A SURVEY OF ORGANIZATIONAL CULTURE AND ORGANIZATIONAL PERFORMANCE IN A MANUFACTURING COMPANY

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By

VELISWA VIRGINIA DOM

Student Number: **G05D6478**

Supervised by: Professor Noel Pearse

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THE ABSTRACT

The purpose of this research was to explore the relationship between organizational culture and organizational performance in a manufacturing company. This company supplies metal products to the motor vehicle manufacturing industry, where the quality and quantity of parts produced is of paramount importance, since the buyers of these products are quality conscious. The organization has three production shifts that rotate each week. Anecdotal observations are that irrespective of the time that a shift operates over the course of the month, the different shifts tend to perform at different levels in terms of quality and quantity of output. This study therefore sought to investigate if these differences between shifts are statistically significant, and if so, whether these shifts also have differences in organizational culture.

Components of organizational culture include values, norms, beliefs, attitudes, principles and expectations that give the organization a unique personality and differentiate it from other organizations. While the literature indicates that qualitative or quantitative approaches can be used in organizational culture research, this research adopted the quantitative approach, making use of the Competing Values Framework (CVF). The CVF is a four-category organizational culture typology established by Cameron and Quinn (2006). The framework is based on two dimensions: stability or flexibility of the organization, and external or internal focus. In this research, the CVF was used as a measurement tool to evaluate organizational culture.

In order to determine differences in organizational culture between shifts, a survey was undertaken (N=138) which measured employee perceptions pertaining to the existing organizational culture of each of the three production shifts at the company. Secondly, differences in performance between the shifts were examined by using the performance data for a three-month period for each shift in terms of quantity and quality. This data was obtained from the management of the production process at the

company. Statistical analysis was done using ANOVA to analyse the differences between the shifts.

The findings indicated that the dominant existing organizational culture at the company under investigation is a clan culture. Furthermore, there is a statistically significant difference between the cultures of all the three shifts at the manufacturing company. The results also indicated that there is a statistically significant difference in the quantity and quality of production between the three shifts. In conclusion, the research indicated there are differences in culture and in performance, but given the nature of the data, it was not possible to statistically analyse the relationship between shift culture and performance. However, it is conceivable that cultural differences between shifts may be contributing to performance differences.

With regards to further research, it is recommended that this research be extended to other branches of the manufacturing company in other regions, in order to determine whether there are any significant differences in culture and performance between these branches and their shifts. Research could also be extended to other South African organizations to create a sufficiently large sample of shift and/or business units, so as to be able to do statistical analysis of the relationship between culture and performance.

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CHAPTER 1: INTRODUCTION

1.1 Background and Motivation for the Research

Organizational performance is of concern to most organizations in the 21st century (Angle & Perry, 1981). Research by Angle and Perry (1981); Deal and Kennedy (1982) and Kotter and Heskett (1992) asserted that organizational culture can increase organizational performance and cost-effectiveness. This research was conducted amongst the 150 production employees of a stamping and tool die manufacturing organization within the Eastern Cape, with the aim of investigating the impact of the "current organizational culture" within the three production shifts on their performance, in terms of the quality and quantity of production output. The outcomes of this investigation could inform a strategic organizational culture change that the new production manager wants to implement. The organization under study supplies metal products to the car manufacturing industry. Hence, quality and quantity of parts produced by this organization is of paramount importance since the buyers of these products are quality conscious. This organization has three rotational production shifts that rotate each week. The shifts run from 6 am to 2 pm, 2pm to 10pm and 10 pm to 6 am. This study therefore seeks to investigate if these differences between shifts are statistically significant, and if so, are there also differences in the organizational culture of the shifts. Depending on the outcomes of this investigation, recommendations were made on how this organization can improve the achievement of its performance goals through cultural change.

1.2 Organizational Culture

Organizational culture is defined as an enduring set of shared assumptions, values and norms that shape the management styles, organizational jargon, symbols, procedures, practices and classifications of achievement that adds to organization uniqueness. This definition offers a view of organizational culture that incorporates aspects referred to by various authors such as Clark and Lafferty (2009), Martins and Martins (2003), and Cameron and Quinn (2006). Furthermore, Cameron and Quinn (2006) noted that organizational culture is valued and reflected by the dominant management styles, organizational jargon, symbols, procedures, practices and

classifications of achievement that adds to organization uniqueness. Ogbonna and Harris (2000) also stated that organizational culture is recognised as a key lever in changing an organization's performance. Hence the ability to be aware of, influence and change organizational culture is important to leaders and managers, lest they find themselves being managed by culture, rather than influencing it.

1.3 Organizational Performance

Organizational performance is an important factor in management research. Cascio (2006) defines organizational performance as the degree of achievement of organizational goals. Daft (2000) states that organizational performance is the capability of an organization to accomplish goals through the effective and efficient usage of available resources. Moreover, Daft (2000), Ricardo and Wade (2001) stated that organizational performance can be attained if goals and objectives are achieved. It is noteworthy that, several models or frameworks exist for conducting organizational performance assessments and organizational performance can be classified into individual and organizational performance (Combs, Crook and Shook, 2005). However, this research will consider organizational level performance. Kotter (2012) discovered that organizational culture can increase job satisfaction, problem solving competencies and organization performance. Ernst (2001) also found out that the organizational success will decrease if internal and/or external stakeholder's expectations are mismatched to that of the existing organizational culture.

1.4 Competing Values Framework

The study builds on Cameron and Quinn's (2006) CVF typology, which is based on two dimensions, namely an organization's internal or external focus, and flexibility or stability focus. Relating to these two dimensions, four distinct types of culture are identified. These are: Clan, Hierarchy, Adhocracy and Market (Cameron & Quinn, 2006). A clan culture signifies a flexible organization with emphasis on preserving the internal domain through a people and customer focus, whereas a hierarchy culture describes an internally preserved organization with a stability and control focus. An adhocracy culture represents an externally focussed organization, which is highly flexible with emphasis on individuality, whereas a market culture describes an

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organization that focusses on maintaining its external position, with emphasis on creating a controlled and stable environment (Cameron & Quinn, 2006).

Cameron and Quinn (2006) stipulate that all four culture types in the CVF have an influence on organizational performance, however each culture has differing criteria for high performance. Organizations with a hierarchy culture, are performing when they are efficient, productive, and functioning smoothly and predictably (Cameron and Quinn, 2006), while measures of effective organizational performance that are valued in a market culture are the attaining of objectives, beating the competition, increasing market share, and profitability. The performance criteria most highly valued in a clan culture include cohesion, high levels of employee morale and satisfaction, human resource development, and teamwork (Cameron & Quinn, 2006). Finally, in the adhocracy culture emphasises invention and new ideas; and creating new markets, new customers, and new openings. Together, the before mentioned outcomes serves as basic indicators of effective organisational performance (Cameron & Quinn, 2006). The CVF typology was used as the analytical tool for this research, mainly because of its relevance to the company at hand. In addition, it is widely used and has gained widespread recognition as a reliable model to assess organizational performance and organizational culture (Cameron, *et al*. 2006). Finally, its validity has been noted by Yu (2009).

