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The psychometric properties of an employee attitude survey for a South African Automotive Manufacturing Organization

by

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CONCEPT DECLARATION

I, **Marzanne van der Linde**, hereby declare that **"The psychometric properties of an employee attitude survey for a South African Automotive Manufacturing Organization"** is my own work. All the resources I have used for this study are cited and referred to in the reference listing by means of a comprehensive referencing system.

I declare that the content of this thesis/article has never before been used for any qualification at any tertiary institute.

_____ _____

Marzanne van der Linde Date

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ABSTRACT

The objective of this study was to determine the psychometric properties of an employee attitude survey as developed by an Automotive Manufacturing Organization. The employee attitude survey consist of 55 items and was completed by a total of 306 employees employed at this specific organization. An exploratory factor analysis (EFA) was performed where only one factor loading resulted out of an anticipated thirteen. The inter-correlations were empirically investigated and indicated that all the items under a specific dimension did have a lot in common with one another. An anti-image inter-correlation was performed. All of the items indicated a satisfying measure of sampling adequacy (MSA) values at .595. The overall reliability of the employee attitude survey was satisfactory. These results suggested that the employee attitude survey is a handy tool for the goal the organization wants to use it for, but it does not differentiate between the thirteen different dimensions of attitude as hoped for.

OPSOMMING

Die doel van die studie was om die psigometriese eienskappe van ‘n werknemer gesindheidsvraelys soos gebruik deur ‘n motorvervaardigings organisasie, te evalueer. Die vraelys bestaan uit 55 vrae wat deur 306 werknemers voltooi is. ‘n Ondersoekende faktor-analise is uitgevoer en slegs een faktor uit ‘n totaal van dertien het gemanifisteer. Itemkorrelasies het aangedui dat al die items onder hul spesifieke dimensies ooreengestem het en goed gekorreleer het. Steekproeftoereikendheid (MSA) het gunstige waardes gestaaf van hoër as .595. Die betroubaarheidskoëffisiënte van die vraelys was baie bevredigend. Die resultate toon dat die vraelys geskik is vir die doel waarvoor die maatskappy dit gebruik, maar daar word nie onderskeid getref word tussen die dertien verskillende gesindheids dimensies nie.

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CHAPTER 1: ORIENTATION AND INTRODUCTION

1.1 Introduction

"Mr. Brown is a skilled factory worker in an almost all-white neighbourhood. Mr. Smith is a black accountant who is married and has two children. How is Mr. Brown going to feel about Mr. Smith? What is he likely to think about him? How is he likely to behave towards him?" (Triandis, 1971).

The answers to these questions concern Mr. Brown's *attitudes* towards Mr. Smith. The major theme of this dissertation deals with attitude. Many of the biggest problems in the workplace today concerns employee's attitudes. Fast changing work environments place more and more demands on people all around the workplace. In adjusting their "attitudes" they can be more able to successfully adapt to necessary changes within their immediate workplace. Unless we change our attitudes towards our fellow man, there could arise a possibility of a nuclear war, which could even mean the end of all human relations, and lead to isolation, decreased productivity, low employee morale, less respect and ultimately personal failure. As seen in the introductory words, Mr. Smith and Mr. Brown's differences can be a cause of intergroup conflict that is widespread in many parts of the world. Conflict almost always emerges when people have different religions, backgrounds and values. In the past conflict was highly undesirable, in the future it may mean total destruction. Therefore if people do not adjust their attitudes in order to successfully function within a diverse work environment, it can lead to major problems (Triandis, 1971).

Although the study of attitudes is of great value, no one must think that knowing all there is to know about attitudes can immediately solve any work-related problems. People need to remember and understand that there are long-established traditional patterns of behaviour and complex problems of agriculture, engineering, economic, health and law that have been intervened by human attitude which support these problems and would be very difficult to change. In measuring the attitude of employees, a lot of work-related problems can be detected, which could be of great value for the organization in order to increase total working relationships within that organization. Even though attitude problems are highlighted, appropriate intervention are needed to decrease the negative issues and improve positive employee behaviour. The main purpose here is to give the

reader a broad understanding on what human attitude is and to study effective and reliable measures of this attitude. A well-known company within the automotive industry were very interested in determining whether their employee attitude measurement was indeed effective. The company's annual goal in terms of employee attitude was to determine any signs of low attitude behaviour and then strive towards improving it. A truthful measurement will ensure that the real areas of employee attitude are measured in the correct manner. Therefore this study will focus on the effectiveness of the measurement tool, used in determining employee attitude, at a certain organization within the borders of South Africa. It is critical for the reliability and validity of the measurement to be as satisfactory as possible in order to ensure an outcome that is worthwhile. The organization has various branches all over the world and all of the people working for this international company complete the attitude survey annually. A lot of people may feel that it is a waste of time to complete the survey, but proof that the survey is beneficial to everyone, as well as valid and reliable may help in changing their mindsets.

Attitude is not something that can be changed overnight or over a cup of coffee but rather something you need to change by believing in what you know is of significant value. People will display positive behaviour within specific areas of their lives if they have a positive mind frame about that certain situation or area. The study of attitudes is only one facet of a complex puzzle throughout the world and organizations but the puzzle is there. This dissertation can therefore be a key towards the expansion of knowledge on employee attitude and on measurement of attitude.

1.2 Problem statement

The rationale to execute this research project is to do a thorough investigation and analysis on an employee attitude survey to determine if the survey is in fact valid and reliable, in other words: "Does it measure what it is supposed to measure and does the instrument consistently yield similar results?" The main aim of this attitude survey that has been developed in Europe is to determine employee attitude towards the organization. The company where the study is being conducted is a well-known company within the motor industry. The name of the company will not be disclosed at

any stage during the research period in order to sustain confidentiality, as requested by the company. Within this specific company operating in South Africa there are eight branches spread over the whole country, with their head office situated in Gauteng. All the branches as well as head office will participate in this study. This survey will determine the attitude of the employees by means of thirteen different dimensions, namely: confidence/performance orientation, respect, co-operation, delegation/influence, performance feedback, internal information, overall understanding, goals, individual development, procedures easily implemented, planning/follow-up, personal and environmental issues and attitude to change. The answers of each person will be scored accordingly, in order to allow the company to determine which branches within South Africa indicated a low attitude score.

Feedback in the form of discussions will be held with work groups, especially at the branches with low attitude scores. Interventions will be planned thereafter in order to improve employee attitude, resulting in a more positive and meaningful work environment. Joint action plans (JAP) will be initialized in order to ensure that no important points are missed when planning appropriate interventions for solving the identified issues at hand.

1.3 Aim of study

The main aim of this study is to determine whether the employee attitude survey is a true measurement in determining employee attitude, specifically in our working conditions within the South African context. One of the biggest concerns raised by the employees were that the survey is not based on South African principles and work situations and cannot be generalized to the rest of the world. Management also expressed the concern that the survey was not a true measurement of employee attitude and therefore is not seen as highly valid or reliable. It wouldn't be of any use to waste the employees' time in completing the survey if it doesn't really measure what it is supposed to measure. The employees are the organization and without them the organization wouldn't be so successful in the market. It is therefore crucial to make sure that every minute of their time is optimally utilized, whether it is in completing the attitude survey or completing an important task.

The questionnaire will be completed by a number of employees at various branches of the organization around the world. Even though the questionnaire was not developed in South Africa, it would be to the benefit of all the branches worldwide to determine the psychometric properties.

1.4 Research questions & hypothesis

The research questions:

1. To what extent is the Employee Attitude Survey reliable in the South African context?
2. Is construct validity highly satisfactory in measuring what it is supposed to measure in the Employee Attitude Survey?

Hypothesis:

Research question 1:

- H1: The employee attitude survey is not reliable at all.
- H2: The reliability of the employee attitude survey is only relatively satisfactory.
- H3: The reliability of the employee attitude survey is highly satisfactory.

Research questions 2:

- H1: The construct validity of the Employee Attitude Survey is very poor.
- H2: The construct validity of the Employee Attitude Survey is relatively satisfactory.
- H3: The construct validity of the Employee Attitude Survey is highly satisfactory.

This study can be classified as evaluative research. The researcher is only going to evaluate whether the questionnaire measures what it is supposed to measure. As Babbie (2001) indicated, evaluation research can, in its simplest sense, be regarded as "the process of determining whether a social intervention has produced the intended results." Therefore in evaluating the attitude survey, the results will indicate the psychometric properties of this survey.

1.5 Dissertation outline

Chapter One provides the reader with relevant background information on the research project, the problem statement, as well as the main aim of this research project. This chapter will provide important detail regarding the reasons why such a study is worth while as well as encourage the reader to read through this document with great interest. The main objective of this research is stated in order to inform the reader to what has to be achieved at the end of this research project. For these reasons it is essential to provide a detailed and informative overview of the research project in chapter one.

Chapter Two provides a detailed literature review of general information, statements and facts regarding the concept of attitude and attitude measurement, already known. Previous research findings regarding similar studies will be stated, providing a good indication of whether similar studies were successful, worth while and filled certain gaps within this particular field. The researcher will also focus on the 13 different dimensions which are seen as building blocks of attitude in the employee attitude survey to indicate whether attitude are evident in all or some of these dimensions as stated by experts.

Chapter Three will state what research approach the researcher will make use of, as well as detail regarding the population and sample used. Information regarding the research design and the measurement instrument will be included. Background information regarding reliability and construct validity will give the reader a good overview of what these two concepts exactly mean and the importance thereof in this research project. The purpose of factor analysis will be provided as well as detailed information on exploratory factor analysis. All of the above information will show the reader exactly how the information needed will be obtained as well as the means by which the data will be analyzed and interpreted.

Chapter Four can be seen as this research project's most "valuable" chapter, because all the results will be documented in this chapter. The results as it is obtained from the statistical programme SPSS, will be provided in graphs and tables. Detailed information in support of the findings will make it even more relevant and clear to the reader of what the specific findings were.

Chapter Five will provide an overall conclusion to the whole study. Determining whether the research questions were answered, stating limitations and providing recommendation for future research to be done in this field. Literature regarding the results found will also be stated in this chapter.

Chapter Six will provide a basic summary of the research conducted. The article will consist of a short abstract of the research conducted, research method description in terms of the data collection procedure, measuring instrument and data analysis. Results as well as limitations and recommendations for future reference will be documented.

CHAPTER 2: LITERATURE REVIEW

2.1 Chapter outline

Within this chapter the researcher will have an in-depth look at the following:

- The historical foundations of attitude. Here the researcher will indicate where and when the word was first discovered, why the word is described as significant and reasons on why researchers find it interesting to study it in depth.
- The meaning of attitude will be indicated by various definitions from researchers as far back as the early 1900's providing an in-depth understanding of the word.
- The researcher will provide information regarding the measurement of attitude, looking firstly at whether attitude can indeed be measured, the most popular ways in measuring attitude and important factors to consider when measuring attitude.
- Information regarding the training of attitudes will be discussed to give insight on the effectiveness and appropriateness in trying to change people's attitudes by means of certain training methods.
- Lastly, workplace attitude and the importance of a positive attitude will be explained.

2.2 Introduction

Attitude may be thought of as a general word, a word people often use. People have their own definitions and conceptions of what the word really means. The word attitude is one of the most distinctive and indispensable words in social psychology. No other term appears more frequently in experimental and theoretical literature. According to Allport (1929) it's popularity is not difficult to explain. This concept escapes the ancient debate regarding the relative influence of inheritance and the environment. The term is also general and elastic enough to apply it to either single, isolated individuals or to even a whole broad band of people in a specific culture. This almost "peaceful" word has been widely adopted and therefore established itself as a keystone in social psychology. Attitude is one of the most distinct factors that make people differ from one another and allows people to be unique in their own way. People can relate to it and it is undeniable that the concept of attitude has become something people live by and even thrive to

improve in certain circumstances. Each person may possess many opposing attitudes, which may tell a different story of the person's behaviour at a certain time. Attitudes often change, even though people may think it doesn't. The saying "you really have an attitude" are well-known and most people see this saying as very negative, almost in an arrogant kind of way. Who say's this "attitude" isn't a good and positive attitude; and if the person has this so-called "attitude" today will he have the same attitude tomorrow?

There is a lot of theory, history and interesting facts concerning attitude, not only as a single concept but in relation to specific situations and behaviour as well. A thorough literature study will be provided to ensure that a wide understanding of this concept with all its relevance is explained in detail.

2.3 Historical foundations

Like many abstract English words, the word attitude also has more than one meaning. Derived from the Latin word "aptus" which means fitness or datedness, this word developed to have quite a unique meaning of its own. From the Latin words derived the word "aptitude" which was referred to as either mental attitudes or motor attitudes when referred to by psychological terms. One of the first psychologists ever to use the word "attitude" was Herbert Spencer. In his "First principles" in 1896 he wrote the following*: " Arriving at correct judgements on disputed questions, much depends on the attitude of mind we preserve while listening to, or taking part, in the controversy, and for the preservation of right attitude it is needful that we should learn how true, yet how untrue, are average human beliefs".* A few years later, when more and more psychologists became in tact with this word, the concept of "motor attitudes" became a popular one. For example in 1895, Baldwin proposed motor attitudes as the basis for the understanding of emotional expression, and later on writers like, Giddings (1896) and Mead (1924) emphasized motor attitudes to be part of social understanding (Fishbein, 1967).

As the years progressed psychologists, researchers and writers became more interested in this concept and started to study it, forming their own views and assumptions about the concept. A huge contributor to the acceptance of attitude was the so-called *Würzburg* School in Germany back in 1909. They agreed that attitudes were neither

sensation, imaginary, nor affection or any combination of the above. Time after time they studied attitude by means of various research methods, which yielded the same results every time. When attitude is measured it has no representation in consciousness other than a vague sense of need, or some indefinite feeling of doubt, conviction, effort or even familiarity. A lot of researchers went and studied the above and found again that attitude is indeed representative of all the above feelings. As a result of all the attention it drew and all the research done on this concept, the *Würzburg* School's work regarding attitude research was a starting point in the interest and acceptance of this concept and was in effect the demonstration that the concept of attitude was indispensable. Later on the influence of the well-known Freud that identified attitude with belonging, hatred, love, passion and prejudice of the unconscious came to light (Fishbein, 1967). One may think that an excessive, maybe even unnecessary amount of experimentalists were involved in the study of this concept, but this was exactly what established the concept in the field of psychology.

The credit though for instituting the concept of attitude as a central feature in psychology must be given to Thomas and Znaniecki (1918), who gave it systematic priority in their study of Polish peasants. According to them attitudes influence the individual's mental process which determines both the actual and potential responses of each person in the social world. They admitted that there indeed exists a distinction between natural attitudes and social attitudes, with all their views and findings on attitude a lot of psychologists tend to agree with them and supported their research all the way. Most psychologists agreed that attitude forms the basis of languages and communication, which is a trail response that derives from any living human being (Fishbein, 1967).

2.4 Underlying meaning of attitude

Situations often exist where an individual may have the same social object in common with another social object, and therewith comes a certain set of social behaviours an individual may have in the presence of this situation. If similarity does in fact exist between these social behaviours that a person displays, it can be stated that the individual had an attitude towards the social objects. To illustrate the above more clearly, let's look at an example: Say for instance a different situation exists where a person of another race is present, an individual may have a positive or negative attitude towards a

person from a different race, no matter in which situation they might be present, if the individual displays a negative attitude this may be known to the reader as stereotyping. On the other hand the individual may have a very positive attitude towards a person of a specific race that he/she interacts with in any situation. In short, attitude represents "consistency in response to social objects" (Campbell, 1963).

- Allport (1935), an expert in the field of social psychology, indicated that social psychology as early as 1918 was defined as the scientific studies of attitudes. As one can imagine this term has been used by many psychologists over the time, and therefore there are quite a few definitions of attitude. Even though a lot of different definitions exist, one common element that runs throughout most of the definitions is "the readiness to respond" to a situation. This readiness can refer to "mental attitudes", as well as the ability to interpret correctly what has been said, mainly as result in holding those particular attitudes (Spenser, 1862). Even today Allport's (1935) definition is still highly influential. His definition about attitude stated the following: "An attitude is a mental and neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related". In relation to his definition, the following important elements were evident:
- Attitudes are private.
- Attitudes are mainly formed and organized through life experiences, therefore people are not born with attitudes but rather acquire them through socialization processes in their lives.
- Attitudes are not passive, but it is a dynamic or directive influence on a person's behaviour.

In providing the reader with a few other definitions, we will be able to determine whether, the broad definition of attitude comes down to the same thing. The following are definitions given by experts in the field of attitude research:

- "An attitude is readiness for attention or action of a definite sort" (Baldwin, 1901);
- "Attitudes are literally mental postures, guides for conduct to which each new experience is referred before a response is made" (Morgan, 1934);
- "An attitude is a complex of feelings, desires, fears, convictions, prejudice or other tendencies that can give an reaction to a person because of varied

experiences" (Chave, 1928);

- "An attitude is a tendency to act toward or against something in the environment which becomes thereby a positive or negative value" (Bogardus, 1931);
- "An attitude is a mental disposition of the human individual to act for or against a definite object" (Droba, 1933);
- "An attitude denotes the general set of the organism as a whole toward an object or situation which calls for adjustment" (Lundberg, 1929);
- "Attitudes are modes of emotional regard for objects, and motor "sets" or slights, tentative reactions toward them" (Ewer, 1929);
- "The attitude is primarily the way of being "set" toward or against things" (Murphy & Murphy, 1931). Two poles were used in these definitions, whether negative or positive; or for or against something. This indicated that a person's attitude could either be one that is more favourable or opposing.

All of the above again reflects on one central definition or idea of what attitude is: "An attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations" (Allport, 1935). This definition suggested that attitude consists of three major components:

- Cognitive component: This refers to "the idea" which is used as some category by humans in thinking.
- Affective component: This refers to the emotion that charges our ideas. If a person is feeling down or very happy, it could mean that the person has a negative or positive reaction towards a certain category.
- Behavioural component: This refers to a predisposition to action, such as driving or buying, or even admiring cars.

These three components are known as the ABC of attitudes. This was supporting evidence by Allport (1935) that three components of attitude are highly interrelated. Rosenberg (1956) specified that the greater the perceived link between an attitude object and the values of a person are, the more change the person will experience. A few years later Fishbein (1967) also emphasized that the greater the connection between an attitude object and certain beliefs of individuals, the greater the affect / change will be towards the attitude object. Then on the other hand again there has also been evidence in the past that these three components should be conceptualized and

measured independently. Various researchers had various views on the measurement of the three attitude components, which made this subject even more interesting for researchers to study over the years. Now that various definitions of the word “attitude” have been explored, the concept can even be studied further by looking at just why people have attitudes in the first place. Smith (1947) stated that attitude helps people to understand the world around them – by organizing complex input from their environment into a form that is more understandable. Secondly, attitudes help people to protect their self-esteem by helping them to avoid unpleasant truths about themselves and lastly, help people to express their fundamental values. Experts in the field have argued in the past that attitudes may express some aspects of an individual’s personality. Smith, Bruner & White (1956) indicated that people with low energy levels might display a lack of interest in any affairs of the world around them. In this instance attitudes may express a psychological condition of the individual.

These authors provided some important reasons of just why attitudes are important. Attitudes help people to adapt better to their environment by making it easier to get along with people who have similar attitudes. It is interesting to note that the persons who really matters to us are people who mostly share the same attitudes than we do. On the other hand people tend to change their attitudes to adapt to those of their role models or other important individuals. An attitude also provides externalization of inner problems. For example, if a girl hates her farther, she might adapt some attitudes which may be inconsistent to attitudes regarding other authority figures in her environment. In a similar argument Katz (1960) stated four functions of attitudes when it comes to the personality. This argument was supported by the research of Allport (1935) as well:

- Instrumental/adjustment function maximizes the rewards in the external environment minimizes the penalties.
- Eco-defensive functions protect the individual from acknowledging truths about themselves that they sometimes do not want to accept.
- Value expensive functions give pleasure to the person, because his/her attitude revealed some basic values the person treasures.
- Knowledge function helps the individual to give structure to his own universe and to help the individual to understand and predict his own events.

It is clear that the above functions are basically just an elaboration on the views of Smith & Co (1956). In short, people have attitudes in order to give meaning to certain behaviour. People display their behaviour to themselves and others in a way that convinces both parties that the social objects benefit from the displayed behaviour.

Moving on, think about to what extent we are what we say, how we feel and how we intend to behave consistent with what we actually do? So-called “naïve researchers” indicated that there exist a strong relationship between the concepts attitudes and behaviour. In a study done by LaPiere (1934) he confirmed that this relationship is rather weak. Whether there is a relationship or not, attitude at the end of the day involves what people think about, feel about and how they would like to behave towards an attitude object. Behaviour cannot only be determined by what people would like to do but also by what they think they should do, this could be social norms, specific habits and expected consequences of the displayed behaviour. LaPiere (1934) summarized that behaviour is only a function of attitudes, norms, habits and expectancies about reinforcements. Only when all four of the above factors are indeed consistent, there could possibly be a relationship between attitudes and behaviour.

This argument gave a lot of researchers something to think about over the long run. In looking at the concept behaviour, when linked to attitude, different researchers had various views on the meaning thereof. Rotter (1967) emphasized different kinds of expectancies of reward. He specifically differentiated between specific and general expectancies. He argued the probability that a particular behaviour will mainly depend on the expectancy of the reward as well as the value thereof to the individual. The consistency between private views and behaviour can also be considered a source of reward. For example an equally important source of inconsistency between attitudes and behaviour can be found in the difficulty of a social act. Obviously it is much easier to say “hi” to someone rather than to marry someone. You can see that the first behaviour is on the extreme end of the continuum, but the second behaviour will have much more considerable consequences. This specific argument about the importance of the threshold of behaviour was clearly contradicted by Campbell (1963). He pointed out that Rotter’s example was very different situations and cannot be compared to one another. Campbell (1963) further argued that Rotter’s study had no relevance to inconsistency between behaviour and attitude.

For many years it was mainly assumed that attitudes are strong predictors of behaviour. Research has shown that this relationship between attitudes and behaviour is not as strong as once believed it was. The best known reasons for a weak-attitude behaviour relationship are:

1. Measurement error: Attitudes measures may not accurately measure a person's attitude.
2. The nature of the attitude to be measured: Researchers were used to measure general attitudes and then tried to measure more specific behaviour – it was indicated that you get a much better relationship when a specific attitude and specific behaviour were measured (Fishbein & Ajzen, 1976).

It is clear that different authors have different views and arguments in terms of the consistency and inconsistency between attitudes and behaviour in social context. The truth is that this relationship will differ from situation to situation, and therefore one situation cannot be generalized to another.

To summarize, attitude is an idea charged with emotion that predisposes certain actions to a specific class of social situations. It consists of cognitive, affective and behavioural components and has various functions. For one, it helps people to adjust, defend their ego, express their values and understand the world around them. Most authors agreed that life experiences of people determined their attitudes. As attitudes develop, cognition becomes more and more differentiated, integrated and organized. Attitude is not the only, main sufficient cause of behaviour, but definitely contributes to it. Behaviour often changes attitude and as people develop attitudes it may justify their previous behaviour. Behaviour is therefore the result of norms, habits, and expectations about certain reinforcements.

2.5 Attitude measurement

A consensus of opinion has been reached by various authors back in the 1930's on whether attitude could be measured. Fishbein & Co (1967) indicated that attitude can indeed be measured in three different ways:

- The consensus of opinion: This is the simplest method in determining what attitude is. The answers of the questionnaire are tabulated. Roughly, this method may be said to "measure' the range of the distribution of a person's opinion to that question, but it does not determine the intensity of the opinion of any individual upon the certain issue in question.
- The a priori scale: This so-called scale was essentially used as a test devised on the basis of logical considerations. It was mainly used as an economical method, because it was so easy to apply. This attitude measuring scale was available in many forms, but it basically comes down to certain questions with 5 possible answers in which the respondent had to choose one answer most applicable to them. Today we know this type of scale as a 5 point scale.
- The psychophysical scale: Fourty or fifty statements are used, in which the differences between all of these statements are known on a certain continuum by the scale developers. The scoring for all of these statements is determined by combining the efforts of many judges, or researchers which have arranged all these statements together according to their own discreditable differences. This scale is entirely based on the opinion of the judges in determining the attitude results.

