Project management in Southern Africa: A best practices analysis

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ABSTRACT

This study covers an investigation into project management best practices in Southern Africa. The purpose of the research was to determine which of the current accepted project management tools and techniques are seen as critical in the region. It also focuses on determining any external or internal factors that hamper effective development of project management in the Southern African region.

The study further tries to determine whether there are any noticeable differences between accepted project management practices in the developed world and practices used in the region.

The study was conducted using a survey with a mix of open and scaled questions and was sent out to a number of companies selected because they employ established project managers. A total number of 400 questionnaires were sent out and 42 completed questionnaires were received from respondents.

The study found that there are no significant differences between the techniques used for project management in Southern Africa and techniques used in the rest of the world. There are, however, several factors influencing project management development in the region that are unique to the region including a severe shortage of skilled people and infrastructure problems.

There is also a lack of knowledge about project management practices amongst respondents and amongst other members of their organizations including senior management. This lack of knowledge combined with the shortage of skilled people can result in serious problems with the execution and management of projects in the Southern African region.

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Lastly I would like to thank Monique Louw for helping me collect the results of the survey and for her support during the past three years.

STATEMENT OF OWN WORK

I, Nico Haupt, declare that this research report is my own work. It is submitted in partial fulfilment of requirements for the degree of Master of Business Leadership at the School of Business Leadership: University of South Africa, Johannesburg.

I certify that, except as noted in the acknowledgements, the report is my own work and all references used are accurately reported.

Signed:

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LIST OF ABBREVIATIONS / ACRONYMS

PMBOK®:	Project Management Body of Knowledge
APMBoK:	Association of Project Management Body of Knowledge
PMI:	Project Management Institute
RAMP:	Risk Appraisal and Management for Projects
PRAM:	Project Risk Analysis and Management
PRINCE:	Projects in Controlled Environments
BOK:	Bodies of Knowledge
WBS:	Work Breakdown Structure
PMO:	Project Management Office

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CHAPTER 1 : ORIENTATION

1.1 Introduction

Project management is a business science concerned with the management of projects in organizations. Modern project management developed recently in the 1960's and 1970's and organizations such as the Project Management Institute (PMI) started developing bodies of knowledge (BOK's) describing good practices in the industry (Morris, Crawford, Hodgson, Shepherd & Thomas, 2006).

There has been a concerted effort by associations to professionalize the project management industry by developing BOK's and adopting professional certification programs. The aim of these programs and BOK's is to establish certain standards in the profession in the world (Morris, Crawford, Hodgson, Shepherd & Thomas, 2006).

In recent times, many organizations have adopted management by projects and indeed, many organizations see projects as the best way to achieve new growth (Graham & Englund, 2004). This trend is on the increase making project management an increasingly important field of management.

The published bodies of knowledge are seen as the generally accepted good practice in the profession (Chapman, 2006). Generally accepted good practices are not necessarily best practices. Several efforts have been made to determine what constitutes best practices (Loo, 2002; White and Fortune, 2002; Loo, 2003). The problem with defining best practices throughout the world is that there are external influences that differ from country to country. These influences include cultural beliefs, social values, political conditions and economic development (Muriithi and Crawford, 2003).

Southern Africa, as a region, has several factors that influence the effective execution of projects, including one of the highest HIV infection rates in the world, political instability in Zimbabwe, natural disasters, for example, floods in Mozambique and Namibia, droughts and epidemics. The region also has a multitude of different cultures and ethnic groups. These factors all influence the way projects are managed and best practices as have been determined, by the studies above, do not necessarily apply to the region.

1.2 Purpose of research

The main purpose of the research reported is to conduct a study into the best practices used in project management in Southern Africa.

Although the idea of best practices is not a new one, studies have mainly focused on the Western world (Muriithi & Crawford, 2003). Together with these studies, the formal bodies of knowledge have set out guidelines for effective project management in the world.

These guidelines do not take into account the differences in Southern Africa due to political, social, economic and legal factors. Accordingly, best practices in Southern Africa cannot necessarily be equated to best practices in other locales in the World.

The purpose of this report is therefore not only to analyse best practices in project management, but to determine the differences in generally accepted best practices and best practices as in the context of the developing Southern Africa.

1.3 Research objectives

This study is only conducted in terms of the Southern African project management context. The problem is that the generally accepted BOK's and best practices as described in, for instance, the PMBOK® guide, were developed in the Western world.

The lack of investigation into the application of best practices in the Southern African context has created an impression that best practices can be universally applied. This assumption could lead to projects being mismanaged and either not delivering on what was promised, missing budgets or deadlines or equally seriously, the cancellation of projects during execution.

More specifically the study has the following objectives:

1.3.1 To identify project management best practices in Southern Africa

Best practices are optimum ways of doing work processes to achieve high performance (Loo, 2002).

The purpose of this objective is to determine which best practices are being used by project managers in Southern Africa.

1.3.2 To identify areas in project management where improvement is needed

Project management practices that need improvement are identified next. This is used to determine where there are gaps in the required knowledge and whether best practices are in line with what is perceived amongst actual practitioners.

1.3.3 To determine the differences between Southern African best practices and best practices in general

General best practices have been defined in the accepted BOK's as well as several other studies (Loo, 2002, White & Fortune, 2002). The purpose of this objective is to determine which of these best practices are not feasible in the Southern African context and to determine which other techniques are being used that are not part of the accepted practices.

1.4 Assumptions

The following assumptions are made:

- There are certain tools and techniques within the general project management practice that do not apply to the Southern African context.
- There are certain constraints to project execution in Southern Africa.
- The political environment in Southern Africa has an effect on project management.
- The culture in Southern Africa differs from the Western world and influences the way projects are planned and executed.
- Government involvement and interference in projects is more pronounced.
- The economies of the countries in question are much less developed than in the Western world.
- The individual characteristics of the countries were not taken into account

1.5 Clarification of concepts

Project:	A temporary endeavour to create a unique product or service (PMBOK®, 2005)
Project management:	The application of knowledge, skills, tools and techniques to project activities to meet project requirements (PMBOK®, 2005)
Best practices:	Optimum way of performing activities to achieve best results (Loo, 2002)
Project sponsor:	The person/company who supplies the financial means for the project (PMBOK®, 2005)
Project consultant:	Any 3rd party consultant working on a project (PMBOK®, 2005)
Project contractors:	The person/company who executes the project (PMBOK®, 2005)
Project houses:	Companies that specialise in managing projects
Project plan:	A schedule of activities that need to be completed to fulfil the project requirements with associated durations for each activity (PMBOK®, 2005)
Project scope statement:	A document describing the scope of the proposed document including the goals and objectives, stakeholders and project team members (PMBOK®, 2005)
Project team:	People actively involved in the execution of a project (PMBOK®, 2005)
Steering team/committee:	A committee of people, usually executives and managers, who act in an oversight capacity (PMBOK®, 2005)
Process groups:	All processes required to meet project objectives (PMBOK®, 2005)

1.6 Delimitations of the study

The study focuses on which practices are seen to be effective in the Southern African context.

The study does not:

- Develop a framework for effective project management. To develop a framework for effective project management a complete analysis of the different stages of projects would need to be done. This is beyond the scope of this study.
- Take into account individual characteristics of countries in Southern Africa
- Determine the reasons for differences between best practices in Southern Africa and best practices as accepted in literature. Each country in Southern Africa has its own individual characteristics dependant on a many factors including culture, economic development, political stability, and etcetera. To take these into account, a determination would have to be made into the effect that each of these factors have on project management. This is beyond the scope of this study.
- Determining the reasons for differences between best practices in South Africa and best practices as accepted in literature. The reasons for the differences in best practices can be anything from economic development to cultural values. Some of these reasons have already been determined in studies such as conducted by Muriithi & Crawford, (2003). They will not be repeated in this study.

1.7 Importance of the study

Project management is becoming an increasingly important area of management in firms all around the world. It is also seen as a part of management that will

continue to increase in importance and will be used more and more frequently (Graham & Englund, 2004, p.11).

This research is therefore vital as it should help companies in Southern Africa to understand which tools and techniques are important in this relatively new field of management. Most of the existing literature is based on practices in the Western World and this study attempts to contribute to this knowledge by analyzing these techniques in a Southern African context.

This report should complement research done by:

- Loo (2002), who assessed best practices in project management in Canada.
- Muriithi & Crawford (2003), who looked at the reasons for differences in techniques used in the developing world
- White & Fortune (2002), who looked at the current practices of project managers
- Dey (2002), who looked at benchmarking and best practices in project management in the Caribbean

1.8 Outline of the research report

This research report contains six chapters. Chapter 1 serves as an overview of the study. Chapter 2 contains the theoretical foundation for the study and Chapter 3 contains a survey of the existing literature on project management best practices. In Chapter 4 the research problem and research questions are formulated. Chapter 5 details the research design and methodology. Chapter 6 contains the results obtained. In Chapter 7 the results of the study are discussed, and conclusions and recommendations on the basis of the results are made.

CHAPTER 2 : THEORETICAL FOUNDATION OF THE STUDY

2.1 Introduction

This chapter lays a theoretical foundation for the concept of best practices in project management. It looks at project management and projects as a unique function in organizations and explores the importance of this function.

The chapter includes the definition of projects and project management (Section 2.2), an overview of the bodies of knowledge and their purpose (Section 2.3), the role of project management in organizations (Section 2.4) and the definition and purpose of best practices (Section 2.5)

2.2 Projects and project management

A project is a temporary endeavour undertaken to create a unique product or result (PMBOK®, 2005 p.5). This means that all projects have a starting point as well as an ending point. The duration of projects may vary though and some last several years. The product created may also differ between a plant to support production, offices or even just documents. All of these are unique though in the fact that each serves a different purpose, whether it is a unique owner, location or design (PMBOK®, 2005).

Projects are typically undertaken to attain a strategic objective for the organization. These objectives can be any of the following: (PMBOK®, 2005)

- Market demands increase so that new facilities are needed
- New products or services to increase the organization's revenue
- A request from a client for a new or added service or product
- Technological advances which create the possibility of new products

- Legal requirements such as environmental legislation

The reason for linking projects to strategy is to help people working on projects to understand why the project is being done and which goals will be achieved (Graham and Englund, 2004). This will ensure projects are prioritized effectively and the company's resources are not wasted on projects that have no clear advantage for the company.

Project management is the application of knowledge, skills, tools and techniques to activities to meet project requirements (PMBOK®, 2005 p.8). This covers a wide set of knowledge areas over the entire project life cycle. These concepts are explained in details in sections 3.2 and 3.3 in this report.

2.3 Bodies of knowledge

There are three widely distributed and generally accepted standards for project management, a Guide to the Project Management Body of Knowledge (PMBOK® guide), the Association of Project Management Body of Knowledge (APMBoK) and the Australian National Competency standards for Project Management (Muriithi & Crawford, 2003). These standards are widely used in the developed world to guide project management. The project management institutes have been working since the middle of the 1970's to develop these BOK's and maintaining them along with associated certification programmes (Morris, Jamieson & Shepherd, 2006). There are also other guides which attempt to define best practices in project management like the Project Risk Analysis and Management Guide (PRAM) and the Risk Appraisal and Management for Projects Guide (RAMP) (Chapman, 2006).

