the new organisational outsourcing structure as soon as possible. Making a transition while the old structure stays intact to any extent after the roll-out has commenced, creates uncertainty and barriers to outsourcing implementation.
- Test the understanding of the managers/implementers before the implementation phase so that the right message and activities are sent out from the start.
- Managers need to look at both internal and external factors such as the regulatory environment, compliance and competition act requirements, when implementing outsourcing.
- An implementation plan should include aspects such as a communication program and risk assessment. These assist in process implementation.
- Transformation and transformation expectations of the industry in South Africa are variables that need to be built into the implementation plan of the company.

- Managers must assess and develop the organisation's state of readiness for strategic change before implementation starts. Management needs to ensure that their companies are stable and do not have any burning platforms that might negatively influence the end goal of implementation.

5.3 Recommendations for future research

The following can be considered for future research:

- A broader industry research, which can yield a wider result and subsequently more descriptive results. For example in the IT industry, a comparison of performances in the telecommunications industry verses the online gambling industry.
- The research has found that employees were not aware of the team methodology that they were using. Their lack of knowledge of a team methodology can affect not only the delay of the successful implementation of a project but as well as the employee's performance as they are unaware of the process to follow when using a specific team methodology. This area can be addressed.
- Further research can be conducted on employee's behaviour and project activities that expose them to a decline in performance.
- Further research can be done to build the factors identified into a model.
- The investigation and management of the business requirements should be investigated.
- Research on outsourcing translocation should be investigated. For example, a project done in a company based in India can be compared to a project being implemented in a South African based company.
- Further research can be conducted on the different motivational models that can affect an employee's performance.
- This study focused mainly on the internal factors influencing the IT industry in South Africa; there is hence an opportunity to extend this study to include the external factors as well.

- The Sharpley (2002) and Bennet and Franco *et al.* (2001) model was limited, as it did not include project related factors. An improved model using project factors can be the basis for further study.

6 CONCLUSION

The purpose of this study was to investigate the performance between outsourced and internal employees in IT projects. Friedman (2005) explains that internal employees are now competing with many outsourced employees for key jobs; therefore there is no room for mediocre performances. The organisation should not only rely on technical or textbook solutions to handle outsourced and internal employees' performance but rather consider the needs and personalities of each employee and how they fit in a team.

Several factors influencing employee performance in the gambling industry in South Africa, be it positively or negatively were identified. The variables identified from the literature review were important. The results of the factor analysis grouped these widely into seven factor categories rather than the proposed four categories from the literature review. This indicated that in the gambling industry in South Africa, the groupings are different in that the variable dynamics play a different role when it comes to employee performance in terms of delivering a project. The seven factor groups are: Factor one is managerial influence; Factor two is based more on the organisation understanding, policies and procedures therein; Factor three primarily focuses on the ownership of employees; Factor four focuses on leadership and the communication in a team; Factor five's main focus is allocating of resources. Factor six is based on leadership and enforcing due dates while Factor seven primarily adheres to the leadership and the business requirement, they are summarised as follows:

- Factor 1: Managerial influence
- Factor 2: Organisational understanding, procedures and policies
- Factor 3: Employee ownership
- Factor 4: Leadership and communication
- Factor 5: Resource allocation
- Factor 6: Leadership and due dates
- Factor 7: Influence of leadership and business requirement.

The purpose of analysis variance was to identify and determine if there was a difference in outsourced and internal employees' performance. It was interesting to note that from the research, outsourced employees performed better than internal employees as they met the business requirement. Organisational, management and employee factors did not affect their performance drastically. From the literature review Dickerson (2007) discussed that often outsourced employees provide a supportive function in assisting internal employees in their day to day tasks as they have more experience. It can be deduced that outsourced employees tend to have an assortment of experience as they have worked in several industries. This can

work as an advantage to them as they are aware of the potential problems that can occur in a project.

Because of this study, Derivco can be enlightened on these areas and needs to focus on these groups, giving them the highest priority. These factors thus influence the employee performance in their companies. Not giving these factor groups the right attention will have a direct impact on the performance of employees i.e. outsourced and internal.

