

EMPLOYEE MOTIVATION FACTORS WITHIN A LARGE NEW ZEALAND CONSTRUCTION COMPANY:

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ABSTRACT

Despite the popularity of motivational research in the latter half of the twentieth century, little has been undertaken within the New Zealand construction industry and internationally little evidence exists on the motivation factors that influence different occupational groups within the industry. As construction remains one of the most people-reliant sectors, employee motivation is a crucial element needed to increase productivity.

This research aimed to fill these knowledge gaps by exploring the motivation of employees working on New Zealand's largest construction project. The research regarded the employees firstly as a single group, and the factors considered as influential motivationally, and also investigated whether specific occupational groups were motivated by differing motivating factors. The four occupational groups included in the research were Project Managers, Construction Supervisors, Quantity Surveyor and Contract Administrators.

A questionnaire was administered to 39 employees. 33 responded and partook in structured interviews. The findings revealed that the respondents as a group were motivated by intrinsic rewards such as co-worker relationships and completing challenging tasks which are highly rated on Maslow's Hierarchy of Needs. It was also found that Project Managers had a marked desire for intrinsic rewards compared to the three other occupational groups. Quantity Surveyors and Construction supervisors provided mixed responses, however they still identified intrinsic rewards as their most significant motivating factors. Contract Administrators were found to have a stronger desire for extrinsic rewards such as monetary rewards and job security.

It was concluded that the employees of a large New Zealand construction company were primarily motivated by intrinsic rewards, and employers should perhaps base their employee motivation strategies around these preferred motivators. On a more detailed level, different motivating factors were favoured by each individual occupational group, and this should also be taken into account to improve motivation and overall productivity.

Key words: Motivation, construction industry, New Zealand, Christchurch earthquake, occupational groups

CONFIDENTIALITY STATEMENT

The author has agreed that all personal and company names of participants in this research will be kept confidential.

- The company that has been studied has not been named within this report.
- The participants have signed confidentiality statements and have been referred to in this study by their occupational group and the individual number that was allocated to them.

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1 INTRODUCTION

1.1 Overview

Despite technological advances and developments in off-site fabrication, construction remains one of the most people-reliant industrial sectors (Langford, 1995; Loosemore, 2003). Thus, improving the job satisfaction and motivation of those that work within the industry should arguably provide the central focus for improving its performance (Asad, 2005). Furthermore despite the popularity of motivational research in the latter half of the twentieth century, little has been undertaken within the New Zealand construction industry and internationally little evidence exists on the motivation factors that influence different occupational groups within the industry (Asad, 2005). Internationally there has been a considerable amount of research undertaken on construction industry employee motivation. The findings and conclusions of these studies however are arguably inapplicable to New Zealand construction workers as they work and live in significantly different environments to their overseas counterparts. Therefore it is important to discover what the significant motivating factors are for employees with the New Zealand construction industry. From the literature findings the research question was selected.

What are the significant motivating and demotivating factors for the employees of a large New Zealand construction company and do they differ between the occupational groups within the company?

The concept of motivation refers to internal factors that impel action and the external factors that can act as inducements to action. The three aspects of action that motivation can affect are direction (choice), intensity (effort), and duration (persistence). Motivation can affect not only the acquisition of people's skills and abilities but also how and to what extent they utilize their skills and abilities (Locke, 2004). The internal and external factors that impel action are referred to as both motivating and demotivating factors throughout the report. These factors have been extensively studied by researchers such as Malsow (1954) and Herzberg (1959) who established two of the founding theories on human motivation.

The large construction company that has been studied is based in Christchurch, New Zealand; it employs over 350 people and is responsible for the earthquake repairs on over 100,000 homes over a period of 3 to 4 years. The company is essentially a project management company which works with government agencies, homeowners and construction contractors to arrange the repairs. The occupational groups within the company that have been selected for this study are the Project Managers, Construction Supervisors, Quantity Surveyors and Contract administrators.

1.2 Objectives

The primary objective for this research is to provide management within the New Zealand construction industry with a greater knowledge of the factors that affect the motivation of people working within it.

Within the primary objective are the following objectives.

1. To discover what the significant motivating and demotivating factors are for the employees of a large New Zealand construction company.
2. To discover if there are any differences between the occupational groups in terms of what motivates them and if so what are the differences.
3. To use the findings to compare and contrast with the current literature on this topic area.
4. Discover if New Zealand differs from other countries in terms of what motivates them?

1.3 Rational

The aim of the research is to discover the different motivating factors for employees of a large New Zealand construction company. The value of this research is for the management of large construction companies to be able to gain a better understanding of the wants and needs of their employees. This information will have real value to management who will be able to implement strategic plans to improve the motivation and output of each group of employees within the company.

The information and knowledge gained from this study will add to, and be comparable with, other similar studies from around the world. It will also serve as a point of comparison between a large construction company and other large companies within New Zealand. The results of this research could highlight the need for construction specific human resource management strategies which will accommodate for the broad spectrum of employees and their varying needs or motivators.

The research will provide an up to date literature review of this topic area. The literature will provide for future researchers a snap shot of the current information available in this area. The research is intended to add to the body of knowledge within Unitec and also the body of knowledge within the New Zealand construction industry.

2 LITERATURE REVIEW

2.1 Introduction

The scope of this literature review is defined by the research topic area. The research topic area as previously defined, is the job motivation factors for the different occupational groups within a New Zealand Construction company.

Included in this literature review is a brief outline of the present motivation theories which have been commonly used in this area of research. A highly detailed analysis of these motivation theories is beyond the scope of this review.

This review is primarily focused on research that has been published with regard to the job motivation factors for people within the construction industry worldwide. Using internet based databases, research papers have been sourced from around the world. These papers have been read, analysed and summarised. The information and references within these papers have then been used to obtain further relevant authors and publications relating to the topic area. The literature review provides a comprehensive understanding of the current state of literature in this topic area worldwide. It also summarises the methods and occupational groups that have been previously studied in this area. The findings of these previous studies were interpreted and analysed to establish themes, trends and conflicting views.

2.2 Seminal Literature

There are many theories on human motivation all of which have been academically proven to different degrees. It is practical to separate these theories into two groups, Founding Theories and Contemporary theories (Robbins, 2004).

“ Owing to the multifaceted nature of motivation and the fact that there is no single answer of what best motivates people at work, there are many competing theories that attempt to explain the nature of motivation ” (Oyedele, 2009).

2.2.1 Early Founding Theories

In the 1950's after the Second World War theories on motivation began to appear. Before these founding theories there was only a very basic understanding of what motivated people. This understanding consisted of two approaches, the 'whip and the carrot' approach. This refers to punishment for underperformance i.e. the whip or basic material reward for goals that were achieved, the carrot (Sinclair, 2010).

In the 1950's three notable founding theories were produced. Abraham Maslow's hierarchy of needs, Douglas McGregor's X and Y theory and Frederick Herzberg's two factor theory. Because these theories are basic in nature in recent years they have been academically attacked which has caused people to reconsider their validity (Robbins, 2004). However, they are still the best known explanations of what motivates people, and fact that they are basic makes them easy to understand and apply (Robbins, 2004). These theories, although somewhat outdated are important to know firstly because they are the base from which contemporary theories have grown and secondly because the terminology developed in these theories is still widely used by management (Robbins, 2004).

2.2.1.1 Hierarchy of Needs Theory

Maslow's 'Hierarchy of needs' (1954) was the first major theory of motivation applied to an individual at work (Uwakweh, 2006). It's probably safe to say the most well known theory on motivation is Maslow's Hierarchy of needs (Robbins, 2004). Maslow hypothesised that people are motivated by five categories of needs, these five categories are, Physiological needs, Safety needs, Social needs, Esteem needs and Self actualisation needs. These needs were categorised into a hierarchy which placed the needs in the order they needed to be satisfied. Maslow thought each group of needs in the hierarchy needed to be satisfied before the needs on the next step of the hierarchy could influence the behaviour of a particular person (Maslow, 1954). It was Maslow's belief that once a person's need had been satisfied it would no longer be able to motivate that person. Managers would have to use incentives on the next category of the Hierarchy of needs to increase motivation (Uwakweh, 2006).

A basic pyramid is used to demonstrate the relation between basic human needs as Maslow saw them. This hierarchy is also commonly visualised in a set of stairs, with each category of needs being a step above the last. Lower order needs are usually met via extrinsic factors (such as pay and reward), whereas higher level needs are usually met through intrinsic factors (such as the inherent satisfaction derived from a job) (Asad, 2005).

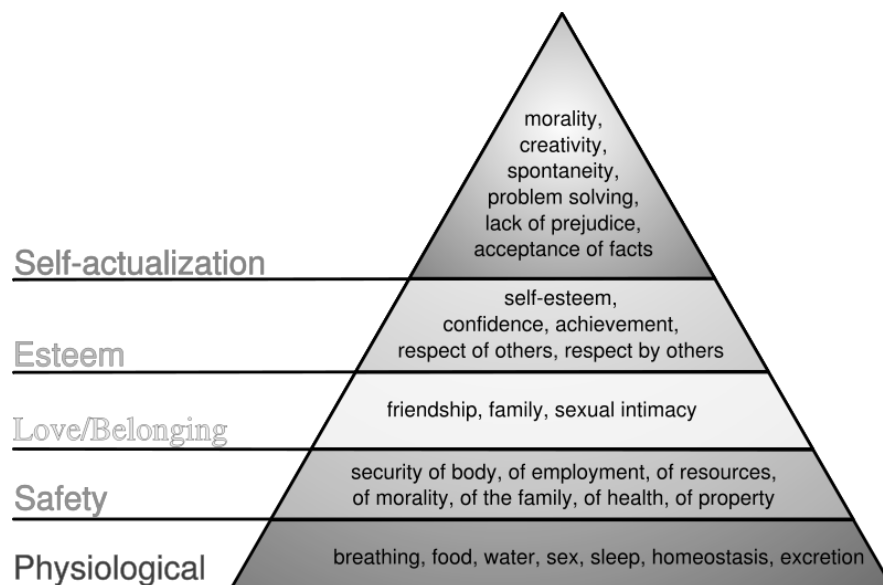


Figure 1 Maslow's Hierarchy of Needs

Source: (Maslow, 1954)

2.2.1.2 Theory X and Y

McGregor (1963) believed that when it came to management there were two distinctly different ways to view people. The first, known as Theory X, was basically negative in nature, it assumed that employees inherently disliked work, were lazy, will do the minimum required, disliked responsibility and must be coerced to perform (Robbins, 2004). The second way to view people, known as Theory Y, was basically positive and assumed employees liked work, liked to be creative, sought responsibility and will exercise self direction.

When relating McGregor's two theories back to the Maslow hierarchy it could be said that Theory X assumes employees are only motivated by lower order needs and Theory Y assumes that employees are only motivated by higher order needs (Robbins, 2004)

2.2.1.3 Two Factor Theory

Frederick Herzberg hypothesised that there were two sets of factors that motivate people. The first set of factors were Motivating factors and the second Hygiene factors (Oyedele, 2009). Herzberg classified Motivators as recognition, growth, promotion opportunities, responsibility and achievement. Herzberg thought these were the only things that could be used to attain job satisfaction and increase motivation in the work place. Herzberg classified hygiene factors as pay or remuneration, company policies, co worker relationships, job security, physical working conditions and supervision quality (Herzberg, 1959). It was Herzberg's belief that people were inherently dissatisfied or demotivated by hygiene factors. Therefore by attending to the hygiene factors, management would not increase job satisfaction or motivation, they would only reduce job dissatisfaction (Oyedele, 2009). Therefore the only way to ensure job satisfaction and motivation was by employing the motivator factors.

The diagram below shows the basic difference between Herzberg's view and the traditional way of looking at job satisfaction.