2.4 The role of project management in organizations

Project management is a fairly new management science with professional associations only starting to develop in the 1960's and 1970's (Morris, Crawford, Hodgson, Shepherd & Thomas, 2006). These associations also published the bodies of knowledge like the PMBOK® guide. Since then project management has become increasingly important mostly because of external influences like customer demands (Graham and Englund, 2004).

The need to provide customers with total solutions to their needs has created a shift from product-based organizations to project-based organizations (Graham and Englund, 2004). Cross-functional project teams who cut across traditional functional boundaries of the company perform temporary roles and when the product or solution is achieved, they disband to move on to other functions. Project teams are becoming more and more common in companies and people from all levels of the organization are involved in them (Graham and Englund, 2004).

2.5 Best practices defined

Best practices can be defined as the optimum way to perform work processes to achieve high performance (Loo, 2002). The project management guides as described above in section 2.3 defines knowledge that is seen as good or common practice (Chapman, 2006). Several attempts have been made to define best practices as can be seen from studies done, as well as the development of the PRAM and RAMP guides. (Loo, 2002; Loo, 2003; Harrington, 1997; Chapman, 2006)

2.5.1 Benchmarking

Benchmarking can be defined as identifying high performance and superior processes in other companies and then internalizing these into an organization (Ramabadron, Jean Jr. & Evans, 1997).

Benchmarking can be split into two types, co-operative and competitive benchmarking (Ramabadron, Jean Jr. & Evans, 1997). Competitive benchmarking refers to the use of information about competitors' processes and structures to improve the companies own processes and structures. (Ramabadron, Jean Jr & Evans, 1997) This can also be used to position the company's products or services in the market. Co-operative benchmarking refers to the use of information from various co-operating companies that are not necessarily in the same industry (Ramabadron, Jean Jr & Evans, 1997).

In terms of project management, benchmarking can be done on several sets of factors: (Ramabadron, Dean Jr. & Evans)

- Task-related outcomes
- Group-related outcomes of group interaction
- Context
- Process

Task-related outcomes refer to the cost, time, risk and performance of the project. Group related outcomes refer to the team member satisfaction as well as the willingness of team members to work in groups on future projects. Contextual variables refer to the activities that ensure that the company has a culture for benchmarking as well as providing the tools and knowledge to employees for effective benchmarking. Process variables refer to how decisions are made, internal relations, external relations and communication characteristics.

These factors can therefore be used to determine benchmarks for projects being done throughout all industries.

2.5.2 Universal best practices

Various studies have been done to determine region specific best practices (Loo, 2002; Dey, 2002). Most of these studies and indeed, most of the project management practices as defined by the PMBOK® guide are based on the developed world.

Using these best practices in Southern Africa is not necessarily relevant. Organizations should not necessarily use all best practices available. In fact, depending on the level of performance of the organizations, some practices should not be used (Harrington, 1997). Another factor influencing the use of best practices and more specifically, to the Southern African context, is the influence of culture, political, social and economical factors.

The following beliefs and values in Southern Africa will affect the applicability of management concepts and best practices (Muriithi and Crawford, 2003):

- Social factors
    - Extended family ties and loyalty to clans and ethnic groups
    - Predominantly rural life
    - Rapidly expanding populations
- Economic conditions
    - Low per capita income
    - Rising unemployment levels
    - Declining stability and wages
- Political conditions
    - Political power concentrated in small elite
    - Young independent states born from European colonial states

2.6 Summary

This chapter provided a theoretical foundation for what is commonly accepted as good practice in project management. It also showed that work on best practices has been done, but several factors prevalent in Southern Africa have not been taken into account.

The next section will provide an analysis of project management literature with an emphasis on best practices, factors influencing best practices and ways to improve project management.

CHAPTER 3 : LITERATURE REVIEW

3.1 Introduction

In the previous chapter the theoretical foundation of the study was given. In Chapter 3 the relevant literature is dealt with. There is a large body of literature available in the field of project management. The materials include guidelines by formal institutes such as the PMI and the APMI as well as several business journals that have been in publication since 1980's.

Project management is a fairly young field of management with the modern form developing in the 50's. Most of this development was also done in the Western world and specifically the US. Recently, several studies have been done in developing countries, but mostly on a very limited basis.

This chapter reviews project management theory, with the focus on current practices and problems. It also covers outside influences on projects such as cultural values, political and economic conditions and social beliefs.

Section 3.2 describes the normal project life cycle. Section 3.3 discusses the nine different knowledge areas that are managed during projects. Section 3.4 describes outside influences on projects such as environmental and cultural issues. Section 3.5 describes details the different stakeholders in projects and their roles and responsibilities. Section 3.6 describes organizational culture's effects on projects. Section 3.7 describes areas of improvement for project management as well as barriers to improving. Section 3.8 goes into detail on best practices as opposed to the general practice as defined by the BOK's. Section 3.9 provides a summary of the chapter.

3.2 Project life cycle

A project can be split into processes which describes its life cycle (Muriithi & Crawford, 2003; Bolles, 2002). These are the following:

- Project authorisation
- Project initiation
- Project planning
- Project execution
- Project closing

3.2.1 Project authorization

Project authorization encompasses the activities done to authorize new projects and ensure that the projects that are done are aligned with the organizations strategy (Bolles, 2002). These activities usually include drawing up a project portfolio, a budget and a portfolio report.

3.2.2 Project initiation

Project initiation involves reviewing and approving the scope of a project and the preliminary project plan before proceeding to the next stages (Bolles, 2002). Activities included during this stage of the project usually include:

- Preparing a preliminary communication plan
- Reviewing business requirements
- Preparing a project scope statement
- Preparing a preliminary project plan
- Preparing a preliminary budget estimate

- Determining the project skills requirements

3.2.3 Project planning

Project planning ensures that adequate planning is done for a project before actual execution starts (Bolles, 2002). This stage usually includes the following activities:

- Formation of a project team
- Formation of a steering team
- Hold kick-off meeting
- Define roles, responsibilities, accountability and authority of all stakeholders
- Review the project scope statement

3.2.4 Project execution

Project execution includes activities for monitoring and reporting progress on projects as well as all activities that are required for the actual execution of the project (Bolles, 2002). These activities include:

- Creating and maintaining a reporting structures
- Instituting countermeasure planning
- Instituting issues resolution procedures
- Establishing project change control processes
- Carry out tracking processes
- Performing risk assessments

3.2.5 Project closing

Project closing includes all activities to ensure a project is closed off properly (Bolles, 2002). These activities include:

- Getting acceptance of all deliverables by the client
- Balancing the budget
- Closing off 3rd party contracts
- Holding project review meetings

3.3 Project knowledge areas

The PMBOK® guide defines nine knowledge areas in project management encompassing all the processes used in a project from authorization to closing. These nine areas are: (PMBOK®, 2005)

- Project integration management
- Project scope management
- Project time management
- Project cost management
- Project quality management
- Project human resource management
- Project communication management
- Project risk management
- Project procurement management

The processes within these knowledge areas interact with each other as well as with all the other knowledge areas. A brief description of each of these nine areas follows.

3.3.1 Project integration management

This knowledge area is concerned with the processes and activities that are needed to identify, combine, unify and coordinate the processes and project management activities within the project management process groups (PMBOK®, 2005). This process extremely important as there is a lot of interaction between different processes during a project. The integrative project management processes are listed below:

- Develop a project charter
- Develop a preliminary project scope statement
- Develop a project management plan
- Direct and manage project execution
- Monitor and control project work
- Integrated change control
- Close project

3.3.2 Project scope management

This knowledge area includes all processes required to ensure a project fulfils all requirements for a project and to ensure that no unnecessary work is done (PMBOK®, 2005). This area is primarily concerned with defining what is and what is not included in a project's scope of work. The scope management processes consist of:

- Scope planning
- Scope definition
- Create a work breakdown structure (WBS)
- Scope verification
- Scope control

3.3.3 Project time management

This knowledge area includes all processes needed to ensure that the project is completed by the deadline (PMBOK®, 2005). This area is primarily concerned with scheduling activities and determining which activities is dependant on each other. The time management processes consist of:

- Activity definition
- Activity sequencing
- Activity resource estimation
- Activity duration estimation
- Schedule development
- Schedule control

3.3.4 Project cost management

This knowledge area includes all processes involved in estimating, budgeting, planning and controlling costs (PMBOK®, 2005). The primary focus of this area is the costs of resources needed to complete the project and include the following processes:

- Cost estimating
- Cost budgeting
- Cost control

3.3.5 Project quality management

This knowledge area includes all processes that help in establishing quality policies, objectives and responsibilities to ensure the requirements for the project are met (PMBOK®, 2005). The processes involved in this knowledge area are:

- Quality planning to identify appropriate standards
- Perform quality assurance
- Perform quality control

3.3.6 Project human resource management

This knowledge area includes all processes involved with the organizing and managing the project team (PMBOK®, 2005). The processes included here are:

- Human resources planning, including identifying the skills required
- Acquire the project team
- Develop the project team
- Manage the project team

3.3.7 Project communication management

This knowledge area includes all processes to ensure generation, collection, distribution, storage, retrieval and disposition of information regarding the project in a timely fashion (PMBOK®, 2005). The following processes are included in this area:

- Communications planning
- Information distribution
- Performance reporting
- Manage stakeholder

3.3.8 Project risk management

This knowledge area includes all processes involved with risk planning, identification, analysis and control of a project. The primary focus of this area is to increase the possibility and impact of positive events, and decrease the possibility and impact of adverse events on the project (PMBOK®, 2005). The following processes are included in this area:

- Risk management planning
- Risk identification
- Qualitative risk analysis
- Quantitative risk analysis
- Risk response planning
- Risk monitoring and control

3.3.9 Project procurement management

This knowledge area includes all processes involved in the purchase or acquisition of all the needed products and services needed to perform the work required for the project (PMBOK®, 2005). It also includes all contract management and purchase order required. The following processes are included in this area:

- Plan purchases and acquisitions
- Plan contracting
- Request seller responses
- Select sellers
- Contract administration
- Contract closure

3.4 Outside influences on project management

Nine problems critical to the effective execution of projects in the developing world have been identified (Gow *et al.*, 1988). These nine factors are:

- Political, environmental and economical constraints
- Institutional realities
- Personnel constraints
- Technical assistance shortcomings
- Decentralization and participation shortcomings
- Timing
- Information systems
- Differing agendas
- Sustaining project benefits

These nine problems are not the only problems to be encountered in Africa. This research was based on large development projects and the factors may not hold true for other types of projects. It has been shown that hard and soft projects have different uncertainties and therefore different issues (Atkinson, Crawford & Ward, 2006).

Several factors in African countries affect the standards set forth by literature that are not encountered in the rest of the world. These factors include cultural values, political and economic conditions, organizational environments, social problems, lack of skills, and lack of resources (Muriithi *et al.*, 2003; Stuckenbruck *et al.*, 1987; Gow *et al.*, 1988).

Social-cultural factors have an effect in the development of values, attitudes and norms about work and organizations and so what works in the developed world, does not necessarily work in Africa (Muriithi *et al.*, 2003). These social issues like

networks and social capital have not been fully explored yet (Brookes, Morton, Dainty & Burns, 2006).