These are only three ways in which attitudes can be measured, but it is interesting to note that people still make use of more or less the same methods in measuring attitude today. Barbash (1974) has emphasized that he himself and a few other researchers have come to the same conclusion that attitude measurements/surveys are only a limited purpose instrument. The usefulness of such an instrument can only be optimum when the problem has been clearly formulated, when technical problems were recognized and when the questionnaires were completed with a detailed understanding of the situation. Research has shown that an attitude survey appear to be most effectively used by organizations in order to obtain information regarding how their employees feel about their working circumstances. The correct items need to be placed in the questionnaire in order to obtain a true measurement of the employee's attitude, and so a lot of research is firstly necessary. Barbash (1974) also indicated that any person making use of such a survey need to know the exact purpose of this process before asking employees to complete an attitude survey.

When measuring attitude, the fact that people's attitudes do change are often taken for granted in the process. In order to isolate the errors that occur from attitude change fluctuations, it is always necessary to determine the standard error of the scale before the measurement takes place. It is crucial to study and evaluate the scale of measurement before even looking at what is being measured. It is assumed that an attitude scale is used in situations where people are expected to answer as honestly as possible. The only thing that can be done is to measure the attitude that is actually expressed with full realization that the subject may consciously hide his/her true attitude, or that the social pressure of a certain situation made the individuals believe what they express are true and very real (Thurstone, 1928).

Employee attitude surveys allow organizations to understand their employee perceptions, because perception is reality. Employees at any organisation act on a basis of their perception, management need to be aware of their employee's views. The results obtained from such a survey can give management knowledge that may directly impact on the bottom line and foster positive employee relations in identifying cost-saving opportunities, improved productivity, reduced turnover, strengthened supervision, streamlined communication, etc. In the next part of chapter 2, all the various dimensions within the survey will be discussed.

Anon (1994) indicated that the following dimensions need to be measured within an attitude survey: overall job satisfaction, co-worker performance/co-operation, pay satisfaction, benefit satisfaction, career advancement, supervisory consideration, communication, concern for employees, productivity, customer service, strategy/mission, job stress, and supervisory instruction.

All of the above dimensions seem very interesting and nice, but what does it actually come down to and can it be linked to employee attitude? Literature regarding similar dimensions in order to ensure a more comprehensive understanding of all the various attitude measurement components/dimensions will be discussed in the next section. In looking more closely at a specific measurement scale of attitude.

Triandis (1971) emphasized that there are three important aspects to consider when measuring attitude: the attitude objects, response continua and individuals. Although good sampling is extremely important, it should not be seen as the only important aspect

when it comes down to measuring attitude. It is important though to sample questions, or forms of responses, since different kinds of questions may result in different kinds of results. The basic concept of good sampling as indicated by Kish (1965) refers to the idea of giving each individual in the population an equal chance of appearing in the final sample. All the successes achieved in the last decade in the field of measuring attitude may have been regarded as one of the biggest accomplishments in social psychology. Today the rate of progress is so great that further achievements in the measurement of attitude is very likely. It is important to note that there were and always will be some limitation in the measurement thereof:

- Measurement can deal only with attitudes that are common, and there are relatively few attitudes that are common enough to be ideally scaled. When forcing attitudes onto a certain scale a lot of harm is done to the unique structure of the measurements that also influences the worth of the scale. Fishbein (1967) indicated that attitude measurement should only be used as the roughest form of the way in which attitude actually exists.
- As mentioned earlier each individual consists of a lot of contradictory attitudes. A person's mental state when completing a questionnaire may tell only part of the story. On the other hand attitudes often change; and then again if an investigation is in process under certain conditions a person may not display a true picture for long, which also influences the measurement results.
- Rationalization is inevitable to occur, and there is a great difficulty in obtaining reliable information concerning attitudes towards genders. Other problems could be that individuals show a lack of insight, ignorance, suspicion or fear which is all contributing factors in making the measurement less satisfactory (Fisbein, 1967).

In short, it is of extreme importance to know that attitudes are not set, but changes daily, and whenever measuring attitude this should be taken into account. Appropriate items should be used in the measurement scale, which are related to attitude with good evidence or reason and lastly ensure that the exact purpose of the attitude measurement is known as well as using the correct scale at all times. Interesting information from the organization involved in this research project were obtained and provided. Meaningful answers on why employee attitude surveys are of value for the company. The attitude survey is to be seen as a tool to help understand and improve the organization's working

climate; and secondly, compiled reports of the completed attitude survey are being used in order to develop appropriate action plans for working climate improvements. The attitude survey gives employees a chance to give input and discuss their working climate. The advantage for the employees and the organization in doing so is mainly the establishment of a proven link between working climate and profitability. The attitude survey also gives employees an opportunity to discuss improvements in their working group and present new ideas to their immediate manager.

In conclusion then, an attitude survey basically provides a chance for employees to express their opinions on their working climate, in order for action plans to be set and improvements to be initialized. In measuring attitude, it is important to ensure that all employees are aware of the advantages and the main goal to be achieved in doing so, when completing an attitude measurement in any form that the organization may choose.

2.6 Attitude as linked to thirteen different dimensions

The employee attitude survey developed by the organization who participated in this research project indicated that their attitude survey measures thirteen different dimensions of attitude. Information regarding these “claimed” thirteen dimensions will be provided in order to determine whether all of the dimensions can in fact be linked to attitude and provide reasons as to “why” it could be linked to a person’s attitude.

2.6.1 Confidence

The word confidence comes from the Latin word meaning “to put one’s trust in someone” – that someone being ourselves. On the internet dictionary, namely the Wikipedia (2006) a psychologist Gary Fitzgibbons provided a good definition of what confidence really is. He indicated that confidence is within all of us, but whether it shines through or whether it remains hidden can very much depend on how we were treated as children and as adults. According to Wikipedia (2006) confidence refers to trust or faith placed in a person or a thing. The Wikipedia (2006) also indicated that confidence is the mental *attitude* of trusting in or relying on a person or thing.

Firm trust, reliance, faith, assurance, boldness are seen as firm in reliance with integrity. Having confidence in oneself is often viewed as someone who is happy and has inner fulfilment. Confidence has to do with a person trusting him/herself. This contributes a lot to the certain way a person lives his or her life and affects the choices people make during their life.

The following question now arises: Whether confidence can be linked to attitude in any way? Narramore & Narramore (1999) indicated that confidence is one of the three cornerstones of each person's *attitude* toward themselves, their self-concept or self-esteem. Confidence has more to do with our performance. Confidence reflects on the belief we have, our talents and abilities which people make use of to go through life. Confidence can essentially be viewed as a sense of competence, because people can either decide to give in to their self-doubts and can become passive and dependent, or a person can become very driven, pushy or power-hungry. It depends from person to person on how they face the challenges each day brings. This is all part of our human attitude, because confidence can be displayed through the attitudes we display during our lives.

Narramore & Narramore (1999) confirmed that confidence can definitely be linked to our attitudes. As mentioned earlier the confidences people live by are usually seen as one of the foundations by which a person were brought up. The first voice of confidence are those displayed and thought by parents. A lot of people see parents as the biggest contributor to their child's confidence. Very little information was obtained to support the statements made by Narramore & Narramore (1999) on confidence actually being linked to attitude. As indicated in the above, confidence can be displayed in a person's attitude. Although not a lot of proof was found, it could be stated that most information obtained on confidence indicated some or other facet that could be linked to a person's attitude.

2.6.2 Respect

Respect can be identified as a mode of action, a form of treatment, a motive, an attitude, a feeling, or a moral virtue. The questions though arise: "What are the distinctive elements of respect?" And "to what attitudes, actions or values are respect similar to?"

Respect is generally regarded as a behavioural component. A person can respect another by keeping their distance from that person, helping another one, praising or honouring others, by means of obeying others etc. In the end respect comes down to the individual's decision on how they want to behave, whether respectfully or negatively, both will be evident in the attitude they perceive. To be able to express respect, a person's behaviour needs to be motivated by one's acknowledgement of the certain object that calls for such respectful behaviour. It can increase our belief that attitude are indeed linked to respect. Frankena (1986) indicated that respect has cognitive, affective as well as co-native dimensions. A lot of philosophers determined that respect is, most centrally, an attitude, or more broadly a complex way of "being towards something". Respect must be adopted by someone with an attitude of respect or someone that prescribes the attitude or actions that expresses it. A few years later other researchers also agreed with the above, as was indicated by Frankena (1986).

In the 1980's Hudson studied different kinds of respect, one type of respect he focused on was "evaluative respect" (Frankena, 1986). He indicated that this type of respect is similar to attitudes such as esteem and admiration. Evaluative respect is earned or deserved, depending on whether another person met certain standards. The other forms of respect he identified were "directive respect" and "institutional respect". The difference between "evaluative respect" and the other two forms were that this was the only kind of respect that involved having a favourable attitude towards a certain individual. From the above it can be concluded that attitude can be linked to respect in a certain sense and more than one of the researchers in the eighties agreed that this was indeed the case.

2.6.3 Co-operation

Co-operation is defined by the Wikipedia (2001) as: "The practice of people or greater entities working in common with commonly agreed-upon goals and possibly methods, instead of working separately in competition". Co-operation is basically the exact opposite of competition, however, the need to compete with other individuals is also a very common motivator for individuals to organize into a group and co-operate with one another in order to form a stronger competitive force. A lot of people support co-operation as the ideal form of management of their human affairs. Wright (2005) indicated that people have a choice in deciding whether they wish to work co-operatively

with others or not. In an example given by Wright (2005), he indicated that the sense of co-operation is something people learn as children by their most important "role model", their parents. If parents teach their children to co-operate in their daily living they will disclose a much more positive attitude in working together with others. He also stated that children, whose parents are not supportive and co-operative towards each other, could more likely not find it easy to co-operate with others, because of the way they grew up as children. The building blocks of an attitude towards co-operation forms in the early years of a child's development, with the parent as the biggest contributor. It is more important than ever to be a very mindful parent. Wright (2005) also stated that aptitude and competence or the ability to accomplish a certain task is nowadays not nearly as important and vital to a happy life as attitude and confidence, which will lead to a co-operative environment where everyone wins, with no losers. In conclusion then, co-operation is liked to attitude.

2.6.4 Delegation / influence

Chapman (1995) indicated that delegation is one of the most important management skills. It is important that individuals are aware of the fact that delegation can both be positive and negative. Good delegation can save a lot of time, develop people and motivate others. Negative delegation causes a lot of frustration, de-motivation and even confusing others. Delegation basically comes down to telling other people what to do. The Wikipedia (2006) defined delegation as: "Handing over a task to another person", usually a subordinate. Chapman (1995) indicated that attitude goes hand in hand with delegation or influence; it depends on the delegator as to how effective the subordinates accept the tasks. If delegation is done in terms of a negative attitude then obviously the subordinate won't be very accepting of what is being delegated. Delegation / influence are a skill that needs to be learnt in order to use the correct tools, and appropriate "attitude" in handing over specific tasks to others. Influence, the same as delegation, basically comes down to the power one person has over another. Anon (1996) indicated that influence has a direct affect on individual attitude. Again influence can just as delegation, either be positive or negative. It was stated that attitude is a person's evaluation of an object of thought. Each and every person holds a certain yard stick and judges other influential individuals on a certain cognitive scale. Influence/delegation can be displayed by a person in his or her own way. Attitudes are able to change if the

person delegated upon is influenced in such a manner that it has a direct impact on his or her attitude.

2.6.5 Performance feedback

Anon (1998) did some research on performance feedback and the importance thereof for employees. Anon (1998) indicated that constructive performance feedback helps employees do their work more effectively and help them improve their communication with their supervisor. Positive performance feedback can be defined as follow: “providing feedback to someone who has done something well and deserves praise for his or her efforts”. On the other side the researcher also identified corrective feedback, which she defined as follow: “providing feedback to someone who has not done something well and who requires some corrective action to improve performance”. In this section the focus will be on performance feedback, which generally is defined as “information that helps employees to alter, change or maintain their behaviours and attitudes so that the organization can continue to operate smoothly”. Now that the reader knows what feedback is, whether positively or constructively, we need to determine whether attitude plays a role in this process. The main aim of performance feedback is to address specific behaviour or attitudes, which needs to be recognized or changed.

According to Anon (1998) attitude can be linked to performance feedback in two ways. Firstly, the attitude that subordinates may display in terms of receiving performance feedback may either be one which is positive. This usually refers to a person that wants to learn out of his/her mistakes and build on it. On the other hand, certain people see performance feedback as negative, and as a waste of his/her time. Such people will display negative behaviour/attitude. Secondly the attitude or behaviour of the superior in providing feedback could either be one which is favourable to the employees or not. If the supervisor has a negative attitude towards all employees and uses this feedback to get back at them, then employees will ignore the feedback and display a ”no-interest” attitude towards the feedback process. The way people perceive performance feedback could be displayed in their attitude.

2.6.6 Internal information

In an article written by a company called Express Computers, they strongly focused on the importance of internal communication. An employee of the company quoted the following:
"Internal communication is essential for every organization, but very few are able to manage it efficiently".

In general internal communication is an essential tool to build an organization successfully. It enhances employee morale and promotes transparency. In the case where internal communication is lacking, it will have a huge effect on employee morale. If employees don't know what is required from them, where the company is going and where the company is at that moment, employees will not feel part of the organization and therefore display a negative attitude towards the organization in general. This can then possibly be linked to low morale and a feeling of low self worth. Sridharan (2005) indicated that most people have a desire to be informed on any issue relevant to them, as well as to experience a feeling of belongingness. He also indicated that it would be evident in people's attitude and behaviour whether they are informed and feels appreciated or not informed and isolated. Internal communication provides direction to employees. Sridharan (2005) indicated that it is management's responsibility to drive the communication and make sure that the correct information reached all levels in the organization.

In recent times companies have started to realize the significance of their internal customers, the main reason for this is that many companies have seen that the lack of communication leads to conflict between employees which has a negative effect on the company and which ultimately leads to the slow death of the company. Without internal communication no organization can ever reach their long-and short term goals. The way people feel about the worth of the internal communication they receive from the top can be displayed in their attitudes towards their company.

2.6.7 Overall understanding

The overall understanding of employees in an organization can be referred to as the understanding of the "big picture". If people don't know what the organization is all about, then employees won't have an idea on what the goals, purpose and functions of the company is. An organization can never succeed if the employees of the company do not have direction in their everyday tasks (Anon, 2005). It is equally important for individuals to understand how they connect to and serve their workgroups or departments. Employees also need to understand how their department fit into the overall organization. No specific evidence has been found that overall understanding are linked to the attitude a person may or may not display, but it has been indicated that the attitude of individuals may be affected by their knowledge of the organization. A person that understands the business will display more confidence, whereas a person with a lack of knowledge will tend to be more uncertain, which may be evident in a person's attitude (Anon, 2005).

2.6.8 Goals

In an article written by Joscelyne (2003) it was indicated that goal setting could either refer to an individual's personal goals or to the organizational goals as a whole. Without having personal goals in life, life can become an aimless journey, lacking positive direction and achievement. If a person's life is to follow a positive path, one needs to have a plan in place, determining what you want out of life and your career and set certain ways to obtain these goals set, in order to fulfil oneself as a person. Numerous people have set goals in the past, some followed it through, and others forgot about it as soon as they were finished setting their goals. If a person is driven and has a positive attitude on focusing on these goals he is more likely to succeed in accomplishing them than in the case where a person's attitude towards his/her goals is more negative. A negative attitude towards certain goals is sometimes the result of the goals being to complex and not likely achievable (Joscelyne, 2003).

In looking at organizational goals, it gives direction and motivates the members of the organization by communicating what the organization is striving towards. Goals are basically statements describing what an organization wishes to accomplish, stemming

from a certain mission and vision. Goals can also be described as the ends toward which a person's efforts will be directed and can for example change from year to year. If organizational goals are set, it can result in positive results because people will support the goals they helped creating. If goals are clearly set and everyone understand the purpose thereof then people will feel positive and motivated in accomplishing them through displaying a positive attitude (Joscelyne, 2003).

2.6.9 Individual development

Individual development can be defined as a process where people deal with their career development, skills development and their development as human beings. Employees need to take responsibility for their own individual development. If employees are motivated and supported by their superiors in developing their skills, they will be motivated to learn, expand their knowledge, be more eager in accomplishing their career goals, and even grow as individuals. In a lot of organizations today individual development planning (IDP) is implemented in providing a certain framework for employees, with certain deadlines and outcomes in place to reach further development within the organization. Individual development at work focuses on current and changing job requirements, observed strengths and weaknesses of the employees as well as the organization's changing needs. One may wonder just where employee attitude comes in. If employees feel motivated and have the opportunities to focus on their own development, it would be self explanatory that this can lead to a positive attitude in the workplace. Every emotion and feeling a person has is displayed by certain behaviour and can be evident in as person's attitude. In conclusion, individual development can be linked to attitude in a way in which people feel motivated and encouraged to grow (Senge, 1990).

2.6.10 Easily implemented

"The gap between knowledge and planning/policy and our actions should be bridged. We must bridge our knowing-doing gap through our collective action. This means creating implementation machinery with which its member can identify, in which they share a sense of pride and to which they are willing to commit" (Devendra, 2003).

As the author has stated in the quote, when implementing any new process, policy, equipment or technology it is of utmost importance that all employees within a company are aware of the new implementation that is going to take place and the consequences thereof. Devendra (2003) indicated that if individuals do not buy into a new implementation process, it would be a very difficult process. Easy implementation can only be successful if the employees are informed and if they support the implementation process. Implementations of any kind usually means change, and people are resistant to change; therefore employees should be informed before the start of the process, in order for them to get use to the new idea. According to Devendra (2003) if individuals are keen and motivated in supporting the implementation process, it will again be evident in their attitudes again; if not then a negative attitude regarding the process will be displayed.

2.6.11 Planning/Follow-up

Planning is an essential component in any organization. Good planning is good stewardship. Success requires careful preparation and planning. Without proper planning and preparation, failure is almost guaranteed. If individuals are interested in reaching certain goals, whether personal or in the organizational, they need to have the right attitude and this means they need to be positive, motivated and focused in the planning process. If people are not focused on the goals to be achieved it cannot be achieved, or even implemented (Anon, 2006).

It is of no significance if a certain plan is put into place, and no follow-up exists in determining whether the objectives stated in the plan are still on the correct track. It is important to determine what errors occur during the process in order to correct it, and place the desired plan back on track. Employees and management need to be involved in a follow-up process; this provides guidance and insight on the objectives at hand. Research done by Peterson (2000) indicated that employees tend to be very negative and unsupportive in achieving certain objectives in the past, because of the fact that they were not involved in the follow-up process stated (Peterson, 2000). If planning and follow-up is effective individuals will most definitely display positive attitudes and behaviour towards the certain objectives in place.

2.6.12 Personnel and environmental issues

Personnel issues in the workplace does not only refer to work-related problems, such as placing the correct people in the correct jobs, employee leave, remuneration or even employee dissatisfaction issues, it can relate to emotional issues as well. Any personal issues employees bring to the workplace can affect their performance. It is recommended by Hawkins (2004) that employers have certain support mechanisms in place to support employees on a personal level. Personnel issues mostly arise when employees are unhappy in the workplace, either with their working circumstances, superior or co-workers. Unhappy employees will behave in a way that is negative, which can reflect on their tasks. Strikes usually arise when employees are not satisfied with their salaries, or specific environmental circumstances. Whatever the reason for negative attitudes and behaviour at work, it influences all employees, employers and the organization's image.

In order to solve personnel issues at work employers need to change the behaviour and attitudes of their employees, which will take a lot of time and effort. Environmental psychologists are very worried about environmental health issues at workplaces nowadays. Firstly, the way in which work stations are laid out are very cramped in order to fit in more people than actually possible. Lighting, air, pollution and the safety of employees are huge issues. Environmental issues are one of the biggest stress builders in the workplace. It also contributes to physical strain. Environmental psychologists stressed the necessity of safer, more health friendly working environments for employees. Mental and physical strain can have a huge effect on people's behaviour at work, if people are uncomfortable at their workstations, it will be evident in their attitudes and behaviour. Clean, safe and environmental friendly work environments can increase employee's attitude towards their workplace (Evans, 1996).

2.6.13 Attitudes to change

As people progress through life it is usually necessary for them to change some of their attitudes in order to adjust to changing circumstances. Most of the time people do not really have choice in the matter. Attitudes can be changed by either experiencing different consequences of established behaviour or by changing our goals or needs.

Sujansky (1981) is one of the most famous researchers on people's attitudes to change. She indicated that people's first reaction to any change is usually negative and resistant. The biggest reason for people's attitudes towards change being negative is because of a lack of information on the change intervention. People need to be taught the benefits of the change. People find themselves in a confused whirl wind of change. The risks frighten then. They dig in and brace for change instead of facing it squarely. Everyone reacts differently to change. That is why Sujansky (1981) indicated that people need to know what the importance of the context of this change is. That means knowing why you may need to change. Getting clarity about the two types of change you're likely to face. Taking a serious look at your control issues and the choices you have when confronting change. One thing is certain: The same old attitude change techniques do not work when it comes to negotiating change. How a person responded to the last change that took place in their workplace may not work the second time around. The second time, a person may be better off getting creative about the change they are about to face. Sujansky (1981) indicated four basic attitudes which can be identified to make or break successful change, as well as what a person can do about them, including:

- The "Can and Will" Attitude
- The "Can and Won't" Attitude
- The "Can't and Will" Attitude
- The "Can't and Won't" Attitude

People with the "can and will" attitude negotiate change in their lives with the greatest success. But whether a person has a "can and will" attitude or not, it is important for all members of the organization to share the same vision, and same commitment towards the change process, otherwise no person will display a positive attitude in the process.

In conclusion, it is evident that all of the abovementioned dimensions can indeed be linked to some or other facet of attitude. Employee's attitude is therefore a strong indicator on how a person accepts deals and perceives a certain situation at work, whether negative or positively linked. After the reliability and validity of the employee attitude survey be determined, it would provide good evidence on whether attitude is linked to all of the above dimensions based in the various questions within the questionnaire.

2.7 Can training change attitude?

Zonneveld (2002) specialized in the field of attitude change and indicated that attitude is often related to the personal characteristics a manager wants his employees to have. The attitude displayed by employees may therefore result in a social setting. If an employee has more of an authoritarian manager he/she will display an attitude which will be much different from employees who has a manager who allows a lot of freedom and own initiative. In training individuals to change their attitude towards certain structures/policies or procedures within the organization, employees firstly need to understand the goal for this attitude change. As soon as people understand the importance thereof an immediate mind shift will kick in on allowing them to be involved in the change process.

Attitude change is all about taking employee's different norms, values, background and behaviour as well as the reasons for them being prone to change into account, before training can take place in the first place. If employees feel that the attitude change is not in line with what they belief, they will automatically show a resistance and a negative attitude in participating in the change process. As mentioned earlier most humans are resistant to change because it is a natural safety mechanism that kick's in as soon as people have to move out of a certain comfort zone of behaviour. Appropriate training can change a person's attitude, but the ground rules and foundation for buy-in form employees need to be established and are seen as the most important fact in the attitude change process. Training is therefore seen as the easier part in the process when compared to the buy-in process for employees (Zonneveld, 2002).

2.8 Attitude in the workplace

Goyer (1999) was one researcher who had an in-depth look at attitude in the workplace. Attitude is seen as any strong belief or feeling towards people and situations. Attitudes are not quick judgements that one makes casually and something that can be changed easily. Every person has acquired certain attitudes throughout their life that is deeply ingrained into a person's personality whether at home or at the workplace.

Attitudes represent a powerful force in any organization. An attitude of trust can be used

to increase communication between an employee and his/her supervisor. Employers do not want to hire job seekers that demonstrate negative attitudes. A person's attitude is one of the most important factors for job success. Anyone may think that if they have the best education, experience, resume, and skills in the world, they will easily be hired, but if a person's attitude is wrong, it could be difficult to be hired anywhere by any organization around the country. Goyer (1999) found the following from the research he has done: One of the most common reasons for employers to dismiss an employee is based on attitude. Attitude not only affects job performance, but it affects other people in the organization as well. It can positively affect other workers or it can act as a cancer and negatively affect other's work performance. The way people think has a very strong influence on their work. Employees need to find their purpose in life, and when the "going gets though" people should keep their sight on the importance of their goals that they want to achieve. A person has a choice at the end of the day, to either have a good or poor attitude.