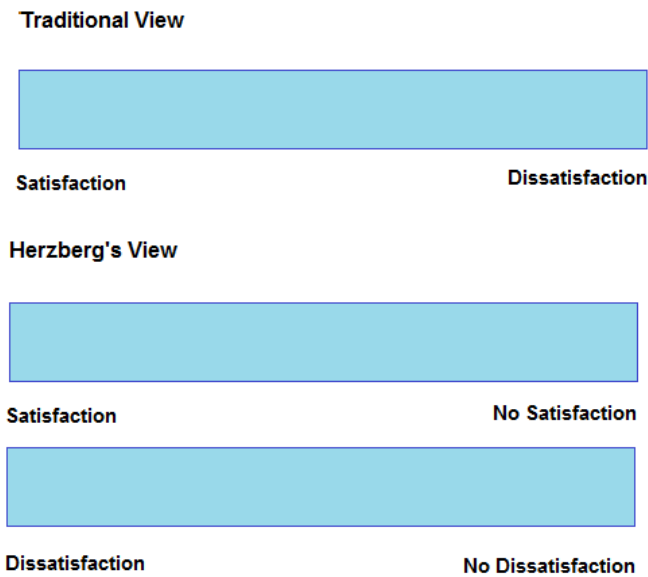


Figure 2 Herzberg's Two Factor theory

Source: (Robbins, 2004)

2.2.2 Contemporary Theories

The Founding theories when closely examined have not held up well academically as they lack supporting documentation (Robbins, 2004). Contemporary theories have been developed in more recent years and are considered to be more academically credible due to their supporting documentation. Essentially these theories expand on the basic early theories of Maslow, McGregor and Herzberg. They represent the current state of the art in explaining employee motivation (Robbins, 2004).

There are seven relatively well known "contemporary" motivation theories. These are the ERG Theory (1969), the McClelland's theory of needs (1956), the Cognitive evaluation theory (1975), the Goal setting theory (1981), the Reinforcement theory (1948), the Equity theory (1963) and the Expectancy theory (1964) (Robbins, 2004). For the purpose of this investigation these theories will not be dealt with in full detail. As previously mentioned they contain many of the same principle as the Founding theories. For a detailed description of these theories the reader is referred to (Robbins, 2004).

All theories covered under Founding and Contemporary can also be grouped as either a content theory or process theory (Robbins, 2004).

2.2.3 Content and Process Theories

Motivation theories are placed in either one of these groups when practically applying them to people. These are Content Theories and Process Theories (Asad, 2005; Halepota, 2005; Oyedele, 2009).

2.2.3.1 Content Theories

Content Theories have an emphasis on what motivates people. Content Theories focus on the aspects of individuals and-or their environment that incite or sustain behaviours (Asad, 2005). Four widely recognised Content Theories of motivation are Maslow's Hierarchy of Needs (1954), Alderfer's ERG theory (1969), McClelland's Achievement Theory (1956) and Herzberg's Two Factor Theory (1959).

2.2.3.2 Process Theories

The Process theories are concerned with the analysis and description of how personal factors such as cognitive processes determine peoples motivation (Oyedele, 2009). Asad and Dainty (2005) conclude that process theories relate to how behaviour is energised, channelled, continued or changed. Three leading Process theories are Adam's equity theory (1963), Vroom's Expectancy theory (1964) and Locke and Latham's Goal theory (1981) (Oyedele, 2009).

2.3 Primary Literature:

The primary source of literature for this review was published research papers. Once these papers were sourced they were analysed and tabulated as to what country and occupational group was the studied, what motivation theory was used and also what method was used to obtain the data. Finally the individual findings of each study were tabulated.

2.3.1 Occupational groups and Countries Studied

Motivation research in the construction industry has been well spread around the world. Papers reviewed were from the United Kingdom, United States of America, Asia, Africa and Australia. The papers reviewed were published between the years of 1998 and 2009.

The most relevant piece of research to my topic area was the research conducted by Salman Asad and Andrew Dainty (2005) it was a study of the motivation factors for disparate occupational groups within the United Kingdom construction sector (Asad, 2005). Another paper from the United Kingdom was that of Lukumon Oyedele who studied the factors that motivate Architects and Engineers within Northern Ireland design firms(Oyedele, 2009). Three major studies of construction workers has been carried out in Asia. Ogunlana (1998) studied the level of motivation in construction workers on high rises in Bangkok Thailand. Martin Skitmore (2004) investigated the demotivating factors for foreman, plant operators, carpenters and steel fixers on civil engineering project in Hong Kong, China. Ying-Hua Huang (2008) researched the job satisfaction of employees of subcontractors working in Taiwan. Two research papers carried out in the USA have been reviewed. The first paper was produced by Benjamin Uwakweh (2006) who looked at the motivation levels of construction apprentices throughout the mid western cities of America. The second paper was produced by Robert Cox (2006) who analysed subcontractor motivation levels in Florida. Guinevere Smithers (2000) researched the effect of workplace on the motivation of professional in Melbourne Australia. This is particularly relevant due to Melbourne's proximity to New Zealand. This results in similar economies, building processes, building standards and management structures.

A number of studies by Olomolaiye and Ogunlana (1989) have been done in Nigeria on low skilled construction workers and bricklayers. These studies are thorough and conclusive however they are not particularly useful or comparable to studies done in developed countries.

2.3.2 Theory Used For Research

The vast majority of researchers used the seminal Founding theories on motivation for the basis of their research questions. Asad (2005), Ying Huang (2008) and Cox (2006) used Maslow's hierarchy of need as the theory to base their studies on. The Maslow Hierarchy of needs has been rendered a widely understood concept and hence, an ideal typology for understanding the motivational types in the industry (Asad, 2005). Smithers (2000), Skitmore (2004), Olomolaiye (1989) and Ogunlana (1998) all used Herzberg's two factor theory as the basis for their study and questionnaires. These included similar questions to the Maslow based studies, but in addition, included a

section in the questionnaire for dissatisfaction or demotivating factors. Quite differently Oyedele (2009) used a number of different theories as the bases of his study. In addition to Maslow's and Herzbergs theories Oyedele (2009) used the ERG theory, achievement theory, equity theory and expectancy theory. Uwakweh (2006) also went against the trend and based his study solely on Vroom's Expectancy theory.

2.3.3 Method used for Research

The method of choice for the vast majority of researchers for data collection was an empirical qualitative study with a structured questionnaire. The questionnaires were in the form of a likert scale or similar (Asad, 2005; Cox, 2006; Huang, 2008; Olomolaiye, 1989; Oyedele, 2009; Skitmore, 2004; Smithers, 2000; Uwakweh, 2006). Ogunlana (1998) conducted personal interviews as well as a questionnaire to gather his data. This was to ensure workers truly understood the meaning and context of the questions (Ogunlana, 1998).

2.3.4 Findings

As the literature review was conducted the findings were tabulated please see Appendix 1.

2.3.4.1 Motivating factors

Consistently throughout the literature monetary reward was the most significant motivator for all construction workers (Asad, 2005; Cox, 2006; Huang, 2008; Ogunlana, 1998; Olomolaiye, 1989). Other significant motivators for construction workers were found to be job security, co-worker relationships, and satisfaction of completing challenging tasks. Asad and Dainty (2005) found that job security is a significant motivator for UK Construction professionals, skilled craftsmen and unskilled labour. Supporting this Olomolaiye (1989) found job security to be the fourth most significant motivator for construction operatives in Nigeria. Interestingly, Cox (2006) found that when workers feel as though they are a part of a team they also feel their job is secure.

The satisfaction of completing challenging tasks was rated highly as a motivator for construction professionals in the UK, skilled craftsmen in the UK, unskilled labour in the UK, and construction workers in Bangkok, Thailand (Asad, 2005; Ogunlana, 1998; Olomolaiye, 1989). However, Huang (2008) found that challenging work and

the opportunity to do something that gives a sense of self-esteem was one of the least important things for subcontractors in Taiwan.

Ogunlana (1998), Cox (2006) and Asad (2005) noted that workers thought safety on the job was a significant factor contributing to their motivation. Oyedele (2009) found that for Architects and Engineers in Ireland favourable project working conditions, organisational support, design process efficacy, and effort recognition are the more significant motivating factors. Ogunlana (1998) found that workers on construction sites in Bangkok thought that the standard of accommodation and welfare were significant to their level of motivation. This is unique to Bangkok as these services are provided by the construction company that employ the workers.

Good relationships with workmates in a team environment was considered an important motivating factor by subcontractors in Florida, USA and construction operatives in Bangkok (Cox, 2006; Ogunlana, 1998; Olomolaiye, 1989). Maloney and McFillen found that skills and knowledge, job satisfaction and personal growth of workers were intrinsic motivators (Maloney, 1986).

2.3.4.2 Motivation factor Conclusions

Asad and Dainty (2005) concluded that the primary motivators for construction professionals, skilled craftsmen and unskilled labour were monetary reward, job security and the intrinsic satisfaction of work. However it appeared that construction professionals were generally more motivated by intrinsic reward than skilled and unskilled operatives. Skilled and unskilled operatives demonstrated a marked desire for extrinsic rewards i.e. money, job security, and health and safety. Another valuable finding was that there is no difference between the motivation factors for employees of large companies and the employees of small companies (Asad, 2005). Supporting Asad and Dainty's findings strongly were that of Barrett (1993) who found that middle level professionals have a higher desire for monetary bonuses than higher level professionals.

2.3.4.3 Demotivating Factors

Smithers (2008) found that the most significant demotivators for construction professionals working in Melbourne, Australia were non-recognition for work done, poor planning and resource distribution, chaos/ad hococracy, aggressive management styles, hostile organisational management, feeling isolated by the opposite gender,

feeling isolated by special interests. Aligning with the findings of Smithers (2008) Ogulana (1998) found that bad treatment by supervisors was ranked highest by construction workers. Ogulana also found that unsafe working conditions was ranked highly as a demotivator. Supporting this was Huang (2007) who found construction workers in Taiwan were demotivated when unsatisfied with their personal protective equipment. Civil engineering operatives in Hong Kong ranked rework the highest demotivator (Skitmore, 2004). This was followed by overcrowded work areas, crew interfacing, tool availability and inspection delays. Huang (2007) also found tool and machinery availability rated highly as a demotivator. Skitmore (2004) found the demotivators that rated the lowest were management changes, management incompetence and material availability.

2.3.4.4 Demotivation factor Conclusions

Skitmore (2003) concluded that by reducing demotivation factors such as rework, lack of material availability and overcrowded work areas large gains in productivity could be achieved. Skitmore (2003) stated that workers estimated a total of 5.1 to 13.6 hours a week were being lost due to these factors. Olomolaiye (1989) found that only 50% of each day was spent productively and remaining 50% was spent idling, taking instructions, waiting for materials and tools or interference respectively. It was suggested that to significantly increase productivity attention should be paid to motivating factors such as remuneration but also decreasing the presence of demotivators onsite (Olomolaiye, 1989).

An interesting finding with construction professionals in Melbourne Australia was that as a group they were generally motivated by the same factors however those who were based onsite were subject to a lot more demotivating factors such as aggressive management, non-recognition, poor planning and chaos, than those based at company offices. Because of this it was concluded that motivation of site based workers was lower than office based workers (Smithers, 2000).

3 RESEARCH DESIGN

3.1 Introduction

This chapter presents each step that was taken to design and conduct this research project. The research has been carried out to answer the research question. “What are the significant motivating and demotivating factors for the employees of a large New Zealand construction company and do they differ between the occupational groups within the company?”

The purpose of this research is to provide clarification and provide useful information that can be used to benefit the construction company studied and also the body of knowledge in this area of construction in New Zealand. The research is a cross-sectional study of what is happening at this point of time and focuses on a selected sample of individuals who are employed by a large construction company in New Zealand. The data will be primary data and will be analysed and interpreted with the assistance of existing published literature. The data collected was qualitative and gathered using structured interviews.

The methodology chosen for this research project has been rationalised and is defended with the appropriate literature from both text books and journal articles. The research sample has been described in detail and discussed in relation to validity and quality. The data collection method chosen has also been rationalised along with the method used to analyse the data once collected. Ethical considerations have been dealt with in this chapter, in detail, and the process undertaken has been described. In conclusion the chapter has discussed the design of the research project, reliability, validity and the research limitations.