Numerous researchers have made use of the CVF to quantify organizational culture and show its relationship to performance. For example, Shepstone and Currie (2006), have shown how culture was related to the efficiency of library staff. Cameron and Quinn (2006) made use of the CVF and showed that when all the leaders, managers and staff within an organization have a clear sense of their common culture, this creates a communal order, stability, a united identity, and common vision while simultaneously reducing organization doubts; all of which resulted in improved organizational efficiency. In addition, Trice and Beyer (1993) used the CVF in their study and concluded that a solid, unique organizational culture is the main contributor of successful performance of a company. Furthermore, differences between the organizational cultures of two organizations in the same industry that adopted similar strategies, explained differences in their results (Kandula, 2006). Finally, an optimistic and solid culture can motivate an average individual to perform and achieve, while a

negative or weak culture may demoralise an outstanding employee so that they underperform (Kandula, 2006).

1.5 Problem Statement

Scholars have investigated the culture-performance relationship to find concrete evidence of their link. Ogbonna and Harris (2000) demonstrated that organizational culture was a vital lever in changing an organization's performance. In investigating the connection between organizational culture and performance, numerous researchers have focussed on financial performance (Rashid, Sambasivan, & Tohari, 2003; Sørensen, 2002). In addition, Schechter, Tromp and Vos (2000) noted research where performance was conceptualised in terms of stock losses and staff turnover. However, there seems to be no previous research that has assessed the linear relationship between organizational culture and employee shift performance.

1.6 The Goals of the Research

The research objective in this study is to determine the impact of organizational culture on organizational performance. The following hypotheses were tested.

> Ho 1: There is no statistically significant difference in organizational culture between the three production shifts. The following sub-hypothesis were also tested:
>
> Ho 1a: There is no statistically significant difference in clan culture between the three production shifts
>
> Ho 1b: There is no statistically significant difference in adhocracy culture between the three production shifts
>
> Ho 1c: There is no statistically significant difference in market culture between the three production shifts
>
> Ho 1d: There is no statistically significant difference in hierarchy culture between the three production shifts

Assuming Ho 1 is rejected, then the following hypothesis will be tested.

Ho 2: There is no statistically significant difference in performance (i.e. production quantity and quality) between the three production shifts.

Ho 2a: There is no statistically significant difference in production quantity between the three production shifts.

Ho 2b: There is no statistically significant difference in production quality between the three production shifts.

1.7 Significance of the Study

The study at hand is intending to contribute by examining the differences in organizational culture and organizational performance amongst shifts in a manufacturing organization. The study sought to ascertain if there were dissimilarities in organizational culture and organizational performance and if so, make recommendation associated with the influence of organizational culture on organizational performance.

1.8 Research Design and Methodology

This research utilised a quantitative approach to researching culture, because, in comparison with the qualitative approach it was most appropriate to complete a thorough, reliable and valid piece of research and does not require a large number of cases to make generalisations (Schein, 1990). Thus, the research will be quantitative in nature, adopting a post positivist paradigm (Guba & Lincoln, 1994). The critical realist ontology of post positivism describes how things really are at work. The epistemology of the researcher was as an objective outsider. While employed in the organization, she was not in the production process environment where the research was conducted. A survey questionnaire was used amongst production staff to assess the current organizational culture. The questionnaire was made up of closed-ended questions, based on Organizational Culture Assessment Instrument (OCAI) (Cameron & Quinn, 2006). That sought to collect biographical and general background data and organizational culture data.

In this study, the whole population of 150 production personnel, who are spread evenly across three shifts, were selected. The research was conducted at the manufacturing factory where the researcher works. The reasoning behind the research being

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conducted at the researcher's workplace was that it was inexpensive in relation to cost and time (Leard, 2012). The researcher delivered the questionnaires to respondents in their workplace and completed questionnaires were collected a week later. The data to measure organizational performance was collected from secondary data that is readily available in the production department. The data measured performance in terms of the number of good parts and non-conforming parts produced by each shift over a three-month period. The three-month period was chosen because within this period all the shifts complete their rotation and have equal number of nights/days on each shift. Furthermore, the study used inferential statistics to test the hypotheses. Since the three shifts are independent from each other, factorial ANOVA was used.

1.9 Structure of the Research

There are five chapters in this dissertation. The chapters will be structured as follows:

Chapter One: Introduction.

This covered the introduction to the study, preliminary literature review, goals of the research and hypotheses, and the methodology adopted by the study.

Chapter Two: Review of Related Literature

This chapter reviews the literature that is related to the impact of organizational culture on organizational performance, and looks at the relevant model that underpins this study.

Chapter Three: Research Methodology

This explains the quantitative methodology used in the study. It also gives an explanation of how data was collected from previous records and through questionnaires.

Chapter Four: Data Presentation and Analysis and Discussion

This chapter provides a presentation of data collected on the impact of organizational culture on organizational performance at the manufacturing company and provides an

analysis and interpretation of the data, also discussing the link of the findings to the theoretical framework and related literature.

Chapter Five: **Summary, Conclusions and Recommendations.**

In this chapter, a summary of the research is provided. From the findings in chapter four, recommendations are made for management practice and further research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this chapter the concepts of organizational culture and organizational performance are explored in more detail. This chapter's main emphasis includes theoretical aspects of the concept of organizational culture and organizational performance, definitions, models and dimensions. This chapter also highlights the literature and previous studies on the impact of organizational culture on organizational performance.

One of the most investigated factors in business is the difference between organizations that succeed and others which fail (Martins & Terblanche, 2003). Organization culture and performance continue to be a focal point of interest for organizations, be it a profit or non-profit one (Martins & Terblanche, 2003). It is thus imperative to understand what affects an organization's performance, so as to be able to take the correct actions to enhance performance (Martins & Terblanche, 2003). Nevertheless, determining, conceptualizing and quantifying performance has not been a simple exercise. Academic scholars have opposing views of the denotations about performance, and it is still regarded as a debatable topic. Critical concerns pertain to the appropriateness of different approaches to organizational performance (Martins & Terblanche, 2003).

2.2 Organizational Culture Definition

Aycan,Sinha and Kanungo (1999) explain the definition of organizational culture by saying that culture represents the internal environment of the organization and the employees and manager's assumptions or beliefs that creates the said environment. Weeks (2010) also sees organizational culture as collective standards which are measured by people's behaviour. Weeks (2010) further argued that culture was shared fundamental values and beliefs. Hough and Oswald (2008) suggested that culture can be measured in quantitative terms and is capable of change. They concluded by saying culture provides an opportunity for the development of identity and a sense of belonging for all. Organizational culture is an integral part of the general functioning of an organization (Martins & Terblanche, values, and norms that create a

climate that impacts how personnel reason, feel, and conduct themselves in the workplace.