Many projects are capital intensive and therefore require government funding due to a lack of resources in these countries. Government bureaucracy therefore runs deep in these projects and will have an effect on the control of the project. Bribery and corruption is also widespread in these countries and can delay projects (Stuckenbruck *et al.*, 1987).

Personnel issues can also seriously hamper projects in the developing world (Gow *et al.*, 1988). A lack of trained and skilled staff, as well as a lack of experience with modern management techniques, results in critical resources being over extended which delays the project. An increased investment in human capital will allow some of these issues to be overcome and increase project performance (Brown, Adams & Amjad, 2007). This means that training and educating project managers positively affects the timing of projects. Developing effective project managers however is becoming a larger challenge with the increasing complexity of projects and the scarcity of human capital (Crawford, Morris, Thomas & Winter, 2006).

Research has shown that more than 50% of project managers have encountered unexpected side effects while executing a project (White and Fortune, 2002). These side effects vary from positive effects like increased sales or improved knowledge to negative effects such as technical limitations or organizational conflicts. The research also covered critical success factors for a project's outcome. This research was done in the UK and the factors will be analysed to determine their importance for projects in Africa.

3.5 Organizational influences

Organizations influence the execution of project through three main factors, systems, cultures and structures:

3.5.1 Organizational systems

Organizations who have adopted management by projects or that derive revenue primarily from performing projects; usually have systems in place to facilitate project management (PMBOK®, 2005). Other companies might not have these systems available and this hampers effective project management.

3.5.2 Organizational culture

Cultures are a system of values and norms that are shared by a group of people who use them to define a way of living (Hill, 2005). The organizational culture also includes policies and procedures that are in place to determine how employees conduct themselves. Authority relationships in a company may also influence the culture. Altogether these factors influence the work ethic and hours of a specific organization. Project manager need to be aware of these factors to ensure the right processes are followed to ensure effective project management.

3.5.3 Organizational structure

Organizational structure also has the ability to influence projects. The factor most influenced by the structure is resource availability. This is especially true in a traditional functional organization were a project team can have difficulties getting the required skilled personnel to become part of the team.

A project management office (PMO) can exist in any of the organizational structures. A PMO can advise traditional departments on appropriate procedures to follow during projects and can also be used to grant authority from an executive point of view.

A large number of project managers also see their jobs as becoming more bureaucratic and administrative paperwork is taking up a lot more of their time (Styhre, 2006). This is especially true of the production phase project managers who are constrained by organizational structures and procedures. This effectively reduces the time that project team members have available for the execution of the project due to paperwork and procedural requirements.

3.6 Project stakeholders

Project stakeholders are any individuals or organizations that are actively involved in the project or who might be affected by it (PMBOK®, 2005). The key stakeholders in projects are:

- Project manager
- Customer/user
- Performing organization
- Project team members
- Project sponsor
- Influencers

The following are definitions of each stakeholder as defined by the PMBOK® guide:

The project manager is the person involved for managing the project overall. This means that he exerts a large influence over the project. The project management

team are members of the project team who are directly involved in managing the project.

The customer or user is the individual or organization that will use the product.

The performing organization is the organization whose employees are responsible for executing the project. This can be from an outside firm contracted in to do the project or from within the customer's organization itself. The project team members are all the people who are involved in the project.

The project sponsor is the person or group of people who are responsible for the financial backing for the project.

Influencers are people that are not necessarily involved in the project but can influence the process due to their positions in either the performing or the customer's organization. The influence they have can be either negative or positive and can influence anything from the processes involved to the goals and objectives of the project.

3.7 Improving project management

As a relatively new field of management, there is always room for improvement in project management. Improvements that are necessary may also vary from organization to organization. Research has been done into project failures, possible areas of improvement and barrier to improvement in several studies (Loo, 2002; Assaf and Al-Hejji, 2006; Kotnour, 2000).

3.7.1 Areas for improving project management

All areas of project management can be improved. Areas for improvement can be divided into technical areas or people related areas. The following areas were identified as the most important areas that need improvement (Loo, 2002):

- Technical areas
    - Improve scope management
    - Improve budget management
    - Implement standard project management practices
    - Integrate project control measures
    - Need for organizational learning
    - The need for project reviews and audits
    - The need for effective resource planning
- People related areas
    - More training for managers and staff
    - The need to empower teams
    - The need for effective planning

The areas for improvement identified span a large portion of the accepted project management literature. Determining similar factors in a Southern African context needs to be done to determine in which areas deficiencies exist.

3.7.2 Barriers to improving project management

Several barriers have been identified that hamper improvements to project management. (Loo, 2002) These include:

- Leadership and organizational culture
- Inadequate investment in training

- Resistance to change
- Individual versus team compensation
- Time pressures and constraints
- No project management champion in organization

As with the areas for improvement identified in section 3.7.1, these barriers need to be verified in a Southern African setting and possibly other barriers identified.

3.7.3 Defining project success

Project success is determined by several factors. A project is generally seen as successful if it fulfils all the defined requirements, is finished on time and within budget (White and Fortune, 2002). Other factors important to project success have also been identified and are listed below: (Bryde, 2003)

- Smooth handover
- Responsiveness to change
- Client perception of project
- Effectiveness
- Increase in organizational effectiveness
- Growth and development of people in project team
- Growth and development of project manager

Different projects can be defined with different success criteria though and not all of these factors necessarily apply to any project. Some tools and techniques may also be more important to a project's outcome than others. These factors will all differ with the type of project as well as the industry it is in (Loo, 2002; Assaf and Al-Hejji, 2006).

It has also been determined that factors and techniques used in projects are not necessarily equally important to the project owners, contractors and consultants involved (Assaf and Al-Hejji, 2006). These all tie in to how a project's success is measured on completion.

3.8 Best practices

Most of the literature like the PMBOK® guide tries to determine what is commonly seen as good practice in the industry (Chapman, 2006). There have, however, been studies done to determine best practices in project management (Loo, 2002; Kerzner 1998; Loo, 2003).

These studies mostly concentrate on practices and projects in the Western world. There has also been some research done in developing countries (Frimpong, Oluwoye & Crawford, 2003; Long, Ogunlana, Quang & Lam, 2004; Gow and Morss, 1988; Stuckenbruck and Zomorrodian, 1987; Muriithi and Crawford, 2003; Saad and Greenwood, 2002) but this research has been very limited. The research is usually in one country only and aimed at a specific industry. The studies mentioned here are also not pertinent to Southern Africa.

Research was done in Canada on the best project management practices (Loo, 2002). The research focused on best practices, areas for improvement, barriers to improving project management and the leadership style needed for effective project management. This research, although done in the Western world, provides several guidelines to where research in Africa can start. Together with the process described in the PMBOK® guide, these need to be analysed to find the best processes in Southern Africa. Barriers to improvement in Africa could be substantially different to the barriers in the Western world. This is mainly due to underdeveloped infrastructures, poor economic and political conditions and a lack of resources in the developing world that is not present in Canada.

For a best practices analysis, general management practices also need to be taken into account. The following eight factors are critical to the success of product performance (Cooper, 1998):

- A high quality process
- Sound strategy for the business
- Resource commitment
- Senior management commitment
- Quality of project teams
- Cross-functional teams
- Innovative climate
- Senior management accountability

Clearly these factors will influence a project's outcome and needs to be taken into account when determining what the best practices are.

One of the goals of documents such as the PMBOK® guide is to ensure that project management is done effectively and that knowledge is distributed amongst the industry. This clearly ties in with point number one above which states that a high quality process is needed. One of the key points for successful project management is to link projects to strategy (Graham and Englund, 2004). Clearly this will not be effective though if the strategy of the business is not sound to begin with. Resource and management commitment are also crucial to successful project management (Loo, 2002; White and Fortune, 2002). Clearly all eight points as mentioned above are relevant to good project management.

Research on which tools, techniques and methodologies are used in the UK shows a high ratio of in-house developed systems were used for project management in conjunction with the accepted methodologies developed by accepted institutions and prescribed by literature such as PRINCE and the

PMBOK® guide (White and Fortune, 2002). It also highlights the limitations of these techniques. This is an important part to understanding best practices and the reasons for limitations in the tools and techniques are listed here (White and Fortune, 2002):

- Tools are inadequate for complex projects
- Difficult to model real world situations theoretically
- Too heavy in documentation, too time consuming
- Failure to predict problems
- Not cost effective
- Lack of training or expertise
- No suitable tools available
- Too much emphasis on following the standard

These points show that, even with all the available literature on good practice, not all the tools and techniques can be used in all situations. Ten percent of all tools and techniques have been shown to fail due to some of the mentioned factors (White and Fortune, 2002). Considering that this research was done in the United Kingdom, where factors like infrastructure and education are a lot further developed than in Africa, it can be expected that a lot more problems will be found in Africa.

3.9 Summary

The literature highlights the fact that although project management as a management science is becoming more formalized and professional, wide gaps still exist. The BOK's developed concentrate on what is seen as good practice but is based on conditions in the Western World. The studies done on best practices are also set in similar conditions. Most studies set in developing

countries focus on reasons for failures and delays, rather on positives and ways to do projects under poor conditions.

The next chapter will analyse the problem statement and research questions in detail.

CHAPTER 4 : PROBLEM STATEMENT AND RESEARCH QUESTIONS

4.1 Introduction

In the previous chapter, project management literature was reviewed with regards to good and best practices. In Chapter 4, the problem statement is described in detail, together with all sub problems, and the research questions arising from the problem are stated.

The chapter includes the problem statement with associated sub problems (Section 4.2) and the research questions posed (Section 4.3).

4.2 Problem statement

The problem statement for this study is:

To determine the best practices for project management in a Southern African context based on the accepted tools and techniques as described in literature and generally accepted in the Western world.

On closer analysis, this statement can be split into three key phrases:

- Best practices for project management. To determine best practices, tools and techniques currently being used by project managers must be determined and then analysed on the basis of best practices as described in section 3.8 of this study.
- Southern African context. This limits the study to countries in Southern Africa and projects that are done inside their borders
- Tools and techniques as described in literature. In the previous section, most of the generally accepted tools and techniques for project

management are described in section 3.3. These techniques are the ones in question for this study.

The problem statement therefore required the analysis of the current application of the tools and techniques by project offices in Southern Africa to determine best practices in the region.

4.3 Research questions

Several critical questions are apparent from the problem statement in section 4.2. To fully address the problem, these questions must be researched to compile a complete answer to the problem.

4.3.1 Best practices in Southern Africa:

The first issue to be decided is which techniques used in Southern Africa are seen as the most important best practices in the area. This will be ranked according to responses received to determine which practices are generally accepted throughout the region.

The study by Loo (2002) provided the basis for analyzing best practices in project management.

4.3.2 Areas needing improvement in project management

Project managers will then be asked to identify which areas of project management needs to be improved in their own industry and organization. This will help in determining which techniques are critical to success for projects.

The study by Loo (2002) provided the basis for analyzing which areas should be investigated in terms of possible areas for improvement.

4.3.3 Barriers to improving project management

In all organizations, barriers exist that hinder improvement to project management. Practitioners were asked which barriers exist in their organizations and which were especially important in regards to developing project management.

The study by Loo (2002) was used to determine the basis for what could possibly act as barriers to improving project management.

4.3.4 Factors critical to project success

Critical success factors for projects will also be determined. These should equate with the best practices used by project managers when projects are evaluated on whether they are successful or not.

The study by White & Fortune, (2002) was used as a basis for possible critical success factors.

4.3.5 Differences between best practices in general and best practices in Southern Africa

The best practices identified have been compared to the best practices as described in existing literature. This has been done to determine which techniques in general literature are not being used in Southern Africa

The studies by Loo (2002), White & Fortune (2002), Long et al (2004) and the PMBOK® guide was used to determine best practices as seen by literature and was then used to compare this to best practices as seen by practitioners in Southern Africa.

4.4 Summary

This chapter defined the problem statement in detail to determine all sides of the problem to be researched. The associated research questions were also determined here with possible procedures on how to address them.

The next chapter will look at the research design and proposed analysis to be done on the data.

CHAPTER 5 : RESEARCH METHODOLOGY

5.1 Introduction

In the previous chapter, the problem statement was analysed and the research questions posed. In Chapter 5, proposed methodology to be used will be described on all aspects.

The chapter includes the research approach taken (Section 5.2), the measuring instruments used (Section 5.3), details on the sampling done (Section 5.3) and the proposed data analysis (Section 5.4).

5.2 Research approach

This study uses as a basis the PMBOK® guide. The purpose of the PMBOK® guide is to define good practice as used in project management (Chapman, 2006). It contains knowledge that is unique to the project management field as well as knowledge that overlaps with the general business management fields (PMBOK®, 2005).

There are two main survey methods that could be used to gather the information needed, communication and observation. The communication approach involves a research survey. This is an extremely versatile and effective way of gathering data according to Blumberg, Cooper & Schindler, (2005). Information of all kinds can be gathered as questions of all types can be asked by the researcher.

Surveying is also more efficient and economical than observation as a few questions can gather the information needed that will require much more time and effort using observation Blumberg et al (2005).

Taking into consideration the above points, the survey method was selected for this study. A questionnaire was developed containing a mixture of open ended questions as well as closed rating type questions. Questions on demographics were also added to establish a profile of the respondents. This is a quantitative approach which is required to determine which practices are generally accepted in Southern Africa, whereas a qualitative approach would not do this to any certainty.

The surveys done were a mixture of personal interviews and self-administered inquiries. Due to the low response rate of similar studies by Loo, (2002) and White & Fortune, (2002) while using a self-administered inquiry, personal interviews were used to encourage a higher response rate.

The main advantages of using a self-administered inquiry is that inaccessible individuals can be contacted (Blumberg et al, 2005). This is especially relevant for the respondents, who as project managers, are generally pressed for time and do not necessarily have the time available for a personal interview.

Personal interviews have several other advantages according to Blumberg et al , (2005):

- Co-operation from respondents
- Interviewer can ask follow-up questions and avoid non-response to questions
- Feedback sessions can be organized for the respondents if required

5.3 Measuring instrument

The measuring instrument used was a questionnaire (attached in Appendix A) and the data collected was quantitative. A measurement instrument should be both valid and reliable. The validity of the instrument is the extent to which the instrument measures what it is supposed to measure. The reliability of the instrument is the consistency with which the instrument yields a certain result if nothing has changed. (Leedy and Ormrod, 2005)

5.3.1 Validity of the measurement instrument

The validity of the instrument can takes 4 different forms: (Leedy and Ormrod, 2005)

- Face validity: This is the extent to which the instrument looks like it is measuring a particular characteristic
- Content validity: This is the extent to which the instrument is representative of the content area being measured
- Criterion validity: This is the extent to which the instrument's result correlate with a similar, related instrument
- Construct validity: This is the extent to which the instrument measures characteristics that are not obtainable by observation

The following steps were taken to determine the validity of the questionnaire:

- Literature on project management was used to determine the questions asked. This ensures content validity
- The measurement instrument was tested on several project managers to determine its efficiency. This ensures construct validity

- The questionnaire was submitted to other researchers for judgment to ensure criterion validity

5.3.2 Reliability of the measurement instrument

The following forms of reliability can be defined: (Leedy and Ormrod, 2005)

- Inter-rater reliability: The extent to which 2 or more researchers evaluating the same characteristic give the same results
- Internal consistency reliability: The extent to which similar items in the instrument yield the same results
- Equivalent forms reliability: The extent to which different variants of the same instrument yield similar results
- Test-retest reliability: The extent to which the instrument will yield similar results when used on different occasions

Internal consistency reliability was increased by submitting the same questionnaire to all the respondents throughout the sample drawn. Equivalent forms reliability was increased by obtaining the data in as little time as possible.

5.4 Sampling

Sampling is the process by which respondents are picked out of the population to represent that population. This process can either be done through probability or non-probability methods (Leedy and Ormrod, 2005). For this study, the population is the project managers in South Africa.

The sample was taken by identifying companies that have project management divisions and sending the questionnaire to the managers there. This is a form of

purposive sampling, a non-probability sampling method (Leedy and Ormrod, 2005).

When doing the sampling, no distinction was made on the basis of any demographic variable. Respondents of all races, genders, ages and languages were targeted in an attempt to gain a representative sample of project managers in the region. Similarly, a broad spectrum of industries was targeted to try and determine differences in tools used. A demographic profile of the respondents will be compiled with the results to clarify what the sample consists of.

Although no demographic distinction was made, it is a prerequisite for the study that the respondents currently work as a project manager. The amount of experience the respondent has as a project manager was recorded, but not used as a screening variable.

Respondents are not identified by name and the organizations that they work for are not mentioned either. This is done to ensure confidentiality that many respondents require.

The amount of responses that is aimed for is fifty. Other studies that have been done on the subject showed a response rate of approximately 25% (Loo, 2002; White and Fortune, 2002). This means that a sample of at least 200 respondents is required and the questionnaire was sent to 250 possible respondents.

After determining which companies have project management divisions, these companies were contacted and requests were made for assistance with the study. Where the company agreed, the questionnaire was electronically sent to each project manager. To ensure confidentiality, the project managers could then electronically answer the questionnaire or answer it on a printed version which was collected from the company contact person.

The sampling method chosen has several limitations. First of these, is that random sampling could not be done due to the fact that the project managers in the countries are spread geographically and not all were easily contactable. The study was done focusing in the Gauteng area in South Africa.

The second limitation to the study is that the total population was unknown. This means that determining whether the sample is representative is not possible.

5.5 Data analysis

The data gathered was collected and organized using Microsoft Excel.

The first analysis done was to determine the profile of the respondents according to race, gender, age, industry worked in, countries where the respondent is involved in project management, the amount of experience the respondent has in project management and how long the respondent has worked for his current organization.

Next the open ended questions were collated and grouped under headings to ease analysis. This included the questions on best practices in the organizations, barriers to improvement of project management and areas where improvement is needed. The responses were assigned codes and then ranked from those with the most responses to the least to determine which was most important.

The questions that entailed rating tools and techniques on a scale of importance were analysed by taking the mean of all the received responses and then ranking them accordingly from most important to least important.

5.6 Summary

This chapter addressed the research approach taken, the measuring instruments used, how sampling was done and which analysis was selected. The study involved a survey approach which involved a quantitative measuring instrument and was spread over as wide a profile as possible.

The next chapter will look at the results that were collected from the described method.

CHAPTER 6 : RESEARCH RESULTS

6.1 Introduction

In the previous chapter, the research methodology was described. In Chapter 6, the results of the study will be presented.

The chapter includes the demographic profile of the respondents (Section 6.2) and the presentation of the research results (Section 6.3).

6.2 Demographic profile of respondents

The demographic profile of the respondents is shown in Figures 6.1, 6.2 and 6.3. The respondents' demographic profile was limited to their race, age and gender as this was not deemed crucial for this study.

Further profiling was however done to determine the amount of experience that the respondents have in the project management environment (Figure 6.4), as well as how well they know their current organization (Figure 6.5). A profile was also established using the country that the project managers' projects are located in (Figure 6.6). The profile was also extended to include an industry breakdown to determine whether the study was conducted over a broad spectrum (Figure 6.7).

As can be seen from the profile, the respondents were mostly male (83.3%) and white (83.3%). The age profile is more varied though with the largest section of the profile being respondents aged between 25 and 34 (42.9%).

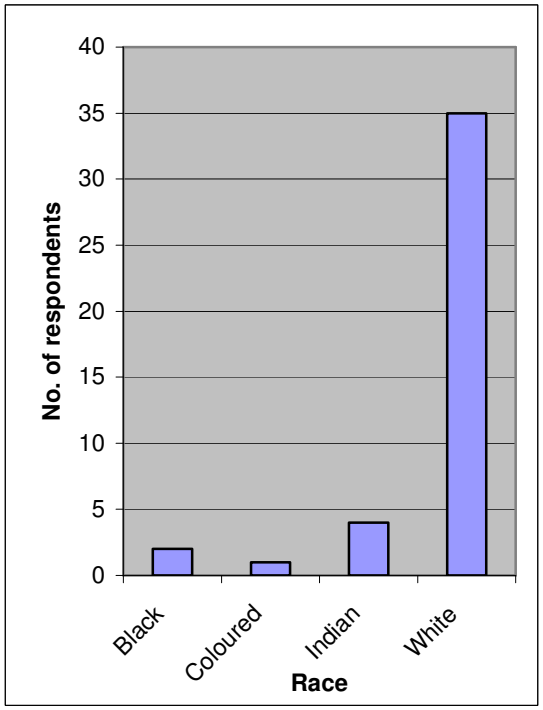

Figure 6-1 Racial profile

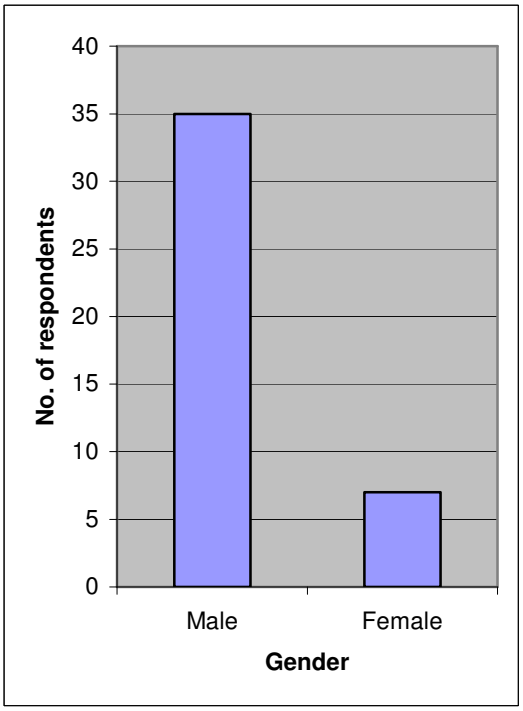

Figure 6-2 Gender profile

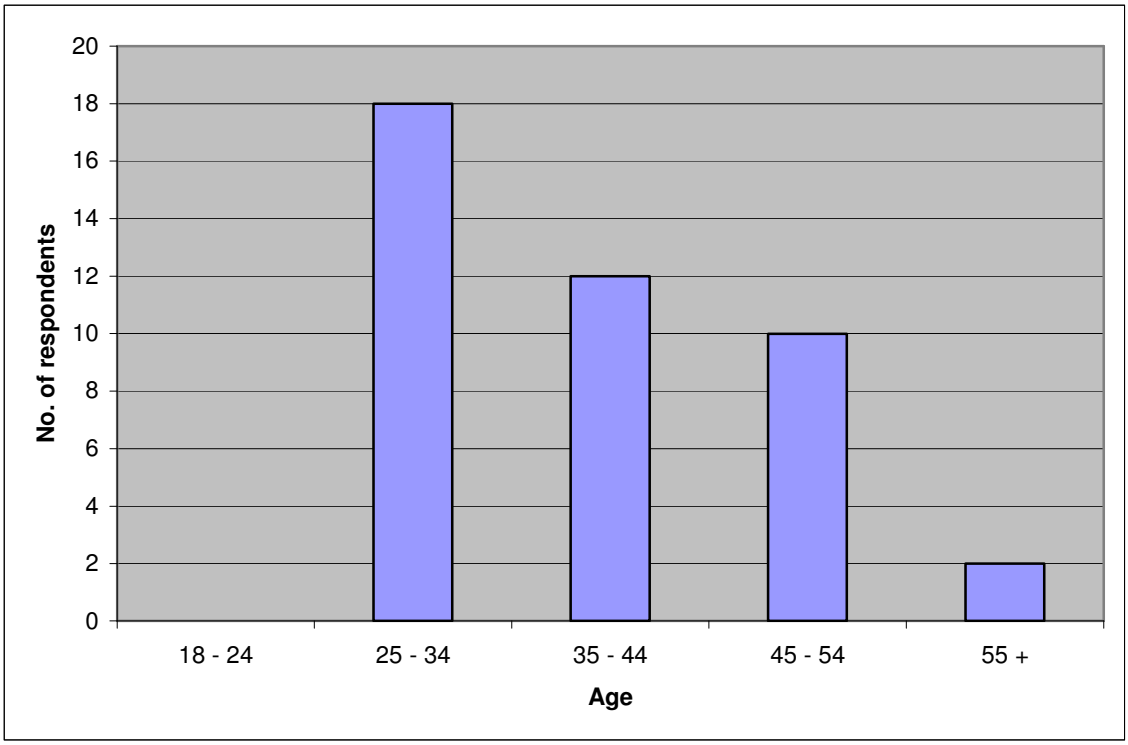

Figure 6-3 Age profile of respondents

When looking at the profile with relation to the amount of experience that the respondents have in project management (Figure 6.4), it is clear that the responses received ranged from fairly new project managers with less than two years experience right through to the other side of the spectrum with managers that have more than ten years project management experience.

Similarly, the respondents have worked for their current organizations for anything from below two years to more than ten years (Figure 6.5). This is not necessarily an ideal situation as respondents who have been working at their organizations for a longer period of time will be more aware of the organizations strengths and weaknesses which are analysed further on in this section.

The project managers are also involved in projects in several countries though all the respondents have been involved in projects in South Africa (Figure 6.6).

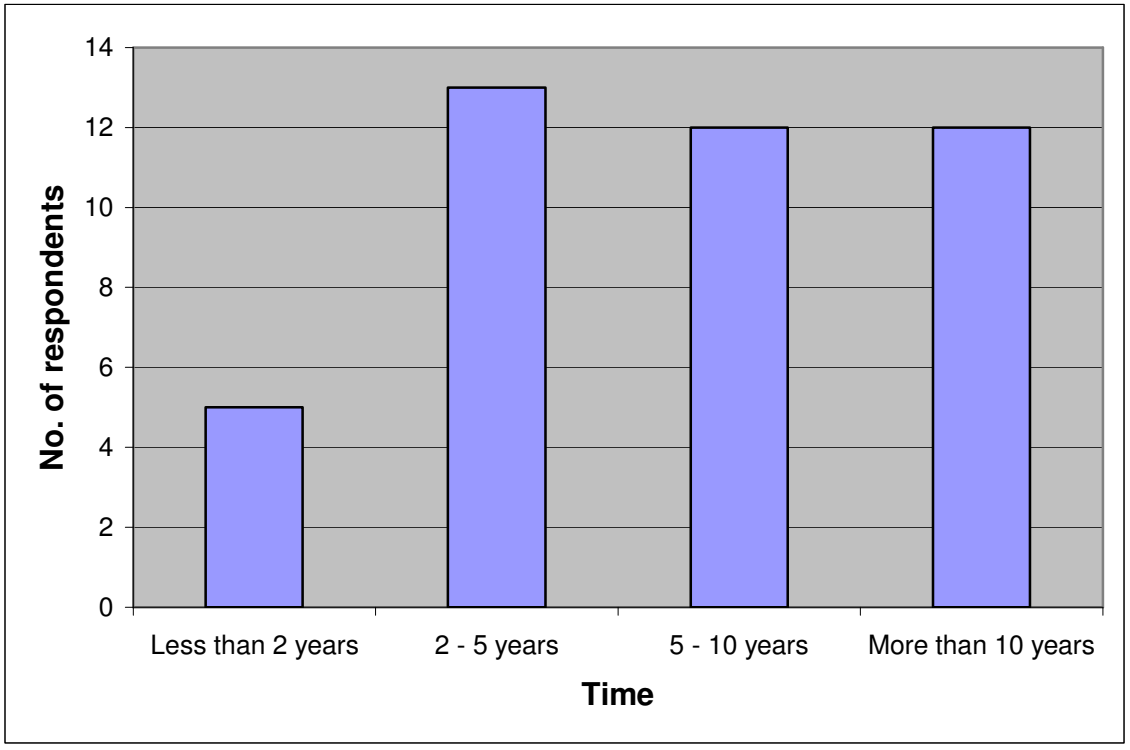

Figure 6-4 Project management experience of respondents

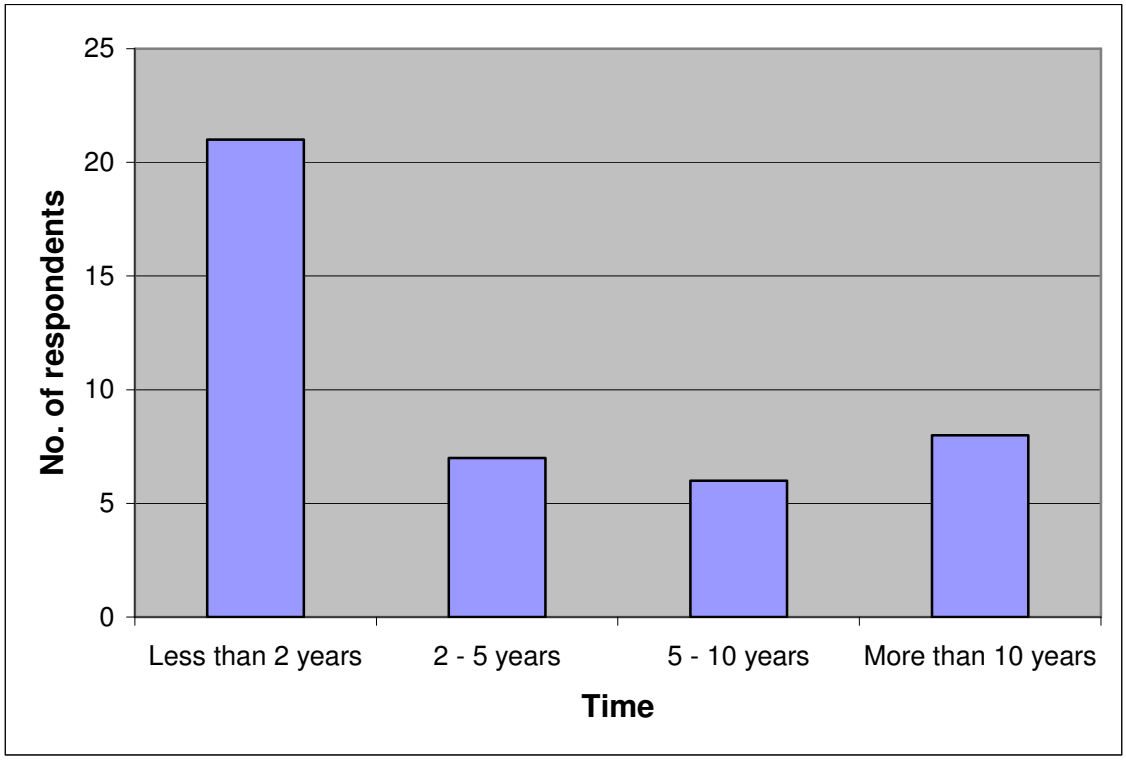

Figure 6-5 Period of employment at current employer

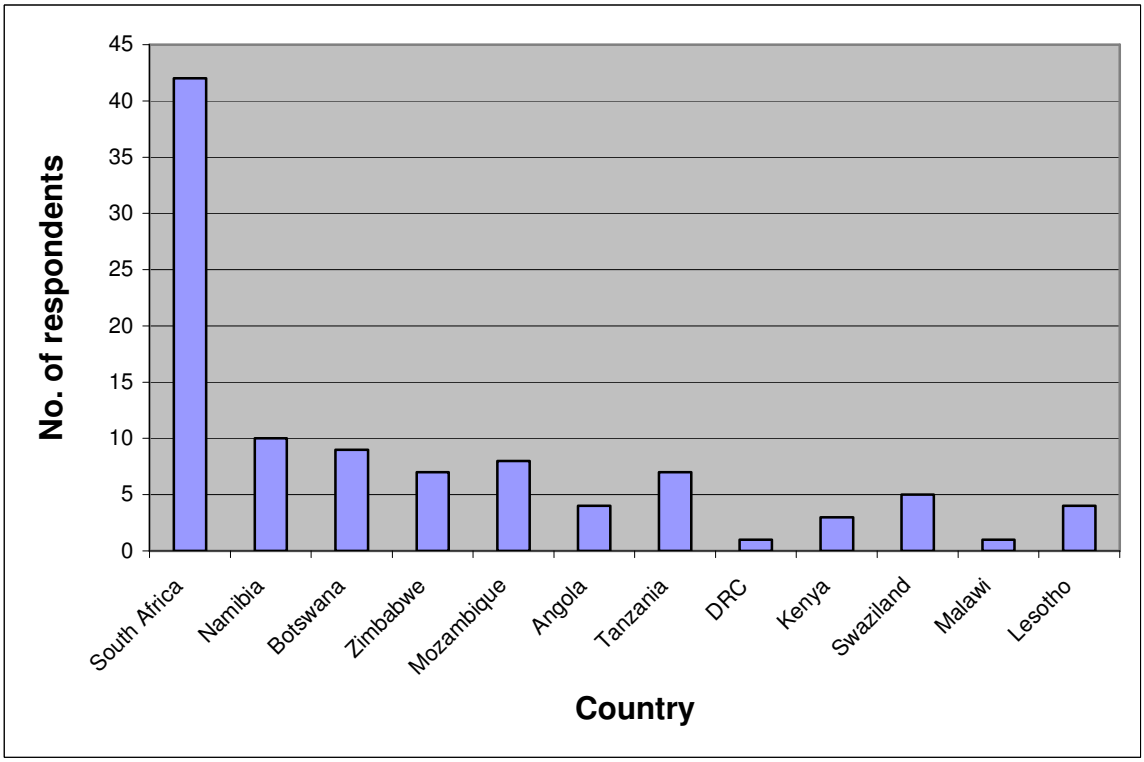

Figure 6-6 Country of project execution

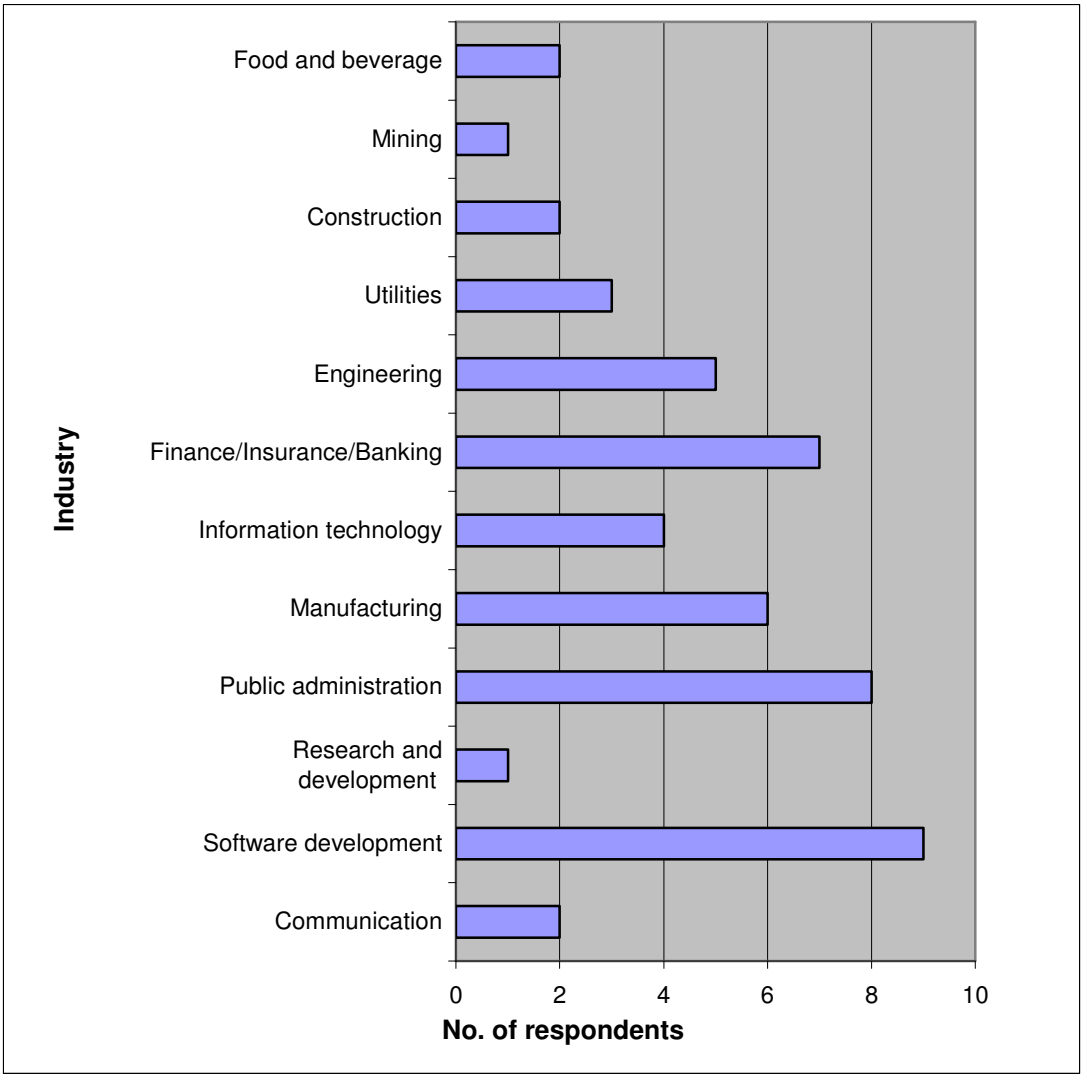

Figure 6-7 Industry profile of respondents

6.3 Research results

6.3.1 Best practices in Southern Africa

The respondents were asked to name the three top best practices in their organization. These were collated and ranked from the practice with the most references to the least. This presents a possible guideline for which of the project management techniques used are commonly accepted by project managers as most important to completing successful projects in Southern Africa. The results that have been grouped and ranked can be seen in Figure 6.8.

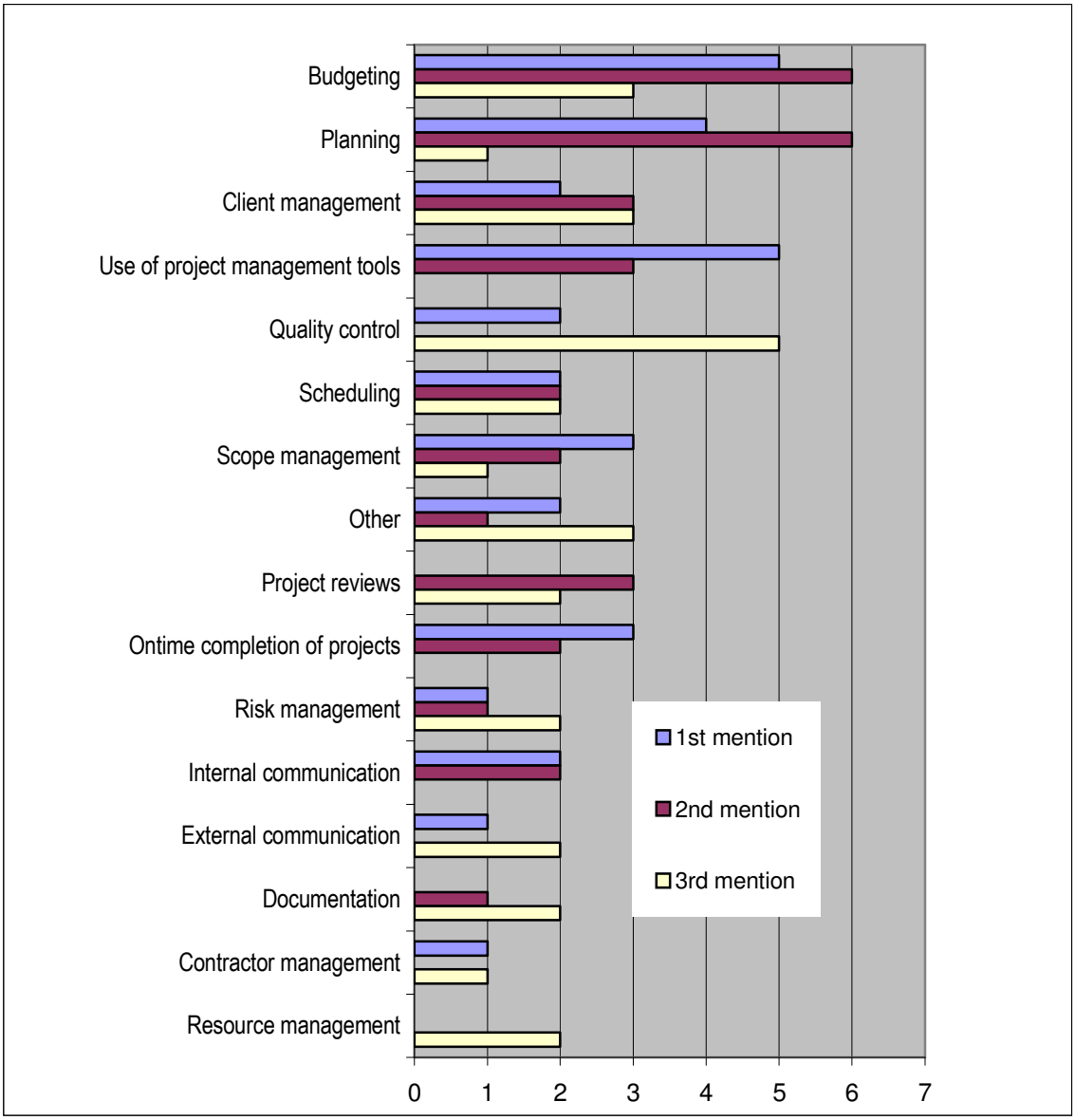

Figure 6-8 Project management best practices in organizations

6.3.2 Areas needing improvement in project management

The respondents were asked to identify areas where project management in their organization is not up to standard and where they would like to see improvement. This was done in the form of an open ended question from which the responses

were grouped and ranked from the areas where most improvement is needed to those with the least mentions. The results can be seen in Figure 6.9.

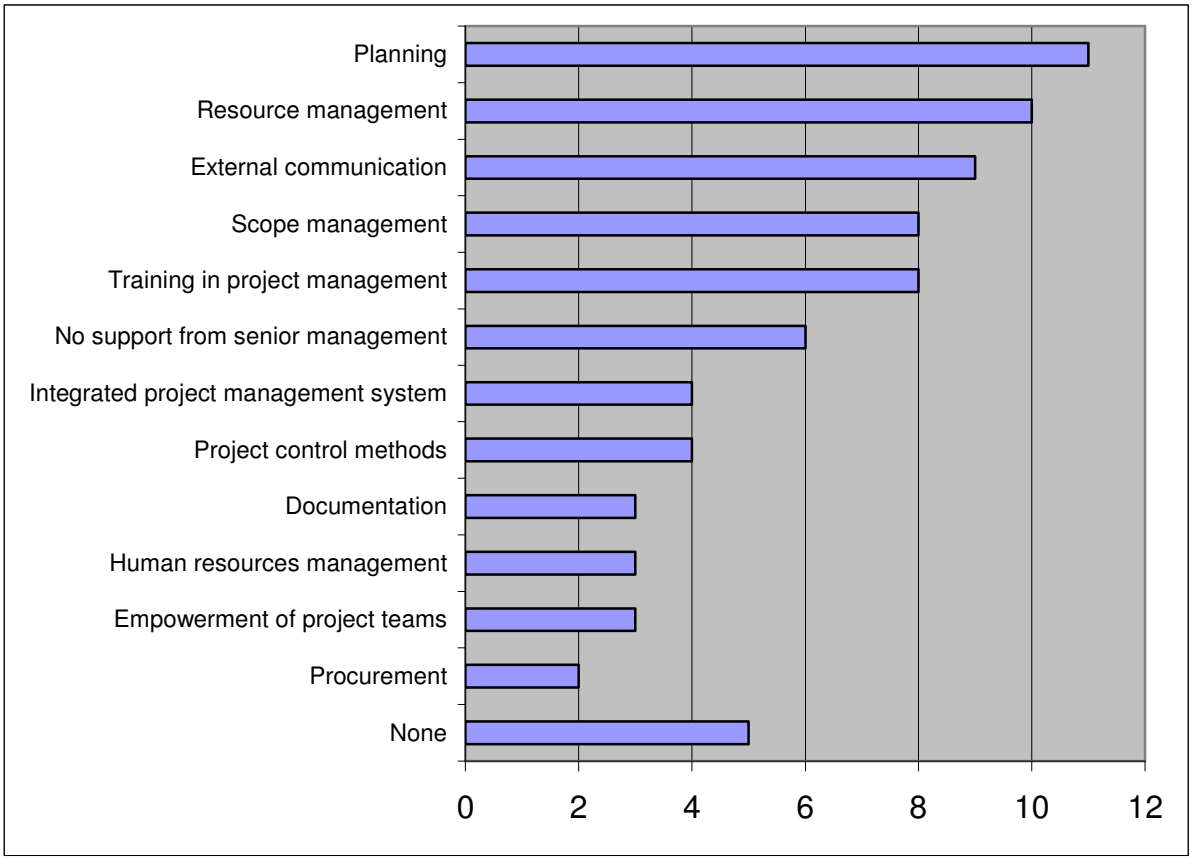

Figure 6-9 Areas in project management where improvement is needed

6.3.3 Barriers to improving project management

In determining which barriers hinder the improvement of project management in Southern Africa, distinction was made between factors inside organizations and external influences. Respondents were asked to identify any number of factors in their organizations which are preventing more efficient project management (Figure 6.10) and also to identify external influences which hamper successful project management (Figure 6.11).

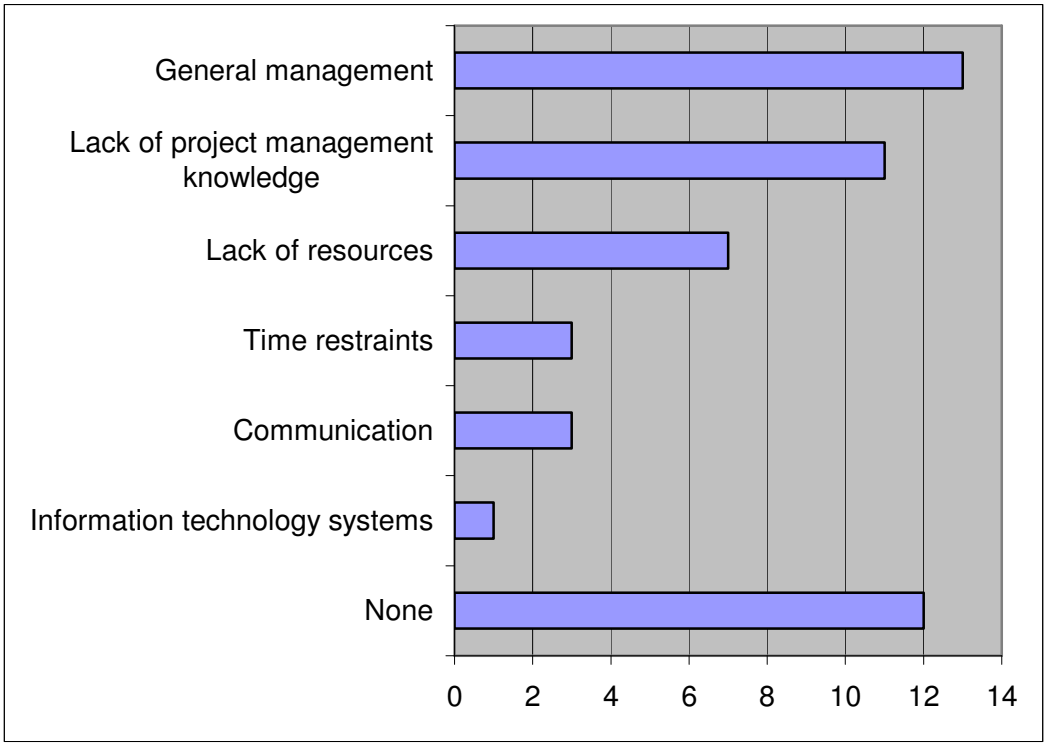

Figure 6-10 Internal factors hampering project management

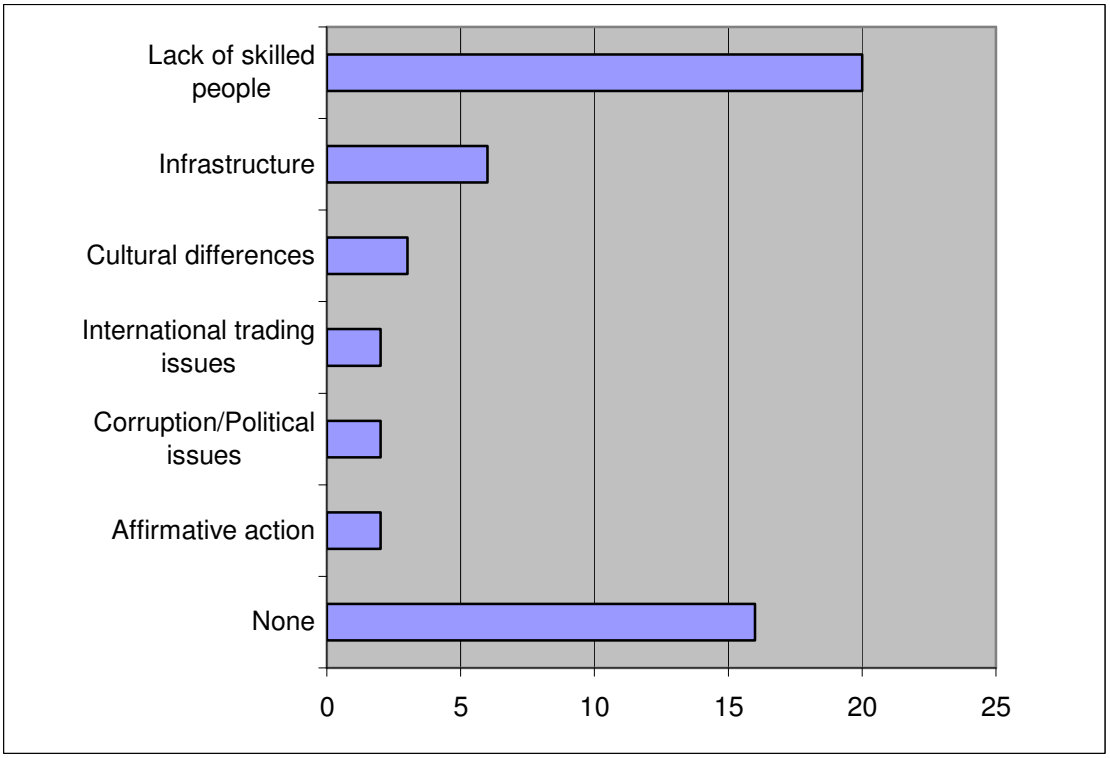

Figure 6-11 External factors hampering project management

6.3.4 Critical factors for project success

To determine which factors are critical to successful project management in Southern Africa, the respondents were asked to rate 31 factors on a scale of importance from one to five where five means the factor is critically important. The mean score of each of these factors was determined over all the respondents and the factors rated with this value from most important to least important. The results can be seen in Figure 6.12

6.4 Summary

This chapter presented the results obtained with the survey, starting with the demographic information for the respondents and continuing with the results for each of the research questions that were identified in Chapter 4.

In the next chapter, these results will be discussed and analysed. Conclusions and recommendations stemming from the results will also be made as well as suggestions for future research.

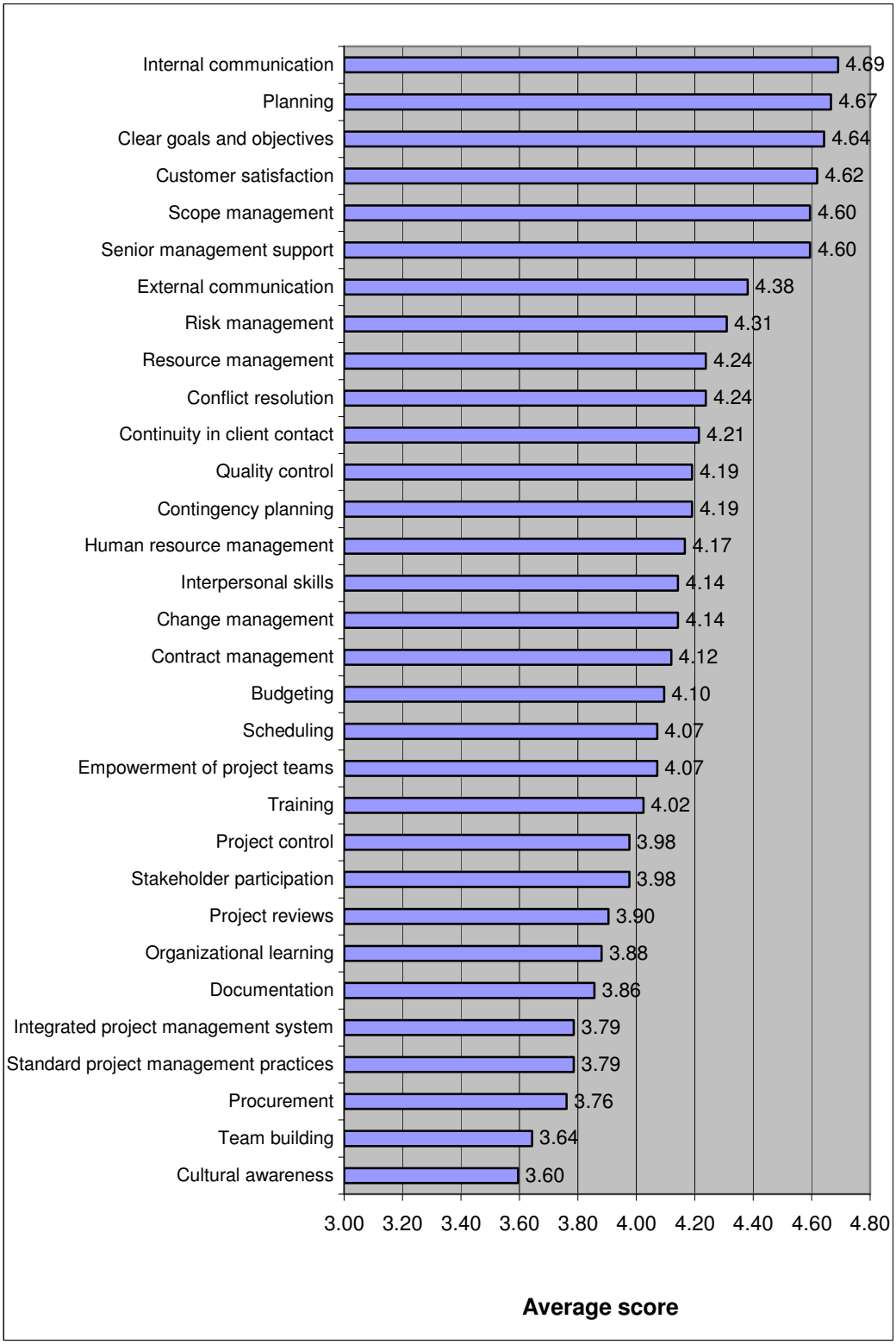

Figure 6-12 Importance of factors to project success

CHAPTER 7 : DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

In the previous chapter, the results obtained in the study were presented. In Chapter 7, the results will be discussed, conclusions drawn and recommendations made.

The chapter includes the discussion of the results (Section 7.2), conclusions drawn (Section 7.3), limitations of the study (Section 7.4) and recommendations (Section 7.5).

7.2 Discussion of research results

7.2.1 Best practices in Southern Africa

As can be seen in Figure 6.8, a wide variety of best practices were mentioned by the respondents in regards to their organizations. The question was phrased to include the three top practices in their organizations and was captured as such.

Fifteen different themes resulted from the question which included ten technical themes and five people related themes. The technical themes mentioned were budgeting, scope management, the use of project management tools, scheduling, planning, risk management, quality control, documentation, resource management and the on-time completion of projects. Several of these themes are closely related such as scheduling, planning and on-time completion of projects which all fall under project time management as described by the PMBOK® guide. Budgeting and resource management are also closely related.

The five people related themes mentioned were client management, internal communication amongst the project team, holding project review meetings, contractor management and external communication with stakeholders.

It must be noted that several of the above themes recurred over the top three places, specifically budgeting, client management, scope management, scheduling and risk management.

It is also notable that the results obtained are largely similar to the results obtained in other studies on the same subject. The results obtained by Loo, (2002) contains almost identical results for the best practices in organizations, and the results also conform to factors that are seen as critical to project success by White and Fortune, (2002).

The fact that people related themes were mentioned also shows that a large part of project management relates to dealing with people, whether it is the project team, the client or other stakeholders.

7.2.2 Areas needing improvement in project management

In determining which areas of project management need to be improved, twelve areas were identified by the respondents (Figure 6.9). Once again the areas were split between technical themes and people related themes.

The technical themes that were mentioned are resource management, planning, scope management, the use of an integrated project management system, documentation, procurement and project control methods.

The people related themes that were mentioned are training of personnel in project management techniques, communication, support from senior management, human resources management and the empowerment of project teams.

Of the areas mentioned, resource management, planning and scope management were the three most commonly mentioned deficient areas. Once again, there are remarkable similarities between the results obtained and the results from the study done by Loo, (2002). Notably, the areas required for improvement are also all included in the factors mentioned as being the top best practices for organizations in Southern Africa showing that though these factors are important, organizations in South Africa are not necessarily efficient in applying them.

7.2.3 Barriers to improving project management

Two questions were included to determine what the barriers are to improving project management efficiency in Southern Africa. The questions encompassed factors internal to organizations (Figure 6.10) and factors external to the organizations (Figure 6.11).

The three main factors mentioned as internal barriers are the lack of knowledge pertaining to project management tools and techniques, the lack of support from general management and a lack of resources. The three main external barriers are the lack of skilled people available in the country, infrastructure and cultural differences.

The internal barriers mentioned highlights that there is a distinct lack of knowledge of project management in the region. Coupled to this, a lack of resources further exacerbates the problem.

The external barriers mentioned factors that have been identified in several other studies (Gow, 1988; Muriithi and Crawford, 2003; Stuckenbruck and Zomorrodian, 1987; Frimpong et al, 2003). These factors are generally problems in developing countries and the research done in the developed world such as the study done by Loo, (2002), have vastly different factors than the results obtained here.

7.2.4 Critical factors for project success

The research question asked was to determine the factors that are critical to project success. A list of 31 factors were pre-determined and ranked on a scale of one to five to determine their relative importance in the Southern African context (Figure 6.12).

The most important factors identified are effective internal communication, having clear goals and objectives and proper project planning. The least important factors identified are the awareness of cultural differences, team building and motivation of team members and procurement.

As can be seen from the results in Figure 6.8, there is a high correspondence between the factors listed as the organizations' best practices and the factors seen as the most important for successful project management. The one glaring contradiction is the use of project management tools which, while being one of the top 4 best practices is only ranked 28th of the 31 factors presented.

7.3 Conclusions

The results of the survey show that though there are several areas in project management in which companies in the region excel, there is also a need for

improvement. The best practices that are currently in use in Southern African organization are shown in Figure 6.8 and shows that the current practices in the region are in line with general project management guidelines and literature and to the rest of the world. This shows that the developing status of the region clearly does not influence the project management as anticipated at the beginning of the study.

The practices identified are all within the standard tools and techniques as listed by the PMBOK® guide.

The areas needing improvement in project management in Southern Africa correspond to the factors mentioned as best practices. This shows that though these are seen as critical to project management success and organizations seem to be performing them well, they are also the areas that most needs improvement. Another factor identified is training of people in project management techniques. This shows that the lack of efficiency in the areas identified as critical can be attributed to a general lack of knowledge about project management. Couple this to a lack of senior management support as identified by the respondents, there are serious deficiencies in project management in Southern Africa.

The results obtained from the questions on internal and external factors hampering project management corroborates these results. The three most mentioned internal factors are interference from general management, a lack of project management knowledge and a lack of resources. Clearly these indicate that there exists a major need for training in project management techniques in Southern Africa. The lack of resources may be attributed to the lack of training and knowledge that currently exists and also needs to be addressed.

The most mentioned external factor, mentioned by 46% of the respondents, is the lack of skilled people in the country. Several factors contribute to this

shortage including the immigration of skilled people to other countries, the legacy left by apartheid where a large section of the population was left without proper education and the relative newness of project management as an important part of organizations.

7.4 Limitations of the study

This study has several limitations:

- The gender profile of the respondents showed that almost no penetration was made into the female population of the region
- The racial profile shows that almost no penetration was made into the black, Indian and coloured population of the region.
- The project managers interviewed were all from South Africa and not the other countries in the region.
- No distinction was made between differences within the countries in the region.
- There were only 42 respondents in the study which means that the results are not necessarily representative of the population.
- The respondents were not drawn randomly from the population but rather from a section of the population that was known to contain project managers. This means that certain areas of project managers in the region may have been omitted in the study

7.5 Recommendations

The following recommendations arise from the study:

- The study needs to be repeated to try and include a more representative sample from the population in the region

- It is clear that there is a serious need for training in project management techniques, both amongst project team members and other personnel in organizations
- More resources need to be allocated to project management
- The study should be done including people in organizations that do not form part of the project teams but are influenced by the results of project management
- Further research should be done into the use of project management as a strategically important tool for organization in the future. Project management is becoming increasingly important to maintain an advantage over competitors and this means that efficient project management will be crucial in the future

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Appendix A: Questionnaire

Introduction:

Thank you for taking the time to answer this questionnaire. It forms part of a thesis for UNISA's MBL degree and focuses on project management in Southern Africa. Data is being collected about the importance of project management tools and techniques as well as barriers to improving project management in organizations. The thesis also focuses on the Southern African region as most of the existing literature is based on the developed world.

The results of this survey will be kept confidential and neither the respondent's name nor organization's name will be given to any 3rd party. To this end, no name, phone number, e-mail address or company name is required on the questionnaire.

Please answer the following questions by marking the appropriate box:

How many years have you been working in a project environment?

□ Less than 2 years

□ 2 – 5 years

□ 5 – 10 years

□ More than 10 years

How many years have you worked for your current organization?

□ Less than 2 years

□ 2 – 5 years

□ 5 – 10 years

□ More than 10 years

Gender

□ Male

□ Female

Race

□ Black

□ Coloured

□ Indian

□ White

Age

□ 18-24

□ 25-34

□ 35-44

□ 45-54

□ 55 +

Please list the three most important project management best practices in your organization?

In your experience, which of the following factors are crucial to completing successful projects? Please rate each on importance using a scale of 1 to 5, where 5 means very important.

Having a integrated project management system

□ 1 □ 2 □ 3 □ 4 □ 5

Effective scope management of projects

□ 1 □ 2 □ 3 □ 4 □ 5

Effective project planning

□ 1 □ 2 □ 3 □ 4 □ 5

Resource management

□ 1 □ 2 □ 3 □ 4 □ 5

Scheduling

□ 1 □ 2 □ 3 □ 4 □ 5

Cost and budget control

□ 1 □ 2 □ 3 □ 4 □ 5

Project control methods

□ 1 □ 2 □ 3 □ 4 □ 5

Quality control procedures

□ 1 □ 2 □ 3 □ 4 □ 5

Procurement

□ 1 □ 2 □ 3 □ 4 □ 5

Effective contract management

□ 1 □ 2 □ 3 □ 4 □ 5

Retention and acquiring human resources

□ 1 □ 2 □ 3 □ 4 □ 5

Stakeholder participation

□ 1 □ 2 □ 3 □ 4 □ 5

Effective communication (Internally in project team)

□ 1 □ 2 □ 3 □ 4 □ 5

Effective communication (Externally to stakeholders)

□ 1 □ 2 □ 3 □ 4 □ 5

Customer satisfaction

□ 1 □ 2 □ 3 □ 4 □ 5

Contingency planning

□ 1 □ 2 □ 3 □ 4 □ 5

Continuity in client contact

□ 1 □ 2 □ 3 □ 4 □ 5

Project documentation

□ 1 □ 2 □ 3 □ 4 □ 5

Standardization of project management practices

□ 1 □ 2 □ 3 □ 4 □ 5

The need for organizational learning

□ 1 □ 2 □ 3 □ 4 □ 5

Empowerment of project teams

□ 1 □ 2 □ 3 □ 4 □ 5

Holding project audits and review meetings

□ 1 □ 2 □ 3 □ 4 □ 5

Training people in project management skills

□ 1 □ 2 □ 3 □ 4 □ 5

Interpersonal skills

□ 1 □ 2 □ 3 □ 4 □ 5

Clear goals and objectives

□ 1 □ 2 □ 3 □ 4 □ 5

Support from senior management

□ 1 □ 2 □ 3 □ 4 □ 5

Effective conflict resolution

□ 1 □ 2 □ 3 □ 4 □ 5

Effective change management procedures

□ 1 □ 2 □ 3 □ 4 □ 5

Team building and motivation

□ 1 □ 2 □ 3 □ 4 □ 5

Risk management

□ 1 □ 2 □ 3 □ 4 □ 5

Awareness of cultural differences

□ 1 □ 2 □ 3 □ 4 □ 5

Are there any other factors, other than the above- mentioned, that are crucial to successful project management?

Which area or areas in your organization need to be improved to increase project management effectiveness?

Are there any barriers in your organization that prevent improvements to project management? If so, please list them.

Are there any external factors in Southern Africa that hinder successful project management? If so, please list them.

12. In which industry sector do you work in?

□ Wholesale/Retail

□ Transportation

□ Communication

□ Software development

□ Research and development

□ Publishing/Distribution

□ Public administration

□ Petrochemical

□ Manufacturing

□ Information technology

□ Health services

□ Finance/Insurance/Banking

□ Engineering

□ Utilities

□ Education

□ Defence

□ Construction

□ Other (Please specify)

13. In which countries have you done projects?

□ South Africa

- □ Namibia
- □ Botswana
- □ Zimbabwe
- □ Mozambique
- □ Angola
- □ Tanzania
- □ Democratic Republic of Congo
- □ Kenya
- □ Other (Please specify)