3.2 Research Methodology

“Research methodology refers to the principles and procedures of logical thought processes which are applied to a scientific investigation” (Fellows, 1997). The methodology or strategy that has been chosen for this research is qualitative. The purpose of this research is to gain knowledge and understand what the motivating factors are for the employees of a large New Zealand construction company.

“Qualitative approaches seek to gain insights and to understand people’s perceptions of ‘the world’ whether as individuals or groups” (Fellows, 1997).

Naoum (2007) stated that when you are gathering qualitative data your research can be based in two categories, namely, exploratory and attitudinal. The research approach for this project is exploratory. Exploratory research is used when there is limited knowledge about the topic (Naoum, 2007). To strongly support this decision support this Naoum (2007) stated.

“Personnel research managers often conduct exploratory research as a diagnostic tool to point out issues of employees’ concern or to generate possible explanation for motivational patterns”.

It was clear that qualitative research was the most appropriate strategy for this study as all of the Journal articles reviewed used qualitative research as their primary methodology (Asad, 2005; Cox, 2006; Halepota, 2005; Lam, 2003; Locke, 2004; Loosemore, 2003; Ogunlana, 1998; Olomolaiye, 1989; Oyedele, 2009; Skitmore, 2004; Smithers, 2000; Uwakweh, 2006).

Two papers used a combination of qualitative and quantitative research as they were trying to identify motivating factors as well as quantify the amount of time that was wasted on site because of them (Olomolaiye, 1989; Skitmore, 2004).

3.3 Research Method

The research method that has been used for this study was an Empirical Survey. Fellows (1997) stated that when studying a contemporary event that is set in the present day, and asking a question that starts with who, what, where, how many & how much. The research strategy you will use is a survey. This type of research is also

described in literature as an Empirical study. Empirical Research can be defined as “research based on experimentation or observation (evidence)”. The word empirical means information gained by experience, observation, or experiment (Hani, 2009).

“To survey carries with it the meaning ‘to look’, survey work inevitably brings with it the idea of empirical research. It involves getting out of your chair and office and going out and purposefully seeking the necessary information”
(Denscombe, 2010).

A survey was used for this study as it provides a wide and inclusive coverage and also a snap shot of a specific point in time which was needed to answer the research question “What are the significant motivating and demotivating factors for the employees of a large New Zealand construction company and do they differ between the occupational groups within the company?”

The survey for the research was carried out using structured interviews which included two parts. Firstly, a small number of open ended questions designed to acknowledge or identify any additional motivation factors that may not have been identified in the literature. Secondly, a questionnaire with 5 set responses the interviewees have to choose from. Naoum (2007) suggests that personal interviews are the best technique for obtaining factual information as well as opinions. Having the interpersonal contact can also help interviewees to understand what is meant by certain questions.

There are three types of interviews, Unstructured, Semi-structured and Structured. An unstructured interview uses ‘Open-ended’ questions at a general level and the interviewee can answer to any extent they feel necessary. Semi-Structured Interviews are more formal than unstructured interviews and have a number of specific topics and questions.

Structured interviews which were used in this research project always present the same questions in the same way to all interviewees. The interviewer has full control over the questionnaire during the interview. A typical structured interview will start with some open questions but will soon move onto a closed question format (Naoum, 2007).

The reviewed research papers revealed that questionnaires sent by mail or internet were by far the most common methods used by researchers (Asad, 2005). Two researchers used personal interviews when conducting their study which shows that this is also a valid method for collecting this type of data (Olomolaiye, 1989; Skitmore, 2004).

3.4 Data collection

The methods of collecting data impact upon the analysis which may be conducted and hence the results, conclusions, values and validity of the study (Fellows, 1997).

The questionnaire used for this research was a combination of open and closed questions. The open questions were general and were designed to establish any factors that may affect the motivation of the employees that were not covered by the literature review. Open questions are designed to enable the respondent to answer in full and to extent they want (Fellows, 1997).

The closed questions were based on the topics identified in the literature which have been found to affect employee motivation in the extensive founding studies of Maslow (1954) and Herzberg (1959). Each of the questions asked can be categorised in reference to Maslow's Hierarchy of Needs.

Naoum (2007) recommends following three fundamental stages when constructing a questionnaire

1. Identifying the first thought questions.
2. Formulating the structure of the final questionnaire.
3. Wording the questions.

The process that was followed to produce the draft topics and questions was informed by the diagram below as recommended by Fellows (1997).

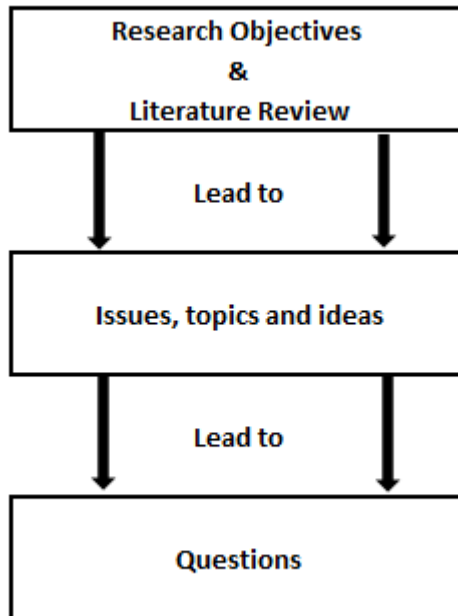


Figure 3 Question development process

Source: Fellows (1997)

The draft questionnaire below was produced from the literature review. It incorporates questions related to the five categories of Malsow’s Hierarchy of Needs; Physiological needs, Safety needs, Social needs, Esteem needs and Self actualisation needs(Maslow, 1954). The questionnaire also includes questions on demotivating factors which are part of Hertzberg’s (1959) Two Factor theory. This ‘mixed theory’ approach was also used by Oyedele (2009) and Ogunlana (1998).

The questionnaire was comprised of two sections. Section One: Open questions and Section Two: Closed questions. Fellows (1997) stated that it is preferable to place open questions before closed questions because you don’t want the response options from related closed questions to affect the respondents answer to an open question. He also stated that you should have more closed questions than open questions as they are easier and quicker to answer.

QUESTIONNAIRE

Section 1		Open Questions				
1.	What are the significant things that motivate you to come to work and do your best each day?					
2.	What are the significant things that negatively affect your motivation at work?					
3.	If you have relocated to Christchurch specifically for the earthquake recovery work, what were the most significant things that motivated you to do so?					
Section 2		Strongly agree	Agree	Neither/nor	Disagree	Strongly disagree
Multi Choice Questions						
1.	Improving your standard of living including housing & food is a significant motivator for you at work.					
2.	Gaining an increase to how much you are being paid is a significant motivator for you at work.					
3.	Knowing your current position within the company is secure for the foreseeable future significantly affects your motivation at work.					
4.	Being safe and comfortable has no significant affect on your motivation at work.					
5.	Having good co-worker relationships is a significant motivator for you at work.					
6.	Completing challenging tasks is a significant motivator for you at work.					
7.	Being part of a team has no significant affect on your motivation at work.					
8.	Being acknowledged for your achievements is a significant motivator for you at work.					
9.	Having the ability to increase your training or skills is a significant motivator for you at work.					
10.	The opportunity for a promotion from your current position has no significant affect on your motivation at work.					
11.	The ability to be creative in your role and improve the performance of the company is a significant motivator for you at work.					
12.	Flexible working hours resulting in a good work life balance is a significant motivator for you at work.					
13.	Poor planning and resource allocation significantly affects your motivation at work.					
14.	Having to redo work has no significantly affect on your motivation at work.					
15.	An increase to the amount of hours you work would significantly affect your motivation at work.					
16.	Aggressive management significantly affects your motivation at work.					
17.	Unsafe work conditions significantly affect your motivation at work.					
18.	Management changes significantly affect your motivation at work.					
19.	Disorganisation in terms of polices and procedures does not significantly affect your motivation at work.					
20.	Overcrowded work areas significantly affect your motivation at work.					
21.	Absence of management or clear leadership significantly affects your motivation at work.					

Figure 4 Survey Questionnaire

The options given to respondents for closed questions are as below. This scale provides the respondents with a good range of choices and should not limit their answers. If the scale is divided too finely the respondents will be unable to place

themselves within the scale, and if too coarsely divided the scale will not differentiate adequately between them (Naoum, 2007).

1. Strongly agree (2 points)
2. Agree (1 point)
3. Neither/nor (0 points)
4. Disagree (-1 point)
5. Strongly disagree (-2 points)

The numerical number shown beside each option represents the intensity of the response. Naoum (2007) recommends these figures should not be shown on the questionnaire and should only be used for analysis purposes.

As recommended by Naoum (2007), the questionnaire was preceded by a covering letter. A covering letter must aim overcome any resistance or prejudice the respondent may have regarding the survey (Nachmias, 1996). As recommended, the covering letter for the survey incorporated the following.

1. The sponsoring organisation and person conducting the survey.
2. Explained the purpose of the survey.
3. Explained why it could be important for the respondent to answer the questionnaire.
4. Assured the respondent that the information provided will be anonymous in the final report.

3.5 Sampling

“Once you have decided the technique for collecting your fieldwork data and you have thought about what to ask, you should be ready to decide on the characteristics of the respondents” (Naoum, 2007).

The ‘population’ chosen (See fig 5) for this research was a large New Zealand construction company working in Christchurch. The company was set up to undertake

the housing repairs in Christchurch, New Zealand following the 7.0 and 6.3 magnitude earthquakes in September 2010 and February 2011 respectively.

The current population of the company is approximately 350 employees. The company is structured with fifteen 'Hub' offices. Each hub has a Project Manager, 8-10 Construction Supervisors, 3-5 Quantity Surveyors, and 6-8 Contract Administrators. The hubs are all managed from a head office of approximately 35 employees. The Head office consisted of Admin and Senior Management.

The sample chosen consists of 3 Project Managers, 12 Contract Administrators, 12 Construction Supervisors and 12 Quantity Surveyors, 10%-20% of the full population (See fig 6). This is a selected sample which provided a good representation of the whole company. The term 'sample' means a specimen or part of a whole 'population' which is taken or used to show what the rest is like (Denscombe, 2010). It was not deemed practical to survey the full population. Surveys operate on the basis of statistical sampling; only extremely rarely are full population surveys possible, practical or desirable (Fellows, 1997).

A manageable sample was chosen as it was the aim of this survey to try and achieve a 100% response rate. The aim of a good survey is to keep non-responses to a minimum and to achieve the highest response rate that is possible in relation to the kind of research being conducted (Denscombe, 2010).

To achieve a 100% response rate face-to-face interviews were conducted. Face-to-face interviews, arranged by personal contact between the researcher and the interviewees, are the kind of approach where a very high response rate can be expected – possibly even 100% (Denscombe, 2010).

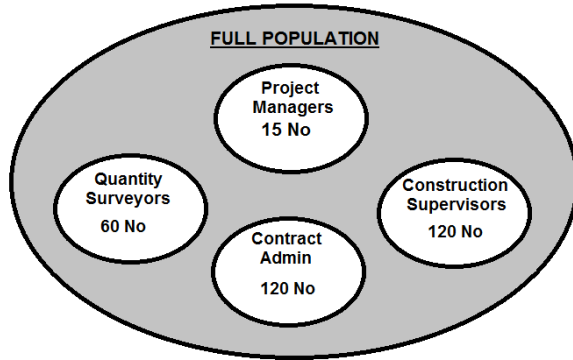


Figure 5 Full Population

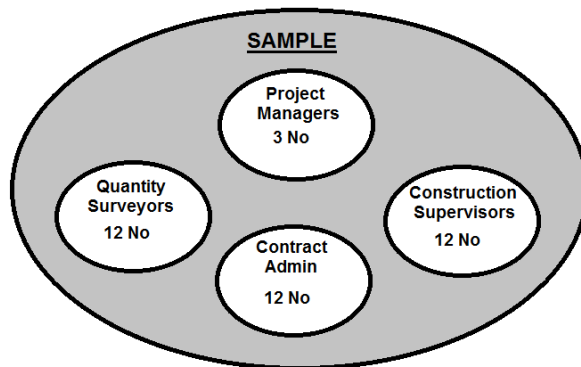


Figure 6 Sample Size

3.6 Validity & Reliability

Validity refers to how credible the study is and that it accurately reflects or assesses the specific concept that the researcher is attempting to measure (Davies, 2011). The credibility of research is something that needs to be demonstrated as part of the research process itself. It should not be taken for granted (Denscombe, 2010). To ensure the research was valid the exact process undertaken has been documented. Any decision made on the process or research design was supported by the literature. The research was validated by member checking and peer review from the experienced research supervisor. This helped to insured the correct processes were being used and no substantial mistakes were made.