According Nelson and Quick, (2011) organizational culture plays several important roles

- Unity: creates a sense of identity with the organization.

- Differentiation: all organizations have unique cultures to differentiate themselves from one another.

- Commitment: company interests superseding personal interests.

- Standardisation: norms, rules and standards influence people in the organization and govern or dictate how they behave and perform their jobs. consistent, observable patterns of behaviour

- Guidance and direction: in project-based organizations where the hierarchy is flat, decision-making is moved to the project units and organizational culture provides the path towards goal achievement.

Organizational culture enables standardised problem resolution activities that support a high level of achievement (Nelson & Quick, 2011).

Schein (1985: 9) described organizational culture as "a pattern of basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid, and therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems". This explanation identifies that organizational culture comprises of constructed theories that are generally believed as a manner of accomplishing tasks and are spread to new employees of the organization (Schein, 1985). For new members, this encourages an adaptive reaction inside the organization, instilling a new belief system (Hofstede, 2011).

This novel and adaptive behaviour, encouraged through organizational values and beliefs, is linked with habits, myths, and signs to enforce the main judgements of organizational culture (Hofstede, 2011). Occasionally, organization culture is referred to as "corporate culture" (Ernst, 2001). Many researchers and studies have attested to the important role of corporate culture (Schein, 1996) and it is argued that each organization possesses a different corporate culture. It is on this basis that organizational culture is highlighted as an independent factor in this study. Organizational culture relates to people and the distinct standard and system of the organization (Ernst, 2001) and the manner in which things are carried out in the organization.

Schein (1996) defined organizational culture as a set of common beliefs, values, and standards that effect how workers perceive and react in the workplace. Nelson and Quick (2011) states that organizational culture is composed of four activities which are giving members a feeling of belonging, reinforcing organizational values, improved commitment, and acting as a control system intended to configure actions/behaviour. Organizational culture promotes reasonable means to recognise the issues, that workers learn from experience and configure by virtue of behaviour, patterns, beliefs and standards to encourage high degree of accomplishments (Nelson & Quick, 2011).

Cameron and Quinn (2006) used the CVF model of culture and point out the importance of shared culture in creating order, progression, group recognition, dedication, and shared vision and decreasing organizational unpredictability, which in turn will lead to increased organizational performance.

This suggests that organizational culture is important in terms of distinguishing one organization from other organizations. Werner (2007) argues that leaders of organizations need to identify the type of culture that is going to support the organization's vision and values. Moreover, they need to determine the required behaviour that will shape the culture of the organization.

Brown (1995: 9) describes organizational culture as "the pattern of beliefs, values and learned ways of coping with experience that have developed during the course of an organization's history, and which tend to be manifested in its material arrangements

and in the behaviours of its members". This implies that organizational culture is incorporated in the organization vision so that organizational members act in a manner which is consistent with the organization values. Although, this system of values, standards, beliefs, actions, morals and presumptions gives the organization its unique identity, there are also unwritten or non-verbalised behaviours that explain the manner in which actions get carried out (Denison & Mishra, 1995).

2.3 Approaches to Organizational Culture Research

A qualitative or quantitative approach can be used in organizational culture research.

2.3.1 Qualitative Approach

The contribution of the qualitative approach is primarily its capacity to unearth the values, assumptions and beliefs associated with the culture (Rhodes, 2014), which underpin patterns of organizational behaviour (Martin, 1992). In terms of Schein's (1992) model, a quantitative approach could be used to explore artefacts and values, but not assumptions. A key benefit of a qualitative approach is, that it is open-ended, thereby allowing the members to raise issues that are of concern to them (Martin, 1992). The qualitative researcher therefore does not generally have a preconceived, restricted set of matters to probe (Martin, 1992).

The major drawbacks connected with qualitative methodology are that the methodology is time-consuming and might not be able to measure certain quantitative elements (Martin, 1992). Also, personal knowledge and experience may influence the observations and conclusions (Schein, 1992). This could be problematic in that it is less objective and since qualitative analysis is usually open-ended, the participants have some control over the content and type of data collected (Martin, 1992). The participants might end up covering up an issue unless the researcher probes properly and conducts the interviews and have member checks or focus groups that might reveal the issues. Therefore, a serious issue to the researcher may not arise if it is deemed irrelevant to the participants, or it may even be intentionally covered up by the participants (Martin, 1992).

2.3.2 Quantitative Approach

Creswell (1994) defines quantitative research as a type of research that is `explaining phenomena by collecting numerical data that is analysed using mathematically based methods (in particular statistics). Quantitative research is essentially about collecting numerical data to explain a particular phenomenon, particular questions seem immediately suited to being answered using quantitative methods a part of which this research seeks to cover for it deals with closed ended questions posed to employees. This is based on the premise that the answers to written questions will be given by organizational members (Linnenluecke, Martina., Sally. Russell, & Andrew Griffiths. 2009). However, as with a qualitative approach, a quantitative approach has its own limitations. For example, since only the matters included in the questionnaire are looked at, certain facets of culture may be overlooked (Sashkin, 1984). Furthermore, the respondent cannot give an explanation for the responses given to questions that have a restricted range of quantified responses (Linnenluecke *et al.* 2009).

The quantitative method has two main benefits. Firstly, statistical results that are obtained through this strategy help comparisons between groups or organizations and permitting the determination of the extent of disagreement or agreement between participants (Martin, 1992). An added advantage is that it can be administered and evaluated rapidly. There is no need to spend time at the agency or organization prior to conducting the survey and the responses can be quickly tabulated.

2.4 Typologies of Organizational Culture

Various models of organizational culture have been acknowledged in the literature, which assess organizational behavioural values or norms (Rousseau, 1990). Examples of instruments to appraise organizational culture include the Organizational Beliefs Questionnaire (Sashkin, 1984) that quantifies beliefs, and the Corporate Culture Survey (Glaser, 1983) that measures values, traditions, and cultural networks. Other instruments such as Cooke and Lafferty's (1989) Organizational Culture Inventory (OCI), and the Culture Gap Survey (CGS) developed by Kilman and Saxons (1983) focuses on behavioural norms, and identify common assumptions and beliefs, which affect how the organization's members communicate and view their work.

Another model, which was embraced in this investigation, is the Competing Values Framework (CVF) of organizational culture (Quinn, 1988)

2.5 Competing Values Framework

The CVF arose out of empirical and conceptual work carried out by Robert Quinn and others (Cameron & Quinn, 2006), who were concerned with scrutinizing the paradoxes and apparent inconsistencies of management, as opposed to the trend to portray leaders and managers as logically dealing with problems and issues (Quinn, 1988). Organizational culture is viewed as a set of generally accepted meanings that form the beliefs, values, and norms that help in solving problems under conditions of uncertainty (Pettigrew, 1979; Trice & Beyer, 1993). Quinn (1988) noted the importance of values in organizations (Quinn, 1988) and argued that the contending demands and interpretations in organizations reflected the different values of individuals and often diverse cultures, which had become embedded in parts of, and across organizations. Thus Quinn (1988) intended to craft an integrating framework, which could capture the value and values of these phases, with their combinations of paradoxes and ambiguities, and to show how individuals and organizations could better evaluate their state of affairs.

A key desire emanating from the CVF is to cultivate greater awareness among individuals and organizations about their value orientations, to make better sense of the drivers of tensions and conflict, and to lay the foundation for a more productive strategic dialogue (Quinn, 1988). Quinn's (2004) model can therefore be used as a first step in preparing organizations to address critical value tensions and paradoxes by helping them to comprehend their current state. Quinn (2004) and Martin (2007) propose that transformative leaders address paradox, incongruities or apparent value trade-offs and, working with co-workers, embrace complexity and uncertainty to develop new strategies.

Cameron and Quinn (2006) therefore framed the CVF as a model exemplifying diverse contending principles of organizational culture. This typology is based on two aspects. These relate to how unchanging an organization is and how internally or externally orientated it is (Cameron & Quinn, 2006). The external and internal aspects show whether the organization is attentive to its external context, or to internal factors

(Cameron & Quinn, 2006). The flexibility-control dimension component of this model divulges an organizational tendency for structure and control, or for flexibility. Cameron and Quinn, (2006) argue that flexibility can be achieved through decentralisation and cooperation.

The CVF results in four quadrants which are well-matched with basic organizational structures that are framed in organizational science (Cameron & Quinn, 2006). Four distinct types of culture are acknowledged, namely: Clan, Hierarchy, Adhocracy and Market (Cameron & Quinn, 2006). Clan cultures signify organizations that concentrate on inner maintenance with flexibility, and care about individuals and clients in particular (Cameron & Quinn, 2006). In a hierarchy culture organizations emphasise internal maintenance, control and stability (Cameron & Quinn, 2006). The adhocracy culture portrays organizations where their external positioning in the market is important, combined with a great degree of individuality and flexibility (Cameron & Quinn, 2006). Lastly, the market culture delimits organizations that are preoccupied with their external positioning relative to competitors, as well as highlighting control and stability (Cameron & Quinn, 2006).

Cameron and Quinn (2006) state that for the four categories of culture in the CVF, each has a different effect on organizational performance. According to Cameron and Quinn (2006) organizations with hierarchy cultures, are thought to be performing only if they are efficient, timely, smooth functioning, and predictable. On the other hand, the standards for organizational performance in a market culture are attaining goals, beating rivals, market share, and financial returns (Cameron & Quinn, 2006). With a clan culture, the point of reference for organizational performance include solidarity, human resource development, contentment, co-operation and high levels of employee morale (Cameron and Quinn, 2006). Finally, the adhocracy culture is interested in innovation and ideas to create new opportunities, markets, and customers.

The CVF typology was used as the diagnostic tool for this research mainly because of its significance to the business at hand. In addition, it has been extensively used and is acknowledged as a trustworthy model to evaluate organizational accomplishment and organizational culture (Cameron, & Quinn. 2006). Finally, its validity has been noted by Yu (2009). Several authors have used the CVF model before to assess organizational culture and achievement. For example, Shepstone and Currie (2006)

used the CVF to prove that culture has a serious role to play in organizational performance and opinion by reasoning that the CVF leads to a multidimensional and complex understanding of organizational achievement. Cameron and Quinn (2006) concluded that performance was enriched when all organizational leaders understood their common culture. This usually brings about civil order, a collective identity, as well as a collective vision. More so, it diminishes organizational indecision, and thereby leads to higher performance of the organization.

According to Kandula (2006) the strategic tool to extraordinary performance is a robust culture. He maintains that owing to differences in organizational culture, the same strategies might not lead to the same results in two different organizations in the same industry and location. Additionally, Trice and Beyer (1993) employed the CVF in their study and emphasized that a strong, distinctive organizational culture is of crucial importance for the performance of a business. A strong and positive culture can make an average individual perform and achieve brilliantly, while a weak and negative culture may discourage an exceptional employee to fail and end up with no achievement.

2.6. Organizational Performance

Organizational performance can be defined as performing, applying, and doing regular and committed work and is considered as one of the basic roles of management (Chamanifard, Nikpour, & Chamanifard, 2014). Hence an organizations' success can be reflected in their performance. This shows that, organizational performance is related to inputs and outputs and also indicates that performance a has close relationship with work and its outcomes (Chamanifard, Nikpour, & Chamanifard, 2014). Organizational performance is the sum of accomplishments achieved by all businesses/departments (Lee & Huang, 2012). These accomplishments are in line with an organizational goal and are to be achieved within a given period. Hence Ahmed and Shafiq (2014) noted that organizational performance is the main ingredient that determines the survival of an organization. Organizational performance includes dimensions of effectiveness, efficiency, productivity, quality, and innovation (Tangen, 2004). It has also been argued that if the concept of organizational culture is comprehended properly, in addition to the direct impact on organizational

performance, it can indirectly influence performance through employee's organizational commitment (Tangen, 2004). In this research, the researcher utilised the output of three different shifts as an indicator of organisational performance.

Tangen (2004) postulated that organizational performance deals with four different aspects of performance, namely high and low performance, individual and team performance. This research will, however focus only on high performance and team performance. The focus on high performance over low performance is necessitated by the fact that this study focuses on quantity and quality of parts produced. The focus on team rather that individual performance is because the research does not seek to measure the performance of each individual but rather it seeks to looks at a team (i.e. a shift). The purpose of this research is to determine the impact of organizational culture on the organizational performance.

2.6.1 High Performance

In the context of organizational performance, high performance in an organization speaks of the capacity of the organization to attain better financial results than those of its counterparts, over a sustained period (Scott Morton, 2003). To achieve high performance an organization must be able to adjust to changes well, and to respond to these swiftly and to manage these changes in the long term (Scott Morton, 2003). Likewise, this calls for the setting up of an aligned and integrated management structure, which constantly works to improve its core competences (Scott Morton, 2003). Above all, there is a need to truly treat the employees as the organization's main asset (Obenchain, 2002).

In categorizing the characteristics of a high-performance organization, the models of Kotter and Heskett (1992) and Scott Morton (2003) are of importance. The framework by Kotter and Heskett (1992) outlines four factors which impact on people's behaviour in organizations. These include organizational culture; organizational structure, leadership of the organization; and the external environment (Kotter & Heskett, 1992). In this framework, organizational structure includes issues related to the formal structure, processes, systems and policies of the organization (Kotter & Heskett, 1992). On the other hand, the organizational environment includes factors like competitors (that is, comparable organizations), legislative and public organizations. According to a research conducted by Scott Morton (2003) the external environment

can be enlarged by increasing partners, customers and suppliers. He further explains that the external environment is enlarged by placing individuals into positions that will promote optimum productivity, and that this can be achieved by putting in place strategies, organizational technology and design within the organizational structure (Scott Morton, 2003). The organizational strategies and regulations have the potential to impact the behaviour of the employees and thereby determine their performance with the organization (De Waal, 2004). Marcoulides and Heck (1993) further states that variables such as individual attitudes and goals; task organization; organizational climate; organizational values; and organizational structure are all to be considered when dealing with organizational culture.