Having said this, organisations are still faced with having both internal and outsourced employees working on their projects. The results revealed that there was only one aspect where the outsourced and internal employee differed in performance therefore there still needs to be improvement in performance. Organisations' projects are exposed to various vulnerabilities and factors that are brought about employees' performance. Their only resort is identifying the factors and protocols that affect both internal and outsourced employees and adhere to these. To begin they should identify the type of leadership style that a team leader uses and match an outsourced or internal employee accordingly. They should make use of detailed training and induction as well as basic awareness for outsourced employees as this will aid them in better understanding of the industry. Implementing a performance model that incorporates project factors, management factors, employees' needs, as well as organisational factors should be the company's core focus when assessing performance of outsourced and internal employees. Unfortunately, many employees are not aware of these procedures and policies. Employees therefore need to be educated in regards to their performance.

Thus, the onus and the responsibility rely on both the employee and the organisation. Many employees are ignorant about the factors that affect their performance and adopt a "so what" attitude. What they fail to realise is that with a little education and with various precautions implemented, their performance can be greatly increased which can result in successful delivery of a project.

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Appendix 1- Questionnaire

UNIVERSITY OF KWAZULU-NATAL Information Systems & Technology

Mcom Information Systems & Technology Research Project

Researcher: Surika Chaithram (0802417143)

Supervisor: Prof Manoj Maharaj (0312608023)

Research Office: Ms P Ximba 031-2603587

Ethical Clearance Number

A comparison of Information Technology project team performance of internal versus Outsourced employees

The purpose of this survey is to solicit information from employees regarding the performance of outsourced vs. internal employees. The information and ratings you provide us will go a long way in helping us identify the difference in performances and factors that affect employees' performance.

Note: Derivco has granted permission to conduct this research.

The questionnaire should only take 5-10 minutes to complete. In this questionnaire, you are asked to indicate what is true for you, so there are no "right" or "wrong" answers to any question. Work as rapidly as you can. If you wish to make a comment please write it directly on the booklet itself. Make sure not to skip any questions. Thank you for participating!

Requirement from the Respondent:

- The questionnaire contains 24 questions of which all need to be completed.
- Please tick only one answer from each of the options given except for question 6 where more than one answer can be selected.
- Do not alter answers.
- Please sign the consent form attached
- Complete the questionnaire with a pen.

Demographic Information (Question 1 - 4)

1. Gender

Male	Female	
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2. Age

<21	22-32	33 - 43	44 - 54	>54
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3. State your employee status.

Internal Employee	Outsourced Employee
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4. Please indicate the number of years of experience you have.

less than 1 year	2 to 3 years	4 to 5 years	6 to 10 years	More than 10 years
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5. Please indicate your position in the organisation.

DBD /DBA/ Developer	Tester/ QA	Team Lead	Business Analyst	Project Manager	Other
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6. Please select your highest education level as well any other qualifications that you have.

Undergraduate	
Honours	
Masters	
PhD	
MSTS	
MSDBA	
C#	
ISEB	
MSCE	
BABOK	
PMBOK	
Other	

7. My team uses a/an _____ methodology. Please choose the appropriate option.

Waterfall	Agile	Spiral	Scrum	Prototyping	Don't know
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In questions 8 - 24 please indicate how strongly you agree or disagree with the statement made.

	Strongly Agree	Agree	Neutral	Disagree
leader/Manager listens to my ideas studies them but will make the final decision.				
leader/Manager leads by infusing energy and eagerness into team members.				
leader/Manager has been given the power to take decisions solely on his/her own authority.				
I seek supervision or feedback from my team leader to obtain the expected outcome.				
As an internal employee I take greater ownership of project phase deliverables than other employees. (for internal employees only)				
As an outsourced employee I take greater ownership of project phase deliverables than other employees. (for outsourced employees only)				
When I come across a work related problem I know who to ask for help.				
For my day-to-day activities I have the necessary equipment, material and resources to complete my work.				
I am meeting due dates on the project plan for each phase.				
The definition of a project is requirements specified to achieve the end result.”				
Most of my project deliverables are being met.				
Most process requirement/s on my project is/are being met.				
I have a clear understanding of my team role and expectations.				
If a conflict occurs in my team they are handled in a professional manner.				
I am satisfied with the quality and frequency of communication I receive from my team.				
I am able to depend on my team members to complete a piece of work.				
I understand the organisations goals and strategies.				
The organisations policies and procedures are clearly communicated to me.				

End of the Questionnaire: Thank you for taking the time to complete the questionnaire.