Mueller (2006) wrote an interesting article on workplace attitude where he indicated that a person's workplace can be one of the most - if not the most - telling aspect of how others look at you and feel about you as a co-worker. Attitude at work can sometimes define a person even more than the work actually produced. Co-workers can see a person either as someone who is reliable, competent and intelligent or as someone they cannot rely on at all. This usually refers to a person who displays a positive attitude in the workplace. People with negative attitudes at work, will find that their co-workers do not always want to be associated with them, give them advice or help them. The main reason for this is because people don't want negativity to influence their positive behaviour.

The main advantage of acceptance and success at work is in displaying a positive attitude and in making sure that others see the success in being a positive person in all of life's pressures and demands.

2.9 Chapter conclusion

After reviewing the concept "attitude" it is evident that attitude is not something that a person is born with, but rather something a person learns throughout his/her childhood. Numerous factors plays a contributing role in the forming of a person's attitude, like the

social environment in which a person grew up, support from family and values learnt by them, beliefs, respect, financial stability, family life, trust. All of these factors and more play a role in forming the attitude a person has with regards to certain issues or people. One of the best definitions in defining what attitude is, is: “An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related.” This definition was stated by Allport (1935) who was one of the most famous researchers on the topic of attitude. Attitudes are private and it has a direct/dynamic influence on a person’s behaviour.

The above definition indicated that attitude consists of three components namely, affective, behavioural and cognitive components. Allport (1935) indicated that these three components are highly interrelated with one another and can be seen as the ABC of attitude. In looking at attitude measurement, the three most popular methods in measuring attitude are consensus of opinion, the priori scale and psychophysical scale. The most common measurement however is using a survey in measuring attitude. The most important aspect to consider in using this type of measurement is to determine the error of scale. The reason for this is because of the fact that people’s attitudes change a lot and therefore it is always difficult to get a true measurement. All of the 13 dimensions of attitude as discussed in this chapter were linked to a person’s attitude in some or other way. The main objective now will be to determine whether the questions in the employee attitude survey can indeed be linked to those dimensions, to which it is supposed to be linked to.

Quite a few studies have been done on attitude in the workplace. It was indicated that a positive employee attitude increases the communication and trust level between an employee and his/ her supervisor. A negative employee attitude has led to dismissal more than once in history. Therefore it is beneficial for a person’s own morale and work satisfaction to display a positive attitude in the workplace. In chapter 3 to follow, the proposed methods of intervention will be described in order to provide a good overview of the methods and approaches to be used in analyzing the desired results with the appropriate tools.

CHAPTER 3: PROPOSED METHOD OF INTERVENTION

3.1 Introduction

This chapter will provide the reader with sufficient and thorough information with regards to the methodology to be used in this research project. Definitions, reasons and background information will be provided on all the statistical techniques used. The measuring instrument self will also be explained as well as the process to be followed in obtaining the data required.

3.2 Chapter outline

In this chapter, focus will be on the following important points:

- The method to be used in gathering the data necessary, in order to provide numerical data to correctly analyze and interpret the results.
- The research design to be used in order to determine how employees feel about their working climate; in terms of leadership, information and collaboration.
- Sampling method to be followed, in order to ensure that a sample size is large enough for the purpose of this study and ensuring data is gathered in an appropriate manner.
- The data collection procedure will be indicated. It is highly important to clearly think this process through as it will affect the successfulness of this research. The means of how the data will be collected will be clearly indicated.
- Description of the measurement instrument and the appropriateness thereof.
- Overview of the statistical techniques to be used in interpreting and analyzing the results appropriately. The use of the SPSS (Statistical Package for the Social Sciences), focus on the descriptive statistics and the role thereof will be discussed. Theory on exploratory factor analysis will be included. Information regarding reliability by means of Cronbach's Alpha together; the goal of inter-item correlation as well as the anti-image correlation will be given.

3.3 Research approach

The data necessary to determine how employees feel about their working climate; in terms of leadership, information and collaboration in an automotive manufacturing organization will be gathered by the researcher by means of a questionnaire. The data will generate quantitative information (numerical data) that will enable the researcher to analyze the data and interpret the results accordingly. Employees will complete the survey as it is currently drawn up, the researcher will determine the validity and reliability of this survey, and determine if it is suitable in the South African context.

3.4 Research design

The survey research design will be used in order to conduct this study. This specific design will enable the researcher to accurately access how employees feel about their working climate; in terms of leadership, information and collaboration. The focus of this research is to obtain the true information/facts on the attitudes employees display regarding the thirteen dimensions. This is a design for measurement taken at one point in time (Cross sectional designs) and the researcher will not observe change over time. After collection of the surveys the validity and reliability of the questionnaire will be determined. The questions in order to determine whether it is suitable in the South African context.

After interpretation of the data, each department's results will be distributed to them and all the results of each dimension will be displayed on a 9-point scale. The results of the previous year will also be indicated under each dimension in order to determine whether an increase or decrease in employee attitude took place within a specific department.

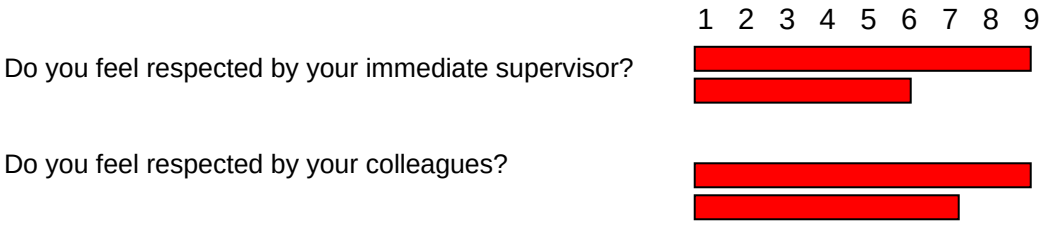
1 - Indicating an extremely negative/low employee attitude within a specific branch and department.
9 - Indicating an extremely high/positive employee attitude within that specific branch and department.

The following is an example of what the scoring would look like:

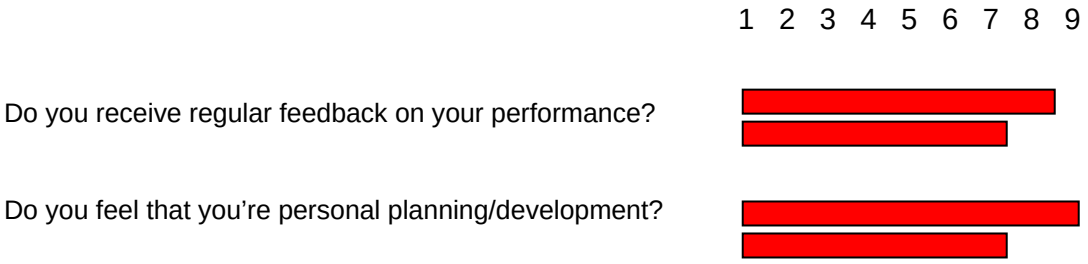
The scoring will be displayed in terms of each dimension. The results are displayed on a 9 point scale as follow.

Note: The top block on the scale represents the score achieved on that specific question in e.g. 2006 (most recent year in which the questionnaire were completed for research purposes), and the block directly underneath it represents the score on this question in e.g. 2005 (previous year's score). This gives a good idea of whether the score increased or decreased in the present year from the score in the previous year. The reasons on why the numbering of questions per dimension does not follow on each other in the correct sequence, is because all of the questions are reviewed every year and then it is decided whether certain questions should replace others, certain questions are then taken out. The newly selected questions are picked from a large pool of questions and placed into a certain dimension, with their original number from the pool.

Example of results within the "respect" dimension:



The questions above indicated an increase in employee attitude in both the questions in this specific dimension.
An example of results within the "performance feedback" dimension may look as follow:



Do you have a personal development plan? [redacted]

The above also indicated an increase in employee attitude within all three of the questions in this specific dimension.

Implications for internal validity of the study:

- The honesty level of the candidates when completing the questionnaire cannot be controlled; they can only be requested to answer as honestly as possible.
- Some candidates may have negative attitudes towards the completion of the questionnaire; in those instances they have the option whether or not they wish to complete the questionnaire. Participation is voluntary.
- Measurement reactivity: Some participants may feel that they are busy completing a test, which may affect their responses to the questionnaire. The researcher will inform all respondents that the survey is not a test but simply a measurement used to obtain the information required on how they feel about their working climate; in terms of leadership, information and collaboration.
- The expectations of the researcher may differ from the expectations of the candidates. The researcher must remember that not everyone will have positive or negative perspectives. It will vary from person to person.
- History: There is always the possibility that the candidates may be influenced or affected by events other than the independent variables. The researcher must ensure that the branch administrators schedule times for the employees to complete the questionnaire and also ensure they are given the appropriate time in completing the survey. Employees must not be disturbed during the completion thereof.
- Culture: Some employees may feel that the questionnaire is not based on the South African culture and that the questions are not relevant. Employees should be informed that participation is voluntary and that the questionnaire will be studied in order to better it if found that it is to be culturally unfriendly.

Implications for external validity of the study:

- Population validity: These organizations could not be generalized to the South African population.
- Ecological validity: The results should be generalized to all circumstances that are implied by the research hypothesis.

3.5 Sampling

The sample of people completing this survey is based on all employees of this specific organization, throughout the country. The total number of employees is currently 360. Due to the fact that participation is completely voluntary it is difficult to indicate how many people will participate in completing the surveys. The participation value will only be determined after completion of the surveys. The employees age range from 18 – 65 years of age. All races within the company will be included. The survey will run for a period of three weeks and employees can complete it anytime within this period.

The type of sampling method appropriate for this study is referred to as accidental sampling. The reason for this is that the sample is based entirely on the judgement of the researcher. All employees at all branches around the country were included in order to obtain a useful sample of at least 300 participants.

3.6 Data collection procedure

The study will be conducted within the natural working environment of all employees. The survey will be accessible on the company's intranet, and all employees with access to the intranet will be able to complete the survey online. Blue collar workers who do not have access to a work station with a computer or the intranet will complete the survey by means of a written test. Each branch administrator will determine the number of employees to complete the survey in a written format and organize a venue for them on their premises to complete the survey. The survey will take all employees more or less 10 – 15 minutes to complete and participation is voluntary. The staff will be encouraged

to take part in the completion of the survey. No biographical information will be required from employees, they only need to indicate who their departmental manager is and type in a specified password. All employees within the same department will have the same password given from their immediate supervisor. The main reason for this is to enable the individuals responsible for analyzing the results to cluster the results by means of various departments. The way in which the survey is completed has been developed in such a manner that no individual can be identified. After completion of the questionnaire (if completed on the intranet) the employees will click the send button, which will forward the completed survey to the specific destination in Europe, where the answers will be transformed into certain output data. In looking at people completing the paper-based questionnaire, all questionnaires will be mailed to a particular address in Europe. It is important though for each person to clearly indicate their manager on the paper-based test, in order to cluster their results within the correct branch and department.

3.7 Measurement instrument

The questionnaire will consist of 55 closed-ended questions, whereby participant's only need to choose the answer most suitable to them in terms of a 6 point rating scale. It is interesting to note that the questionnaire itself consist of a 6 point rating scale and the results are interpreted on a 9 point rating scale as seen in section 3.5. The reasons why the company make use of a 9 point rating scale is not clear, but this can cause a lot of confusion. The only information the researcher have with regards to this, is that results of previous years indicate that a rating from 1 – 5 on a 9 point scale suggests that serious action need to be taken to improve a certain key within the attitude survey. Anything from 6 – 9 on the rating scale is seen as acceptable or satisfying, and little or no improvements are necessary. The advantage of close-ended questions is that it clarifies response alternatives for the respondent and reduces the number of vague answers that may be given. The type of close – ended questions that will be made use of in this questionnaire is in a rating scale response format; this will require the respondent to use a rating for a specific measurement.

The scale will consist of:

1. Don't know
2. Yes – Excellent
3. Yes – Good
4. Neither yes or no
5. No – improvements are necessary
6. No – improvements are very necessary

This questionnaire is specifically designed for the purpose of determining the attitudes of all employees employed by this organization worldwide towards their working climate. This measuring instrument is not time - consuming and the respondents will find it easy to complete. This method of measuring is not expensive at all and because anonymity is ensured, it will encourage respondents to complete the questionnaire honestly.

Even though most of the employees will complete the survey, their main concern is still whether it is valid and reliable? It won't take the candidates more than 10 – 15 minutes to complete the 55 questions the survey comprises of. As this organization is based in different countries over the world, the employee attitude survey is available in twenty five different languages and the participants have the choice in completing the questionnaire in his/her preferred language.

The researcher already knows what ages, gender and races each department in each branch consists of; this will be the only biographical information that will be included in this study. The reliability and validity of the questionnaire has not yet been proven and is a major concern. The researcher will determine this, by using the SPSS program. Each of the 13 dimensions is being measured by a certain amount of questions:

- Dimension 1: Confidence – measured by 6 questions
- Dimension 2: Respect – measured by 2 questions
- Dimension 3: Co-operation – measured by 4 questions
- Dimension 4: Delegation/Influence – measured by 4 questions
- Dimension 5: Performance feedback – measured by 3 questions
- Dimension 6: Internal information – measured by 6 questions

- Dimension 7: Overall understanding – measured by 4 questions
- Dimension 8: Goals – measured by 3 questions
- Dimension 9: Individual development – measured by 3 questions
- Dimension 10: Easily implemented – measured by 2 questions
- Dimension 11: Planning/Follow-up – measured by 4 questions
- Dimension 12: Personnel & Environmental issues – measured by 10 questions
- Dimension 13: Attitudes to change – measured by 4 questions

Different statements for each dimension were used with more or less the same meaning in order to determine the honesty of the respondents. There is always the possibility of rating errors by the respondents. This will only be determined this after the completion of the questionnaires. As a lot of statements were used to measure the constructs at hand, the reliability and validity of the questionnaire is likely to be more satisfactory than in a case where these constructs would only be measured by a single item. Gorsuch (1983) indicated that a minimum of three variables / items per factor is necessary for a reliable measurement, the more items per factor the better. Tabachnick (2001) indicated that five or six variables are actually necessary for a pure measuring factor. The validity of the questionnaire may be influenced by the fact that certain dimensions are measured by two or three variables. As it is indicated not every dimension are measured by the same amount of factors, some factors are even less than two items per factor, this can be seen as a concern later on in this research study, when the reliability is determined as well as in the executing of a factor analysis.

3.8 Data analysis and interpretation

In order to determine whether or not the questionnaire is valid and reliable various steps will be followed on SPSS to analyze the data as well as interpreting the results. Firstly the focus will be on the descriptive statistics in order to determine the normal distribution rate of the questionnaire, then an exploratory factor analysis in order to determine the validity as well as the reliability by means of Cronbach's Alpha. Lastly, an inter-item correlation together with an anti-image correlation will be conducted to determine whether the items in each dimension relate to one another or not. A factor analysis will be done once again using items with satisfying MSA (Measures of sampling adequacy)

values from the anti-mage correlation. By doing this it can increase the significance of the results found during the fist factor analysis and so increase the significance of the research study as well (Roodt & Kruger, 2003).

3.8.1 Descriptive statistics

Descriptive statistics is a method mainly used to describe certain basic features about the study. It provides simple summaries about the sample as well as the measures used. Descriptive statistics basically form the basis of virtually every single quantitative data analysis. It is a method used by the researcher to represent the data in a more understanding manageable way. In most quantitative research studies there are usually a large number of people on any measure. Descriptive statistics help us to take these large amounts of data and place it in a more sensible form. In this study the focus will be on the distribution of univariate analysis because no specific biographical information. The only detail required was the names of the respondent's direct manager, in order to cluster the results according to departments within the organization. It will only be determined how the answers to the questions were spread. This will indicate what answers were given most by participants in each question (Trochim, 2002).

1.8.2 Factor analysis

Factor analysis tells us what variables to group and consist of methods for finding clusters of related variables. Each such cluster consists of a group of variables that correlates more highly among themselves than they do with variables outside the cluster. Factor analysis usually concern variables even though some applications concern individual scores and factor/variable scores (Fabrigar, Wegener, MacCallum & Strahan, 1999). In other words factor analysis is a method by which multiple measurements can be analyzed by determining certain causes for a relationship between measurements (van Domelen, 2006).

The three most popular types of factor analysis can be distinguished as: Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Principle Component Analysis (PCA). In this instance the only focus will be on EFA. Basic factor analysis is a

statistical technique with several uses in test development and evaluation, including:

1. Item analysis
2. Scale development
3. Theory testing

3.8.3 Exploratory factor analysis

Many different factor analysis techniques and models exist; one characteristic all of the methods have in common is trying to separate common factors from unique factors in order to explain correlations between certain variables. Even though the focus will be on exploratory factor analysis in this section, the reader should understand the difference between these three types of factor analysis. PCA is one of the methods used in data reduction. This method involves taking scores on a large set of measured variables and reducing them to scores on a smaller set of complex variables that holds as much information from the original variables as possible. EFA on the other hand is based on the so-called “common factor model” (van Domelen, 2006).

This model basically suggests that each measured variable in a battery of measured variables is a linear function of one or more common factors and only one unique factor. Unique factors have a specific factor component as well as what is called an error of measurement component. In using the EFA method the researcher needs to determine:

1. What variables to include in the study and the size and nature of the sample on which the study is be based,
2. If the EFA is the most appropriate form of analysis,
3. A specific procedure to fit the model,
4. How many factors should be included, and
5. A method of rotating the initial factor analytic solution to a final solution.

The domain of interest should be carefully defined. All valid guidelines for the selection of the specific measured variables should be specified. The reliability and validity of measurement should also be considered at all times during the factor analysis, because this is the main aim of this study (Fabrigar & Co, 1999).

While EFA use correlation matrix and its diagonal, CFA usually uses the covariance matrix and its diagonal. The reason for this difference is that in CFA, the measurement error should be small by choosing covariance matrix. One huge advantage which played a role with researchers to be favouring the CFA method is the fact that covariance matrix keeps information that would have been lost in using the EFA method, but again the method chosen will depend on the focus of the researcher, which in this case will lean more strongly towards the EFA method. In general the CFA focuses more on the relation amongst errors while EFA does not. It is important to note that more of a subjective judgement is made about the meaningfulness of factors in EFA for the specific study (Fabrigar & Co, 1999).

It was indicated that an exploratory factor analysis is usually used in scale validation and therefore this method will be used to determine whether specific items conform to the dimension with which it is supposed to conform to. This method will help to determine which items are unnecessary in each of the thirteen dimensions. For example: does the question “Do you feel that your working group / team is well managed’? really determine confidence? An item-analysis will be done in the process of exploratory factor analysis. The main goal of item-analysis is to select those items that are most related to the construct. This will enable the researcher to evaluate how each item is related to its own construct, as well as how it relates to other associated or similar constructs.

The desired result would indicate that all items measuring the same construct are scored together; to give the best possible estimate of each item’s score on that specific construct.

If we look at item-analysis and its role in exploratory factor analysis, it was indicated by Gorsuch (1997) that the main function of item-analysis is to select those certain items that are most related to a specific construct. This method will help in identifying the fewest possible constructs needed to produce the specific data in the questionnaire. The results of the exploratory factor analysis will be used to determine the validity of the questionnaire. The relation of each variable will indicate whether a certain item is related to only one of the constructs or to other constructs as well. Those items that are mostly related to a specific dimension can then be recommended as a scale for the construct underlying that particular dimension. Using the results of the factor analysis, can help

achieving the goals of the item-analysis in more than one way. The factor analysis provides results on all of the constructs. For example, if there is more than one construct in the pool of items, then there has to be one factor for each and every construct (Gorsuch, 1997).

The exploratory factor analysis process to be carried out in this research project will provide the researcher with information regarding the questionnaire. In conducting a factor analysis on the data provided by the questionnaire, the Kaiser-Meyer-Olkin (KMO) statistics will be indicated. This refers to the prediction on whether the sampling adequacy of the data is likely to factor well, based on correlation and partial correlation. KMO can be used to assess which variables to drop from a model because they are too multi-collinear. There will be a KMO statistic for each variable and their sum will be the KMO overall statistic. Tabahnick (2001) stated that Kaiser's measure of sampling adequacy is basically the ratio of the sum of squared correlations plus the sum of squared partial correlations. Values of above .6 are ideally required in order to conduct a factor analysis. On the other hand Barlett's test determines whether all factor standard deviations (or equivalent variances) are equal, against the alternative that the standard deviations are not all equal. The Barlett's test should be significant in order to successfully proceed with a factor analysis (i.e. significance less than 0.05) (Morgan, 1998).

The other results obtained from a factor analysis are known as "total variance explained". In this table certain eigenvalues (this concept will be discussed in dept in the results chapter) will be displayed within the "Total" column. This will provide the quantity of variance in the observed variables accounted for by each component or factor. The eigenvalues will indicate how many dimensions were allocated, in other words: how many factor loadings were identified. A parallel analysis; known as "random eigenvalues" will be used to construct a scree plot in excel.

3.8.4 Reliability

According to the internet dictionary, Wikipedia (2006) reliability is: "The consistency of a set of measurements or measuring instruments." It is important to understand that reliability does not imply validity; these are two different concepts with two totally

different meanings serving different purposes. Reliability focuses on the measuring of something consistently, but not necessarily on what is supposed to be measured like in the case of validity. Reliability therefore comes down to an instrument consistently yielding similar results, over repeated tests of the same subject.

In conducting the item-analysis as well as the Cronbach Alpha it will be determined whether the reliability of the questionnaire does improve if certain items / questions were to be deleted (Hurley & Co, 1997). The Cronbach Alpha measures how well a set of items measure a single construct. It is important to note that in the case where the data has a multi-dimensional structure the Cronbach Alpha will be relatively low. The Cronbach Alpha is not a statistical test but is rather referred to as a coefficient of reliability. Reliability and item analysis have always been known as a method to construct reliable measurement scales, improve existing scales and to evaluate the reliability of scales already in use.

The sample size that will be used to determine these certain psychometric properties will be 360. This sample size is large enough to perform a study that is significant (Hurley & Co, 1997). In this instance the Cronbach Alpha will be determined for the overall questionnaire as well as for all of the 13 different dimensions.

3.8.5 Inter-item & anti-image correlations

In order to determine whether the inter-item correlation complies with the criteria of sampling adequacy set for factor analysis, an anti-image correlation should be conducted for all of the items in the employee attitude survey. Before looking at the inter-item correlation, some information regarding this method will be provided. The correlation tables will display Pearson correlation coefficients, significant values, as well as the number of cases with non- missing values. The Pearson correlation coefficients assume that the data are normally distributed and can be seen as a measure of linear association between two variables. The correlation values may range from -1 to 1 and so the sign that the correlation coefficient displays indicates the direction of the relationship, either positive or negative. It is important to note that the correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself and the correlations that are above the main diagonal are a mirror

image of those below. The closer a value lies to 1.0, the more positively correlated that item is. If the significance level is very small (less than 0.50) then the correlation can be seen as significant. On the other hand if the significance level is relatively large (> 0.50) then the correlation is not significant and the variables are not linearly related to one another (Anon, 2006).

An anti-image correlation should also be carried out to determine whether the above inter-item correlation will comply with criteria of sampling adequacy. An anti-image correlation is the negative value of partial correlation that exists between variables. Also linked to the anti-image correlation processes is the measure of sampling adequacy (MSA). These scores can range from 0 to 1. If a variable has a score of 1, it means that, that variable is perfectly predicted without any error from other variables (Hair, Anderson, Tatham & Black, 1998). In an article written by Roodt & Kruger (2003) an inter-item and anti-image was conducted in order to determine the validity of a certain questionnaire. These authors only carried out a factor analysis on the items with satisfying MSA values. Even though a factor analysis has been carried out in the first instance, carrying out a factor analysis on only selected items after an anti-image was carried out, could yield much more significant results at the end of the day.

3.9 Chapter conclusion

All methodological detail was given in this chapter, in order to obtain a broad understanding of the methods/processes that the researcher will make use of in accomplishing the desired outcome of this research project. The data showing the total number of completed attitude surveys by the employees will be typed into the SPSS programme in order to analyze the answers of the respondents.

With the help of all the specified methods mentioned the validity and reliability of this survey can be determined. The other question that will be answered by analyzing the data by means of the SPSS is the question of whether all of the 13 dimensions correctly measures the questions it is supposed to. With all this done the researcher can determine whether to reject or accept the null hypothesis stated. The next chapter is seen as the most important chapter, as all the results will be noted, analyzed and interpreted.

CHAPTER 4: DATA ANALYSIS & INTERPRETATION OF FINDINGS

4.1 Introduction

In the previous chapter thorough definitions, reasons and procedures were given on all of the methods to be used to determine the psychometric properties of the employee attitude survey. In this chapter the results will be provided and interpreted accordingly by means of the specified methods as indicated in chapter 3.

4.2 Chapter outline

The results and interpretation will be provided as follow:

- **Descriptive statistics** – The researcher will only determine how the answers to the questions were spread. This will indicate to the researcher what answers were given most by participants to each question. In other words determine the frequency distribution of the answers (Trochim, 2002).
- **Exploratory factor analysis** – Determine which items are unnecessary in each of the 13 dimensions. For example: does the question "Do you feel that your working group/team is well managed" really determine confidence? An item - analysis will be done in the process of exploratory factor analysis. The main goal of item-analysis is to select those items that are most related to the construct. This will enable the researcher to evaluate how each item is related to its own construct, as well as how it relates to other associated or similar constructs (Fabrigar & Co, 1999).
- **Frequency-item distribution** – This table will indicate how the answers of the respondents were spread. This will also provide information regarding extreme positive or negative directed statements.
- **Inter-item distribution** – Tables displaying all items in each of the thirteen dimensions will indicate whether there exist a significant correlation between items within certain dimensions or whether items have nothing in common with one another (Anon, 2006).
- **Anti-image correlations** – A table containing anti-image information will be displayed. This information will indicate whether item-inter correlations complies with the criteria of sampling adequacy for a factor analysis (Hair, Anderson,

Tatham & Black, 1998).

- **Reliability** – Reliability comes down to an instrument consistently yielding similar results, over repeated tests of the same subject. In conducting the item-analysis as well as the Cronbach Alpha the researcher will be able to determine whether the reliability of the questionnaire does improve if certain items/questions were to be deleted (Hurley & Co, 1997).

4.3 Descriptive statistics

Table 4.1 Company demographics

Race group	N
White	169
African	117
Coloured	35
Indian	38
Other	1
Total number of employees	360

Currently 360 people are employed within the organization and a total number of 306 employees completed the attitude survey. This means that 54 employees chose not to complete the survey, giving an 85% participation rate. The next table indicates the descriptive statistics. It provides a summary of continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation provide measures of distribution like skewness and kurtosis. This indicates a distribution that varies from a normal distribution. Normal distribution is seen as a prerequisite for factor analysis (Anon, 2005). As a rule of thumb, if the skewness and/or kurtosis measure is more than 2.5 times its standard error, the assumption of normality has been violated. A result of less than 5.5 indicates skewness or kurtosis not significantly different from normal distribution (Morgan & Griego, 1998). Since many statistical tests assume data to be normally distributed, it is always a good idea to check the distribution of your data (Tabachnick & Fidell, 2001).

Table 4.2 Descriptive statistics

Descriptive statistics							
Q	N	Mean	Std.	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Statistics	Std.Error	Statistics	Std.Error
1.	306	3.582	1.2551	**-.722**	**.139**	**-.469**	**.278**
10.	306	3.6013	1.30492	**-.807**	.139	-.315	.278
11.	306	3.3203	1.40095	**-.563**	.139	-.732	.278
14.	306	3.5686	1.21069	**-.720**	.139	-.286	.278
15.	306	3.3693	1.30229	**-.594**	.139	-.647	.278
16.	306	3.5850	1.30358	**-.992**	.139	.181	.278
177.	306	3.6569	1.21327	**-.969**	.139	.315	.278
178.	306	3.2451	1.33873	**-.514**	.139	-.655	.278
179.	306	3.5752	1.41047	**-.973**	.139	-.014	.278
19.	306	3.7451	1.09562	**-1.227**	.139	1.387	.278
2.	306	3.77451	1.106525	**-1.210**	.139	1.293	.278
21.	306	4.0425	1.04088	**-1.648**	.39	3.337	.278
23.	306	3.5000	1.37959	**-.784**	.139	-.365	.278
24.	306	3.4542	1.33534	**-.791**	.139	-.281	.278
25.	306	3.2484	1.35153	**-.524**	.139	-.803	.278
27.	306	3.5556	1.15028	**-.774**	.139	-.098	.278
28.	306	4.3856	1.06893	**-2.374**	.139	6.046	.278
29.	306	3.7092	1.27667	**-.954**	.139	.067	.278
30.	306	3.3889	1.40342	**-.630**	.139	-.627	.278
33.	306	4.4052	1.01101	**-2.412**	.139	6.645	.278
34.	306	3.8562	1.11572	**-1.053**	.139	.569	.278
35.	306	3.4052	1.19253	**-.614**	.139	-.437	.278
36.	306	3.3497	1.35451	**-.719**	.139	-.285	.278
38.	306	3.6699	1.13030	**-1.216**	.139	1.473	.278
4.	306	3.3758	1.34747	**-.523**	.139	-.843	.278
41.	306	3.4869	1.29368	**-1.128**	.139	.763	.278
42.	306	3.6405	1.12855	**-.980**	.139	.433	.278
43.	306	3.8824	1.07393	**-1.187**	.139	1.217	.278
44.	306	3.7124	1.26062	**-.947**	.139	.040	.278
45.	306	3.4346	1.25606	**-.635**	.139	-.437	.278
46.	306	3.4052	1.10105	**-.380**	.139	-.716	.278

47.	306	3.4216	1.16593	**-.709**	.139	-.028	.278
48.	306	4.1176	1.06165	**-1.925**	.139	4.550	.278
49.	306	3.8987	1.13059	**-1.526**	.139	2.672	.278
5.	306	3.8856	1.18321	**-1.140**	.139	.641	.278
50.	306	3.5098	1.24198	**-1.010**	.139	.538	.278
52.	306	3.6176	1.23377	**-.832**	.139	-.110	.278
53.	306	3.1242	1.22713	**-.357**	.139	-.652	.278
54.	306	2.7026	1.67326	**-.426**	.139	-1.118	.278
57.	306	2.8399	1.66266	**-.484**	139	-1.087	.278
59.	306	3.6569	1.24528	**-.885**	.139	.057	.278
60.	306	3.3170	1.33828	**-.843**	.139	-.064	.278
61.	306	3.7255	1.21053	**-.933**	.139	.152	.278
62.	306	3.3431	1.28926	**-.615**	.139	-.478	.278
63.	306	3.7516	1.29959	**-1.127**	.139	-.508	.278
67.	306	3.8399	1.20539	**-1.441**	.139	1.837	.278
68.	306	3.5261	1.11663	**-.791**	.139	.215	.278
7.	306	3.1046	1.30655	**-.408**	.139	-.738	.278
75.	306	3.6732	1.18643	**-.791**	.139	-.201	.278
79.	306	3.2516	1.25662	**-.455**	.139	-.675	.278
9.	306	3.8203	1.05444	**-1.442**	.139	2.614	.278
90.	306	3.8464	1.12174	**-1.055**	.139	.720	.278
91.	306	3.6536	1.20284	**-1.196**	.139	1.114	.278
92.	306	3.2745	1.31441	**-.640**	.139	-.420	.278
93.	306	35261	1.14275	**-.947**	.139	.694	.278

Meaning of the above columns:

- **Valid N (listwise)** – This is the number of non-missing values.
- **N** – This is the number of valid observations for the variable. The total number of observations is the sum of N and the number of missing values.
- **Minimum** – This is the minimum, or smallest, value of the variable.
- **Maximum** – This is the maximum, or largest, value of the variable.
- **Mean** – This is the arithmetic mean across the observations. It is the most widely

used measure of central tendency. It is commonly called the average. The mean is sensitive to extremely large or small values.

- **Std**. – Standard deviation is the square root of the variance. It measures the spread of a set of observations. The larger the standard deviation is, the more spread out the observations are.

- **Variance** – The variance is a measure of variability. It is the sum of the squared distances of data value from the mean divided by the variance divisor. The Corrected SS is the sum of squared distances of data value from the mean. Therefore, the variance is the corrected SS divided by N-1. Variance as an index is not usually used because it is in squared units. Instead, standard deviation is rather used.

- **Skewness** – Skewness measures the degree and direction of asymmetry. A symmetric distribution such as a normal distribution has a skewness of 0, and a distribution that is skewed to the left, e.g. when the mean is less than the median, has a negative skewness (Anon, 2005).

In this case it was found that the data presented was normally distributed as most of the items were close to a value of - 2 or - 3. These skewness values are all smaller than 2.5, and therefore all the item's frequency distributions can be seen as normally distributed. As the data is normally distributed, it can be concluded that the answers given by all the participants were favourably spread. This can be seen as significant as a variety of answers were given. In such a situation, where data is normally distributed the worth of a factor analysis is just so much more beneficial and significant than in a case where data was negative or positively distributed. After the completion of the facto analysis more information with regards to the sampling distribution and relevant information on whether the results were significant or not will be provided (Tabachnick & Fidell, 2001).

4.4 Exploratory factor analysis

The KMO in the table below refers to the prediction on whether the sampling adequacy of the data is likely to factor well, based on correlation and partial correlation. KMO can be used to assess which variables to drop from a model because they are too multi-

collinear. There will be a KMO statistic for each variable and their sum will be the KMO overall statistic. The KMO has to vary from 0.0 to 1.0 and KMO should be 0.7 or higher to proceed with factor analysis. If it is not, the indicator variable with the lowest individual KMO statistic values needs to be dropped, until KMO overall rises above 0.7. The Bartlett's test should be significant (i.e. significance less than 0.05) (Morgan, 1998).

Table 4.3 KMO and Barlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.941
Bartlett's test of sphericity	Approx. Chi-Square	9939.028
	df	1485
	Sig.	.000

The KMO (Kaiser – Meyer – Olkin) indicated the efficiency of the sample size; it recorded a value of .941 which is very satisfactory. Gorsuch (1983) indicated that the KMO value should ideally always be larger than 0.5 in order to proceed to a factor analysis. In terms of the Barlett test, the significance figure shows a .000, which is significant and therefore all standard deviations are equal and there is no difference in variance between the items.

Table 4.4 Total Variance Explained

	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	20.071	36.493	36.493
2	2.523	4.588	41.080
3	2.173	3.950	45.031
4	1.894	3.444	48.474
5	1.498	2.724	51.199
6	1.391	2.529	53.727
7	1.257	2.286	56.014
8	1.175	2.136	58.149
9	1.131	2.056	60.205
10	1.072	1.950	62.155
11	1.010	1.837	63.992
12	.980	1.782	65.773

13	.951	1.728	67.502
14	.877	1.594	69.096
15	.842	1.530	70.626
16	.795	1.446	72.072
17	.757	1.377	73.450
18	.732	1.332	74.781
19	.713	1.295	76.077
20	.682	1.241	77.317
21	.663	1.205	78.522
22	.646	1.175	79.697
23	.615	1.119	80.816
24	.598	1.087	81.903
25	.573	1.042	82.945
26	.534	.971	83.917
27	.523	.951	84.867
28	.506	.920	85.787
29	.483	.879	86.666
30	.441	.802	87.468
31	.431	.783	88.251
32	.418	.759	89.011
33	.408	.742	89.752
34	.388	.706	90.459
35	.382	.695	91.154
36	.365	.663	91.817
37	.358	.651	92.468
38	.336	.611	93.079
39	.310	.563	93.642
40	.302	.549	94.191
41	.295	.536	94.727
42	.277	.503	95.230
43	.266	.484	95.714
44	.255	.463	96.178
45	.243	.442	96.619
46	.241	.439	97.058
47	.228	.415	97.473
48	.215	.392	97.865
49	.205	.372	98.237
50	.188	.342	98.579
51	.176	.319	98.898
52	.169	.307	99.206
53	.156	.283	99.489
54	.142	.258	99.747
55	.139	.253	100.000

Extraction Method: Principal Component Analysis

As indicated earlier certain eigenvalues will be indicated in order to determine how many factors can be extracted how many factor loadings could be found. Eigenvalue, meaning the amount of variation in the total sample accounted for by each factor. The eigenvalues are not the percentage variance explained but rather a measure of the amount of variance in relation to total variance. As seen in the above table random eigenvalues and real eigenvalues were compared. Research usually shows that random eigenvalues are lower than the real values, as is also the case in this instance (Lawley, 1971).

It was assumed that this questionnaire measures thirteen different dimensions of employee attitude. The results obtained from the eigenvalues in performing an exploratory factor analysis (EFA) indicated that there is indeed only one dimension that could be detected in the questionnaire. Only one factor loading were indicated out of all of the items within the questionnaire. This means that there are no real dimensions in this questionnaire. Eleven eigenvalues seem to be stable though, but the difference between the first factor reading and the other ten are extreme. The empirical results did not correspond with assumption at all. This can be seen as a problem in the validation of any questionnaire.

4.5 Frequency-item distribution, inter-item & anti-image correlations

Indicated in this chapter the factor analysis showed that there are only one factor loading and not 13 as assumed, presenting the thirteen different dimensions. These results raised concern about the questionnaire's construct validity. In order to determine whether the inter - item correlation complies with the criteria of sampling adequacy set for factor analysis an anti-image correlation should be conducted for all of the items in the employee attitude survey. The frequency-item distribution table below indicates how the answers of the respondents were spread. This will give a good indication on which answers were chosen most by the participants.

Before looking at the inter-item correlation, some information regarding this method will be provided. The correlation tables will display Pearson correlation coefficients, significant values, as well as the number of cases with non- missing values. The

Pearson correlation coefficients assume that the data are normally distributed and can be seen as a measure of linear association between two variables. The correlation values may range from -1 to 1, so the sign the correlation coefficient displays indicates the direction of the relationship, either positive or negative. It is important to note that the correlation coefficients on the main diagonal are always 1.0, that is because each variable has a perfect positive linear relationship with itself and the correlations that are above the main diagonal are mirror images of those below. The closer a value lies to 1.0, the more positively correlated that item is. If the significance level is very small (less than 0.50) the correlation can be seen as significant. On the other hand if the significance level is relatively large (> 0.50) the correlation is not significant and the variables are not linearly related to one another (Anon, 2006).

4.5.1 Frequency-item response distribution

Table 4.5 Frequency-item response distribution

Q	Don't know	No - improvements are very necessary	No - improvements are necessary	Neither yes/no	Yes - good	Yes - Excellent
q1	2	21	51	32	123	77
q10	3	28	35	42	112	86
q11	8	33	51	43	103	68
q14	2	20	43	49	121	71
q15	3	34	44	50	116	59
q16	7	25	31	36	133	74
q177	4	19	33	42	132	76
q178	7	33	50	58	104	54
q179	11	28	27	37	114	89
q19	4	12	28	36	160	66
q2	4	11	30	33	155	73
q21	5	6	15	28	143	109
q23	7	32	32	47	106	82
q24	7	29	38	43	122	67
q25	5	40	48	46	115	52
q27	2	16	47	43	141	57
q28	7	5	6	20	75	193
q29	4	21	35	35	116	95
q30	8	32	44	47	99	76
q33	6	3	8	17	82	190
q34	1	14	28	37	131	95
q35	3	18	60	44	133	48
q36	12	20	53	45	116	60
q38	7	10	28	48	152	61

q4	4	29	62	32	111	68
q41	15	13	33	47	143	55
q42	2	18	33	42	151	60
q43	2	11	25	35	143	90
q44	3	22	34	35	119	93
q45	4	22	52	48	119	61
q46	1	9	70	56	125	45
q47	5	13	55	54	133	46
q48	8	2	14	22	136	124
q49	9	4	20	38	140	95
q5	2	17	26	33	119	109
q50	10	13	42	43	142	56
q52	3	20	41	40	125	77
q53	5	26	70	65	105	35
q54	56	26	36	59	93	36
q57	45	34	36	43	106	42
q59	4	19	36	45	117	85
q60	13	26	36	55	128	48
q61	3	16	38	37	123	89
q62	6	25	54	48	119	54
q63	7	19	31	28	122	99
q67	8	15	15	35	140	93
q68	4	9	51	50	142	50
q7	8	30	70	50	110	38
q75	1	18	40	43	123	81
q79	4	27	61	56	112	46
q9	6	7	19	43	160	71
q90	3	8	35	36	129	95
q91	8	15	26	44	146	67
q92	9	26	53	50	120	48
q93	7	8	45	53	143	50

It can be seen from the above table that the answers to the questions were relatively favourably spread. This was also detected in the descriptive statistics table earlier in this chapter. All statistical methods carried out in this study assume that the data are normally distributed; if the data were not normally spread it would have had an influence on all of the results (Anon, 2005). The option “yes/good” was chosen mostly by the participants in all of the 55 items stated.

4.5.2 Inter-item correlations

Table 4.6 Respect

		Question 5	Question 91
Question5	Pearson Correlation	1	.364(**)
	Sig. (2-tailed)		.000
Question91	Pearson Correlation	.364(**)	1
	Sig. (2-tailed)	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlation between item 5 and 91.

Table 4.7 Co-operation

		Question7	Question42	Question44	Question47
Question7	Pearson Correlation	1	.484(**)	.420(**)	.352(**)
	Sig. (2-tailed)		.000	.000	.000
Question42	Pearson Correlation	.484(**)	1	.556(**)	.462(**)
	Sig. (2-tailed)	.000		.000	.000
Question44	Pearson Correlation	.420(**)	.556(**)	1	.364(**)
	Sig. (2-tailed)	.000	.000		.000
Question47	Pearson Correlation	.352(**)	.462(**)	.364(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.8 Delegation/Influence

		Question9	Question10	Question43	Question177
Question9	Pearson Correlation	1	.267(**)	.167(**)	.257(**)
	Sig. (2-tailed)		.000	.003	.000
Question10	Pearson Correlation	.267(**)	1	.444(**)	.588(**)
	Sig. (2-tailed)	.000		.000	.000
Question43	Pearson Correlation	.167(**)	.444(**)	1	.593(**)
	Sig. (2-tailed)	.003	.000		.000
Question177	Pearson Correlation	.257(**)	.588(**)	.593(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exists between all items

Table 4.9 Performance feedback

		Question11	Question41	Question60
Question11	Pearson Correlation	1	.370(**)	.348(**)
	Sig. (2-tailed)		.000	.000
Question41	Pearson Correlation	.370(**)	1	.441(**)
	Sig. (2-tailed)	.000		.000
Question60	Pearson Correlation	.348(**)	.441(**)	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.10 Internal information/communication

		Question14	Question15	Question16	Question45	Question52	Question92
Question14	Pearson Correlation	1	.490(**)	.339(**)	.559(**)	.370(**)	.485(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Question15	Pearson Correlation	.490(**)	1	.483(**)	.411(**)	.390(**)	.439(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Question16	Pearson Correlation	.339(**)	.483(**)	1	.409(**)	.323(**)	.350(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Question45	Pearson Correlation	.559(**)	.411(**)	.409(**)	1	.431(**)	.505(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Question52	Pearson Correlation	.370(**)	.390(**)	.323(**)	.431(**)	1	.299(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Question92	Pearson Correlation	.485(**)	.439(**)	.350(**)	.505(**)	.299(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: A significant correlation exists between all items.

Table 4.11 Confidence/performance orientation

		Question1	Question2	Question4	Question59	Question63	Question90
Question1	Pearson Correlation	1	.532(**)	.551(**)	.487(**)	.414(**)	.299(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Question2	Pearson Correlation	.532(**)	1	.393(**)	.370(**)	.292(**)	.300(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Question4	Pearson Correlation	.551(**)	.393(**)	1	.368(**)	.390(**)	.260(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Question59	Pearson Correlation	.487(**)	.370(**)	.368(**)	1	.569(**)	.387(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Question63	Pearson Correlation	.414(**)	.292(**)	.390(**)	.569(**)	1	.313(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Question90	Pearson Correlation	.299(**)	.300(**)	.260(**)	.387(**)	.313(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.12 Overall understanding

		Question19	Question46	Question48	Question67
Question19	Pearson Correlation	1	.494(**)	.203(**)	.351(**)
	Sig. (2-tailed)		.000	.000	.000
Question46	Pearson Correlation	.494(**)	1	.172(**)	.346(**)
	Sig. (2-tailed)	.000		.002	.000
Question48	Pearson Correlation	.203(**)	.172(**)	1	.361(**)
	Sig. (2-tailed)	.000	.002		.000
Question67	Pearson Correlation	.351(**)	.346(**)	.361(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.13 Goals

		Question21	Question49	Question178
Question21	Pearson Correlation	1	.436(**)	.204(**)
	Sig. (2-tailed)		.000	.000
Question49	Pearson Correlation	.436(**)	1	.426(**)
	Sig. (2-tailed)	.000		.000
Question178	Pearson Correlation	.204(**)	.426(**)	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.14 Individual development

		Question23	Question24	Question25
Question23	Pearson Correlation	1	.524(**)	.471(**)
	Sig. (2-tailed)		.000	.000
Question24	Pearson Correlation	.524(**)	1	.506(**)
	Sig. (2-tailed)	.000		.000
Question25	Pearson Correlation	.471(**)	.506(**)	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.15 Easy to implement

		Question27	Question53
Question27	Pearson Correlation	1	.388(**)
	Sig. (2-tailed)		.000
Question53	Pearson Correlation	.388(**)	1
	Sig. (2-tailed)	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exists between item 27 and 53.

Table 4.16 Planning/Follow-up

		Question35	Question36	Question54	Question57
Question35	Pearson Correlation	1	.470(**)	.327(**)	.383(**)
	Sig. (2-tailed)		.000	.000	.000
Question36	Pearson Correlation	.470(**)	1	.356(**)	.370(**)
	Sig. (2-tailed)	.000		.000	.000
Question54	Pearson Correlation	.327(**)	.356(**)	1	.690(**)
	Sig. (2-tailed)	.000	.000		.000
Question57	Pearson Correlation	.383(**)	.370(**)	.690(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.17 Personnel and environmental issues

		Q28	Q29	Q30	Q33	Q34	Q50	Q61	Q62	Q75	Q79
Question28	Pearson Correlation	1	.340(**)	.278(**)	.522(**)	.080	.197(**)	.173(**)	.218(**)	.149(**)	.194(**)
	Sig. (2-tailed)		.000	.000	.000	.165	.001	.002	.000	.009	.001
Question29	Pearson Correlation	.340(**)	1	.585(**)	.300(**)	.323(**)	.236(**)	.394(**)	.382(**)	.370(**)	.528(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000
Question30	Pearson Correlation	.278(**)	.585(**)	1	.293(**)	.289(**)	.281(**)	.430(**)	.346(**)	.329(**)	.495(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000
Question33	Pearson Correlation	.522(**)	.300(**)	.293(**)	1	.235(**)	.127(*)	.137(*)	.207(**)	.242(**)	.188(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.026	.017	.000	.000	.001
Question34	Pearson Correlation	.080	.323(**)	.289(**)	.235(**)	1	.181(**)	.257(**)	.301(**)	.442(**)	.370(**)
	Sig. (2-tailed)	.165	.000	.000	.000		.001	.000	.000	.000	.000
Question50	Pearson Correlation	.197(**)	.236(**)	.281(**)	.127(*)	.181(**)	1	.266(**)	.292(**)	.260(**)	.478(**)
	Sig. (2-tailed)	.001	.000	.000	.026	.001		.000	.000	.000	.000
Question61	Pearson Correlation	.173(**)	.394(**)	.430(**)	.137(*)	.257(**)	.266(**)	1	.458(**)	.382(**)	.537(**)
	Sig. (2-tailed)	.002	.000	.000	.017	.000	.000		.000	.000	.000
Question62	Pearson Correlation	.218(**)	.382(**)	.346(**)	.207(**)	.301(**)	.292(**)	.458(**)	1	.335(**)	.513(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000

Question75	Pearson Correlation	.149(**)	.370(**)	.329(**)	.242(**)	.442(**)	.260(**)	.382(**)	.335(**)	1	.491(**)
	Sig. (2-tailed)	.009	.000	.000	.000	.000	.000	.000	.000		.000
Question79	Pearson Correlation	.194(**)	.528(**)	.495(**)	.188(**)	.370(**)	.478(**)	.537(**)	.513(**)	.491(**)	1
	Sig. (2-tailed)	.001	.000	.000	.001	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 4.18 Attitude to change

		Question38	Question68	Question93	Question179
Question38	Pearson Correlation	1	.374(**)	.313(**)	.337(**)
	Sig. (2-tailed)		.000	.000	.000
Question68	Pearson Correlation	.374(**)	1	.468(**)	.324(**)
	Sig. (2-tailed)	.000		.000	.000
Question93	Pearson Correlation	.313(**)	.468(**)	1	.373(**)
	Sig. (2-tailed)	.000	.000		.000
Question179	Pearson Correlation	.337(**)	.324(**)	.373(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

It is very interesting to note that all the different items within a certain dimension have a significant inter-item correlation, this means that the items in every dimension has a lot in common with one another, this also indicates that the dimensions do measure the same construct.