Poor performance is harmful to organizational growth and progress, if left unattended (De Waal, 2004). Productive performance within an organization is to be maintained for an organization to succeed, both in private and public entities (De Waal, 2004). In fact, poor employee performance hampers the integrity of the organization and can hinder the organization from achieving its objectives (De Waal, 2004). A high level of performance is to be achieved at all cost (Kotter & Heskett, 1992). Thus, this study is aimed at supporting the organization to identify areas of improving the current performance. Ultimately this will help to maintain professionalism in the organization as part of the overall improvement programmes. More importantly, enhanced organizational performance is very important as it aids the organization to achieve customer trust and satisfaction (Kotter & Heskett, 1992). Thus, the full growth and success of the business entity requires an effort of each and every individual.

The rapport of the manager and the employee is crucial for the best performance of the employee. Also, office politics and conflicts discourage members' morale and efforts to perform effectively to achieve the set objectives (Lusthaus & Adrien, 1998). In addition, communication is one of the most important aspects that play a crucial role between the managers and employees (Lusthaus & Adrien, 1998). In actual fact, once this rapport is affected, it also affects the performance levels. For an organization to attain high levels of productivity there needs to be a good working relationship between management and labour. Hence, managers must always boost the morale of their employees so that they attain high performance. In addition to realising high individual

performance, the organization should encourage team performance (Lusthaus & Adrien, 1998).

2.6.2 Team Performance

Organizational life is centred on team work (Hills, 2007). Martin and Bal (2006) state that team work within an organization is one of the critical aspects in achieving high productivity. In ensuring effective group performance proper leadership qualities should be displayed during production. Leadership becomes the driving and focal factor when it comes to team operations (Martin & Bal ,2006). Further research reveals that more leaders are using methods such as coaching-related activities to motivate the team to obtain the desired organizational objectives (Wageman, 2001). It is important for managers to monitor the production performance in a team setup, as well as how the leader deals with challenges that arise during production (Wageman, 2001). Research conducted by Klein, Ziegert, Knight, and Xiao, (2006) highlighted leadership dynamics in teams and how leadership roles are shared within a team environment. These studies suggest that team performance is one of the most vital aspects for an organization to improve productivity and succeed (Klein, Ziegert, Knight, & Xiao, 2006).

Although individual performance is difficult to ascertain as it is also difficult to measure, it has an influence on team dynamics (Bunse, Vodicka & Schonsleben,2011). Therefore, measuring individual performance is an important piece of the team performance puzzle and a fundamental building block in determining whether to reassign tasks, rearrange teams or to assess training programs (Hills, 2007). However, for management to be aware of how the organization performs, they also need to measure team and the overall organizational performance.

2.7 Measuring Organizational Performance

Measuring performance in an organization is important as it determines the productivity of the management and of the employees (Bunse, *et al* 2011). Organizational performance is measured by determining the effectiveness of employees; cost effectiveness, and the ability of the personnel to implement best working methods to ensure optimum productivity (Ron & Rooda, 2006). Organizations that focus on external objectives and internal competition must use market share

growth and customer satisfaction to measure the market demands of the organizations' goods and services (Ron & Rooda, 2006). Such measurement of performance offers valuable insights for designing and coming up with annual reviews of managers, and employees in general (Amaratunga & Baldry, 2002). The information reported will reflect how the organization is performing, highlighting the weakness and strength of the production process (Bunse, *et al.* 2011). This will assist the leaders within the organization to strategize and develop the processes of improving organizational performance (Ron & Rooda, 2006). The outcomes of performance measurement are used by management and employees to ensure effectiveness and efficiency within an organization while maintaining satisfactory performance towards the external customers (Amaratunga & Baldry, 2002).

2.8 Production Performance

According to Gits (1992), production is an important function in an organization. In support of Gits (1992) argument, Huang, Dismukes, Shi, Su, Razzak, Bodhole, and Robison (2003), noted that organizations must be efficient in their attempt to improve and ensure high productivity. Skinner (1974) indicates that setting production goals makes it possible for the organization to attain desired objectives. Having production performance measurements enables the organization to know where it stands in relation to its projected level of the production process (Ghalayini & Noble 1996). The information recording the performance measured is important in designing methods to improve productivity (Ghalayini & Noble, 1996). Globerson (1985) argued that standards set in an organization are to be met in order to ensure optimum productivity. However, Ghalayini and Noble (1996, cited in Burgess, Ong, and Shaw, 2007) stated that developments in production technology have changed the method of measuring performance. This has led to the financial perspective, which was traditionally used to measure performance, to being viewed as not the primary method of measuring organizational performance (Ghalayini and Noble, 1996).

There are numerous methods used to measure and improve performance in an organization (Neely,1999, Shaw, 2007). Evaluating and measuring current performance properly can be used to improve productivity and eliminate wastage during production (van Veen Dirks, 2010). Small and Medium Enterprises tend to have

trouble in improving productivity, due to poorly designed methods of measuring performance and a lack of resources to make the necessary changes. Performance indicators are tools that are designed in an organization (Denkena & Liedtke, 2006). Parmenter (2007) defined performance indicators to be a set of measures that are focused on measuring all aspects of organization performance. These tools are important to improve both the current and future success of an organization (Parmenter, 2007:45). Tsai and Chen (2011) further explain that performance indicators reflect the qualitative characteristic of performance. Key performance indicators (KPI) are some of the tools used in organizations to measure performance. Using the information acquired from the KPI's, organizations translate strategic goals into measurable objectives (Tsai & Cheng, 2011). The production performance measurements need to be supported by clear and feasible KPIs. According to Slack, Chambers and Johustan (2009) a well-defined policy will make the key performance indicators clear and achievable at an operational level. Al-Najjar and Kans (2006) also argued for the development of appropriate measurement policies for developed KPIs. Neely and Bourne (2000) properly defined measures used to reduce the ambiguity that affects organizational achievements.

2.9 The Impact of Organizational Culture on Performance

Several studies have demonstrated that there is a relationship between organizational culture and performance (Hartmann, 2006; Naranjo-Valencia, Jimenez-Jimenez, & Sanz-Valle, 2016; Ogbonna and Harris, 2000). In an early example of such a study of 34 companies in America conducted over a period of 5 years, and using 'return on investment and sales as measures of performance, Denison (1984) showed a link between culture and organizational performance (Denison, 1984). However, Lim (1995) was critical of Denison's (1984) study, arguing that it was based on the measurement of organizational climate rather than measuring organizational culture. In spite of such criticism, researchers have continued to examine this relationship. For example, Ogbonna and Harris (2000) demonstrated the relationship between organizational culture and company performance in 1000 registered British companies. Measures of performance included customer satisfaction, sales growth, market share, competitive advantage and sales volume. In order to measure

organizational culture, innovative, competitive, bureaucratic, and community cultures were taken into account (Ogbonna & Harris, 2000).

Research has also examined the impact of different characteristics of the culture in relation to performance. Xenikou and Simosi's (2006) study suggests that in Greece, organizations found only two out of the four major cultural characteristics examined had a strong impact on the financial performance of the firm, while Ginevičius and Vaitkūnaite (2006) reported that an organizational culture characterised by involvement and cooperation positively impacts organizational performance. In another study, Suppiah and Sandhu (2011) found that organizational culture types influence tacit knowledge sharing behaviour, and that such influences may be positive or negative, depending on the culture type (Sun, 2008). According to research findings by Jacobs,Mannion, Davies, Harrison,Konteh and Walshe (2013) within English hospitals, there was a significant relationship between a strong culture amongst senior and upper management team and the performance of the organization.

It can therefore be argued that an important factor determining performance at both the individual and organizational level is the organizational culture (Igbinovia, & Popoola, 2016), and so organizations have put effort into developing their culture as a way of improving performance (Denison & Mishra, 1995; Martinez, Beaulieu, Gibbons, Pronovost, & Wang, 2015; Naranjo-Valencia, Jimenez-Jimenez, & Sanz-Valle, 2016). Nelson and Quick, (2011) states that organizational culture has four functions, which are: giving members a sense of identity, reinforcing organizational values, increasing their commitment, and serving as a control mechanism for shaping behaviour. Martins and Terblanche (2003) stressed the following two functions of organizational culture: Firstly, organizational culture creates a feeling of identity among members of an organization. Secondly, organizational culture creates a competitive edge to enable the new members of an organization to understand acceptable behaviour and social system stability (Martins & Terblanche, 2003). Organizational culture is often considered as the backbone on which organizational performance is based, and supports management control within the organization (Ginevičius & Vaitkūnaite, 2006). The theory of control explains the link between organizational culture and performance (Martins & Terblanche, 2003). Sun (2008) noted that organizational culture aids management to control and direct employee behaviour, thereby building commitment to the organization and its goals. Some benefits of

organizational culture as highlighted by Hellriegel, Slocum and Woodman (2001) is its potential to enhance organizational performance, individual satisfaction, problem solving, especially without much supervision, as the members of the organization know what is expected of them.

This study has used the (CVF) as a model of types of organizational culture. The CVF has attracted attention in the literature since its inception in the early 1980s (Brown & Dodd, 1998). It is one of the most influential and extensively used models in the area, has a data collection instrument with good validity and reliability, and is convenient for practical operations (Cameron, *et al.* 2006; Howard 1998, cited in Yu, 2009). The CVF has been applied to issues ranging from leadership development to organizational change, and was first extended by Quinn and Kimberly (1984) to examine organizational culture. It has been applied in various improvement approaches and was used in a major management and professional development programme for public sector employees in the state of New York as well as for an organizational change process within the Ford Motor Company (Brown & Dodd, 1998). CVF is a useful model for organizations to adopt in taking a systems perspective of their businesses and to plan and manage major change (Brown & Dodd, 1998).

As explained earlier, this framework refers to whether an organization has a predominant internal or external focus and whether it strives for flexibility and individuality, or stability and control. The juxtaposition of the different cultural dimensions based on control versus flexibility and external versus internal orientation has been considered in the organizational research literature, particularly their role as a driver of organizational performance (Detert *et al.*, 2000). The contrasting values captured under CVF provide a strong reason for choosing this model of organizational culture over the others, such as Hofstede's (1980) model or organizational culture profile developed by O'Reilly (1991). In this study, the dimensions of flexibility and control are important for the underlying culture required for the pursuit of different strategic goals in terms of quality or innovation. This issue has raised a theoretical debate whereby the management of quality and innovation were considered as opposing to each other, as summarized by Prajogo and Sohal (2001). For example, the contrasting management values between control and learning suggested by Sitkin

et al. (1994) provide theoretical support for the opposing nature of quality and innovation.

While control and flexibility may reflect the contrast between quality and innovation, the internal and external orientations of the CVF may reflect the distinction between a product and process focus (Kohli & Jaworski, 1990; Lengnick-Hall, 1996). Product here is defined as a physical good to customers (who are external), while process is defined as production operations which produce the products and which typically occur in the absence of the customer in a manufacturing environment (Kohli & Jaworski, 1990; Lengnick-Hall, 1996). An external customer is typically interested in the product offering itself, not the internal processes the organization uses to make the product available (Kohli & Jaworski, 1990; Lengnick-Hall, 1996). As such, since the product is designed and produced to serve customer needs, it has to carry an external market orientation or customer focus (Kohli & Jaworski, 1990; Lengnick-Hall, 1996). Processes, on the other hand, occur inside the organization, often without contact with the customer and hence, are more internally oriented (Abernathy & Utterback, 1988).

2.10 Conclusion

This chapter has highlighted what organizational culture is and how it impacts on organizational performance. It also highlighted the dimensions of organizational culture and performance including the models that have typically been used to measure organizational culture in relation to organizational performance. In addition, the literature on the relationship between organizational culture and organizational performance has been reviewed, and it became evident that there is a clear relationship between an organization's culture and its performance, although more studies are still needed to examine possible moderators or mediators (Burke, 2002). If the results of this study show that the various shifts differ in their organizational culture and performance, then the results could help the organization to further improve its effectiveness. The following chapter will look at the research methodology used in this study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter reviewed the literature concerning organizational culture and organizational performance and the relationships between these two concepts. This chapter aims to describe the research methodology that was used in this study. According to Babbie and Mouton (2001) research methodology can be described as concentrating on the "research procedure" as well as on the "tools and processes" that are to be employed. The reasoning behind this is the expansion of scientific knowledge through systematic observation, in a controlled manner that can be replicated (Welman & Kruger, 2001).

Remenyi (1996) suggested three key philosophical questions that need to be addressed when commencing research, namely "why research?", "what to research?" and "how to research?" The principal focus of this chapter is the last question "how to research?" with the "why research?" and the "what to research?" having been briefly explained in Chapter 1. Also, Chapter 2 highlighted the theoretical importance of the research. In addressing "how to research?" the instruments that were used to measure organizational culture and organizational performance are also described. The objective of the research as stated earlier is to determine whether there is a relationship between the organizational culture and organizational performance in a car parts manufacturing company located in the Eastern Cape in South Africa. It is important to conduct this research as it could give insight into how the company can improve performance. A brief description of the relevant statistical techniques used in the research is also given, together with the methods that were used. Finally, important ethical considerations pertaining to the research are discussed.

3.2 Research Philosophy

There are two basic methodologies for collecting data that can be distinguished namely: - quantitative and qualitative methods (Rhodes, 2014). Quantitative research uses measurable data to formulate facts and uncover patterns in research. Qualitative research findings can be used to inform hypotheses testable by quantitative methods, and qualitative research can be used to explore the meaning of quantitative findings

(Leard, 2012). According to Rhodes (2014), the quantitative approach to gathering information focuses on describing a phenomenon across a larger number of participants thereby providing the possibility of summarizing characteristics across groups or relationships. This research was quantitative in nature adopting a post positivist paradigm (Guba & Lincoln, 1994). A quantitative analysis together with a reductionist approach (Remenyi, 1996), was carried out in order to determine the relationship between the various variables (Mahoney & Goertz, 2006). According to Babbie and Mouton (2001) this involves the measuring and analysis of variables using statistical procedures to measure the properties of phenomena while controlling sources of error in the research process.

Guba and Lincoln (1994) describe a paradigm as a set of beliefs that deals with certain principles. Guba and Lincoln (1994) distinguish between the positivist paradigm, which assumes naïve realism as its ontology, and a post positivist paradigm, which has critical realism as its ontology. The realist ontology assumes that there are real world objects apart from the human knower (Nyoni, 2014). Nyoni (2014) label the ontology as critical realism that must be subjected to the widest possible critical examination to facilitate capturing what happens in real life as closely as possible (but never perfectly). According to Nyoni (2014), the epistemology in this paradigm is modified transactional or objective. The researcher and the object of investigation or research are linked, such that who we are and how we understand the world is a central part of how we understand ourselves, others and the world (Nyoni, 2014). The research was conducted in a post positivist paradigm, with the ontology being critical realism (Guba & Lincoln, 1994). The post positivist approach of modified dualism states that reality can be "approximated but not fully known" (Guba & Lincoln, 1994).

3.2.1 Hypothesis

The research objective in this study is to determine the impact of organizational culture on organizational performance. The following hypothesis will therefore be tested.

Ho 1: there is no statistically significant difference in organizational culture (clan, adhocracy and market culture) between the three production shifts.

Assuming Ho 1 is rejected, then the following hypothesis will be tested.

H_1 1: there is a statistically significant difference in organizational culture between the three production shifts.

Ho 2: there is no statistically significant difference in performance (i.e. production quantity and quality) between the three production shifts.

Assuming Ho 2 is rejected, then the following hypothesis will be tested.

H_1 2: there is a statistically significant difference in performance (i.e. production quantity and quality) between the three production shifts.

3.3 Research Population and Sampling

Sekaran (2000) states that a population refers to any group of people, events, or things that are of interest to the researcher. Trochin (2000) considers a research population as a group to which the researcher wants to generalise. The population selected for this research includes everyone in each shift namely; supervisory level as well as key technical staff employed in the three shifts with the organization. The size of the population is 150 employees. According to Sekaran (2000) a sample is a subset of a population comprising of a selection of members of the particular population. For the purpose of this research, the sample is equal to the population, which is all the workers on all three shifts, with 50 workers in each shift.

3.4 Measurement Instruments

The questionnaire utilised in this research has been attached as Appendix A. A cover letter was used to explain the purpose of the research and the questionnaire, as well as to assure anonymity. The questionnaire consisted of two separate sections; Section A included biographical data such as age, gender, position and level of education. Section B was aimed at measuring the organizational culture, using the Competing Values Framework of Cameron and Quinn (2006). Organizational performance production data were utilised as the measure of performance in this research and was obtained from the management of the manufacturing company. The following sections will discuss in more detail the organizational culture questionnaire utilized, as well as the organizational performance data.

3.4.1 Competing Values Framework Organizational Culture Instrument

Cameron and Quinn (2006) measured organizational culture by using a model known as the CVF. This research will make use of this model as it will be able to assist the author in determining the culture of each shift. The CVF is one of the most influential and extensively used models in the area of organizational culture research, hence its appropriateness in this research (Yu, 2009). The researcher is using this model because compared with other models and scales; the CVF has better validity and reliability, and is very convenient for practical operations (Cameron, et al. 2006). Howard (1998, cited in Yu, 2009:39) tested the validity of the CVF using a sample drawn from ten United States organizations, where he found support for a structure of organizational culture values consistent with the CVF. In other research done by Denison and Mishra (1995, cited in Yu, 2009:39) confirmation of the relationship between organizational effectiveness and the four culture types identified in the CVF was observed.

The instrument has six sections. Each subsection has four alternatives corresponding to the four culture types, and the respondents were requested to divide 100 points among the four alternatives, depending on the extent to which each alternative is similar to the culture in the respondent's shift. For example, for Section One if the respondent thinks alternative A is very similar to his/her shift, alternative B and C are somewhat similar and alternative D is hardly similar at all, the respondent might give 60 points to A, 15 points to B and C and 10 points to D. The same process was repeated using the same approach for the other four sections.

3.4.2 Organizational Performance

The organizational performance measurement was captured and recorded using the organization's production data. The manufacturing company captures and records production data on a daily, weekly, monthly and annual basis. This data is collected per shift and contains the quantity of parts produced, rework and scrap, among other information. For this research, the organizational performance will be measured in terms of the quantity and quality of parts produced in each shift during a three-month period. The shifts had the same number of workers, who worked the same number of hours and had same working conditions to ensure reliability and validity of the results.

3.5 Data Gathering and Capturing

3.5.1 Pilot Questionnaire

The initial questionnaire was piloted with ten respondents to check for three aspects namely (1) any grammar or spelling mistakes, (2) ease of completing the form, as well as (3) to ensure that all the questions were well understood. This resulted in changes being made to a few questions to make them more applicable to the organizational setting without detracting from the original question's intention. It was also found that only one respondent from the pilot test had difficulty in allocating points among the four alternatives totalling 100 in the organizational culture section of the questionnaire. This led the researcher to add more detailed instructions and examples to assist in the completion of the culture section of the questionnaire. On the draft cover letter to the questionnaire the researcher had initially explained to the respondent that the total points from the alternatives A,B,C and D in Section B should add up to 100. After the Pilot test the researcher added an example specifying that if the respondent thought that alternative A is very similar to his/her shift, alternative B and C are somewhat similar and alternative D is hardly similar at all the respondent could give 60 points to A, 15 points to B and C and 10 points to D).

3.5.2 Administration of the Organizational Culture Questionnaire

The researcher held a meeting with the respondents. The questionnaire was handed to each respondent with a description of the purpose of the research and that all answers would be treated as strictly confidential. A reminder message was later sent out by the researcher, together with an extension of the original submission date to ensure that the questionnaires were collected by the due date. The questionnaire utilised has been attached as Appendix B. The response rate was 100% in each shift and therefore the overall response rate was also 100%.

3.5.3 Data Capturing

The data was captured from the completed questionnaire into Microsoft Excel. Data was also checked for completeness and accuracy of completion as per the instructions. The researcher utilised an independent data capturer to check for accuracy of the captured data. Any partially completed or incorrectly completed questionnaires were discarded. In total, twenty questionnaires were discarded. This included 10 from shift 1, 6 from shift 2 and 4 from shift 3.