Appendix 2 - Correlations

	My team lead listens to my ideas but will make the final decision	My team lead leads by infusing energy	My team lead has been given the power to make decisions on his own	I need little supervision from my team lead	As an internal employee I take greater ownership	When I incur work related problem	In my day to day activities I have the necessary equipment to complete my work	I'm meeting due dates on project	The scope of my project deliverables are being met	The business requirement of my project is being met	I understand the team role and expectation	Conflict is well handled in my team	I'm happy with the quality and frequency of communication from my team members	I can rely on my team members to complete a piece of work	I understand the organisations goals and strategies	The organisations policies and procedures are clearly communicated to me
Correlation	1.000	.171	.251	-.175	-.259	.071	.102	.040	.083	.196	.098	.117	.195	.205	.169	.169
	.171	1.000	.020	-.034	-.177	.010	.049	.167	.082	.130	.299	.322	.350	.170	.194	.194
	.251	.020	1.000	.171	.045	.291	.037	.143	.330	.222	.161	.093	.024	.154	.059	.059
	-.175	-.034	.171	1.000	.252	.110	.013	.193	.003	-.098	-.116	-.145	-.194	-.270	-.082	-.082
	-.259	-.177	.045	.252	1.000	.015	.213	.111	.165	.224	.067	-.067	-.105	-.148	-.056	-.056

.212	.116	.015	-.134	-.824	1.000	.001	-.152	-.018	-.093	-.187	.003	.085	.123	.213	.126	.126
.071	.010	.291	.110	.015	.001	1.000	.410	.273	.278	.229	.184	.279	.151	.110	.227	.227
.102	.049	.037	.013	.213	-.152	.410	1.000	.148	.309	.297	.284	.154	.459	.170	.123	.123
.040	.167	.143	.193	.111	-.018	.273	.148	1.000	.188	.382	.352	.296	.181	-.003	.195	.195
.083	.082	.330	.003	.165	-.093	.278	.309	.188	1.000	.396	.406	.408	.161	.451	.160	.160
.196	.130	.222	-.098	.224	-.187	.229	.297	.382	.396	1.000	.420	.285	.358	.236	.071	.071
.098	.299	.161	-.116	.067	.003	.184	.284	.352	.406	.420	1.000	.636	.558	.620	.324	.324
.117	.322	.093	-.145	-.067	.085	.279	.154	.296	.408	.285	.636	1.000	.453	.555	.267	.267
.195	.350\	.024	-.194	-.105	.123	.151	.459	.181	.161	.358	.558	.453	1.000	.469	.195	.195

I can rely on my team members to complete a piece of work	.205	.170	.154	-.270	-.148	.213	.110	.170	-.003	.451	.236	.620	.555	.469	1.000	.234	.234
I understand the organisations goals and strategies	.169	.194	.059	-.082	-.056	.126	.227	.123	.195	.160	.071	.324	.267	.195	.234	1.000	1.000
The organisations policies and procedures are clearly communicated to me	.169	.194	.059	-.082	-.056	.126	.227	.123	.195	.160	.071	.324	.267	.195	.234	1.000	1.000

Appendix 3 - Eigen Values

Factor	Initial Eigen values		
	Eigen value	% of Variance explained by factor	Cumulative % of variance explained by factor
1	4.322	25.422	25.422
2	2.412	14.189	39.610
3	1.667	9.807	49.418
4	1.408	8.283	57.701
5	1.161	6.832	64.532
6	1.090	6.414	70.946
7	1.004	5.908	76.854
8	.820	4.826	81.680
9	.650	3.825	85.505
10	.574	3.379	88.884
11	.537	3.161	92.045
12	.411	2.417	94.463
13	.317	1.862	96.325
14	.262	1.541	97.866
15	.221	1.299	99.165
16	.142	.835	100.000
17	-4.12E-016	-2.42E-015	100.000