4.5.3 Anti-image correlations

As mentioned earlier an anti-image correlation should also be carried out to determine whether the above inter-item correlation will comply with criteria of sampling adequacy. An anti-image correlation is the negative value of partial correlation that exists between variables. Also linked to the anti-image correlation processes is the measure of sampling adequacy (MSA). These scores can range from 0 to 1. If a variable has a score of 1, it means that , that variable is perfectly predicted without any error form other variables

(Hair, Anderson, Tatham & Black, 1998). The following results were obtained from the anti – image correlation:

Table 4.19 Anti-image correlations

Refer to addendum, table 20, page 109.

It is very interesting to note that all of the anti- image correlations are adequate when looking at the inter-item correlation. The MSA (measure of sample adequacy) values are indicated by the figures in bold in the above Anti-images tables. All of the MSA 's values are greater than 0.595, this indicates that all of the items in the employee attitude survey is adequate and significant (Hair, Anderson, Tatham & Black, 1998). For this reason it would not be necessary to perform a principle factor analysis again with a varimax rotation and item analysis.

4.6 Measurement instrument

4.6.1 Reliability

Table 4.20 Overall Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.966	.966	55

As indicated in the above table the overall Cronbach Alpha of the attitude survey is satisfactory at .966. It is not surprising though that the overall alpha is high, this is usually the case if only one dimension is recognized which is attitude in this case. The reliability was also determined for each of the thirteen dimensions of this employee attitude survey. The alpha ranged from .533 – .829 within all of the thirteen dimensions. Research done by Gorsuch (1983) indicated that a sample size of + 300 is sufficient in the determining scale reliability and in the process of scale validation.

4.7 Chapter conclusion

The descriptive statistics displayed that the data are normally distributed as all of the values were smaller than 2.5. This indicates that the answers of the respondents were favourably spread. The reliability of the questionnaire indicated an overall Alpha of .966 which is satisfactory. An alpha was also determined for each of the thirteen different dimensions, the alpha's ranged from .533 – .829. An exploratory factor analysis was carried out. Firstly, the KMO values were determined which indicated that the sample size was more than sufficient for a factor analysis to be done. The KMO measured an impressive .941. This indicated that the researcher could proceed with a factor analysis.

The eigenvalues indicated that only one factor loading were found out of all the possible factors and that there is indeed only one dimension, namely attitude overall that could be measured. This means that the assumptions made in terms of this measurement instrument measuring thirteen different dimensions of attitude is untrue. After the exploratory factor analysis and inter-item correlation was carried out, the results indicated that all the items within a specific dimension correlated significantly with each other and therefore all the items had a lot in common. This was the case for all thirteen dimensions. After this an anti-image correlation was done to determine whether the inter-item results were adequate. This was indeed the case as all of the dimensions MSA (Measure of sample adequacy) values were higher than .595, because no items indicated a low MS value. Therefore it was not necessary to perform an anti-image again.

CHAPTER 5: RESEARCH CONCLUSION & RECOMMENDATIONS

5.1 Chapter outline

- The objective of the research project will be stated, as well as the reasons why it was necessary to conduct such a study. The research questions will be stated in order to determine what the answers of these questions were after completion of the study.
- A summary on literature found will be included.
- The results of the study will be provided, answers given to the research questions and its significance in practice noted.
- Limitations with regards to this study will be provided.
- Some recommendations will be made, encouraging readers to further this research, ensuring improvement of this measuring instrument's significance.
- This study will finish of with some closing thoughts.

5.2 Objective of study

5.2.1 Objectives of the research project & the necessity thereof

The main objective of this study was to determine whether the employee attitude survey is a true measurement in determining employee attitude, specifically in the working conditions within the South African context. One of the biggest concerns raised by the employees at this organization was that the survey is not based on South African principles and work situations, and cannot be generalized to the rest of the world, as the survey was developed in Europe. Management also expressed the concern that the survey was not a true measurement of employee attitude and therefore is not seen as highly valid or reliable. It wouldn't be of any use to waste employee's time in completing the survey if it doesn't really measure what it is supposed to measure. For these reasons the need was identified to provide the organization with answers with regards to the psychometric properties of the employee attitude survey and the significance thereof having it completed annually.

5.2.2 Research questions

With regards to the research hypothesis the following research questions had to be answered:

- To what extent is the Employee Attitude Survey reliable in the South African context?
- Is construct validity highly satisfactory in that it measures what it is supposed to measure in the Employee Attitude Survey?

In evaluating the attitude survey, the results will indicate the psychometric properties of this survey.

As Babbie (2001) indicated, evaluation research can, in its simplest sense, be regarded as "the process of determining whether a social intervention has produced the intended results". The answers to the research questions will be provided under paragraph 5.4.

5.3 Summary of literature found

In the first instance the focus was on the historical foundations of the word "attitude" in order to gain insight on where this concept was developed and when it surfaced. Like many abstract English words, the word attitude also has more than one meaning. Derived from the Latin word "aptus" which means fitness or adaptedness, this word developed to have quite a unique meaning of its own. From the Latin words derived the word "aptitude", which was referred to as either mental attitudes or motor attitudes when referred to in psychological terms. One of the first psychologists ever to use the word "attitude" was Herbert Spencer. In his "First principles" in 1896 he wrote the following*: "Arriving at correct judgements on disputed questions, much depends on the attitude of mind we preserve while listening to, or taking part, in the controversy, and for the preservation of right attitude it is needful that we should learn how true, yet how untrue, are average human beliefs".* A few years later, when more and more psychologists became in tact with this word, the concept of "motor attitudes" became a popular one. For example in 1895, Baldwin proposed motor attitudes as the basis for the understanding of emotional expression. Later on writers like, Giddings (1896) and Mead (1924) emphasized motor attitudes as part of social understanding (Fishbein, 1967). A

huge contributor to the acceptance of attitude was the so-called *Würzburg* School in Germany back in 1909. They agreed that attitudes were neither sensation, nor imaginary, nor affection or any combination of the above (Fishbein, 1967). One may think that an excessive, maybe even unnecessary amount of experimentalists were involved in the study of this concept, but this was exactly what established the concept in the field of psychology. At the end most psychologists agreed on one single thing and that is that attitude forms the basis of languages and communication, which is a trail response that derives from any living human being (Fishbein, 1967).

In the second place, a lot of different definitions from various authors were given in order to ensure that the concept was explained in full. Some of the most popular definitions found were:

- "Attitudes are literally mental postures, guides for conduct to which each new experience is referred before a response are made" (Morgan, 1934);
- "An attitude is a complex of feelings, desires, fears, convictions, prejudice or other tendencies that can give reaction to a person because of varied experiences" (Chave, 1928)
- "An attitude is a mental disposition of the human individual to act for or against a definite object" (Droba, 1933).

These definitions all come down to one central definition or idea of what attitude is:
"An attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations" (Allport, 1935). This definition suggested that attitude consists of three major components: Cognitive component, affective component and behavioural component. These three components are known as the ABC of attitudes. This was supporting evidence by Allport (1935) that these three components of attitude are highly interrelated.

In the third instance, attitude measurement as well as the thirteen different dimensions was explained with supported literature to state whether each dimension could be linked to attitude or not. It was found that all of the thirteen different dimensions could be linked to attitude by some or other means. The three most known methods in measuring attitude are: the consensus of opinion method, the priori scale method and the psychophysical scale method (Fishbein & Co, 1967). Barbash (1974) and a few other

researchers emphasized that attitude measurements / surveys is only a limited purpose instrument. The usefulness of such an instrument can only be optimised when the problem has been clearly formulated, when technical problems were recognized and when the questionnaires were completed with a detailed understanding of the situation.

It was also found that appropriate training can change a person's attitude, but the ground rules and foundation for buy-in from employees need to be established and are seen as the most important fact in the attitude change process. People have different values and norms in life and to try and change a person's beliefs would only cause a lot of trouble and heartache. Any organization trying to change another's attitude need to be very sentimental during the whole process (Zonneveld, 2002).

Lastly, attitude at work was studied and it was found that a person's attitude in the workplace can sometimes define a person even more than the work actually produced. Co-workers can see a person either as someone who is reliable, competent, and intelligent or as someone they cannot rely on at all. This usually refers to a person who displays a positive attitude in the workplace. People with negative attitudes at work, will find that their co-workers do not always want to be associated with them or even give them advice or help them. The main reason for this is because people don't want negativity to influence their positive behaviour. The main advantage of acceptance and success at work is in displaying a positive attitude and in making sure that others see the success in being a positive person in all of life's pressures and demands (Mueller, 2006).

5.4 Results of research questions and its significance in practice

The research questions asked were both answered in this study. The first question, whether the survey is seen as reliable within the South African context, was answered in chapter 4. The Cronbach Alpha is highly satisfactory which indicates that this survey will consistently yield similar results every time. As only one dimension was found though, it is not surprising that the reliability was high. Reliability was also determined for the items within each dimension; the entire dimension indicated a relative to a highly satisfying reliability. In conclusion, the Cronbach Alpha indicated that this survey can be seen as reliable. The second research question whether the employee attitude survey measures

what it is suppose to be measuring in looking at construct validity was also answered. An exploratory factor analysis was conducted and the eigenvalues indicated that only one factor loading was found, which indicated that there does in fact not exist thirteen different dimensions of attitude in this survey, but only one. An inter-item analysis as well as an anti-image correlation was conducted in order to determine whether the items within each dimension really relates to one another. All the items within the claimed thirteen different dimensions were highly related to one another, which mean that even though the thirteen different dimension's items are related, there were no results found that the survey distinguishes between these thirteen dimensions. For this reason the survey cannot be seen as valid. The survey needs to be reviewed by the experts and other more appropriate dimensions should be considered.

In looking at the hypothesis stated in chapter one, the results indicated that in terms of the reliability of the attitude survey is highly satisfactory. The construct validity are not as satisfactory, rather poor as the survey does not distinguish between the thirteen different dimensions of employee attitude.

5.5 Limitations related to this research study

- Most of the dimensions were measured by less than five variable / items. Tabachnick (2001) indicated that a minimum of five variables are necessary for a pure measurement. As less than five variables were present most of the time under each dimension, the reliability could have been influenced by this.
- Only one factor loading was found when an exploratory factor analysis was performed. This indicated that only one dimension is evident and not thirteen different dimensions as suggested.
- Even though the survey was available in twenty five different languages, only one of the eleven official South African languages, namely English was included as one of the twenty languages the respondents could choose from. A lot of African people indicated that they would have preferred answering the survey in their own home language as they sometimes struggled to understand the exact meaning of certain phrases or words within the survey.
- The employee attitude survey is an international survey, used throughout the world. A lot of concern has been raised about the survey not being suitable for

our South African culture, our workgroup, goals and market.

- The total number of thirteen dimensions has been seen as to many too be covered in only fifty five questions. A general response indicates that people think it is unreasonable to use only fifty five questions to measure all of the dimensions effectively.
- As no specific biographical information was obtained the study can not be generalised to the whole population.

5.6 Recommendations

- Increase the number of items / variables under the dimensions with less than 5 variables, this will ensure that each dimension is a pure measure and it could also increase the reliability of each dimension (Tabachnick, 2001).
- Each dimension should be reviewed, as only one factor loading was found. It should be determined whether these thirteen dimensions really do surface in this survey and if necessary, replace the dimensions with others or delete some inappropriate dimensions.
- The employee attitude survey should also be available in the other official South African languages. Employees will feel more comfortable in completing it in their own language and it would increase their understanding of certain words or phrases. Even if this survey still remains an international survey, employees representing different South African languages based in South Africa, should help transform all the surveys completed in another language to English, before sending the surveys off to Europe. Key decision makers of the organization within South Africa should consider developing their own questionnaire after reviewing the culture of the South African workforce.
- A cultural evaluation of the organization within South Africa should be done to determine whether it complies with the statements within the employee attitude survey, if necessary replace certain questions with others which are more appropriate in terms of our South African context.
- Review all of the current items within the employee attitude survey and determine whether some items cannot be replaced with other more relevant items.

5.7 Closing thoughts

There is little difference in people, but that little difference makes a big difference. The little difference is attitude. The big difference is whether it is positive or negative.

- W. Clement Stone -

Imagine what a positive working environment would manifest if all employees have a positive attitude. The main objective of the employee attitude survey was to allow employees to anonymously state how they feel in their working environment. The results obtained from this survey should be interpreted and dealt with accordingly in order to ensure issues are resolved within certain departments and between colleagues.

A lot of theory and background has been provided and it was evident more than once that attitude "makes" a person and can increase job satisfaction and colleague relations. In conclusion, the employee attitude survey does require some work and is not 100% valid, but the tool exists, the information exists and the employees are there; it needs to be optimally utilized. By reviewing this survey and improving it, this can be a tool that will encourage other companies to consider making use of such a survey to improve the attitude of their employees for optimum successfulness throughout. An unknown author once said the following: "The only thing that is truly yours; that no one can control or take from you – is your attitude. So if you can take care of that everything else in life becomes much easier" (Anon, 2006).

CHAPTER 6: SCIENTIFIC ARTICLE

THE PSYCHOMETRIC PROPERTIES OF AN EMPLOYEE ATTITUDE SURVEY FOR A SOUTH AFRICAN AUTOMOTIVE MANUFACTURING ORGANIZATION

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ABSTRACT

The objective of this study was to determine the psychometric properties of an employee attitude survey as developed by an Automotive Manufacturing Organization. The employee attitude survey consists of 55 items and was completed by a total of 306 employees employed at this specific organization. An exploratory factor analysis (EFA) was performed where only one factor loading resulted out of an anticipated thirteen. The inter-correlations were empirically investigated and indicated that all the items under a specific dimension did have a lot in common with one another. An anti-image inter-correlation was performed. All of the items indicated a satisfying measure of sampling adequacy (MSA) values at .595. The overall reliability of the employee attitude survey was satisfactory. These results suggested that the employee attitude survey is a handy tool for the goal the organization wants to use it for, but it does not differentiate between the thirteen different dimensions of attitude as hoped for.

OPSOMMING

Die doel van die studie was om die psigometriese eienskappe van ‘n werknemer gesindheidsvraelys soos gebruik deur ‘n motorvervaardigings organisasie, te evalueer. Die vraelys bestaan uit 55 vrae wat deur 306 werknemers voltooi is. ‘n Ondersoekende faktor-analise is uitgevoer en slegs een faktor uit ‘n totaal van dertien het gemanifisteer. Itemkorrelasies het aangedui dat al die items onder hul spesifieke dimensies ooreengestem het en goed gekorreleer het. Steekproeftoereikendheid (MSA) het gunstige waardes gestaaf van hoër as .595. Die betroubaarheidskoëffisiënte van die vraelys was baie bevredigend. Die resultate toon dat die vraelys geskik is vir die doel waarvoor die maatskappy dit gebruik, maar daar word nie onderskeid getref word tussen die dertien verskillende gesindheids dimensies nie.

Introduction

Employee attitude surveys have been used in many organizations throughout the world. Some organizations benefited from it and others did not. One of the biggest reasons for employee attitude surveys being ineffective and of little worth, is the fact that a lot of these surveys has not been properly constructed (Triandis, 1971). An Auto Manufacturing organization has been making use of an employee attitude survey for the last couple of years. This survey is used to determine how employees feel about their working climate; in terms of leadership, information and collaboration. The need to evaluate this specific questionnaire was identified and the researcher made use of the opportunity to look more closely at the psychometric properties of the employee attitude survey. The questionnaire consisted of fifty five questions. These fifty five questions comprised of thirteen different dimensions. These thirteen different dimensions of attitude are: confidence/performance, orientation, respect, co-operation, delegation/influence, performance feedback, internal information, overall understanding, goals, individual development, easily implemented, planning/follow-up, personal and environmental issues and attitude to change.

This article will focus on the evaluation of the employee attitude survey to determine if the survey is in fact valid and reliable, in other words: “Does it measure what it is supposed to measure and does the instrument consistently yield similar results”? In determining the psychometric properties, the organization can decide whether it is of value to them or not.

Attitude

Attitude is one of the most distinct factors that make people differ from one another, allowing people to be unique in their own way. People can relate to it and it is therefore undeniable that the concept of attitude has become something people live by and even thrive to improve in certain circumstances. Each person may possess many opposing attitudes, which may tell a different story of the person’s behaviour at a certain time.

Allport (1935) was one of the leading researchers in the filed of attitude. He defined attitude as follows: “An attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations”. On the other hand Chave (1928) defined attitude in another light: “An attitude is a complex of feelings, desires,

fears, convictions, prejudice or other tendencies that have given a set or readiness to act to a person because of varied experiences". Even though a lot of different definitions exist, one common element that runs through most definitions is "the readiness to respond" to a situation. This readiness can refer to "mental attitudes", as well as the ability to interpret correctly what has been said, mainly as a result of holding those particular attitudes (Spencer, 1862). Allport's definition of attitude, symbolized three different components of attitude: the cognitive component, which referred to "the idea" which is used as some category by humans in thinking; the affective component: which referred to the emotion that charges our ideas; and lastly the behavioural component which referred to a predisposition to action, such as driving or buying, or even admiring cars. These three components are known as the ABC of attitudes.

A huge debate existed between experts in this field on whether attitude could be displayed in human behaviour. Most researchers agreed that people display their behaviour to themselves and others in a way that convinces both parties that the social objects benefit / don't benefit from the displayed behaviour. Other researchers again argued that behaviour cannot only be determined by what people would like to do but also by what they think they should do. This could be social norms, specific habits and expected consequences of the displayed behaviour. LaPiere (1934) also indicated that behaviour is only a function of attitudes, norms, habits and expectancies about reinforcements. Only when all four of the above factors are indeed consistent, could there possibly be a relationship between attitude and behaviour.

Attitude Measurement

As attitude was measured with a specific designed questionnaire, it was of importance to obtain evidence on whether attitude could be measured in the first place. Most researchers agreed that attitude could indeed be measured. Research has shown that an attitude survey appear to be most effectively used by organizations in order to obtain information regarding how their employees feel about their working circumstances. The correct items needed to be placed in the questionnaire in order to obtain a true measurement of the employees' attitude, and therefore a lot of research is firstly necessary. Barbash (1974) indicated that any person making use of such a survey need to know the exact purpose of this process before asking employees to complete an attitude survey.

Employee attitude surveys allow organizations to understand their employee perceptions, because perception is reality. Employees at any organisation act on a basis of their perception, management need to be aware of their employees' views. The results obtained from such a survey can give management insight and provide them with knowledge that may directly impact on the bottom line and foster positive employee relations in identifying cost-saving opportunities, improved productivity, reduced turnover, strengthed supervision and streamlined communication. When measuring attitude, the fact that people's attitudes do change are often taken for granted in the process. In order to isolate the errors that occur from attitude change fluctuations, it was necessary to determine the standard error of the scale before the measurement took place. The attitude measurement in this specific study claimed to measure 13 different dimensions of attitude. All of these dimensions were researched and interesting enough all of them had some or other logical link to a person's attitude (Thurstone, 1928).

Whether these dimensions measured the correct facets of attitude was still to be determined. Certain measures were to be taken to determine whether certain items within the questionnaire indeed measured these dimensions. An exploratory factor analysis would be an ideal tool to determine whether this survey would be valid to the organization and its employees. Neuman (1997:141) defined measurement validity as the degree of fit between a construct and the indicators of the construct. In order to use a valid instrument it should have a construct that has a theoretical basis, which can be translated through clear operational definitions involving measurable indicators. Before any questionnaire could be administered the validity of the questionnaire must be determined to ensure that the measuring instrument indeed measures what is says it does and to ensure that there are no logical errors in drawing conclusions from the data.

Any institution making use of an attitude measurement needs to ensure that it is not only valid but reliable as well. It would be impossible to effectively and correctly determine how employees feel about their working climate; in terms of leadership, information and collaboration if the measurement instrument is invalid and unreliable. As this attitude survey focuses on thirteen different dimensions of attitude it makes the need for determining the construct validity thereof even more important and necessary for the organization.

Hypothesis

The following research questions were formulated in order to determine the worth of the employee attitude survey, the hypothesis to be proven will indicate the significance thereof.

The research questions:

1. To what extent is the Employee Attitude Survey reliable in the South African context?
2. Is construct validity highly satisfactory in measuring what it is supposed to measure in the Employee Attitude Survey?

Research question 1:

- H1: The employee attitude survey is not reliable at all.
- H2: The reliability of the employee attitude survey is only relatively satisfactory.
- H3: The reliability of the employee attitude survey is highly satisfactory.

- Research questions 2:
- H1: The construct validity of the Employee Attitude Survey is very poor.
- H2: The construct validity of the Employee Attitude Survey is relatively satisfactory.
- H3: The construct validity of the Employee Attitude Survey is highly satisfactory.

Item formulation

One of the most important things to remember for anyone who is interested in test development is that the overall test is only as good as the items included in the measuring instrument. This does not only refer to the type of questions included but also to the number of items and to which dimension certain items are related too. All of these important points are essential for the reliability and validity of a measuring instrument (Schepers, 1992). All fifty five items within the questionnaire are stated in a question format. Employees indicated their answers by choosing the option most appropriate to them on a 6 point rating scale. The options were:

1. Don’t know
2. Yes – Excellent
3. Yes – Good

4. Neither yes nor no
5. No – improvements are necessary
6. No – improvements are very necessary

All fifty five questions were stated in a very direct manner, no positive or negative statements could be identified as it was only direct closed-ended questions that were asked.

The main objective of this research project is to evaluate the employee attitude survey in order to determine its validity and reliability.

This will be determined by means of:

- Differential statistics
- Reliability measures
- Exploratory factor analysis
- Differential item skewness
- Inter-item correlations
- Anti-image correlations

METHOD

Participation/Respondents

A number of 360 employees employed at the Automotive Manufacturing organization were encouraged to partake in this study. The employees are spread over eight branches around the country. The attitude survey was available on the intranet of the organization, or by means of a pen and paper based test. It was sent to individuals in Europe after completion by pressing the sent button on the intranet or mailed to a specific destination in the case where a pen and paper based test was completed. A number of 306 respondents completed the employee attitude survey. Therefore an 85% participation rate was achieved and fifty four individuals chose not to complete the survey. Participation was voluntary and no one was forced to take part. All employees range between the ages of 18 – 65. All races within the organization were included. No demographical information was required from the respondents. The main reason for this was to increase the confidentiality of the participants. The racial spread of employees below is based on the total number of employees employed at the organization.

Table 1

Demographical information

Race group	N
White	169
African	117
Coloured	35
Indian	38
Other	1
Total number of employees	360

The questionnaire was available in twenty five different international languages. It was solely up to the participants to choose the language in which they wanted to complete the questionnaire. No results in terms of preferred language or any other demographical information were requested from them.

Data collection procedure

The employee attitude survey consisted of closed ended questions, which was advantageous in reducing the number of vague answers the respondents may have given in the case of open-ended questions. This data collection method has been very time sufficient and respondents found it easy to complete.

Measuring instrument

The employee attitude survey was developed by individuals in Europe. No information on the validity and reliability has been obtained by the researcher. For this reason this questionnaire had to be evaluated in order to provide information regarding the psychometric properties of the attitude survey to the South African employees employed at this Auto Manufacturing organization. As mentioned 55 items and thirteen dimensions are identified within this survey. The different dimensions were measured by the following items:

Confidence/Performance orientation	Item: 1,2 4, 59, 63, 90
Respect	Item: 5, 91
Co-operation	Item: 7, 42, 44, 47

Delegation/influence	Item: 9, 10, 43, 177
Performance feedback	Item: 11,41,60
Internal information	Item: 14, 15, 16, 45, 45, 52, 92
Overall understanding	Item: 19, 46, 48, 67
Goals	Item: 21, 49, 178
Individual development	Item: 23, 24, 25
Easily implemented	Item: 27, 53
Planning/Follow-up	Item: 35, 36, 54, 57
Personal and environmental issues	Item: 28, 29, 30, 33, 34, 50, 61, 62, 75, 79
Attitude to change	Item: 38, 68, 93, 179

The employee attitude survey didn't take the candidates more than 10 - 15 minutes to complete. The respondents had to choose the statement that was most appropriate to them in terms of the 6-point rating scale. One thing that were seen as a positive was the fact that a lot of items were used within the questionnaire to measure a certain construct, which means that the reliability and validity of the questionnaire were more likely to be satisfactory than in a case where constructs were only measured by a single item (Neuman, 1997:141).

PROCESS

To determine whether or not the questionnaire was valid and reliable various steps were followed on the SPSS programme in order to analyze the data as well as interpreting the results. It was of essence to determine the descriptive statistics; this method is mainly used to describe certain basic features about the research. It provided simple summaries about the sample as well as the measures used. Descriptive statistics basically forms the basis of virtually every single quantitative data analysis. It is a method used by researchers to typically present the data in a way that is more understanding and manageable. In most quantitative research studies there are usually a large number of respondents on any measure. Descriptive statistics are used to place these large amounts of data in a more sensible form. In this case the researcher focused on the distribution of univariate analysis. This tool helped in determining how the answers to the questions were spread. This indicated which answers were given most by participants in each question (Trochim, 2002).

Certain measures were to be taken in order to determine whether the attitude survey was valid. An analysis would provide sufficient information in terms of what variables to group, as well as methods for finding clusters of related variables. As factor analysis is usually used in scale validation, it was concluded that a specific type of factor analysis, namely Exploratory Factor Analysis (EFA) was most suitable in determining the worth of the survey (Fabrigar & Co, 1999). The EFA model basically suggests that each measured variable in a battery of measured variables is a linear function of one or more common factors and only one unique factor. Unique factors have a specific factor component as well as what is called an error of measurement component. The domain of interest was clearly defined and all valid guidelines for the selection of the specific measured variables were specified. The reliability and validity of measurement had to be considered at all times during the factor analysis, because this was the main aim of this study and exactly what the researcher needed to find out (Fabrigar & Co, 1999).

The EFA method helped the researcher to determine which items were unnecessary in each of the thirteen dimensions. For example: does the question “Do you feel that your working group / team is well managed”? really determine confidence? An item-analysis was done in the process of exploratory factor analysis (Gorsuch, 1997). The factor analysis provided results on all of the constructs. For example, if there were more than one construct in the pool of items, then there had to be one factor for each and every construct.

According to the Wikipedia (internet dictionary) reliability is: “The consistency of a set of measurements or measuring instruments”. Reliability focuses on the measuring of something consistently, but not necessarily what is supposed to be measured like in the case of validity. Reliability therefore comes down to an instrument that consistently yields similar results, over repeated tests of the same subject.

By including the item-analysis when reliability was measured by the Cronbach Alpha the researcher were able to detect whether the reliability of the questionnaire does improved if certain items/questions were to be deleted (Hurley & Co, 1997). The Cronbach Alpha measured how well a set of items measure a single construct. As a sample size of 306 was used, the sample was large enough to perform a study that was significant (Hurley & Co, 1997). The significance of the sample size would be confirmed by the KMO

(Kaiser – Meyer – Olkin) value. Bartlett's test was done to determine whether all factor standard deviations (or equivalently variances) are equal against the alternative that the standard deviations are not all equal (Gorsuch, 1983). A Frequency-item distribution was done to indicate how the answers of the respondents were spread. This also provides information regarding extreme positive or negative directed statements. An inter-item distribution were done to determine whether significant correlations exist between items within a certain dimension or whether items have nothing in common with one another (Anon, 2006). Lastly, an anti-image correlation indicated whether inter-item correlations complies with the criterion of sampling adequacy for a factor analysis by means of MSN (Measure of sample adequacy) values (Hair, Anderson, Tatha & Black, 1998).

RESULTS

Descriptive statistics

The next table indicates the descriptive statistics. It provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation provides measures of distribution, like skewness and kurtosis, which indicate how much a distribution varies from a normal distribution. Normal distribution is seen as a prerequisite for factor analysis (Anon, 2005). As a rule of thumb, if the skewness and/or kurtosis measure is more than 2.5 times its standard error the assumption of normality has been violated. If the result is not more than 5.5 then skewness or kurtosis is not significantly different from normal (Morgan & Griego, 1998). Since many statistical tests assume data are normally distributed, it is always a good idea to check the distribution of your data (Tabachnick & Fidell, 2001).

Table 2

Descriptive statistics

Descriptive statistics							
Q	N	Mean	Std.	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Statistics	Std.Error	Statistics	Std.Error
1.	306	3.582	1.2551	**-.722**	**.139**	**-.469**	**.278**
10.	306	3.6013	1.30492	**-.807**	.139	-.315	.278
11.	306	3.3203	1.40095	**-.563**	.139	-.732	.278
14.	306	3.5686	1.21069	**-.720**	.139	-.286	.278

15.	306	3.3693	1.30229	**-.594**	.139	-.647	.278
16.	306	3.5850	1.30358	**-.992**	.139	.181	.278
177.	306	3.6569	1.21327	**-.969**	.139	.315	.278
178.	306	3.2451	1.33873	**-.514**	.139	-.655	.278
179.	306	3.5752	1.41047	**-.973**	.139	-.014	.278
19.	306	3.7451	1.09562	**-1.227**	.139	1.387	.278
2.	306	3.77451	1.106525	**-1.210**	.139	1.293	.278
21.	306	4.0425	1.04088	**-1.648**	.39	3.337	.278
23.	306	3.5000	1.37959	**-.784**	.139	-.365	.278
24.	306	3.4542	1.33534	**-.791**	.139	-.281	.278
25.	306	3.2484	1.35153	**-.524**	.139	-.803	.278
27.	306	3.5556	1.15028	**-.774**	.139	-.098	.278
28.	306	4.3856	1.06893	**-2.374**	.139	6.046	.278
29.	306	3.7092	1.27667	**-.954**	.139	.067	.278
30.	306	3.3889	1.40342	**-.630**	.139	-.627	.278
33.	306	4.4052	1.01101	**-2.412**	.139	6.645	.278
34.	306	3.8562	1.11572	**-1.053**	.139	.569	.278
35.	306	3.4052	1.19253	**-.614**	.139	-.437	.278
36.	306	3.3497	1.35451	**-.719**	.139	-.285	.278
38.	306	3.6699	1.13030	**-1.216**	.139	1.473	.278
4.	306	3.3758	1.34747	**-.523**	.139	-.843	.278
41.	306	3.4869	1.29368	**-1.128**	.139	.763	.278
42.	306	3.6405	1.12855	**-.980**	.139	.433	.278
43.	306	3.8824	1.07393	**-1.187**	.139	1.217	.278
44.	306	3.7124	1.26062	**-.947**	.139	.040	.278
45.	306	3.4346	1.25606	**-.635**	.139	-.437	.278
46.	306	3.4052	1.10105	**-.380**	.139	-.716	.278
47.	306	3.4216	1.16593	**-.709**	.139	-.028	.278
48.	306	4.1176	1.06165	**-1.925**	.139	4.550	.278
49.	306	3.8987	1.13059	**-1.526**	.139	2.672	.278
5.	306	3.8856	1.18321	**-1.140**	.139	.641	.278
50.	306	3.5098	1.24198	**-1.010**	.139	.538	.278
52.	306	3.6176	1.23377	**-.832**	.139	-.110	.278
53.	306	3.1242	1.22713	**-.357**	.139	-.652	.278
54.	306	2.7026	1.67326	**-.426**	.139	-1.118	.278

57.	306	2.8399	1.66266	**-.484**	139	-1.087	.278
59.	306	3.6569	1.24528	**-.885**	.139	.057	.278
60.	306	3.3170	1.33828	**-.843**	.139	-.064	.278
61.	306	3.7255	1.21053	**-.933**	.139	.152	.278
62.	306	3.3431	1.28926	**-.615**	.139	-.478	.278
63.	306	3.7516	1.29959	**-1.127**	.139	-.508	.278
67.	306	3.8399	1.20539	**-1.441**	.139	1.837	.278
68.	306	3.5261	1.11663	**-.791**	.139	.215	.278
7.	306	3.1046	1.30655	**-.408**	.139	-.738	.278
75.	306	3.6732	1.18643	**-.791**	.139	-.201	.278
79.	306	3.2516	1.25662	**-.455**	.139	-.675	.278
9.	306	3.8203	1.05444	**-1.442**	.139	2.614	.278
90.	306	3.8464	1.12174	**-1.055**	.139	.720	.278
91.	306	3.6536	1.20284	**-1.196**	.139	1.114	.278
92.	306	3.2745	1.31441	**-.640**	.139	-.420	.278
93.	306	35261	1.14275	**-.947**	.139	.694	.278

In this case it was found that the data presented was normally distributed as most of the items were close to a value of - 2 or - 3. These skewness values are all smaller than 2.5 and therefore all the item's frequency distributions can be seen as normally distributed. As the data is normally distributed, it can be concluded that the answers given by all the participants were favourably spread (Tabachnick & Fidell, 2001).

Overall reliability statistics

Table 3

Overall reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.966	.966	55

As indicated in the above table the overall Cronbach Alpha of the attitude survey is satisfactory at .966. It is not surprising though that the overall alpha is high, this is usually the case if only one dimension is recognized which is attitude in this case. The reliability was also determined for each of the thirteen dimensions of this employee attitude survey. The alpha ranged from .533 - .829 within all of the 13 dimensions. The reliability should ideally range from 0.6 - 0.69 to be seen as acceptable (Gorsuch, 1983).

In other research conducted by Gorsuch (1983) it was stated that a sample size of + 300 are very sufficient in the determining scale reliability and in the process of scale validation.

Exploratory factor analysis

Table 4

KMO and Barlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.941
	Approx. Chi-Square	9939.028
	df	1485
	Sig.	.000

Table 5

Total variance explained

	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	20.071	36.493	36.493
2	2.523	4.588	41.080
3	2.173	3.950	45.031
4	1.894	3.444	48.474
5	1.498	2.724	51.199
6	1.391	2.529	53.727
7	1.257	2.286	56.014
8	1.175	2.136	58.149
9	1.131	2.056	60.205
10	1.072	1.950	62.155
11	1.010	1.837	63.992
12	.980	1.782	65.773
13	.951	1.728	67.502

14	.877	1.594	69.096
15	.842	1.530	70.626
16	.795	1.446	72.072
17	.757	1.377	73.450
18	.732	1.332	74.781
19	.713	1.295	76.077
20	.682	1.241	77.317
21	.663	1.205	78.522
22	.646	1.175	79.697
23	.615	1.119	80.816
24	.598	1.087	81.903
25	.573	1.042	82.945
26	.534	.971	83.917
27	.523	.951	84.867
28	.506	.920	85.787
29	.483	.879	86.666
30	.441	.802	87.468
31	.431	.783	88.251
32	.418	.759	89.011
33	.408	.742	89.752
34	.388	.706	90.459
35	.382	.695	91.154
36	.365	.663	91.817
37	.358	.651	92.468
38	.336	.611	93.079
39	.310	.563	93.642
40	.302	.549	94.191
41	.295	.536	94.727
42	.277	.503	95.230
43	.266	.484	95.714
44	.255	.463	96.178
45	.243	.442	96.619
46	.241	.439	97.058
47	.228	.415	97.473
48	.215	.392	97.865
49	.205	.372	98.237
50	.188	.342	98.579
51	.176	.319	98.898
52	.169	.307	99.206
53	.156	.283	99.489
54	.142	.258	99.747
55	.139	.253	100.000

Extraction Method: Principal Component Analysis

The eigenvalues indicate how many factors can be extracted, in other words how many factors do measure what is supposed to measure. The word eigenvalue, also known as characteristic roots, refers to the amount of variation in the total sample accounted for by each factor. The eigenvalues are not the percentage of variance explained but rather a measure of the amount of variance in relation to total variance. As seen in the above

table random eigenvalues and the real eigenvalues were compared, and research has shown that random eigenvalues are usually lower than the real values, as it is also the case in this instance (Lawley, 1971). The KMO (Kaiser – Meyer – Olkin) indicated the efficiency of the sample size; it recorded a value of .941 that is very satisfactory. Tabahnick (2001) stated that Kaiser's measure of sampling adequacy is basically the ratio of the sum of squared correlations plus the sum of squared partial correlations. Values of above .6 are ideally required in order to conduct a factor analysis.

On the other hand a Barlett's test was done that determined whether all factor standard deviations (or equivalently variances) are equal, against the alternative that the standard deviations are not all equal. The Barlett's test should be significant (i.e. significance less than 0.05) in order to successfully proceed to a factor analysis (Morgan, 1998). All standard deviations are equal and there are no difference in variance between the items.

It was assumed that this questionnaire measures thirteen different dimensions of employee attitude. In the results obtained from the eigenvalues in performing an exploratory factor analysis (EFA) it indicated that there are indeed only one dimension that could be identified in the questionnaire. Only one factor loading was detected out of all of the items within the questionnaire. This means that there are no real dimensions in this questionnaire. Eleven Eigenvalues seem to be stable though, but the difference between the first factor reading and the other ten are extreme. For this reason the other factors cannot be extracted and seen as much worth. The empirical results did not correspond with assumption at all. This can be seen as a huge problem in the validation of any questionnaire.

Frequency-item distribution, inter-item & anti-image correlations

In order to determine whether the inter-item correlation complies with the criteria of the sampling adequacy set for factor analysis an anti-image correlation was conducted for all of the items in the employee attitude survey. Before looking at the inter-item correlation, some information regarding this method will be provided. The correlation tables display Pearson correlation coefficients, significant values, as well as the number of cases with non-missing values. The Pearson correlation coefficients assume that the data are normally distributed and can be seen as a measure of linear association between two variables. The correlation values may range from -1 to 1 and so, the

symbol the correlation coefficient displays indicates the direction of the relationship, either positive or negative. It is important to note that the correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself. The correlations that are above the main diagonal are a mirror image of those below. The closer a value lies to 1.0, the more positively correlated that item is. If the significance level is very small (< 0.50) then the correlation can be seen as significant. On the other hand if the significance level is relatively large (> 0.50) then the correlation is not significant and the variables are not linearly related to one another (Anon, 2006).

Table 6

Frequency – item response distribution

Q	Don't know	No - improvements are very necessary	No - improvements are necessary	Neither yes/no	Yes - good	Yes - Excellent
q1	2	21	51	32	123	77
q10	3	28	35	42	112	86
q11	8	33	51	43	103	68
q14	2	20	43	49	121	71
q15	3	34	44	50	116	59
q16	7	25	31	36	133	74
q177	4	19	33	42	132	76
q178	7	33	50	58	104	54
q179	11	28	27	37	114	89
q19	4	12	28	36	160	66
q2	4	11	30	33	155	73
q21	5	6	15	28	143	109
q23	7	32	32	47	106	82
q24	7	29	38	43	122	67
q25	5	40	48	46	115	52
q27	2	16	47	43	141	57
q28	7	5	6	20	75	193
q29	4	21	35	35	116	95
q30	8	32	44	47	99	76
q33	6	3	8	17	82	190
q34	1	14	28	37	131	95
q35	3	18	60	44	133	48
q36	12	20	53	45	116	60
q38	7	10	28	48	152	61
q4	4	29	62	32	111	68
q41	15	13	33	47	143	55
q42	2	18	33	42	151	60
q43	2	11	25	35	143	90

q44	3	22	34	35	119	93
q45	4	22	52	48	119	61
q46	1	9	70	56	125	45
q47	5	13	55	54	133	46
q48	8	2	14	22	136	124
q49	9	4	20	38	140	95
q5	2	17	26	33	119	109
q50	10	13	42	43	142	56
q52	3	20	41	40	125	77
q53	5	26	70	65	105	35
q54	56	26	36	59	93	36
q57	45	34	36	43	106	42
q59	4	19	36	45	117	85
q60	13	26	36	55	128	48
q61	3	16	38	37	123	89
q62	6	25	54	48	119	54
q63	7	19	31	28	122	99
q67	8	15	15	35	140	93
q68	4	9	51	50	142	50
q7	8	30	70	50	110	38
q75	1	18	40	43	123	81
q79	4	27	61	56	112	46
q9	6	7	19	43	160	71
q90	3	8	35	36	129	95
q91	8	15	26	44	146	67
q92	9	26	53	50	120	48
q93	7	8	45	53	143	50

As the reader can see from the above table, the answers of the questions were relatively favourably spread. This was also detected in the descriptive statistics table earlier in this chapter. All statistical methods carried out in this study assume that the data are normally distributed; if the data were not normally spread it would have had an influence on all of the results (Anon, 2005).

Inter-item correlations

Table 7

Respect

		Question 5	Question 91
Question5	Pearson Correlation	1	.364(**)
	Sig. (2-tailed)		.000
Question91	Pearson Correlation	.364(**)	1
	Sig. (2-tailed)	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlation between item 5 and 91.

Table 8

Co – operation

		Question7	Question42	Question44	Question47
Question7	Pearson Correlation	1	.484(**)	.420(**)	.352(**)
	Sig. (2-tailed)		.000	.000	.000
Question42	Pearson Correlation	.484(**)	1	.556(**)	.462(**)
	Sig. (2-tailed)	.000		.000	.000
Question44	Pearson Correlation	.420(**)	.556(**)	1	.364(**)
	Sig. (2-tailed)	.000	.000		.000
Question47	Pearson Correlation	.352(**)	.462(**)	.364(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 9

Delegation/influence

		Question9	Question10	Question43	Question177
Question9	Pearson Correlation	1	.267(**)	.167(**)	.257(**)
	Sig. (2-tailed)		.000	.003	.000
Question10	Pearson Correlation	.267(**)	1	.444(**)	.588(**)
	Sig. (2-tailed)	.000		.000	.000
Question43	Pearson Correlation	.167(**)	.444(**)	1	.593(**)
	Sig. (2-tailed)	.003	.000		.000
Question177	Pearson Correlation	.257(**)	.588(**)	.593(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 10

Performance feedback

		Question11	Question41	Question60
Question11	Pearson Correlation	1	.370(**)	.348(**)
	Sig. (2-tailed)		.000	.000
Question41	Pearson Correlation	.370(**)	1	.441(**)
	Sig. (2-tailed)	.000		.000
Question60	Pearson Correlation	.348(**)	.441(**)	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 11

Internal information/communication

		Question14	Question15	Question16	Question45	Question52	Question92
Question14	Pearson Correlation	1	.490(**)	.339(**)	.559(**)	.370(**)	.485(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Question15	Pearson Correlation	.490(**)	1	.483(**)	.411(**)	.390(**)	.439(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Question16	Pearson Correlation	.339(**)	.483(**)	1	.409(**)	.323(**)	.350(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Question45	Pearson Correlation	.559(**)	.411(**)	.409(**)	1	.431(**)	.505(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Question52	Pearson Correlation	.370(**)	.390(**)	.323(**)	.431(**)	1	.299(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Question92	Pearson Correlation	.485(**)	.439(**)	.350(**)	.505(**)	.299(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 12

Confidence/Performance orientation

		Question1	Question2	Question4	Question59	Question63	Question90
Question1	Pearson Correlation	1	.532(**)	.551(**)	.487(**)	.414(**)	.299(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Question2	Pearson Correlation	.532(**)	1	.393(**)	.370(**)	.292(**)	.300(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Question4	Pearson Correlation	.551(**)	.393(**)	1	.368(**)	.390(**)	.260(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Question59	Pearson Correlation	.487(**)	.370(**)	.368(**)	1	.569(**)	.387(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Question63	Pearson Correlation	.414(**)	.292(**)	.390(**)	.569(**)	1	.313(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Question90	Pearson Correlation	.299(**)	.300(**)	.260(**)	.387(**)	.313(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 13

Overall understanding

		Question19	Question46	Question48	Question67
Question19	Pearson Correlation	1	.494(**)	.203(**)	.351(**)
	Sig. (2-tailed)		.000	.000	.000
Question46	Pearson Correlation	.494(**)	1	.172(**)	.346(**)
	Sig. (2-tailed)	.000		.002	.000
Question48	Pearson Correlation	.203(**)	.172(**)	1	.361(**)
	Sig. (2-tailed)	.000	.002		.000
Question67	Pearson Correlation	.351(**)	.346(**)	.361(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).

a Listwise N=306

Finding: Significant correlations exist between all items.

Table 14

Goals

		Question21	Question49	Question178
Question21	Pearson Correlation	1	.436(**)	.204(**)
	Sig. (2-tailed)		.000	.000
Question49	Pearson Correlation	.436(**)	1	.426(**)
	Sig. (2-tailed)	.000		.000
Question178	Pearson Correlation	.204(**)	.426(**)	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).

a Listwise N=306

Finding: Significant correlations exist between all items.

Table 15

Individual development

		Question23	Question24	Question25
Question23	Pearson Correlation	1	.524(**)	.471(**)
	Sig. (2-tailed)		.000	.000
Question24	Pearson Correlation	.524(**)	1	.506(**)
	Sig. (2-tailed)	.000		.000
Question25	Pearson Correlation	.471(**)	.506(**)	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 16

Easy to implement

		Question27	Question53
Question27	Pearson Correlation	1	.388(**)
	Sig. (2-tailed)		.000
Question53	Pearson Correlation	.388(**)	1
	Sig. (2-tailed)	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exists between item 27 and 53.

Table 17

Planning/follow-up

		Question35	Question36	Question54	Question57
Question35	Pearson Correlation	1	.470(**)	.327(**)	.383(**)
	Sig. (2-tailed)		.000	.000	.000
Question36	Pearson Correlation	.470(**)	1	.356(**)	.370(**)
	Sig. (2-tailed)	.000		.000	.000
Question54	Pearson Correlation	.327(**)	.356(**)	1	.690(**)
	Sig. (2-tailed)	.000	.000		.000
Question57	Pearson Correlation	.383(**)	.370(**)	.690(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 18

Personnel and environmental issues

		Q28	Q29	Q30	Q33	Q34	Q50	Q61	Q62	Q75	Q79
Question28	Pearson Correlation	1	.340(**)	.278(**)	.522(**)	.080	.197(**)	.173(**)	.218(**)	.149(**)	.194(**)
	Sig. (2-tailed)		.000	.000	.000	.165	.001	.002	.000	.009	.001
Question29	Pearson Correlation	.340(**)	1	.585(**)	.300(**)	.323(**)	.236(**)	.394(**)	.382(**)	.370(**)	.528(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000
Question30	Pearson Correlation	.278(**)	.585(**)	1	.293(**)	.289(**)	.281(**)	.430(**)	.346(**)	.329(**)	.495(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000
Question33	Pearson Correlation	.522(**)	.300(**)	.293(**)	1	.235(**)	.127(*)	.137(*)	.207(**)	.242(**)	.188(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.026	.017	.000	.000	.001
Question34	Pearson Correlation	.080	.323(**)	.289(**)	.235(**)	1	.181(**)	.257(**)	.301(**)	.442(**)	.370(**)
	Sig. (2-tailed)	.165	.000	.000	.000		.001	.000	.000	.000	.000
Question50	Pearson Correlation	.197(**)	.236(**)	.281(**)	.127(*)	.181(**)	1	.266(**)	.292(**)	.260(**)	.478(**)
	Sig. (2-tailed)	.001	.000	.000	.026	.001		.000	.000	.000	.000
Question61	Pearson Correlation	.173(**)	.394(**)	.430(**)	.137(*)	.257(**)	.266(**)	1	.458(**)	.382(**)	.537(**)
	Sig. (2-tailed)	.002	.000	.000	.017	.000	.000		.000	.000	.000
Question62	Pearson Correlation	.218(**)	.382(**)	.346(**)	.207(**)	.301(**)	.292(**)	.458(**)	1	.335(**)	.513(**)

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000
Question75	Pearson Correlation	.149(**)	.370(**)	.329(**)	.242(**)	.442(**)	.260(**)	.382(**)	.335(**)	1	.491(**)
	Sig. (2-tailed)	.009	.000	.000	.000	.000	.000	.000	.000		.000
Question79	Pearson Correlation	.194(**)	.528(**)	.495(**)	.188(**)	.370(**)	.478(**)	.537(**)	.513(**)	.491(**)	1
	Sig. (2-tailed)	.001	.000	.000	.001	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

Table 19

Attitude to change

		Question38	Question68	Question93	Question179
Question38	Pearson Correlation	1	.374(**)	.313(**)	.337(**)
	Sig. (2-tailed)		.000	.000	.000
Question68	Pearson Correlation	.374(**)	1	.468(**)	.324(**)
	Sig. (2-tailed)	.000		.000	.000
Question93	Pearson Correlation	.313(**)	.468(**)	1	.373(**)
	Sig. (2-tailed)	.000	.000		.000
Question179	Pearson Correlation	.337(**)	.324(**)	.373(**)	1
	Sig. (2-tailed)	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).
a Listwise N=306

Finding: Significant correlations exist between all items.

It is very interesting to note that all the different items within a certain dimension have a significant inter-item correlation, this means that the items in every dimension has a lot in common with one another, this also indicates that the dimensions do measure the same construct.

Anti-image correlations

As mentioned earlier an anti-image correlation should also be carried out to determine whether the above inter-item correlation will comply with criteria of sampling adequacy.

An anti-image correlation is the negative value of partial correlation that exists between variables. Also linked to the anti-image correlation processes is the measure of sampling adequacy (MSA). These scores can range from 0 to 1. If a variable has a score of 1, it means the variable is perfectly predicted without any error form other variables (Hair, Anderson, Tatham & Black, 1998). The following results were obtained from the anti-image correlation:

Table 20

Anti – image correlations

	q1	q10	q11	q14	q15	q16	q177	q178	q179	q19	q2	q21	q23	q24	q25	q27	q28
Q1	**0.966**	-0.138	0.080	-0.150	0.003	0.052	0.013	-0.066	0.078	-0.016	-0.216	-0.114	-0.079	0.120	-0.065	-0.144	-0.031
Q10	-0.138	**0.960**	-0.014	-0.114	-0.088	0.031	-0.106	-0.033	0.078	-0.146	0.089	0.093	-0.170	-0.022	-0.151	-0.040	0.074
Q11	0.080	-0.014	**0.967**	-0.114	-0.029	-0.116	-0.090	-0.052	0.120	0.019	0.034	0.000	-0.128	0.017	0.014	0.054	0.062
Q14	-0.150	-0.114	-0.114	**0.974**	-0.086	0.049	-0.023	-0.015	0.032	0.013	-0.017	-0.060	-0.093	-0.109	-0.063	0.064	-0.086
Q15	0.003	-0.088	-0.029	-0.086	**0.918**	-0.349	0.093	0.103	-0.128	0.023	0.050	0.100	0.060	-0.132	-0.023	-0.014	-0.049
Q16	0.052	0.031	-0.116	0.049	-0.349	**0.882**	0.099	-0.127	0.060	-0.041	-0.117	-0.346	-0.107	-0.018	-0.076	0.051	-0.023
Q177	0.013	-0.106	-0.090	-0.023	0.093	0.099	**0.958**	-0.266	-0.033	0.018	-0.035	-0.018	-0.108	-0.028	0.002	0.081	-0.149
Q178	-0.066	-0.033	-0.052	-0.015	0.103	-0.127	-0.266	**0.945**	-0.216	0.185	-0.026	0.124	0.051	-0.182	0.083	0.053	0.062
Q179	0.078	0.078	0.120	0.032	-0.128	0.060	-0.033	-0.216	**0.934**	-0.014	-0.032	-0.135	-0.072	0.015	-0.105	0.090	0.065
Q19	-0.016	-0.146	0.019	0.013	0.023	-0.041	0.018	0.185	-0.014	**0.953**	-0.087	-0.067	-0.037	-0.078	0.038	-0.073	-0.034
Q2	-0.216	0.089	0.034	-0.017	0.050	-0.117	-0.035	-0.026	-0.032	-0.087	**0.957**	0.108	0.007	-0.053	-0.043	-0.013	-0.061
Q21	-0.114	0.093	0.000	-0.060	0.100	-0.346	-0.018	0.124	-0.135	-0.067	0.108	**0.837**	-0.028	0.088	0.173	0.075	-0.136
Q23	-0.079	-0.170	-0.128	-0.093	0.060	-0.107	-0.108	0.051	-0.072	-0.037	0.007	-0.028	**0.966**	-0.170	-0.046	-0.035	0.009
Q24	0.120	-0.022	0.017	-0.109	-0.132	-0.018	-0.028	-0.182	0.015	-0.078	-0.053	0.088	-0.170	**0.946**	-0.228	0.025	-0.017
Q25	-0.065	-0.151	0.014	-0.063	-0.023	-0.076	0.002	0.083	-0.105	0.038	-0.043	0.173	-0.046	-0.228	**0.933**	-0.008	-0.053
Q27	-0.144	-0.040	0.054	0.064	-0.014	0.051	0.081	0.053	0.090	-0.073	-0.013	0.075	-0.035	0.025	-0.008	**0.956**	-0.012
Q28	-0.031	0.074	0.062	-0.086	-0.049	-0.023	-0.149	0.062	0.065	-0.034	-0.061	-0.136	0.009	-0.017	-0.053	-0.012	**0.810**
Q29	-0.010	-0.066	0.033	-0.083	0.160	-0.004	0.037	-0.038	-0.102	-0.059	-0.088	-0.048	0.025	-0.070	0.072	-0.105	-0.145
Q30	0.002	0.065	-0.151	-0.118	-0.207	0.163	-0.004	0.013	0.051	-0.060	-0.061	-0.146	-0.040	0.014	-0.168	0.078	-0.034
Q33	-0.019	0.064	-0.052	0.108	-0.015	-0.047	0.077	0.032	0.031	0.137	-0.023	0.028	-0.099	0.007	0.058	-0.114	-0.415
Q34	-0.114	0.036	0.019	-0.004	-0.011	-0.017	-0.021	0.051	-0.008	-0.064	0.066	0.125	0.043	-0.025	-0.019	0.090	0.075
Q35	-0.018	-0.078	0.064	-0.063	-0.086	0.093	-0.073	-0.026	0.054	0.084	-0.027	-0.173	-0.108	0.086	-0.078	-0.043	0.024
Q36	0.012	-0.027	-0.174	-0.103	-0.018	-0.056	0.095	0.061	-0.212	0.019	0.047	0.191	-0.039	-0.090	0.147	0.006	0.010
Q38	0.001	0.011	-0.031	0.005	0.174	-0.076	0.083	-0.191	-0.046	0.019	0.100	0.074	-0.068	0.030	-0.062	-0.012	0.040
Q4	-0.065	-0.133	-0.135	0.112	0.143	-0.118	0.061	0.023	-0.009	0.049	-0.052	0.050	-0.066	-0.059	0.038	-0.101	-0.133
Q41	0.102	-0.022	-0.084	-0.068	-0.063	0.054	0.060	-0.016	-0.076	-0.071	-0.085	-0.143	0.098	0.012	-0.070	-0.126	-0.079
Q42	-0.072	-0.001	-0.104	-0.069	0.011	0.032	0.089	-0.003	-0.027	-0.113	-0.103	0.052	-0.038	-0.104	0.099	-0.143	0.011
Q43	-0.050	0.073	0.012	-0.062	0.017	-0.007	-0.209	0.133	0.135	0.000	-0.107	-0.090	-0.052	0.045	-0.051	-0.003	0.197
Q44	-0.033	-0.133	-0.065	-0.063	0.027	-0.134	-0.088	0.023	-0.049	0.069	0.045	0.142	0.037	0.077	0.116	-0.101	-0.080
Q45	-0.054	-0.028	-0.199	0.003	-0.031	-0.115	-0.173	-0.004	0.028	-0.045	-0.090	-0.010	0.122	-0.050	-0.038	-0.075	0.026
Q46	-0.077	0.269	0.095	-0.018	-0.144	0.187	-0.093	-0.070	-0.073	-0.190	-0.027	-0.046	-0.043	-0.024	-0.003	-0.063	0.086
Q47	-0.090	-0.042	-0.056	0.010	-0.009	-0.077	0.047	0.047	0.011	0.031	0.085	0.133	0.156	0.077	0.098	-0.101	-0.075
Q48	0.065	-0.097	0.022	-0.074	-0.175	-0.082	0.063	-0.009	-0.091	0.058	-0.128	-0.211	0.072	0.031	0.089	-0.148	-0.039
Q49	0.113	-0.103	0.038	0.012	0.076	-0.030	-0.132	-0.059	-0.046	0.026	0.003	-0.250	0.028	-0.097	-0.070	-0.051	-0.006
Q5	-0.265	-0.071	0.000	-0.039	0.018	0.003	0.039	-0.110	-0.049	-0.046	0.125	-0.010	-0.046	0.114	-0.048	0.106	-0.126
Q50	-0.096	-0.001	0.073	0.097	0.200	-0.020	-0.036	0.170	-0.064	-0.052	0.028	-0.040	0.119	-0.195	0.040	0.056	-0.069

Q52	0.145	-0.121	-0.055	0.138	-0.105	0.087	0.019	-0.046	0.110	0.114	-0.038	-0.156	0.026	-0.069	-0.022	-0.034	-0.002
Q53	-0.097	-0.095	-0.046	0.100	0.117	-0.051	-0.020	-0.100	0.149	-0.067	0.003	0.013	0.033	0.050	-0.006	0.044	0.085
Q54	0.023	0.055	-0.097	-0.023	-0.041	0.026	-0.107	-0.026	-0.005	-0.050	0.046	0.171	-0.104	0.165	-0.096	0.007	0.043
Q57	-0.026	0.042	0.034	-0.034	0.050	-0.051	0.126	-0.073	0.032	-0.022	0.001	-0.158	0.099	-0.090	0.028	-0.031	-0.002
Q59	-0.005	-0.032	-0.050	-0.074	-0.249	0.092	-0.056	-0.050	-0.246	-0.060	-0.052	-0.073	0.042	0.004	0.139	-0.124	0.130
Q60	-0.059	-0.035	-0.077	0.077	0.037	-0.014	-0.027	-0.043	-0.015	-0.037	0.008	-0.018	-0.007	-0.085	-0.023	0.085	0.145
Q61	-0.058	0.058	0.018	-0.179	0.050	0.047	-0.194	0.082	-0.097	-0.074	-0.038	0.051	-0.052	-0.178	0.040	-0.046	0.072
Q62	-0.083	0.015	-0.063	-0.053	0.075	-0.074	-0.145	-0.021	-0.033	-0.063	0.078	0.061	0.125	0.017	-0.172	-0.017	-0.040
Q63	0.029	-0.019	0.018	0.096	-0.030	0.130	0.057	-0.030	-0.062	0.009	0.052	-0.074	-0.090	-0.006	-0.059	0.135	-0.103
Q67	0.066	0.031	0.145	0.005	0.060	0.099	0.084	-0.042	-0.018	-0.078	0.092	-0.091	-0.073	-0.008	-0.102	0.155	-0.100
Q68	0.002	0.066	-0.037	-0.002	-0.161	0.025	-0.144	-0.095	0.153	-0.141	-0.131	0.047	-0.040	0.053	0.110	-0.145	-0.078
Q7	0.009	-0.020	-0.035	-0.075	-0.110	-0.118	-0.021	0.010	0.081	0.070	-0.041	0.027	-0.013	0.172	-0.050	-0.072	0.159
Q75	-0.019	0.065	-0.007	0.038	-0.033	-0.116	-0.076	0.057	0.003	0.008	0.048	0.090	-0.080	0.025	-0.159	-0.182	0.057
Q79	-0.009	-0.068	0.022	0.063	-0.120	0.090	0.050	-0.080	-0.006	0.104	0.034	-0.161	-0.049	0.004	-0.065	-0.010	0.027
Q9	0.017	0.045	0.094	0.001	-0.040	0.111	0.003	0.060	-0.059	0.003	-0.012	-0.048	0.028	-0.076	-0.049	-0.004	0.079
Q90	0.060	0.123	-0.034	-0.093	-0.083	0.120	0.002	-0.091	-0.008	-0.229	-0.068	0.016	0.044	0.003	-0.016	0.072	-0.021
Q91	0.036	0.008	-0.091	0.050	0.071	-0.087	-0.108	0.142	-0.247	0.062	-0.032	0.098	0.003	-0.035	0.099	-0.092	0.052
Q92	0.033	-0.109	0.035	-0.024	-0.091	-0.043	0.053	-0.069	-0.003	0.064	-0.091	-0.022	0.060	0.049	0.012	0.077	-0.030
Q93	-0.029	0.050	-0.011	-0.041	0.088	-0.121	-0.076	-0.078	-0.023	-0.009	0.132	0.052	-0.004	0.048	0.012	-0.149	0.076

	q29	q30	q33	q34	q35	q36	q38	q4	q41	q42	q43	q44	q45	q46	q47	q48	q49
Q1	-0.010	0.002	-0.019	-0.114	-0.018	0.012	0.001	-0.065	0.102	-0.072	-0.050	-0.033	-0.054	-0.077	-0.090	0.065	0.113
Q10	-0.066	0.065	0.064	0.036	-0.078	-0.027	0.011	-0.133	-0.022	-0.001	0.073	-0.133	-0.028	0.269	-0.042	-0.097	-0.103
Q11	0.033	-0.151	-0.052	0.019	0.064	-0.174	-0.031	-0.135	-0.084	-0.104	0.012	-0.065	-0.199	0.095	-0.056	0.022	0.038
Q14	-0.083	-0.118	0.108	-0.004	-0.063	-0.103	0.005	0.112	-0.068	-0.069	-0.062	-0.063	0.003	-0.018	0.010	-0.074	0.012
Q15	0.160	-0.207	-0.015	-0.011	-0.086	-0.018	0.174	0.143	-0.063	0.011	0.017	0.027	-0.031	-0.144	-0.009	-0.175	0.076
Q16	-0.004	0.163	-0.047	-0.017	0.093	-0.056	-0.076	-0.118	0.054	0.032	-0.007	-0.134	-0.115	0.187	-0.077	-0.082	-0.030
Q177	0.037	-0.004	0.077	-0.021	-0.073	0.095	0.083	0.061	0.060	0.089	-0.209	-0.088	-0.173	-0.093	0.047	0.063	-0.132
Q178	-0.038	0.013	0.032	0.051	-0.026	0.061	-0.191	0.023	-0.016	-0.003	0.133	0.023	-0.004	-0.070	0.047	-0.009	-0.059
Q179	-0.102	0.051	0.031	-0.008	0.054	-0.212	-0.046	-0.009	-0.076	-0.027	0.135	-0.049	0.028	-0.073	0.011	-0.091	-0.046
Q19	-0.059	-0.060	0.137	-0.064	0.084	0.019	0.019	0.049	-0.071	-0.113	0.000	0.069	-0.045	-0.190	0.031	0.058	0.026
Q2	-0.088	-0.061	-0.023	0.066	-0.027	0.047	0.100	-0.052	-0.085	-0.103	-0.107	0.045	-0.090	-0.027	0.085	-0.128	0.003
Q21	-0.048	-0.146	0.028	0.125	-0.173	0.191	0.074	0.050	-0.143	0.052	-0.090	0.142	-0.010	-0.046	0.133	-0.211	-0.250
Q23	0.025	-0.040	-0.099	0.043	-0.108	-0.039	-0.068	-0.066	0.098	-0.038	-0.052	0.037	0.122	-0.043	0.156	0.072	0.028
Q24	-0.070	0.014	0.007	-0.025	0.086	-0.090	0.030	-0.059	0.012	-0.104	0.045	0.077	-0.050	-0.024	0.077	0.031	-0.097
Q25	0.072	-0.168	0.058	-0.019	-0.078	0.147	-0.062	0.038	-0.070	0.099	-0.051	0.116	-0.038	-0.003	0.098	0.089	-0.070
Q27	-0.105	0.078	-0.114	0.090	-0.043	0.006	-0.012	-0.101	-0.126	-0.143	-0.003	-0.101	-0.075	-0.063	-0.101	-0.148	-0.051
Q28	-0.145	-0.034	-0.415	0.075	0.024	0.010	0.040	-0.133	-0.079	0.011	0.197	-0.080	0.026	0.086	-0.075	-0.039	-0.006
Q29	**0.954**	-0.270	-0.069	-0.043	-0.067	0.051	-0.022	-0.020	-0.033	-0.159	-0.019	0.098	0.007	-0.007	0.079	0.112	0.007
Q30	-0.270	**0.944**	-0.078	-0.052	0.050	-0.157	-0.042	0.063	0.201	0.056	0.109	0.046	-0.048	-0.015	-0.132	-0.021	0.045
Q33	-0.069	-0.078	**0.827**	-0.117	0.093	0.014	-0.009	0.104	-0.089	0.131	-0.080	0.013	0.020	-0.026	0.068	-0.071	-0.066
Q34	-0.043	-0.052	-0.117	**0.936**	-0.043	0.083	0.041	-0.096	-0.119	0.076	-0.111	0.071	-0.001	-0.042	0.033	0.003	-0.085
Q35	-0.067	0.050	0.093	-0.043	**0.955**	-0.094	-0.040	-0.032	-0.098	-0.072	-0.075	-0.069	-0.200	0.027	-0.100	-0.027	0.203
Q36	0.051	-0.157	0.014	0.083	-0.094	**0.948**	-0.007	0.038	-0.079	0.035	-0.158	0.026	-0.021	-0.039	0.024	0.082	-0.106
Q38	-0.022	-0.042	-0.009	0.041	-0.040	-0.007	**0.915**	0.082	-0.247	0.108	-0.047	0.065	-0.156	0.009	-0.016	-0.151	-0.111
Q4	-0.020	0.063	0.104	-0.096	-0.032	0.038	0.082	**0.961**	-0.035	-0.020	-0.008	-0.006	0.023	-0.058	-0.122	0.031	-0.034
Q41	-0.033	0.201	-0.089	-0.119	-0.098	-0.079	-0.247	-0.035	**0.923**	0.034	0.031	-0.011	0.059	-0.055	0.008	0.185	0.046

Q42	-0.159	0.056	0.131	0.076	-0.072	0.035	0.108	-0.020	0.034	**0.961**	0.031	-0.116	0.062	-0.093	-0.013	0.069	-0.114
Q43	-0.019	0.109	-0.080	-0.111	-0.075	-0.158	-0.047	-0.008	0.031	0.031	**0.933**	-0.068	-0.066	-0.047	0.061	-0.060	0.006
Q44	0.098	0.046	0.013	0.071	-0.069	0.026	0.065	-0.006	-0.011	-0.116	-0.068	**0.952**	0.019	-0.106	0.080	0.149	-0.222
Q45	0.007	-0.048	0.020	-0.001	-0.200	-0.021	-0.156	0.023	0.059	0.062	-0.066	0.019	**0.962**	-0.049	0.025	0.105	-0.024
Q46	-0.007	-0.015	-0.026	-0.042	0.027	-0.039	0.009	-0.058	-0.055	-0.093	-0.047	-0.106	-0.049	**0.932**	-0.400	-0.037	0.020
Q47	0.079	-0.132	0.068	0.033	-0.100	0.024	-0.016	-0.122	0.008	-0.013	0.061	0.080	0.025	-0.400	**0.923**	0.128	-0.157
Q48	0.112	-0.021	-0.071	0.003	-0.027	0.082	-0.151	0.031	0.185	0.069	-0.060	0.149	0.105	-0.037	0.128	**0.875**	-0.267
Q49	0.007	0.045	-0.066	-0.085	0.203	-0.106	-0.111	-0.034	0.046	-0.114	0.006	-0.222	-0.024	0.020	-0.157	-0.267	**0.925**
Q5	-0.094	-0.089	0.000	0.064	0.045	0.098	0.010	-0.057	-0.059	0.024	-0.040	-0.111	-0.051	-0.049	0.033	0.023	0.079
Q50	0.146	-0.065	-0.036	0.005	-0.115	-0.101	-0.018	0.053	-0.141	-0.129	0.085	-0.058	0.000	0.029	-0.006	-0.132	0.058

	q29	**q30**	**q33**	**q34**	**q35**	**q36**	**q38**	**q4**	**q41**	**q42**	**q43**	**q44**	**q45**	**q46**	**q47**	**q48**	**q49**
Q1	-0.010	0.002	-0.019	-0.114	-0.018	0.012	0.001	-0.065	0.102	-0.072	-0.050	-0.033	-0.054	-0.077	-0.090	0.065	0.113
Q10	-0.066	0.065	0.064	0.036	-0.078	-0.027	0.011	-0.133	-0.022	-0.001	0.073	-0.133	-0.028	0.269	-0.042	-0.097	-0.103
Q11	0.033	-0.151	-0.052	0.019	0.064	-0.174	-0.031	-0.135	-0.084	-0.104	0.012	-0.065	-0.199	0.095	-0.056	0.022	0.038
Q14	-0.083	-0.118	0.108	-0.004	-0.063	-0.103	0.005	0.112	-0.068	-0.069	-0.062	-0.063	0.003	-0.018	0.010	-0.074	0.012
Q15	0.160	-0.207	-0.015	-0.011	-0.086	-0.018	0.174	0.143	-0.063	0.011	0.017	0.027	-0.031	-0.144	-0.009	-0.175	0.076
Q16	-0.004	0.163	-0.047	-0.017	0.093	-0.056	-0.076	-0.118	0.054	0.032	-0.007	-0.134	-0.115	0.187	-0.077	-0.082	-0.030
Q177	0.037	-0.004	0.077	-0.021	-0.073	0.095	0.083	0.061	0.060	0.089	-0.209	-0.088	-0.173	-0.093	0.047	0.063	-0.132
Q178	-0.038	0.013	0.032	0.051	-0.026	0.061	-0.191	0.023	-0.016	-0.003	0.133	0.023	-0.004	-0.070	0.047	-0.009	-0.059
Q179	-0.102	0.051	0.031	-0.008	0.054	-0.212	-0.046	-0.009	-0.076	-0.027	0.135	-0.049	0.028	-0.073	0.011	-0.091	-0.046
Q19	-0.059	-0.060	0.137	-0.064	0.084	0.019	0.019	0.049	-0.071	-0.113	0.000	0.069	-0.045	-0.190	0.031	0.058	0.026
Q2	-0.088	-0.061	-0.023	0.066	-0.027	0.047	0.100	-0.052	-0.085	-0.103	-0.107	0.045	-0.090	-0.027	0.085	-0.128	0.003
Q21	-0.048	-0.146	0.028	0.125	-0.173	0.191	0.074	0.050	-0.143	0.052	-0.090	0.142	-0.010	-0.046	0.133	-0.211	-0.250
Q23	0.025	-0.040	-0.099	0.043	-0.108	-0.039	-0.068	-0.066	0.098	-0.038	-0.052	0.037	0.122	-0.043	0.156	0.072	0.028
Q24	-0.070	0.014	0.007	-0.025	0.086	-0.090	0.030	-0.059	0.012	-0.104	0.045	0.077	-0.050	-0.024	0.077	0.031	-0.097
Q25	0.072	-0.168	0.058	-0.019	-0.078	0.147	-0.062	0.038	-0.070	0.099	-0.051	0.116	-0.038	-0.003	0.098	0.089	-0.070
Q27	-0.105	0.078	-0.114	0.090	-0.043	0.006	-0.012	-0.101	-0.126	-0.143	-0.003	-0.101	-0.075	-0.063	-0.101	-0.148	-0.051
Q28	-0.145	-0.034	-0.415	0.075	0.024	0.010	0.040	-0.133	-0.079	0.011	0.197	-0.080	0.026	0.086	-0.075	-0.039	-0.006
Q29	**0.954**	-0.270	-0.069	-0.043	-0.067	0.051	-0.022	-0.020	-0.033	-0.159	-0.019	0.098	0.007	-0.007	0.079	0.112	0.007
Q30	-0.270	**0.944**	-0.078	-0.052	0.050	-0.157	-0.042	0.063	0.201	0.056	0.109	0.046	-0.048	-0.015	-0.132	-0.021	0.045
Q33	-0.069	-0.078	**0.827**	-0.117	0.093	0.014	-0.009	0.104	-0.089	0.131	-0.080	0.013	0.020	-0.026	0.068	-0.071	-0.066
Q34	-0.043	-0.052	-0.117	**0.936**	-0.043	0.083	0.041	-0.096	-0.119	0.076	-0.111	0.071	-0.001	-0.042	0.033	0.003	-0.085