Reliability or dependability is the extent to which the survey or measurement procedure would yield the same results on repeated trials. The research was deemed to be reliable as the literature on ‘process’ was followed closely both in terms of text and past studies in this area. To support reliability all participants were given the same

questions in the same order. All the questions were tested and revised multiple times. From this they were deemed to be clear, well written, and appropriate.

To control and improve the reliability of the research the following factors were identified and implemented.

Research instrument

The exact same questionnaire was administered to the participants in the exact same way every time. This insured consistency in the responses.

Researcher-subject relationships

To minimise the possible affect of the researcher being known to the participants, the participants were assured that the study is confidential and that their answers would not be associated with them personally. They were asked to answer the questions as honestly as possible

Location

The location for the interviews was at the participants place of work so that they felt comfortable. The interviews were conducted in a meeting room with the door closed so that the participants were assured no one could hear the answers they were giving.

3.7 Ethics

Denscombe (2010) states it is hard to overstate the importance of ethics in the context of contemporary social research.

There are standard ethical measures researchers are expected to put into place when carrying out social research. These always include.

1. Participants will remain anonymous.
2. Data will be treated as confidential.
3. Participants understand the nature of the research and their involvement.
4. Participants voluntarily consent to being involved.

(Denscombe, 2010)

3.7.1 Harm Minimisation

Special care has been taken to ensure the participants are not subjected to unnecessary risk of harm as a result to their participation. The possible types of harm are physical, psychological, social and commercial(Davies, 2011).

The main issues that were considered to minimise the harm on participant from this research were:

Privacy

Participants were be given control over the extent, timing and circumstances of their participation.

Confidentiality

All the information the participants gave was treated as confidential and they were guaranteed anonymity. The name of the company is also confidential and the company was also guaranteed anonymity.

Data Storage

The data was stored in both hard copy and digital format for a period of five years from the completion of the research by Unitec's research ethics committee. Once the student file is submitted copies of sensitive information were deleted.

Social and Cultural Sensitivity

Possible social and cultural issues were taken into account when constructing the questionnaire. Potentially offensive or harmful questions were removed.

Research Design

The research was designed to have the least affect possible on the company that was studied. This was done by have a fairly conservative sample size and constructing the questionnaire so that it was quick and easy to complete.

4 DATA ANALYSIS & FINDINGS

4.1 Introduction

This chapter presents the findings of the report and also the analysis of those findings. The data collection process has been described in chronological order. The actual response rate and Ambiguous data have been discussed. The data management systems that were used have been described in detail, outlining the coding, categorising, processing and record keeping methods. The findings of the study have been presented in two parts, full sample responses and occupational group responses. The short comings of the data have been identified and discussed.

The findings have been analysed. The themes, trends and contradictions are identified and discussed. In the conclusion the significant findings and their analysis are identified again summarised.

4.2 Data Collection

4.2.1 Data Collection Process

The data collection process was pre-planned and well thought out. Using text books and other published literature an appropriate process was chosen which suited the type of data that was collected and also the data collection method.

The type of data collected was qualitative. Participants were asked for responses to several open question and were also asked to rate a number of statements according to their personal opinion.

This data was collected through structured interviews with all participants answering the same set of questions. The step by step process used to collect the data is listed below in chronological order.

1. A possible company and sample group was identified for the study.
2. Agreement from the Senior Management of the company was sought. First verbally and then followed up in writing.
3. A questionnaire was developed to answer the research question. The questionnaire incorporated themes and topics identified within the literature.
4. The questionnaire was tested with people within the construction industry three times. After each test small adjustments were made based on the comments and data received.
5. A summary of the proposed study was submitted to Unitec for ethical approval. This included the questionnaire, respondent participation agreement, confidentiality agreement and an information sheet on the study.
6. A time to discuss the study with the employees was requested with management. This was carried out at the weekly office meeting.

7. The employees were then asked if they would be interested and willing to participate.
8. The interested employees were asked to sign the participation form.
9. A time was organised to meet and explain the questionnaire to the participant.
10. Participants were given time to fill out the questionnaire and return the completed questionnaires in their own time.

4.2.1.1 Proposed process and actual process

The only major difference between the proposed data collection process and the actual was the carrying out of the structured interviews. It was very difficult to organise a time with each participant to conduct a full interview. The participants were very busy and cancelled meetings at the last minute because business related things would come up. It was decided to drop off the questionnaire personally to each participant and let them complete it by their selves in their own time. When the questionnaire was dropped off it was fully explained to the participants reading the information sheet out to them. They were asked to call with any questions they had on the questionnaire.

4.2.2 Response Rate

A conservative sample of 39 employees was chosen for this study. Selecting a relatively small and isolated portion of the full sample was carried out to gain the best response rate possible. From the 39 employees who were selected to carry out the study a total of 33 completed the questionnaire. This provides a response rate of 85%.

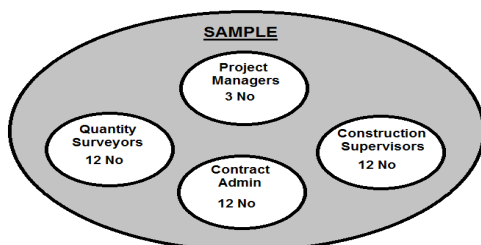


Figure 7 Proposed sample size

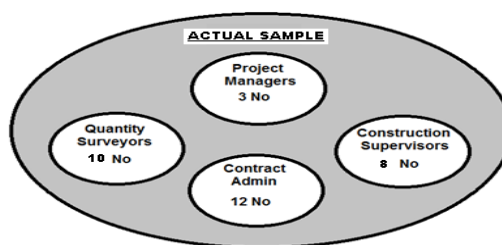


Figure 8 Actual sample size

4.2.3 Ambiguous & Missing Data

There were three types of unusable data received from the respondents.

Firstly, there were two respondents who did not attempt Section 1: Open questions.

These respondents were simply excluded from that set of data.

The second type of unusable data was also in Section 1: Open questions. There were several instances where the respondent's handwriting was illegible. This data was also excluded with no assumptions being made.

The third type of unusable data was found in Section 2: Multi choice questions. There were a few instances where the respondents had left a question without ticking one of the provided answers. When participants did this a value of zero was allocated to that question.

4.3 Data Management

“Qualitative data needs to be prepared and organized before they can be analysed. It is important to appreciate that in a ‘raw’ condition qualitative data are likely to be difficult to interrogate in any systematic and meaningful fashion”(Denscombe, 2010).

4.3.1 Coding and Categorising

To keep track of each questionnaire and which occupational group the respondent belonged to, a Data Management spreadsheet was set up. This spreadsheet contained the respondent's name and identification code. The codes used were PM (Project Manager), CS (Construction Supervisor), QS (Quantity Surveyor) and AD (Contract Administration). Each respondent was allocated a unique number according to their occupational group, for example PM. 1, PM. 2, PM. 3 etc. The code and number of the respondent was printed on the top right corner of their questionnaire before they were handed out.

The spreadsheet which links the completed questionnaire with each particular respondent is confidential and therefore was not included in the report. The respondents were reminded of this before they partook in the interview.

4.3.2 Data Processing & Recording

The Data Management spreadsheet was also used to keep track of who had completed and returned their questionnaires. Once returned, the respondents name would be ticked off on the spreadsheet. This information was used to follow up with participants who had not returned their questionnaire. This was carried out after three days with a friendly reminder email and resulted in a good response rate.

Once received, the completed questionnaires were scanned to email in a PDF format. The questionnaires were saved digitally according to the four occupational groups.

The raw data received from the respondents was processed and recorded on three spreadsheets. These three spreadsheets were used to produce three tables and graphs that could then be interpreted and analysed easily.

The first spreadsheet recorded the responses of the full sample to the open questions. It also recorded how many times a particular answer was given from the different respondents.

The second spreadsheet recorded the full sample's response to each of the multi choice questions. This spreadsheet produced a table which showed which motivating factors were the most or least significant to the respondents.

The third spreadsheet recorded the responses of each occupational group to a particular question. A response rate was produced for each occupational group which showed how significant they, as a group, thought a particular motivating factor was.

The response rate was reached by adding up the total value of the responses to a particular question and dividing that by the number of respondents. This provided an average response to that question (the response rate). The provided answer options to

the multi choice questions are as below along with the corresponding values assigned to them.

Strongly agree (2 points)

Agree (1 point)

Neither/nor (0 points)

Disagree (-1 point)

Strongly disagree (-2 points)

4.4 Findings

The findings of this study fall under the two separate sections of the questionnaire. These sections are Open Question and Multi Choice sections. Within these sections the finding are also split between the sample as a whole and each separate occupational group.

4.4.1 Section One: Open Questions

The open questions were asked before the multi choice questions and were designed to identify significant motivating factors that may not have been identified in the literature and therefore were not included in the multi choice section. It was important to have these open questions before the multi choice section so that the participants would answer honestly and not give uniformed answers based on topics in the multi choice section.

The answers to the open questions were also used to compare with the answers to the multi choice questions. By doing this it could be established whether there were any contradictions in what the respondents had said. And on the other hand it would strengthen the similar results that have come up in both sections of the questionnaire.

4.4.1.1 Question 1: Motivating Factors

The first open question asked was “What are the significant things that motivate you to come to work and do your best each day?” The results from this question are displayed in Table 1 below.

Table 1 Motivating Factors

Identified motivators	Participants												Total																							
	PM1	PM2	PM3	CS1	CS2	CS3	CS4	CS6	CS7	CS8	CS11	OS1		OS3	OS4	OS5	OS6	OS7	OS8	OS9	OS12	AD1	AD2	AD3	AD4	AD5	AD6	AD7	AD8	AD9	AD10	AD11	AD12			
Complete challenging tasks	1								1		1		1								1			1			1	1	1	1	1	1	1	1	1	11
Achieve targets/goals	1	1		1					1											1	1						1	1	1						8	
Be part of team/team work	1	1																			1			1						1			1		6	
Increasing personal knowledge & training				1									1	1				1	1		1	1													7	
Remuneration/ pay packet					1						1				1	1	1							1			1	1			1				9	
Career progression/gain experience					1								1			1										1									4	
Producing good results for clients/community		1			1	1			1				1			1						1						1	1				1	1	11	
Forming co-worker relationships										1		1								1		1													4	
Acknowledgement & Positive management												1		1																					2	
Interesting work																						1								1					2	
Work life balance																								1											1	
Cooked breakfast													1																						1	

The two topics that were identified most frequently by the respondents as their motivating factors for coming to work and doing their best were “completing challenging” tasks and “producing good results for clients and the community”.

The second most significant motivator was “remuneration”. 9 respondents identified how much they get paid as a significant motivation for them at work. Close behind remuneration and identified by 8 respondents was “achieving goals & targets”.

It was noted that “Increasing personal knowledge”, “being part of a team”, “career progression” and “co-worker relationships” were also identified multiple times as motivators.

The topic of “Interesting work” was identified by two respondents as a motivating factor. This was the only topic or area that was not identified in the literature review as a motivating factor.

4.4.1.2 Question 2: Demotivating Factors

The second open question asked was “What are the significant things that negatively affect your motivation at work?” The results from this question are displayed in Table 2 below.