Appendix 4 - Rotated Component Matrix

	Factor						
	1	2	3	4	5	6	7
My team lead listens to my ideas but will make the final decision	-0.08	0.14	-0.21	0.25	0.10	-0.35	0.72
My team lead leads by infusing energy	0.14	0.12	-0.15	0.73	-0.09	0.01	0.01
My team lead has been given the power to make decisions on his own	0.24	0.00	-0.01	-0.13	-0.01	0.32	0.75
I need little supervision from my team lead	-0.16	-0.06	0.11	-0.02	-0.01	0.77	-0.01
As an internal employee i take greater ownership	0.02	-0.01	0.93	-0.08	0.06	0.15	-0.05
As a outsourced employee i take greater ownership	0.06	0.06	-0.92	0.05	-0.03	-0.03	0.05
When i incur a work related problem	0.18	0.19	-0.10	-0.13	0.66	0.39	0.20
In my day to day activities i have the necessary equipment to complete my work	0.12	0.04	0.18	0.07	0.88	-0.07	0.01
I'm meeting due dates on my project	0.13	0.13	0.10	0.54	0.15	0.54	0.12
The scope of my project deliverables are being met	0.68	0.05	0.19	-0.14	0.16	0.13	0.32
The business requirement of my project is being met	0.31	-0.07	0.36	0.40	0.28	-0.04	0.42
I understand the team role and expectation	0.74	0.18	0.09	0.39	0.15	-0.02	0.01
Conflict is well handled in my team	0.75	0.14	-0.09	0.32	0.09	0.05	-0.04
Im happy with the quality and frequency of communication i receive from my team memebers	0.39	0.03	-0.10	0.52	0.48	-0.27	-0.05
I can rely on my team members to complete a piece of work	0.82	0.10	-0.17	0.03	0.06	-0.29	0.09
I understand the organisations goals and strategies	0.15	0.98	-0.04	0.10	0.07	-0.01	0.04
The organisations policies and procedures are clearly communicated to me	0.15	0.98	-0.04	0.10	0.07	-0.01	0.04

Appendix 5 - Analysis

		Sum of Squares	df	Mean Square	F	Sig.
My team lead leads by infusing energy	Between Groups	.812	1	.812	1.286	.261
	Within Groups	45.472	72	.632		
	Total	46.284	73			
My team lead has been given the power to make decisions on his own	Between Groups	.609	1	.609	.724	.398
	Within Groups	60.540	72	.841		
	Total	61.149	73			
I need little supervision from my team lead	Between Groups	1.403	1	1.403	1.994	.162
	Within Groups	50.651	72	.703		
	Total	52.054	73			
When I incur a work related problem	Between Groups	.000	1	.000	.000	.992
	Within Groups	26.054	72	.362		
	Total	26.054	73			
In my day to day activities i have the necessary equipment to complete my work	Between Groups	.789	1	.789	1.618	.207
	Within Groups	35.116	72	.488		
	Total	35.905	73			
I'm meeting due dates on my project	Between Groups	.013	1	.013	.023	.880
	Within Groups	41.500	72	.576		
	Total	41.514	73			
The scope of my project deliverables are being met	Between Groups	.701	1	.701	1.577	.213
	Within Groups	32.015	72	.445		
	Total	32.716	73			
The business requirement of my project is being met	Between Groups	2.524	1	2.524	4.739	.033
	Within Groups	38.354	72	.533		
	Total	40.878	73			
I understand the team role and expectation	Between Groups	.397	1	.397	.630	.430
	Within Groups	45.386	72	.630		
	Total	45.784	73			
Conflict is well handled in my team	Between Groups	.009	1	.009	.013	.910
	Within Groups	47.356	72	.658		
	Total	47.365	73			
I'm happy with the quality and frequency of communication i receive from my team members	Between Groups	.127	1	.127	.221	.640
	Within Groups	41.386	72	.575		
	Total	41.514	73			
I can rely on my team members to complete a piece of work	Between Groups	.193	1	.193	.243	.623
	Within Groups	57.158	72	.794		
	Total	57.351	73			
I understand the organisations goals and strategies	Between Groups	.079	1	.079	.174	.678
	Within Groups	32.570	72	.452		
	Total	32.649	73			
I understand the organisations goals and strategies	Between Groups	.079	1	.079	.174	.678
	Within Groups	32.570	72	.452		
	Total	32.649	73			
team lead listens to my ideas but will make the final decision	Between Groups	4.551	1	4.551	5.492	.022
	Within Groups	59.665	72	.829		
	Total	64.216	73			

Appendix 6 - Ethical Clearance



RESEARCH OFFICE (GOVAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 - 2603587
EMAIL : ximba@ukzn.ac.za

26 NOVEMBER 2008

MS. S CHAITHRAM (200203307)
INFORMATION SYSTEMS

Dear Ms. Chalthram

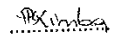
ETHICAL CLEARANCE APPROVAL NUMBER: HSS/0740/08M

I wish to confirm that ethical clearance has been approved for the following project:






"A comparison of IT projects' team performance of Internal versus Outsourced employees"

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Yours faithfully


MS. PHUMELELE XIMBA

cc. Supervisor (Prof. M Maharaj)
cc. Mrs. C Haddon

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville