

## CHAPTER THREE

### RESEARCH METHODOLOGY

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#### 3.1 Introduction

The construction industry creates and maintains the built environment that underpins all modern human endeavour, economic growth, and social development. (SA construction industry status report – 2004)

*The study investigates the implementation of motivation to increase work output in terms of productivity. Site managers/agents of top class eight-construction companies who are registered with the Gauteng Master Builders Association in Johannesburg were interviewed.*

##### 3.1.1 Tests of hypothesis

The hypothesis to be tested is:

Ho: that, site managers/agents who motivate their skilled workforce will have:

- increased productivity and performance

Ha: that site managers/agents that do not motivate it skilled workforce will have:

- decreased productivity and performance

The hypothesis was applied to eight construction companies in South Africa. Findings and conclusion in the study are discussed in chapter five.

##### 3.1.2 Research method adopted

The research study was conducted by firstly doing literature review and using opinions of various authors and relating these opinions and theories to the South African construction industry.

The study adopts an exploratory method involving identifying motivational factors that can be used to motivate the skilled workforce and at the same time increases work output in terms of productivity.

Twelve construction companies were in the sample universe and eight (66.7%) responded to the investigative interview.

An investigative research interview of the site managers/agent of eight companies which are categorized into; Company A, Company B, Company C, Company D, Company E, Company F, Company G, Company H was carried out with regards to the motivational system of their skilled workforce and how it affect productivity.

### **3.2 Methods use in the collection of information**

The research tool use in the study is the interviewing of key personnel's (Site manager's/agents) who are involve in the management of the skilled workforce in the construction industry.

#### **3.2.1 Interviews**

A survey interview can be defined as a conversation between the interviewer and the respondent with the aim of getting information from the respondent (Moser et al, 1973).

The advantages of using personal and key informant interviews are:

- The accessibility to the respondent – Site manager's/agents.
- The understanding of the respondent of what is required of them. The role of the respondent, what is expected of him in that role and the decision of the site manager's/agent's to give relevant information.
- The site managers/agents work directly with the skilled workforce on the construction site.
- Motivation on the part of the site manager's/agent's to answer the questions accurately.

### **3.3 Questionnaire design and pre-test**

To ease data collection an eight question questionnaire was designed taken into consideration the time constraints the site manager's/agent's have at hand. The answers to these questions are short ones.

Length of question is important; Converse et al suggested it should not be more than twenty words (Converse et al, 1986).

The questions establish the focus of the study and are formed about the situation or problem around the subject of motivation of the skilled workforce; this helps to determine the purpose for the study.

The questionnaire design for the research report was structured into two sections. A letter was addressed to respondents, who were site managers and site agents. The letter explains the reason for conducting the survey and the need for the site managers/agent to co-operate.

A ten questionnaire was initially designed and used for the pilot interviews. The interview was done telephonically to test the opinion of site managers with regards to the motivation of their skilled workforce.

There was problem of time constraints in responding to the entire questionnaire as majority of them are always very busy. The questions were then reduce to eight in order to minimize time involved in the actual interview.

In this research report a convenient random sample was selected. The sample was representative of eight reputable construction companies around the Johannesburg centre business district (CBD).

Eight construction companies were interviews on different construction site within the Johannesburg area.

Table 3.1 shows the list of the companies and the date the interviews were conducted.

**Table 3.1**

<b>NO.</b>	<b>NAME OF COMPANY</b>	<b>DATE OF INTERVIEW</b>
1.	Company A	28 <sup>th</sup> May 2005
2.	Company B	30 <sup>th</sup> May 2005
3.	Company C	30 <sup>th</sup> June 2005
4.	Company D	6 <sup>th</sup> July 2005
5.	Company E	6 <sup>th</sup> July 2005
6.	Company F	6 <sup>th</sup> July 2005
7.	Company G	7 <sup>th</sup> July 2005
8.	Company H	11 <sup>th</sup> July 2005

### **3.3.1 Sampling frame**

For the research to be a representative of construction industry it is necessary to get the representative sampling frame from the population.

Sampling is a deliberate choice of a number of people who provide information with regards to the data from which conclusion is drawn (Jankowicz, 1995).

The respondent of the study are:

- Site manager's and
- Site agents.

A simple random sampling, which involves a straightforward sampling frame of the construction site, was carried out in and around Johannesburg.

Key informant interview was used for the study because respondent are chosen on the basis of their specialized knowledge in the field of construction.

Tremblay (1992 as cited in Jankowicz; 1995) stated the usefulness of key informant interview that:

- It defines the essential key characteristics of certain issues by drawing on personal experience and understanding of the respondents;

- It identifies and defines the boundaries, constraints and the extremes in which these definitions are applied;
- It increases the knowledge of the issue itself.

Seven construction sites were visited and one company (Company B) was contacted telephonically and questionnaire was forwarded to the Human resource manager and she responded by email. The list of these construction companies are listed in table 3.2 below:

Table 3.2

NO.	NAME OF COMPANY	JOB TITLE AND POSITION OF RESPONDENT	YEARS OF EXPERIENCE	COMMENT
1.	Company A	Toll manager	15	Company A is a South African-based group of companies serving the construction economies of the less developed world and leveraging South African competitiveness into global markets. The company does construction throughout South Africa.
2.	Company B	Personnel Assistant & Human Resources	8	Company B over the past ten years has been involved in multi - million construction works throughout South Africa.
3.	Company C	Site Manager's (2 Nr.)	7	Company C is mainly involved in the construction of town houses.
4.	Company D	Site Agent	34	Company D is involved in property development including the construction of clustered and town houses by using sub - contractors.
5.	Company E	Site Agent	3	Company E has established itself as a leading supplier of Construction services and Building products in Southern Africa since 1948. The multi - disciplinary skills the company holds enables Company E to partner its clients and offer service excellence in the following fields: <ul style="list-style-type: none"> <li>• Civil Engineering</li> <li>• Building</li> <li>• Structural and Mechanical Engineering</li> </ul>

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				<ul style="list-style-type: none"> <li>• Roads Construction</li> <li>• Open Cast Mining Contracting</li> <li>• Underground Mining Contracting</li> <li>• Manufacturing of Building and Mining Products</li> <li>• Facility Management</li> </ul>
6.	Company F	Site Manager	16	Company F is mainly involved in the construction of houses over the past 16 years.
7.	Company G	Site Engineer/Agent	2	<p>Company G is a broad-based infrastructural company.</p> <p>Company G is one of the top three construction and materials manufacturing companies in southern Africa.</p> <p>With decades of construction experience, Company G has played a major role in the development of southern Africa's infrastructure, achieving a reputation both nationally and internationally for innovation and professionalism.</p>
8.	Company H	Site Agent	4	Company H is a Joint Venture construction company and specializes in the construction of buildings and roads.