Table 2 Demotivating Factors

Identified demotivators	Participants												0																				
	PM1	PM2	PM3	CS1	CS2	CS4	CS6	CS7	CS8	CS11	OS1	OS3		OS4	OS5	OS6	OS7	OS8	OS9	OS12	AD1	AD2	AD3	AD4	AD5	AD6	AD7	AD8	AD9	AD10	AD11	AD12	
Poor leadership	1										1								1				1										4
Bad treatment of staff by management	1																		1										1			3	
Lack of sleep									1																							1	
Difficult clients /conflict with clients									1	1		1			1		1		1												1	6	
Poor colleague relationships									1	1		1		1									1									5	
Poor company policies / procedures		1				1															1							1		1	5		
Management Indecision/disorganisation						1	1																					1			3		
Interruptions in the office					1																										1		
External influences					1																										1		
Poor planning & resource allocation																	1														1		
Long working hours																							1								1		
Repetitive/non-stimulating tasks													1	1									1	1	1	1					6		
Being office bound															1																1		
Negative atmosphere																				1					1			1			3		
Achieving poor results																					1										1		
Stressful situations																											1				1		
Insufficient training																												1			1		
Being undermined or questioned																													1		1		

The respondents identified a larger number of demotivating factors than they did motivating factors. The respondents only identified 12 motivating factors while they identified 18 demotivating factors that affect them.

The most frequently identified demotivating factors were “repetitive & non stimulating tasks” and “difficult clients/conflict with clients”. These two areas were identified 6 times each throughout the sample.

The second most frequently identified demotivating factors were “Poor colleague relationships” and “Poor company policies/procedures”. These two areas were identified 5 times each by the respondents.

“Poor leadership”, “Bad treatment by management”, “Negative office atmosphere” and “Management indecision/disorganisation” were also identified by the respondents a considerable number of times.

It should be noted that the demotivating topics, “Lack of sleep”, “Difficult clients /conflict with clients”, “Negative atmosphere”, and “Repetitive/non-stimulating tasks” were not identified through the literature review.

4.4.1.3 Question 3: Relocation Motivators

The third open question asked was “If you have relocated to Christchurch specifically for the earthquake recovery work, what were the most significant things that motivated you to do so?” This question was based on a sub-topic within the study. The question was asked because the sample had a relatively high number of people who had relocated to Christchurch to partake in the earthquake recovery project. Out of the 33 respondents, 12 people had relocated or moved specifically to Christchurch for employment on the earthquake recovery project.

The two most common reasons or motives for relocating to Christchurch were the “employment opportunities” it offered and to “help the community” with the earthquake recovery. The second most common motive was remuneration or income. 4 of the 12 respondents said they relocated for the money. 3 respondents said that they moved to Christchurch as it was an opportunity to progress their career. 2 respondents said they relocated for the life style and travel.

4.4.2 Section Two: Multi Choice Questions

Section two of the questionnaire consisted of 21 multi choice questions. These questions were based on the motivating factors that were identified in the literature review. Each question was in the form of a statement. The respondents would select one of five options as a response to that statement. The options given were Strongly agree, Agree, Neither/nor, Disagree, Strongly disagree. The answers were weighted with a point system and were converted into tables and graphs for analysis.

4.4.2.1 Full Sample

The findings over the full sample are displayed below in Table 3. This table shows each question and the response received to that question as an average over the whole group.

Table 3 Multi Choice Full Sample

Section 2: Multi Choice Questions		Response Score
1.	Improving your standard of living including housing & food is a significant motivator for you at work.	31.00
2.	Gaining an increase to how much you are being paid is a significant motivator for you at work.	25.00
3.	Knowing your current position within the company is secure for the foreseeable future significantly affects your motivation at work.	23.00
4.	Being safe and comfortable has no significant affect on your motivation at work.	14.00
5.	Having good co-worker relationships is a significant motivator for you at work.	54.00
6.	Completing challenging tasks is a significant motivator for you at work.	45.00
7.	Being part of a team has no significant affect on your motivation at work.	28.00
8.	Being acknowledged for your achievements is a significant motivator for you at work.	36.00
9.	Having the ability to increase your training or skills is a significant motivator for you at work.	37.00
10.	The opportunity for a promotion from your current position has no significant affect on your motivation at work.	10.00
11.	The ability to be creative in your role and improve the performance of the company is a significant motivator for you at work.	39.00
12.	Flexible working hours resulting in a good work life balance is a significant motivator for you at work.	39.00
13.	Poor planning and resource allocation significantly affects your motivation at work.	28.00
14.	Having to redo work has no significantly affect on your motivation at work.	26.00
15.	An increase to the amount of hours you work would significantly affect your motivation at work.	15.00
16.	Aggressive management significantly affects your motivation at work.	27.00
17.	Unsafe work conditions significantly affect your motivation at work.	25.00
18.	Management changes significantly affect your motivation at work.	1.00
19.	Disorganisation in terms of polices and procedures does not significantly affect your motivation at work.	22.00
20.	Overcrowded work areas significantly affect your motivation at work.	12.00
21.	Absence of management or clear leadership significantly affects your motivation at work.	21.00

Question	Response Score
1	31.00
2	25.00
3	23.00
4	14.00
5	54.00
6	45.00
7	28.00
8	36.00
9	37.00
10	10.00
11	39.00
12	39.00
13	28.00
14	26.00
15	15.00
16	27.00
17	25.00
18	1.00
19	22.00
20	12.00
21	21.00

“Having good co-worker relationships” was the most highly rated motivating factor by a considerable margin.

The second rated motivating factor was “Completing challenging tasks”. With a score of 39 each “the ability to be creative” and “flexible working hours resulting in a good work life balance” rated as the third equal most significant motivating factors.

“Being acknowledged for your achievements” and “The ability to increase your training or skills” were also highly rated by the respondents in fourth and fifth place respectively.

Mediocre responses were received on the topics of, housing standard, remuneration, job security, being part of a team, resource allocation, redoing work, work place safety, aggressive management, disorganisation of policies and procedures and absence of management and clear leadership.

The respondents rated “Management changes” as having the lowest significant affect to their motivation. “An increase in the hours work” and “Over crowded work areas” also rated poorly as having an effect on participant’s motivation.

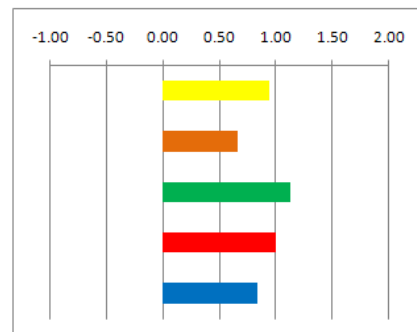
4.4.3 Occupational Groups

This set of findings also looks at the 21 multi choice questions. The findings for each question are looked at in more detail. The average response from each occupational group has been recorded and displayed in the corresponding graphs.

The purpose of doing this is to discover if there are any significant differences to how each of the occupational groups responded to the questions.

Table 4 Question 1 occupational groups

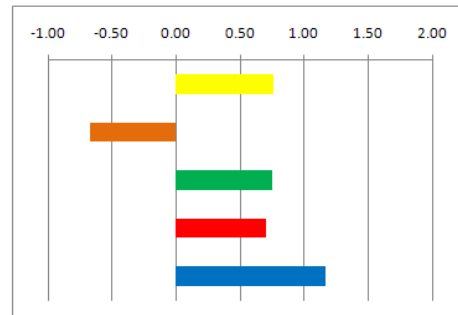
1.	Improving your standard of living including housing & food is a significant motivator for you at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	31.00	0.94
	Project managers	3	2	0.67
	Construction Supervisors	8	9.00	1.13
	Quantity Surveyors	10	10.00	1.00
	Contract Administrators	12	10.00	0.83



There did not appear to be any significant differences to the responses received by each group for Question 1 on standards on living and food.

Table 5 Question 2 occupational groups

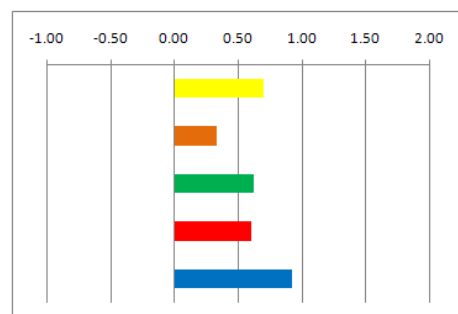
2.	Gaining an increase to how much you are being paid is a significant motivator for you at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	25.00	0.76
	Project managers	3	-2	-0.67
	Construction Supervisors	8	6.00	0.75
	Quantity Surveyors	10	7.00	0.70
	Contract Administrators	12	14.00	1.17



There were significant differences between the occupational groups and the responses they gave. Project Managers appeared to have very little motivation from monetary reward while Contract Administration appeared to be highly motivated. Construction Supervisors and Quantity Surveyors had similar responses at close to the full sample average.

Table 6 Question 3 occupational groups

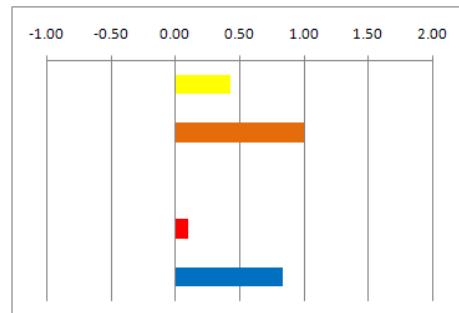
3.	Knowing your current position within the company is secure for the foreseeable future significantly affects your motivation at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	23.00	0.70
	Project managers	3	1	0.33
	Construction Supervisors	8	5.00	0.63
	Quantity Surveyors	10	6.00	0.60
	Contract Administrators	12	11.00	0.92



There were significant differences in the responses received for Question 3. Similar to the responses on monetary reward, Project Managers rated job security relatively low while Contract Admin rated it highly. Contract Supervisors and Quantity Surveyors again responded at close to the sample average.

Table 7 Question 4 occupational groups

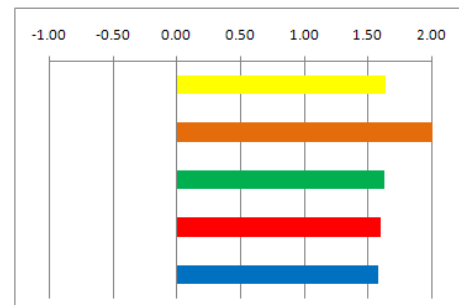
4. Being safe and comfortable has no significant affect on your motivation at work.				
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	14.00	0.42	
Project managers	3	3	1.00	
Construction Supervisors	8	0.00	0.00	
Quantity Surveyors	10	1.00	0.10	
Contract Administrators	12	10.00	0.83	



Significant differences were found in the response to Question 4 on workplace safety. Project Managers and Contract Admin rated it as highly important to their motivation. Construction Supervisors & Quantity Surveyors rated workplace safety relatively low on its affect to their motivation.

Table 8 Question 5 occupational groups

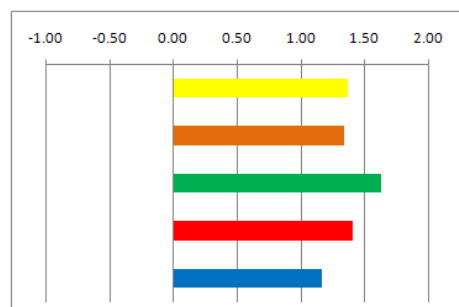
5. Having good co-worker relationships is a significant motivator for you at work.				
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	54.00	1.64	
Project managers	3	6	2.00	
Construction Supervisors	8	13.00	1.63	
Quantity Surveyors	10	16.00	1.60	
Contract Administrators	12	19.00	1.58	



There did not appear to be any significant differences to the responses received by each group for Question 5 on Co-worker relationships.

Table 9 Question 6 occupational groups

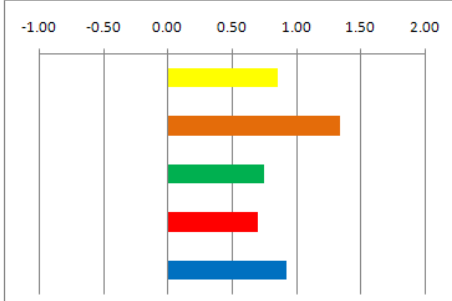
6. Completing challenging tasks is a significant motivator for you at work.				
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	45.00	1.36	
Project managers	3	4	1.33	
Construction Supervisors	8	13.00	1.63	
Quantity Surveyors	10	14.00	1.40	
Contract Administrators	12	14.00	1.17	



There did not appear to be any significant differences to the responses received by each group for Question 5 on completing challenging tasks.