Q35	-0.067	0.050	0.093	-0.043	**0.955**	-0.094	-0.040	-0.032	-0.098	-0.072	-0.075	-0.069	-0.200	0.027	-0.100	-0.027	0.203
Q36	0.051	-0.157	0.014	0.083	-0.094	**0.948**	-0.007	0.038	-0.079	0.035	-0.158	0.026	-0.021	-0.039	0.024	0.082	-0.106
Q38	-0.022	-0.042	-0.009	0.041	-0.040	-0.007	**0.915**	0.082	-0.247	0.108	-0.047	0.065	-0.156	0.009	-0.016	-0.151	-0.111
Q4	-0.020	0.063	0.104	-0.096	-0.032	0.038	0.082	**0.961**	-0.035	-0.020	-0.008	-0.006	0.023	-0.058	-0.122	0.031	-0.034
Q41	-0.033	0.201	-0.089	-0.119	-0.098	-0.079	-0.247	-0.035	**0.923**	0.034	0.031	-0.011	0.059	-0.055	0.008	0.185	0.046
Q42	-0.159	0.056	0.131	0.076	-0.072	0.035	0.108	-0.020	0.034	**0.961**	0.031	-0.116	0.062	-0.093	-0.013	0.069	-0.114
Q43	-0.019	0.109	-0.080	-0.111	-0.075	-0.158	-0.047	-0.008	0.031	0.031	**0.933**	-0.068	-0.066	-0.047	0.061	-0.060	0.006
Q44	0.098	0.046	0.013	0.071	-0.069	0.026	0.065	-0.006	-0.011	-0.116	-0.068	**0.952**	0.019	-0.106	0.080	0.149	-0.222
Q45	0.007	-0.048	0.020	-0.001	-0.200	-0.021	-0.156	0.023	0.059	0.062	-0.066	0.019	**0.962**	-0.049	0.025	0.105	-0.024
Q46	-0.007	-0.015	-0.026	-0.042	0.027	-0.039	0.009	-0.058	-0.055	-0.093	-0.047	-0.106	-0.049	**0.932**	-0.400	-0.037	0.020
Q47	0.079	-0.132	0.068	0.033	-0.100	0.024	-0.016	-0.122	0.008	-0.013	0.061	0.080	0.025	-0.400	**0.923**	0.128	-0.157
Q48	0.112	-0.021	-0.071	0.003	-0.027	0.082	-0.151	0.031	0.185	0.069	-0.060	0.149	0.105	-0.037	0.128	**0.875**	-0.267
Q49	0.007	0.045	-0.066	-0.085	0.203	-0.106	-0.111	-0.034	0.046	-0.114	0.006	-0.222	-0.024	0.020	-0.157	-0.267	**0.925**
Q5	-0.094	-0.089	0.000	0.064	0.045	0.098	0.010	-0.057	-0.059	0.024	-0.040	-0.111	-0.051	-0.049	0.033	0.023	0.079
Q50	0.146	-0.065	-0.036	0.005	-0.115	-0.101	-0.018	0.053	-0.141	-0.129	0.085	-0.058	0.000	0.029	-0.006	-0.132	0.058

	q29	**q30**	**q33**	**q34**	**q35**	**q36**	**q38**	**q4**	**q41**	**q42**	**q43**	**q44**	**q45**	**q46**	**q47**	**q48**	**q49**
Q1	-0.010	0.002	-0.019	-0.114	-0.018	0.012	0.001	-0.065	0.102	-0.072	-0.050	-0.033	-0.054	-0.077	-0.090	0.065	0.113
Q10	-0.066	0.065	0.064	0.036	-0.078	-0.027	0.011	-0.133	-0.022	-0.001	0.073	-0.133	-0.028	0.269	-0.042	-0.097	-0.103
Q11	0.033	-0.151	-0.052	0.019	0.064	-0.174	-0.031	-0.135	-0.084	-0.104	0.012	-0.065	-0.199	0.095	-0.056	0.022	0.038
Q14	-0.083	-0.118	0.108	-0.004	-0.063	-0.103	0.005	0.112	-0.068	-0.069	-0.062	-0.063	0.003	-0.018	0.010	-0.074	0.012
Q15	0.160	-0.207	-0.015	-0.011	-0.086	-0.018	0.174	0.143	-0.063	0.011	0.017	0.027	-0.031	-0.144	-0.009	-0.175	0.076
Q16	-0.004	0.163	-0.047	-0.017	0.093	-0.056	-0.076	-0.118	0.054	0.032	-0.007	-0.134	-0.115	0.187	-0.077	-0.082	-0.030
Q177	0.037	-0.004	0.077	-0.021	-0.073	0.095	0.083	0.061	0.060	0.089	-0.209	-0.088	-0.173	-0.093	0.047	0.063	-0.132
Q178	-0.038	0.013	0.032	0.051	-0.026	0.061	-0.191	0.023	-0.016	-0.003	0.133	0.023	-0.004	-0.070	0.047	-0.009	-0.059
Q179	-0.102	0.051	0.031	-0.008	0.054	-0.212	-0.046	-0.009	-0.076	-0.027	0.135	-0.049	0.028	-0.073	0.011	-0.091	-0.046
Q19	-0.059	-0.060	0.137	-0.064	0.084	0.019	0.019	0.049	-0.071	-0.113	0.000	0.069	-0.045	-0.190	0.031	0.058	0.026
Q2	-0.088	-0.061	-0.023	0.066	-0.027	0.047	0.100	-0.052	-0.085	-0.103	-0.107	0.045	-0.090	-0.027	0.085	-0.128	0.003
Q21	-0.048	-0.146	0.028	0.125	-0.173	0.191	0.074	0.050	-0.143	0.052	-0.090	0.142	-0.010	-0.046	0.133	-0.211	-0.250
Q23	0.025	-0.040	-0.099	0.043	-0.108	-0.039	-0.068	-0.066	0.098	-0.038	-0.052	0.037	0.122	-0.043	0.156	0.072	0.028
Q24	-0.070	0.014	0.007	-0.025	0.086	-0.090	0.030	-0.059	0.012	-0.104	0.045	0.077	-0.050	-0.024	0.077	0.031	-0.097
Q25	0.072	-0.168	0.058	-0.019	-0.078	0.147	-0.062	0.038	-0.070	0.099	-0.051	0.116	-0.038	-0.003	0.098	0.089	-0.070
Q27	-0.105	0.078	-0.114	0.090	-0.043	0.006	-0.012	-0.101	-0.126	-0.143	-0.003	-0.101	-0.075	-0.063	-0.101	-0.148	-0.051
Q28	-0.145	-0.034	-0.415	0.075	0.024	0.010	0.040	-0.133	-0.079	0.011	0.197	-0.080	0.026	0.086	-0.075	-0.039	-0.006

Q29	**0.954**	-0.270	-0.069	-0.043	-0.067	0.051	-0.022	-0.020	-0.033	-0.159	-0.019	0.098	0.007	-0.007	0.079	0.112	0.007
Q30	-0.270	**0.944**	-0.078	-0.052	0.050	-0.157	-0.042	0.063	0.201	0.056	0.109	0.046	-0.048	-0.015	-0.132	-0.021	0.045
Q33	-0.069	-0.078	**0.827**	-0.117	0.093	0.014	-0.009	0.104	-0.089	0.131	-0.080	0.013	0.020	-0.026	0.068	-0.071	-0.066
Q34	-0.043	-0.052	-0.117	**0.936**	-0.043	0.083	0.041	-0.096	-0.119	0.076	-0.111	0.071	-0.001	-0.042	0.033	0.003	-0.085
Q35	-0.067	0.050	0.093	-0.043	**0.955**	-0.094	-0.040	-0.032	-0.098	-0.072	-0.075	-0.069	-0.200	0.027	-0.100	-0.027	0.203
Q36	0.051	-0.157	0.014	0.083	-0.094	**0.948**	-0.007	0.038	-0.079	0.035	-0.158	0.026	-0.021	-0.039	0.024	0.082	-0.106
Q38	-0.022	-0.042	-0.009	0.041	-0.040	-0.007	**0.915**	0.082	-0.247	0.108	-0.047	0.065	-0.156	0.009	-0.016	-0.151	-0.111
Q4	-0.020	0.063	0.104	-0.096	-0.032	0.038	0.082	**0.961**	-0.035	-0.020	-0.008	-0.006	0.023	-0.058	-0.122	0.031	-0.034
Q41	-0.033	0.201	-0.089	-0.119	-0.098	-0.079	-0.247	-0.035	**0.923**	0.034	0.031	-0.011	0.059	-0.055	0.008	0.185	0.046
Q42	-0.159	0.056	0.131	0.076	-0.072	0.035	0.108	-0.020	0.034	**0.961**	0.031	-0.116	0.062	-0.093	-0.013	0.069	-0.114
Q43	-0.019	0.109	-0.080	-0.111	-0.075	-0.158	-0.047	-0.008	0.031	0.031	**0.933**	-0.068	-0.066	-0.047	0.061	-0.060	0.006
Q44	0.098	0.046	0.013	0.071	-0.069	0.026	0.065	-0.006	-0.011	-0.116	-0.068	**0.952**	0.019	-0.106	0.080	0.149	-0.222
Q45	0.007	-0.048	0.020	-0.001	-0.200	-0.021	-0.156	0.023	0.059	0.062	-0.066	0.019	**0.962**	-0.049	0.025	0.105	-0.024
Q46	-0.007	-0.015	-0.026	-0.042	0.027	-0.039	0.009	-0.058	-0.055	-0.093	-0.047	-0.106	-0.049	**0.932**	-0.400	-0.037	0.020
Q47	0.079	-0.132	0.068	0.033	-0.100	0.024	-0.016	-0.122	0.008	-0.013	0.061	0.080	0.025	-0.400	**0.923**	0.128	-0.157
Q48	0.112	-0.021	-0.071	0.003	-0.027	0.082	-0.151	0.031	0.185	0.069	-0.060	0.149	0.105	-0.037	0.128	**0.875**	-0.267
Q49	0.007	0.045	-0.066	-0.085	0.203	-0.106	-0.111	-0.034	0.046	-0.114	0.006	-0.222	-0.024	0.020	-0.157	-0.267	**0.925**
Q5	-0.094	-0.089	0.000	0.064	0.045	0.098	0.010	-0.057	-0.059	0.024	-0.040	-0.111	-0.051	-0.049	0.033	0.023	0.079
Q50	0.146	-0.065	-0.036	0.005	-0.115	-0.101	-0.018	0.053	-0.141	-0.129	0.085	-0.058	0.000	0.029	-0.006	-0.132	0.058

All the anti-image correlations are adequate when looking at the inter-item correlation. The MSA (measure of sample adequacy) values were indicated by the figures in bold in the above Anti-images tables. All the MSA's values are greater than 0.60, this indicates that all the items in the employee attitude survey is adequate and significant. For this reason it would not be necessary to perform a principle factor analysis with a varimax rotation and item analysis.

DISCUSSION

The purpose of the study was to evaluate the employee attitude survey and determine its psychometric properties. The results indicated that the overall survey is reliable but the exploratory factor analysis showed only one factor loading, and not thirteen as suggested. A few limitations with regards to this study were identified that will be discussed shortly. A number of six objectives has been stated, all of these objectives were addressed. No biographical information was required from the respondents. For this reason the results could not successfully be generalized to the whole population.

One limitation detected from the respondents was the fact that the survey was only available in one official South African language. All other twenty four languages were international languages; some respondents had difficultly in understanding certain words or phrases and would prefer completing the survey in their own South African language. In future it would be beneficial if employees do have that choice in completing it in their own South African language. Employees representing each language should be appointed to translate it to English afterwards before sending it off to Europe.

A factor analysis was done and the KMO (Kaiser – Meyer – Olkin) was determined and found to be .941. This indicated that the KMO value was significant enough to proceed with a factor analysis as it was larger than .5 (Gorsuch, 1983). The results obtained from the exploratory factor analysis showed only one factor loading, therefore only one dimension was indicated namely attitude in general. In future the different dimensions should be reviewed and replaced with the current dimensions in order to increase the validity of the survey. The items within each dimension were highly related to one another as the MSA (Measure of sampling adequacy) values indicated that all items had a value higher than 0.60. No factor analysis was performed again as all items were significantly related to one another within each dimension. If only certain items indicated high MSA values a second factor analysis would have been performed. The reliability was very satisfying at .966; each of the claimed thirteen dimensions also indicated a satisfying reliability. Most of the dimensions were measured by less than five variables / items. Tabachnick (2001) indicated that a minimum of five variables are

necessary for a pure measurement. As less than five variables were present most of the time under each dimension, the reliability could have been influenced by this. In looking at the hypothesis stated in chapter one, the results indicated that in terms of the reliability of the attitude survey is highly satisfactory. The construct validity are not as satisfactory, rather poor as the survey does not distinguish between the thirteen different dimensions of employee attitude.

A total number of thirteen dimensions have been seen as too many to be covered in only fifty five questions. A general response indicated that people think it is unreasonable to use only fifty five questions to measure all of the dimensions effectively. All of the current items should be reviewed in order to determine whether some items cannot be replaced with other more relevant items. The employee attitude survey is an international survey. A lot of concern has been raised about the survey not being suitable for the South African context. The cultural evaluation of the organization within South Africa should be reviewed to determine whether it complies with the statements within the employee attitude survey, if necessary replace certain questions with others which are more appropriate in terms of our South African context.

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APPENDIX A: ETHICAL FEASIBILITY

1. Research Objective

The main aim of this study is to determine whether an employee attitude survey is a true measurement in determining employee attitude, specifically in our working conditions within the South African context. The biggest concern expressed by the participating organization was that the employee attitude survey is not based on South African principles and work situations, and cannot be generalized to the rest of the world. A number of at least 300 individuals need to complete this attitude survey in order to successfully determine a pattern between various dependant variables. If this large sample of about 300 questionnaires are received back fully completed then only could there possibly be enough valuable evidence in determining how many different factors are needed to explain the pattern of relationship between the variables. The correct process in analyzing the data is of essence in order to really determine whether this employee attitude survey is indeed valid and reliable. Even though the questionnaire was not developed within the country, it will be of a lot of worth to determine the psychometric properties of this attitude survey, not only for our purpose but for the rest of the branches spread over the rest of the world as well.

2. Summary of research techniques

For the purpose of this research project a quantitative research approach will be used. The survey research design will be used, this design will enable the researcher to accurately access how employees feel about their working climate; in terms of leadership, information and collaboration. Measurement will only be taken at one point in time; this refers to cross sectional design. The researcher will not observe change over time. This research technique can ensure that the situations and conditions cannot be manipulated, because the respondents only completes the questionnaire and are not further involved in the research process from there onwards. The type of sampling method appropriate for this study is referred to as accidental sampling. The reason for making use of this sampling method is because the sampling is based entirely on the judgment of the researcher. The researcher will be including all employees at all branches around the country and invite them to complete the survey voluntarily.

3. Participation of respondents

The sample of respondents will consist of all employees employed at the Automotive Manufacturing organization, at the various branches throughout South Africa. All cultures, ages, gender and ethnic origins will be included and therefore no person will be discriminated against. All participation is voluntary and no one will be forced in any way to take part in this research. The study will be conducted within the natural working environment of all employees. The survey will be accessible on the company's intranet and all employees with access to the intranet will be able to complete the survey online. Blue collar workers who do not have access to a work station with a computer or the intranet will complete the survey by means of a written test. Each branch administrator will determine the number of employees to complete the survey in a written format and organize a venue for them on their premises to complete the survey. The survey will take all employees more or less 10 – 15 minutes to complete. Employees will receive a certain password from their immediate supervisor beforehand and all employees in that specific department need to type in the provided password in order to complete the survey, therefore all employees within the same department will have the same password. The questionnaire will be available for completion from the 14th of February until the 12th of March 2006 on the intranet. After this period the data will be sorted and results will be given according to the employee attitude level within each department is.

4. Results, findings and dissertation

All of the results, findings and the completed dissertation will be made available to the University of Pretoria as well as to the relevant party within the organization where the research was undertaken. No information regarding the organization will be disclosed in the dissertation which could lead to jeopardizing their confidentiality. The main aim of this research project is focused on determining the construct validity and is not focused on the individuals taking part in this study. In order to ensure ethical compliance a letter of consent by the organization giving permission to take part in this research and providing the required data will be attached.

APPENDIX B: CHAPTER DIVISION

GENERAL OVERVIEW OF CHAPTERS:

Chapter One provides the reader with relevant background information on the research project, problem statement, as well as the main aim of this research project. This chapter will provide important detail regarding the reasons why such a study is worth while as well as encourage the reader to read through this document with great interest. The main objective of this research is stated in order to inform the reader to what has to be achieved at the end of this research project. For these reasons it is essential to provide a detailed and informative overview of the research project in chapter one.

Chapter Two provides a detailed literature review of general information, statements and facts regarding the concept of attitude and attitude measurement, already known. Previous research findings regarding similar studies will be stated, providing a good indication of whether similar studies were successful, worth while and filled certain gaps within this particular field. The researcher will also focus on the thirteen different dimensions which are seen as building blocks of attitude in the employee attitude survey to indicate whether attitude are evident in all or some of these dimensions as stated by experts.

Chapter Three will state what research approach the researcher will make use of, as well as detail regarding the population and sample used. Information regarding the research design and the measurement instrument will be included. Background information regarding reliability and construct validity will give the reader a good overview of what these two concepts exactly mean and the importance thereof in this research project. The purpose of factor analysis will be provided as well as detailed information on exploratory factor analysis. All of the above information will show the reader exactly how the information needed will be obtained as well as the means by which the data will be analyzed and interpreted.

Chapter Four can be seen as this research project's most "valuable" chapter, because all the results will be documented in this chapter. The results as it is obtained from the statistical programme SPSS, will be provided in graphs and tables.

Chapter Five will provide an overall conclusion to the whole study. Determining whether the research questions were answered and providing limitations with regards to the study as well as recommendations for future research to be done in this field. Literature regarding the results found will also be stated in this chapter.

Chapter Six will provide a basic summary of the research conducted. The article will consist of a short abstract of the research conducted, research method description in terms of the data collection procedure, measuring instrument and data analysis. Results as well as limitations and recommendations for future reference will be documented.

APPENDIX C: LETTER OF CONSENT FOR DATA USAGE

22 May 2006

Faculty Economic and Management Sciences
University of Pretoria
Pretoria
0001

Dear Sir/Madam

RE: LETTER OF CONSENT: PROPOSED RESEARCH AT AN AUTOMOTIVE MAUFACTURING ORGANIZATION

The referred to organization herewith consents to the proposed research, as partial completion of Marzanne van der Linde Masters degree studies at the University of Pretoria. The organization acknowledges that the proposed research relates to Me. van der Linde's Masters Degree in Human Resource Management and it will consist of a survey questionnaire that will be completed on a voluntary basis by all staff members. The organization grants authorization to her for the use of data for this purpose only, with the full understanding that this will not be to the disadvantage of the organization.

Should any additional information be required in this regard, please do not hesitate to contact: Mrs R van Eeden at: (011) 842 5046.

Yours sincerely

Mrs R van Eeden
National Human Resources Manager

APPENDIX D: EXAMPLE OF THE EMPLOYEE ATTITUDE SURVEY

VOLVO GROUP ATTITUDE SURVEY

netsurvey

	Don't know	Yes - excellent	Yes - good	Neither yes or no	No - improvements are necessary	No - improvements are very necessary
Do you feel that your working group/team is well managed?	☐	☐	☐	☐	☐	☐
Do you feel that you work in a cost-conscious manner in your working group/team?	☐	☐	☐	☐	☐	☐
Do you feel that there is positive energy in your working group/team?	☐	☐	☐	☐	☐	☐
Do you feel respected by your immediate manager/supervisor?	☐	☐	☐	☐	☐	☐
Is your working group/team free from conflicts that negatively affect its operations?	☐	☐	☐	☐	☐	☐
Can you influence your work situation?	☐	☐	☐	☐	☐	☐
Does your immediate manager/supervisor involve you in making decisions affecting your working group/team?	☐	☐	☐	☐	☐	☐
Do you receive regular feedback on your performance?	☐	☐	☐	☐	☐	☐
Are you satisfied with the information you receive from your immediate manager/supervisor?	☐	☐	☐	☐	☐	☐
Are you satisfied with the information you receive from the top management of your company?	☐	☐	☐	☐	☐	☐
Do you receive information about your company's business results (e.g. sales, production, financial information)?	☐	☐	☐	☐	☐	☐
Is the service/quality supplied by your group to other working groups/teams satisfactory?	☐	☐	☐	☐	☐	☐
Do you know your company's overall goals/objectives?	☐	☐	☐	☐	☐	☐

Do you feel that your immediate manager/supervisor supports your personal development?	☐	☐	☐	☐	☐	☐
Do you have the opportunity for personal development in your work?	☐	☐	☐	☐	☐	☐
Do you get the education/training needed for your work?	☐	☐	☐	☐	☐	☐
Is it easy to get things done in your working group/team?	☐	☐	☐	☐	☐	☐
Do you like your work?	☐	☐	☐	☐	☐	☐
Do you feel motivated in your work?	☐	☐	☐	☐	☐	☐
Are you sufficiently recognised and appreciated for the work you do?	☐	☐	☐	☐	☐	☐
Are you proud of working for your company?	☐	☐	☐	☐	☐	☐
Is the physical working environment acceptable at your place of work?	☐	☐	☐	☐	☐	☐
Is work planned effectively within your working group/team?	☐	☐	☐	☐	☐	☐
Is your working group's/team's performance regularly reviewed?	☐	☐	☐	☐	☐	☐
Are you proactive in implementing change initiatives?	☐	☐	☐	☐	☐	☐
Do you feel that your personal planning/ development dialogues are worthwhile?	☐	☐	☐	☐	☐	☐
Is there co-operation within your working group/team?	☐	☐	☐	☐	☐	☐
Does your immediate manager/supervisor make clear demands on you?	☐	☐	☐	☐	☐	☐
Do you feel that your immediate manager/supervisor can handle conflict situations within your working group/team?	☐	☐	☐	☐	☐	☐
Do you receive timely information relating to your work?	☐	☐	☐	☐	☐	☐
Is the service/quality received by your group from other working groups/teams satisfactory?	☐	☐	☐	☐	☐	☐
Is there co-operation with the departments/groups, which are important to your work?	☐	☐	☐	☐	☐	☐
Do you understand your company's business mission?	☐	☐	☐	☐	☐	☐
Do you know your working group's/team's goals/objectives?	☐	☐	☐	☐	☐	☐
Can your working group/team cope with stress/anxiety that affects its operations?	☐	☐	☐	☐	☐	☐
Do you feel free to express your opinions in your working group/team?	☐	☐	☐	☐	☐	☐

Are decided actions carried out quickly enough within your company?	☐	☐	☐	☐	☐	☐
Has your working group/team worked actively with the results of the previous Volvo Group Attitude Survey?	☐	☐	☐	☐	☐	☐
Are you familiar with the results of the previous Volvo Group Attitude Survey?	☐	☐	☐	☐	☐	☐
Do you feel that your company is well managed?	☐	☐	☐	☐	☐	☐
Do you have a personal development plan, or similar document?	☐	☐	☐	☐	☐	☐
Does your immediate manager/supervisor set a good example?	☐	☐	☐	☐	☐	☐
Do you feel that new colleagues are properly integrated into your working group/team?	☐	☐	☐	☐	☐	☐
Do you have confidence in the person your immediate manager/supervisor reports to?	☐	☐	☐	☐	☐	☐
Does your company operate in accordance with Volvo Group's corporate values - quality, safety and environmental care?	☐	☐	☐	☐	☐	☐
Do you have the right conditions (e.g. equipment, instructions and routines) to carry out good work?	☐	☐	☐	☐	☐	☐
Is your working group/team good at implementing change initiatives?	☐	☐	☐	☐	☐	☐
Do you feel that your colleagues/co-workers are motivated in their work?	☐	☐	☐	☐	☐	☐
Do you feel that your company is customer focused?	☐	☐	☐	☐	☐	☐
Do you feel respected by your colleagues/co-workers?	☐	☐	☐	☐	☐	☐
Are you satisfied with the information you receive about external factors that affect your company (e.g. customer behaviour, state of the market, competitors)?	☐	☐	☐	☐	☐	☐
Does your working group/team practice continual improvements?	☐	☐	☐	☐	☐	☐
Do you feel that your immediate manager/supervisor explains decisions in a good way?	☐	☐	☐	☐	☐	☐
Are you involved in setting goals/objectives?	☐	☐	☐	☐	☐	☐
Is your company actively working to improve diversity (e.g. gender, race, ethnicity, etc)?	☐	☐	☐	☐	☐	☐

Have you received information about Volvo Group's Code of Conduct?						
Do you feel that your team/working group is working according to Code of Conduct?						
Do you know the procedure for reporting a case of detected fraud?						

Back Send