Table 10 Question 7 occupational groups

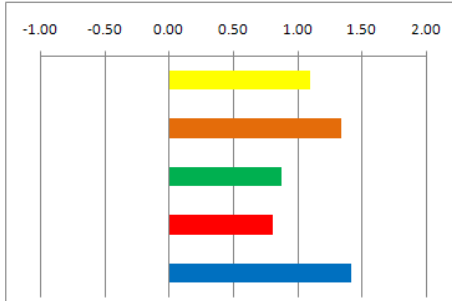
7.	Being part of a team has no significant affect on your motivation at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	28.00	0.85
	Project managers	3	4	1.33
	Construction Supervisors	8	6.00	0.75
	Quantity Surveyors	10	7.00	0.70
	Contract Administrators	12	11.00	0.92



There appeared to be a significant difference in the way each group responded to Question 7 “being part of a team”. Project Managers and Contract Administration rated this motivating factor much higher than Quantity Surveyors and Construction Supervisors.

Table 11 Question 8 occupational groups

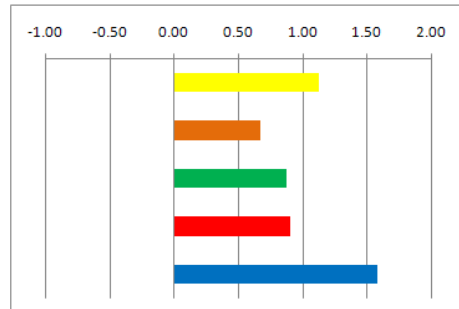
8.	Being acknowledged for your achievements is a significant motivator for you at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	36.00	1.09
	Project managers	3	4	1.33
	Construction Supervisors	8	7.00	0.88
	Quantity Surveyors	10	8.00	0.80
	Contract Administrators	12	17.00	1.42



There appeared to be a significant difference in the way each group responded to Question 8 “being acknowledged for your achievements”. Project Managers and Contract Administration rated this motivating factor much higher than Quantity Surveyors and Construction Supervisors.

Table 12 Question 9 occupational groups

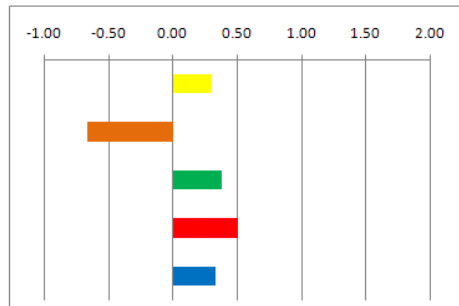
9. Having the ability to increase your training or skills is a significant motivator for you at work.				
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	37.00	1.12	
Project managers	3	2	0.67	
Construction Supervisors	8	7.00	0.88	
Quantity Surveyors	10	9.00	0.90	
Contract Administrators	12	19.00	1.58	



There were significant differences to the way each occupational group answered Question 9 “increasing skills or training”. Contract Administrators rated this motivating factor highly while Quantity Surveyors, Construction Supervisor and Project Managers rated it relatively low.

Table 13 Question 10 occupational groups

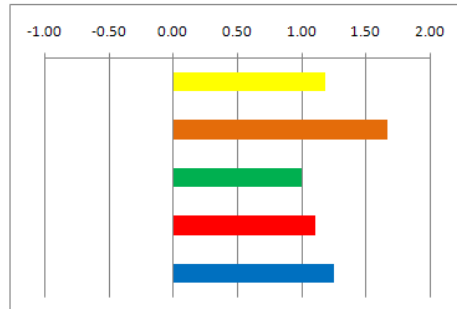
10. The opportunity for a promotion from your current position has no significant affect on your motivation at work.				
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	10.00	0.30	
Project managers	3	-2	-0.67	
Construction Supervisors	8	3.00	0.38	
Quantity Surveyors	10	5.00	0.50	
Contract Administrators	12	4.00	0.33	



Significant differences in responses were received for “the opportunity for promotion”. Quantity Surveyors were the most motivated by this motivating factor. Project Managers were by far the least motivated by this factor. Construction Supervisors and Contract Admin both had similarly low responses to this motivating factor.

Table 14 Question 11 occupational groups

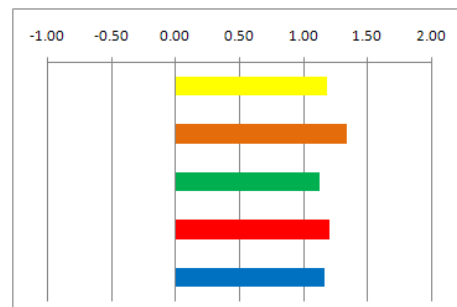
11.	The ability to be creative in your role and improve the performance of the company is a significant motivator for you at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	39.00	1.18
	Project managers	3	5	1.67
	Construction Supervisors	8	8.00	1.00
	Quantity Surveyors	10	11.00	1.10
	Contract Administrators	12	15.00	1.25



The ability to be creative in your role rated highly with Project Managers. There was little difference in the other occupational groups who rated it close to the sample average.

Table 15 Question 12 occupational groups

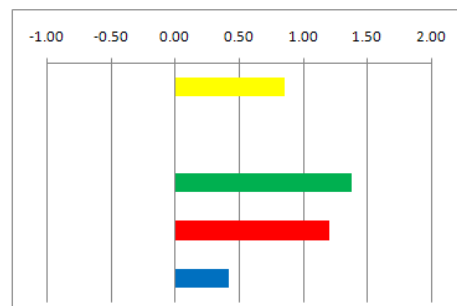
12.	Flexible working hours resulting in a good work life balance is a significant motivator for you at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	39.00	1.18
	Project managers	3	4	1.33
	Construction Supervisors	8	9.00	1.13
	Quantity Surveyors	10	12.00	1.20
	Contract Administrators	12	14.00	1.17



There did not appear to be any significant differences to the responses received by each group for Question 12 “work life balance”.

Table 16 Question 13 occupational groups

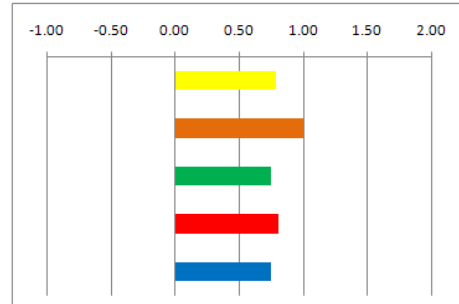
13.	Poor planning and resource allocation significantly affects your motivation at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	28.00	0.85
	Project managers	3	0	0.00
	Construction Supervisors	8	11.00	1.38
	Quantity Surveyors	10	12.00	1.20
	Contract Administrators	12	5.00	0.42



There were some significant differences in the response received for Question 13 “poor planning and resource allocation”. Construction Supervisors and Quantity Surveyors rated this demotivating factor highly while Project Managers and Contract Administrators rated it poorly.

Table 17 Question 14 occupational groups

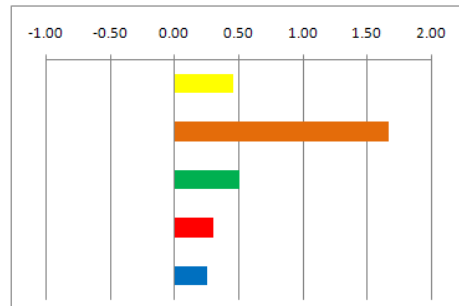
14.	Having to redo work has no significantly affect on your motivation at work.			
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	26.00	0.79	
Project managers	3	3	1.00	
Construction Supervisors	8	6.00	0.75	
Quantity Surveyors	10	8.00	0.80	
Contract Administrators	12	9.00	0.75	



There did not appear to be any significant differences to the responses received by each group for Question 14 “having to redo work”.

Table 18 Question 15 occupational groups

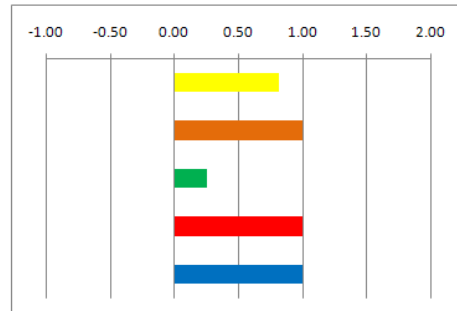
15.	An increase to the amount of hours you work would significantly affect your motivation at work.			
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	15.00	0.45	
Project managers	3	5	1.67	
Construction Supervisors	8	4.00	0.50	
Quantity Surveyors	10	3.00	0.30	
Contract Administrators	12	3.00	0.25	



There was a significant difference in the way the Project Managers responded to Question 15. Project Manager thought that an increase to their working hours would greatly affect their motivation. The other three groups rated this demotivating factor poorly.

Table 19 Question 16 occupational groups

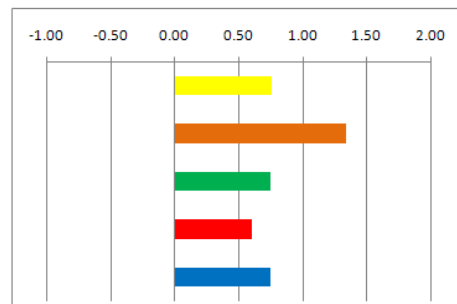
16.	Aggressive management significantly affects your motivation at work.			
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	27.00	0.82	
Project managers	3	3	1.00	
Construction Supervisors	8	2.00	0.25	
Quantity Surveyors	10	10.00	1.00	
Contract Administrators	12	12.00	1.00	



There was a significant difference in the responses to Question 16 “aggressive management”. The Construction Supervisors rated aggressive management as having little affect on their motivation while the rest of the sample rated it highly.

Table 20 Question 17 occupational groups

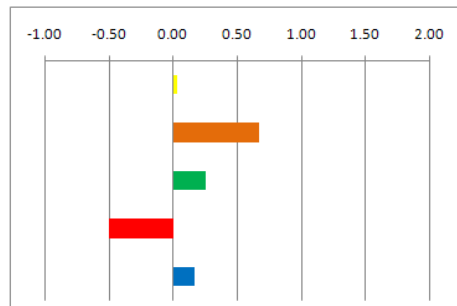
17.	Unsafe work conditions significantly affect your motivation at work.			
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	25.00	0.76	
Project managers	3	4	1.33	
Construction Supervisors	8	6.00	0.75	
Quantity Surveyors	10	6.00	0.60	
Contract Administrators	12	9.00	0.75	



There did not appear to be any significant differences to the responses received by each group for Question 17 “unsafe work conditions”.

Table 21 Question 18 occupational groups

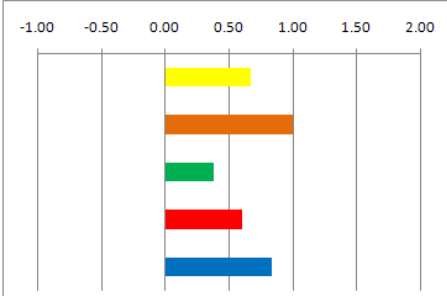
18.	Management changes significantly affect your motivation at work.			
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	1.00	0.03	
Project managers	3	2	0.67	
Construction Supervisors	8	2.00	0.25	
Quantity Surveyors	10	-5.00	-0.50	
Contract Administrators	12	2.00	0.17	



Management changes rated widely between Project Managers and Quantity Surveyors. Project Managers rated management changes as having the highest affect on their motivation. Construction Supervisors and Contract Admin rated management changes as having some effect to their motivation. Quantity Surveyors rated management changes as having no affect on their motivation.

Table 22 Question 19 occupational groups

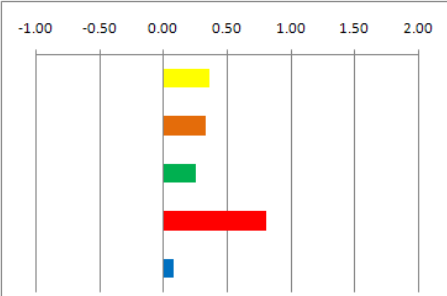
19.	Disorganisation in terms of polices and procedures does not significantly affect your motivation at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	22.00	0.67
	Project managers	3	3	1.00
	Construction Supervisors	8	3.00	0.38
	Quantity Surveyors	10	6.00	0.60
	Contract Administrators	12	10.00	0.83



Question 19 “poor company policies and procedures” gathered mixed response from the sample. Project Managers and Contract Admin rated this demotivating factor the highest. Construction Supervisors rated this factor poorly compared to the other occupational groups. Quantity Surveyors rated this factor similarly to the sample average.

Table 23 Question 20 occupational groups

20.	Overcrowded work areas significantly affect your motivation at work.			
	Occupational Group	No	Response	Ave response
	FULL SAMPLE	33	12.00	0.36
	Project managers	3	1	0.33
	Construction Supervisors	8	2.00	0.25
	Quantity Surveyors	10	8.00	0.80
	Contract Administrators	12	1.00	0.08



Project Managers, Construction Supervisors and Contract Admin rated overcrowded work areas poorly as a demotivating factor. However Quantity Surveyors rated it relatively highly as having significant affect on their motivation.

Table 24 Question 21 occupational groups

21.	Absence of management or clear leadership significantly affects your motivation at work.			
Occupational Group	No	Response	Ave response	
FULL SAMPLE	33	21.00	0.64	
Project managers	3	0	0.00	
Construction Supervisors	8	4.00	0.50	
Quantity Surveyors	10	8.00	0.80	
Contract Administrators	12	9.00	0.75	

There were significant differences in the responses received for Question 21 “absence of management or clear leadership”. This demotivating factor was rated most highly by the Quantity Surveyors and Contract Administrators. Project Managers rated this factor as having very little affect on their motivation. Construction Supervisor rated this factor relatively low also.

4.4.4 Data Quality and Shortcomings

A major shortcoming with the data was the number of respondents in the Project Manager category. As the number of respondents was so small it had the potential to produce overly strong responses to questions when compared to the average responses of larger groups. For example, if the three Project Managers all strongly agreed with the effect of a motivating factor it would product the strongest possible rating. Over a sample of 10-12 an instance of everyone strongly agreeing would far less likely.

4.5 Discussion and Analysis

4.5.1 Themes

Definition:

A Theme is a unifying idea, image, or motif, repeated or developed throughout a work. (Heritage, 2009)

4.5.1.1 Full Sample Motivators

This section of the analysis relates to the full sample of respondents and how they responded to the questionnaire.

4.5.1.1.1 Co-worker Relationships

A vivid theme throughout the findings is that Co-worker Relationships is very important to the motivation of the group as a whole. In the open question section where participants were asked to identify the factors that motivate them most at work (Table 1) 4 respondents identified “good co-worker relationships” as a motivating factor. On the demotivating factor section (Table 2) 5 respondents identified “poor colleague relationships” as a leading demotivator for them at work. This was the second most identified demotivator.

Strongly supporting the results of the open questions are the multi choice section results (Table 3). “Having good co-worker relationships” received the highest response score of all the questions asked.

Co-worker relationships was not found to be the number one motivating factor in the published journal articles that were reviewed however Good relationships with workmates in a team environment was considered an important motivating factor by subcontractors in Florida USA and construction operatives in Bangkok (Cox, 2006; Ogunlana, 1998; Olomolaiye, 1989).

Co-worker relationships would fit into level three of Maslow’s Hierarchy of Needs which is known as the “Love/belonging tier” which includes motivators such as friendship, family & intimacy (Maslow, 1954). Parts of good co-worker relationships could also fit into level four of Maslow’s hierarchy of needs; this is known as the “esteem tier” and includes motivators such as self esteem, confidence, achievement,

respect of others and respect by others (Maslow, 1954). Maslow's Hierarchy of Needs theory states that once a need has been satisfied it no longer motivates that person, only something higher up on the hierarchy of needs will be able to motivate that person. If we were to apply Maslow's theory to the finding we would assume that the needs of the employees below level three and four on the hierarchy have been satisfied already. Level one and two of the Hierarchy of Needs include things such as adequate food, water, shelter, personal safety, personal health, job security, safety of family, safety of property etc.

4.5.1.1.2 Completing challenging tasks

"Completing challenging tasks" was also very important to the motivation of the entire group. Eleven participants identified completing challenging tasks as a significant motivator in the open question section (see table 1). This factor was rated equal as a significant motivator for the respondents.

Strongly supporting what the participants had said in the open question section are the results from the multi choice section. "Completing challenging" tasks was the second highest rated motivating factor (see table 3).

The satisfaction of completing challenging tasks was rated highly as a motivator for construction professionals in the UK, skilled craftsmen in the UK, unskilled labour in the UK, and construction workers in Bangkok, Thailand (Asad, 2005; Ogunlana, 1998; Olomolaiye, 1989). However contradicting these and literature findings was Huang (2008) who found that challenging work and the opportunity to do something that gives a sense of self-esteem was one of the least important things for subcontractors in Taiwan.

Completing challenging tasks fits into the fourth tier of Maslow's Hierarchy of Needs. This tier is called the Esteem tier and includes things like self esteem, confidence, achievement, respect of other etc. This is considered a high order need. Using Maslow's theory it is assumed that because this is one of the most significant motivators of the group, the groups lower order needs must be satisfied.

Completing challenging tasks is definitely a strong motivator for all of the respondents. This theme was repeated through the findings and literature.

4.5.1.1.3 Creativity

The ability to be creative is a significant motivator for the group. This motivator scored as the third equal highest motivator in the multi choice section with a score of 39 (See table 3). I believe in support of this is the findings on demotivation factors (table 2). Repetitive & non stimulating tasks were identified by the highest number of participants as a significant demotivating factor for them at work. I would think that to reduce repetitive non stimulating tasks an employer would need to assign more creative non repetitive tasks to employees.

Creativity is on the top level of Maslow's Hierarchy of needs. This tier is called the Self Actualization tier, it includes Morality, Creativity, Spontaneity, Problem solving etc(Maslow, 1954).

4.5.1.1.4 Flexible working hours/Good work life balance

Flexible working hours resulting in a good work life balance is a significant motivator. This motivating factor was rated third equal with creativity in the multi choice section of the questionnaire. Work life balance was also identified by a respondent in the open question section.

Interestingly Flexible working hours and a good work life balance were not identified in the literature as a significant motivating factor. Perhaps flexible working hours and work life balance becomes more important to people after a natural disaster such as that in Christchurch. People's lives would have been a lot less stable and unorganised following the earthquakes which may have resulted in a need for flexible working hours helping with mental recovery and resilience.

4.5.1.1.5 Increasing Skills & Knowledge

Having the ability to increase your training, skills and knowledge was a significant motivator for the group. It scored highly in the open question section with 7 people

identifying it as a significant motivating factor. Supporting this was the results of the multi choice section where increasing skills and training scored the 4th highest rating.

Again these motivating factors would fall into the 4th tier of Maslow's Hierarchy of Needs. This is a higher order need and falls within self esteem, confidence & achievement. For this motivating factor to be at the forefront of peoples minds we would assume that they are happy with their safety and physiological needs.

Increasing skills and personal knowledge was not identified in the literature as a significant motivator for construction professional or operatives. Possibly the respondents who have got involved in this project are looking at the project as a chance to better themselves and further their careers. The project they are involved in is very unique and is the largest in New Zealand's history. People with a wide range in professional backgrounds have got involved. Many of the respondents have come from small businesses, self employed positions or outside the industry. I would assume to undertake such a challenge, increasing your knowledge and skills would definitely be a significant motivator.

4.5.1.1.6 Acknowledgement of achievements

Being acknowledged for your achievements was a significant motivating factor for the participants. Acknowledgement for achievements was rated by participants in the multi choice section as the 5th most significant motivating factor (table 3). It was also identified by participants in the open question section (table 1).

Oyedele (2009) found that for Architects and Engineers effort recognition was one of the more significant motivating factors. Supporting the findings was Smithers (2008) who found that one of the most significant demotivators for construction professionals working in Melbourne Australia were non-recognition for work done.

This motivating factor is also a high order need and is associated with the 4th level of Maslow's Hierarchy of Needs.

4.5.1.1.7 Monetary Reward / Remuneration

Monetary reward or remuneration was found to be a motivating factor. It was second most identified factor by the respondents in the open question section (see table 1). However it did not score very highly in the multi choice section where it came in 10th out of the 21 questions asked.

Throughout the literature it was widely found that money was a significant motivating factor if not the most significant motivating factor for all construction workers (Asad, 2005; Cox, 2006; Huang, 2008; Ogunlana, 1998; Olomolaiye, 1989).

4.5.1.1.8 Least Significant Motivators

The opportunity for promotion, being safe in the work place and job security were rated very poorly by the respondents. These results contradicted the findings in the literature. Ogunlana (1998) and Cox (2006) found that workers thought safety on the job was a significant factor contributing to their motivation and Asad and Dainty (2005) identified job security as a significant motivator.

The respondents are working on is a fixed term contracts with the total programme of the project being 3-4 years. It may be because of this that the respondents did not rate promotion opportunities highly.

I would suggest that job safety rated poorly because the vast majority of the sample were office based i.e. Project Managers, Quantity Surveyors and Contract Administrators. These employees would probably only be exposed to minor safety risks.

Job security rating poorly as a motivator during a worldwide recession is puzzling. It could be argued that because there is a huge amount of work being undertaken in Christchurch with the earthquake rebuild it is not affected by the current recession. Perhaps the respondents believe it would be easy to get another job if their current one was removed or stopped.

4.5.1.2 Full Sample Demotivators

4.5.1.2.1 Poor planning & Resource allocation

Poor planning and resource allocation was the most significant demotivating factor for the group. This factor rated the highest out of all the demotivating factors in the multi choice section (table 3). Supporting this it was also identified in the open question section as a significant demotivator.

Smithers (2008) also found that one of the most significant demotivators for construction professionals working in Melbourne Australia was planning and resource distribution.

As the project the respondents are working on is so large and unique it's possible there are or were some teething issues around planning and resource allocation which could be significantly affecting the motivation of the employees.

4.5.1.2.2 Aggressive Management

Aggressive management was the second highest rated demotivating factor (see table 3). This finding was supported in the open question section where 3 participants identified poor treatment by management as a significant demotivator.

This finding also reflects that of Smithers (2008) who found that one of the most significant demotivators for construction professionals working in Melbourne Australia was aggressive management styles.

4.5.1.2.3 Redoing work

It was found that having to redo work is a significant demotivating factor for the group. It was ranked as the third highest demotivator by the participants. Rework or redoing work was not specifically brought up in the open question section by any of the participants however it tends to go hand and hand with the topics of poor planning, management indecision and poor procedures which were identified under the open question section (table 2).

Skitmore (2004) found that Civil engineering operatives in Hong Kong ranked rework the highest demotivator, and that by reducing rework, by better or more careful planning, substantial gains to productivity of the company or project would be made.

4.5.1.2.4 Difficult Clients & Conflict with Clients

An interesting finding in the open question section which was not identified in the literature review was that difficult clients and conflict with clients was significant demotivator for the respondents.

I believe that this was not identified by previous researchers because the level of client interaction on typical or traditional projects is minimal compared to the project that was studied. The project team studied has to deal with the home owners of earthquake damaged houses every day. The project team of 39 studied was responsible for repairs on 120- 140 houses a month, each house having its individual owner or client. The homeowners are under huge stress because of the earthquake and have minimal knowledge of construction. This has the potential to create difficulties and conflict while organising the repairs. I believe this is something that construction workers are ill-equipped to deal with especially the highly emotional clients that have had major losses. Possibly some training on how to deal with these types of clients and situations could help the employees involved in this project. If they are better equipped to deal with these clients their job motivation will be less affected and their productivity will go up.

4.5.1.2.5 Least Significant Demotivators

Management changes and Overcrowded work areas did not appear to be significant demotivators for the group as they rated very poorly.

This aligns with Skitmore's (2004) findings. He also found that the demotivator that rated the lowest was management changes. However contradicting the findings, Skitmore found that overcrowded work areas was the second most significant demotivator for Civil Engineering operatives in Hong Kong. I would suggest this contradiction is a result of the differing working conditions of the participants in this study and those of Civil Engineering operatives in Hong Kong.

4.5.1.3 Occupational Group Motivators

It was found that different motivating and demotivating factors affected each occupation group differently. This is clearly shown on Tables 5, 6, 7, 10, 11, 12, 13, 14, 16, 18, 19, 21, 22, 23 and 24. These tables show major differences in the way the occupational groups answered the questionnaire.

The respondent's results in Table 4, 8, 9, 15, 17 and 20 are relatively uniformed. In these cases the full sample was either strongly agreeing with something or strongly disagreeing with something. No particular occupational groups stood out from the rest.

4.5.1.3.1 1.5.1.2.1 Project Managers

Project Managers are significantly more motivated by work place safety, teamwork, acknowledgement of achievement and the ability to be creative than the other participants.

Project managers were significantly less motivated by money, job security, increasing training and skills and opportunities for promotion than the other participants.

4.5.1.3.2 Construction Supervisors

Construction supervisors are significantly more motivated by completing challenging tasks than the other participants.

Construction supervisors are significantly less motivated by work place comfort & safety, being acknowledged for achievements and the ability to be creative than the other participants.

4.5.1.3.3 Quantity Surveyors

Quantity Surveyors are significantly more motivated by the opportunity for promotion than the other participants.

Quantity Surveyors are significantly less motivated by being safe and comfortable and being acknowledged for achievements than the other participants.

4.5.1.3.4 Contract Administration

Contract Administrators are significantly more motivated by gaining an increase to how they are being paid, knowing their position with the company is safe, being safe and comfortable, being acknowledged for achievements and increasing training and skills than the other participants.

Contract Administrators are significantly less motivated by completing challenging tasks than the other participants.

4.5.1.4 Occupational Groups Demotivators

4.5.1.4.1 Project Managers

Project Managers are significantly more demotivated by increase in the amount of hours worked, management changes and poor company policies than the other occupational groups.

Project Managers are significantly less demotivated by poor planning and resource allocation, absence of clear leadership than the other participants.

4.5.1.4.2 Construction Supervisors

Construction Supervisors are significantly more demotivated by poor planning & resource allocation than the other occupational groups.

Construction Supervisors are significantly less demotivated by aggressive management, disorganisation of policies and procedures, overcrowded work areas and absence of management than the other participants.

4.5.1.4.3 Quantity Surveyors

Quantity Surveyors are significantly more demotivated by poor planning & resource allocation, overcrowded work places and the absence of clear leadership than the other participants.

Quantity Surveyors are significantly less demotivated by an increase in hours worked and management changes than the other participants.

4.5.1.4.4 Contract Administration

Contract Administrators are significantly more demotivated by disorganisation of policies and procedures than the other participants.

Contract Administrators are significantly less demotivated by poor planning and resource allocation, increase to hours worked and overcrowded work areas than the other participants.

4.5.2 Trends

Definition:

A trend is a general direction in which something tends to move (Heritage, 2009).

4.5.2.1 Full Sample

4.5.2.1.1 Motivating Factors

Generally the participants as a group were more motivated by intrinsic rewards, things which are on the top end of Maslow's hierarchy of needs. The most significant motivators were co-worker relationships, completing challenging tasks, being creative, work life balance, increasing skills and acknowledgement of achievements. These 'High order needs' only motivate people who are relatively happy with their safety and physiological needs such as job security, security of family, security of health, security of property, shelter, food, water etc.

These findings reflect that of the literature review. It was shown within the literature that construction professionals are more motivated by high order needs than construction operatives. Asad and Dainty (2005) concluded in their study that the primary motivators for construction professionals, skilled craftsmen and unskilled labour were monetary reward, job security and the intrinsic satisfaction of work. However it appeared that construction professionals were generally more motivated by intrinsic reward than skilled and unskilled operatives.

Another trend that could be drawn from the literature in parallel with this study was that construction workers from more developed countries are generally motivated by high order needs. The findings of Ogunlana (1998) in Bangkok and Olomolaiye

(1989) in Nigeria suggest a much stronger desire for lower order needs such as housing and job security which does not appear in the studies done in developed countries.

A trend that existed throughout the findings and literature review was that monetary reward or remuneration is a significant motivator regardless of whether you are a professional, operative or the country you work in. I believe this is because people's needs and living costs adjust to how much they earn and almost regardless of how much people earn there will always be things they want that are slightly out of their reach economically.

4.5.2.1.2 Demotivating Factors

The significant demotivating factors for the group were poor planning and resource allocation, aggressive management styles, having to redo work and dealing with difficult clients. There did not appear to be trend with these findings other than that the factors that most demotivate the group are out of their control. It seems that these factors are things that will always be present in their current workplace. There is potential to minimise these factors but it would be unlikely to eliminate them completely because of the nature of the work.

4.5.2.2 Occupational Groups

4.5.2.2.1 Motivating factors

When examining how each occupational group responded to the questions it is clear that different things motivate different occupational groups. Upon closer examination, trends developed relating to how each group responded to certain types of questions.

Project Managers were generally more motivated by higher order needs than the other occupational groups. They responded very strongly to things that offer intrinsic reward such as teamwork, acknowledgement of achievement and the ability to be creative. Project Managers have the highest level of professionalism out of the four groups studied. Project Managers are typically very knowledgeable, well educated, highly driven and well paid. These findings reflect that of Asad and Dainty (2005) and Smithers (2000) who found that construction professionals have a much higher

desire for intrinsic rewards than none professional construction workers such as tradesmen and general labour.

There was not an obvious trend with the Construction Supervisors and Quantity Surveyors. These two groups had a mix of responses to the different types of questions. However, regardless of the odd strong response to extrinsic motivators they both were generally still inclined to things that offered intrinsic reward.

Contract Administrators were generally more motivated by lower order needs than the other occupational groups. They responded strongly to things that offered extrinsic rewards such as gaining an increase to how they are being paid, knowing your position with the company is safe, being safe and comfortable, and increasing their training and skills. I believe this result also fits into the trends that were identified in the literature. The Contract Administrators would be the least professional out of the four groups that were studied. Their role does not require a lot of industry specific knowledge and the majority had not had any formal training. Their primary roles were data entry filing and word processing. It seems appropriate then that Contract Administrators results from the questionnaire reflect what Asad & dainty (2005) found with the unskilled operatives in the United Kingdom.

4.5.2.2 Demotivating factors

Again the demotivating factor findings did not appear to form an obvious theme. However, it is possible that each factor was rated by how prevalent it is in the day to day working life of that occupational group. For example Project Managers rated an increase in work hours, management changes and poor company policy as their most significant demotivators. This result seems logical as these demotivators would affect Project managers more than the other occupational groups. Likewise, Construction Supervisors rated poor planning and resource allocation as their most significant demotivator. It would again seem logical that poor planning and resource allocation would affect them more than any of the other occupational groups.

5 CONCLUSIONS & RECOMENDATIONS

5.1.1 Introduction

The aim of this research was to answer the question “What are the significant motivating and demotivating factors for the employees of a large New Zealand construction company and do they differ between the occupational groups within the company?” The question has two parts, firstly, what are the significant motivating and demotivating factors for the employees of a large New Zealand construction company? Secondly, do the motivating and demotivating factors differ between the occupational groups? As with the findings and analysis the conclusions have been split to answer the two parts of the research question.

5.1.2 Employee Motivating & Demotivating Factors

The most significant motivating factors for the group as a whole were co-worker relationships, completing challenging tasks, being creative, flexible working hours/work life balance, increasing skills and acknowledgement of their achievements. This showed that the group had a strong desire for intrinsic rewards and that their motivating factors fall within the higher levels of Maslow’s Hierarchy of Needs. The findings were in line with findings from research in developed countries such as Australia, England, Ireland, Hong Kong and the United States. The findings supported the literature on motivation factors for construction professionals, which had previously been found to be motivated by intrinsic reward. It should be noted that the significant motivator of flexible working hours/work life balance was a unique finding of this study and was not reflected in the literature.

The most significant demotivating factors were poor planning and resource allocation, aggressive management styles, having to redo work and dealing with difficult clients. It was concluded that employees would be inherently dissatisfied by these factors and they would only be able to be minimised rather than eliminated in the work place. This finding is in line with Herzberg’s theory (1959) who states that people were inherently dissatisfied or demotivated by hygiene factors and therefore by attending to the hygiene factors management would not increase job satisfaction or motivation they would only reduce job dissatisfaction(Oyedele, 2009). The significant

demotivating factor of dealing with difficult clients was a unique finding for this study; it was not identified by other researches in the literature.

5.1.3 Occupational Group Motivating & Demotivating Factors

It was found that there were considerable differences in the factors that affected the motivation of the different occupational groups. Project Managers had a marked desire for intrinsic rewards compared to the three other occupational groups. Quantity Surveyors and Construction supervisors provided mixed responses, however they still identified intrinsic rewards as their most significant motivating factors. Compared to the other occupational groups, Contract Administrators were found to have a stronger desire for extrinsic rewards such as monetary rewards and job security. The latter being considered a lower order need on Maslow's Hierarchy of Needs.

It was found that demotivating factors affect each of the occupational groups differently. For Project Managers an increase in hours you have to work, management changes and poor company policy were the most significant demotivators. For Construction Supervisors poor planning and resource allocation was their most significant demotivating factor. Quantity Surveyors were significantly more demotivated by poor planning & resource allocation, overcrowded work places and the absence of clear leadership than the other participants. Contract Administrators are significantly more demotivated by disorganisation of policies and procedures.

5.1.4 Recommendations

It is recommended that the company create an 'umbrella' strategy to manage the motivation of all the employees within the company. Within this umbrella strategy should be individual tailor made strategies for each occupational group. The umbrella strategy should have a strong focus on promoting good co-worker relationships. Perhaps a social club, family days or team building courses would be appropriate. The strategy should also include procedures, which set goals or challenging tasks and ensure progress is monitored and all achievements are acknowledged. Perhaps a company newspaper could be a good way to acknowledge high achievers. The motivation strategy needs to include a plan to minimise the significant demotivation

factors of poor planning and resource allocation, aggressive management and difficult clients. Specialist training should be provided to employees to help them deal with difficult and emotional clients. This could include a set of guidelines on what to do when certain situations occur.

Individual strategies for each occupational group should be created. The Project Managers motivation strategy should be designed around high level intrinsic rewards such as creativity, teamwork and acknowledgement of achievements. The Construction Supervisors strategy should be based on intrinsic rewards but also insuring they have the resources they need to complete their work effectively. A motivation strategy for Quantity Surveyors should also be based around intrinsic rewards however more attention should be given to the opportunity of promotion than acknowledgement of achievements. The strategy to motivate Contract Administrators should be based on extrinsic rewards such as monetary reward, job security and providing a safe and comfortable environment for them at work.

5.1.5 Limitations of Research

The most significant limitation to this research project was the amount of time that was allocated. Only 10 months was available to conduct the research, this meant that some parts of the process were not carried out to the level detail that they could have been.

Another limitation which may have affected some of the results was the sample size. The sample size was probably too small. This is especially the case with the Project Managers. Because there are a relatively small number of Project Managers within the company and they are very busy people it was difficult to get a large sample or high response rate.

The participants were known to the researcher this could have possibly had some affect on the answers given around sensitive subjects such as money or workplace safety.

5.1.6 Future Research

There is definitely the potential to carry out future research in this area. Very little has been done on motivation within the New Zealand construction industry. Perhaps a researcher could present a range of motivation strategies and ask employees which they would prefer to be implemented in their work place. Studies could be undertaken around the implementation of occupation specific motivation strategies and measuring the effect they have on the productivity of the group over a set time. Some interesting points were identified that could be related to the earthquake recovery work. Future research could be done on the specific affects on employee's motivation when working on disaster recovery contracts. This could be compared to a similar sample working in Auckland or Wellington. The participants who had relocated to Christchurch for the earthquake recovery work identified some interesting reasons for doing so. A much more detailed study could be carried out on these people and perhaps the certain personality traits they possess as well as other contributing factors.

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