3.6 Statistical Analysis

Descriptive statistics describe phenomena of interest by making use of bar charts and measures of central tendency to summarise the data (Behr, 1988; Sekaran, 2000). According to Salkind (2000) descriptive statistics allow the researcher to better understand the data by visualising patterns. In this research descriptive statistics have been utilised to summarise the biographical details of respondents, to describe the existing and preferred organizational culture, as well as to describe the organizational commitment and employee performance.

Reliability and validity are two important criteria for evaluating the quality of measurement instruments (Babbie & Mouton, 2001). According to Denscombe (2003), a reliable measurement instrument will produce the same results each time it is used. The Cronbach's alpha reliability coefficient is utilised to measure the internal consistency of an instrument of measurement by measuring the underlying constructs (Bohrnstedt, 1969). The researcher made use of the Cronbach's alpha reliability coefficient to measure the questionnaire's degree of internal consistency. If alpha value is 1, the implication is that there is perfect internal consistency, while 0 implies no internal consistency. Values above 0.80 are considered good, while those below 0.60 are considered poor.

The analysis of variance (ANOVA) is utilised to test for a significant mean difference among more than two groups on a variable of interest (Sekaran, 1992). The level of significance of the mean difference amongst the groups is determined by the F-statistic, however it is not possible to state where the differences lie (Sekaran, 2000). In this research the factorial ANOVA has been utilised for testing the first two hypotheses. The factorial ANOVA allows the comparison of the three shifts simultaneously. The null hypothesis ($H0$) was rejected if the $p-value$ was less than 0.05 and null hypothesis was accepted when the $p-value$ was more than 0.05.

3.7 Ethical Considerations

According to Remenyi (1998) there are some key considerations that need to be addressed by the researcher to ensure the integrity of the research, these include: how the research is to be conducted, how the data is to be processed and what is be

done with the findings. The researcher sought permission from the respondents as well as the management of the organisation under study, to conduct the study. All the participants were given a project outline to help them decide if to take part, and, if so, could give written permission for their participation.

A major principle of social research ethics is that participating should be voluntary (Riivarii, Lämsä, Kujala & Heiskanen, 2012). In this study, participants were encouraged to participate out of their free will. Anonymity is when records cannot be linked to names. Protection of confidentiality may involve restricting access to raw data, storing in a manner that does not allow identification data securely, reporting findings in a manner that does not allow for ready identification of participants and obtaining permission for subsequent use of data (Salkind, 2000). In this case, respondents were not asked to reveal their identity on the questionnaires and results were analysed at a shift level (Appendix A).

In terms of how the research was conducted, the researcher held discussions with the HR Manager as well as the Production and Plant Manager to discuss the overall aims of the research as well as what would be measured. The researcher was granted permission to undertake the research (Appendix D). Respondents were provided with the purpose of the research while also being assured that their responses would be treated as strictly confidential and their anonymity was upheld during and after the research (Appendix A). During the processing of the data, anonymity was upheld by ensuring that respondents did not write their names on the questionnaires. When the data was captured on spreadsheet it was analysed for completeness without any "personal bias" or misrepresentation (Remenyi, 1998). Regarding the utilisation of the findings, the research has been undertaken for academic purposes and the organization will be provided with a copy of the final report, hence the researcher ensured that the report was correct and professional. Attached are the key ethics documents namely; the ethical standards form, institution consent form (Appendix D) and the participant consent form.

3.8 Summary

This chapter presented the importance of the research being carried out at a manufacturing company in Eastern Cape and discussed the methodology of the research. Reference was made to the research objectives and hypotheses described in Chapter 1 Section 1.3. The research population and the method of sampling were also stated. The reliability and validity of the organizational culture questionnaire has been discussed and it indicated a high degree of reliability. The organizational performance measure that was utilised in the research has also been described. The statistical methods utilised in the research have been described, together with the ethical considerations for the research. Chapter 4 will discuss the findings and results of the statistical analysis that was undertaken.

Chapter 4: RESEARCH RESULTS

4.1 Introduction

Presented in this chapter are research results. The sample that was used in the research will be described in terms of respondents' gender, age, educational qualifications, as well as the position of the respondents within the company. Also presented are the organization culture analysis scores and the results per shift, broken down into the four dimensions. The organizational performance indicators that were used will be presented. The results from the hypotheses tested will be presented, where after the results will be discussed in further detail.

4.2 Descriptive Statistics

The biographical data has been analysed in this section by means of descriptive statistics, utilising bar charts to understand the sample under consideration.

4.2.1 Gender

The sample consisted of 138 usable responses. Of the respondents, 88 were male and 50 were female. This implies that the majority of production employees are male rather than women. This is not surprising since the car parts manufacturing industry is dominated by male employees.
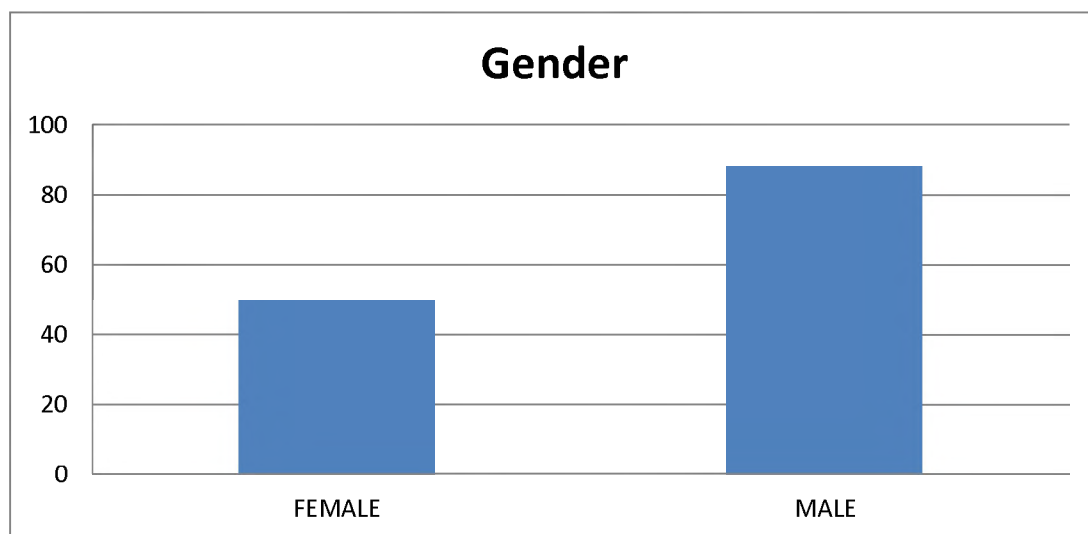
Figure 4.1: Gender

4.2.2 Age

Most respondents are between 31-35 years. This is followed by the 36-40 age groups with 37 respondents and the 30 or under age group with 28 respondents. The remaining age groups have respondents not more than 13 respondents in total. The implication is that the company has a high proportion of young employees. The company therefore benefits from the advantages of having a young workforce.
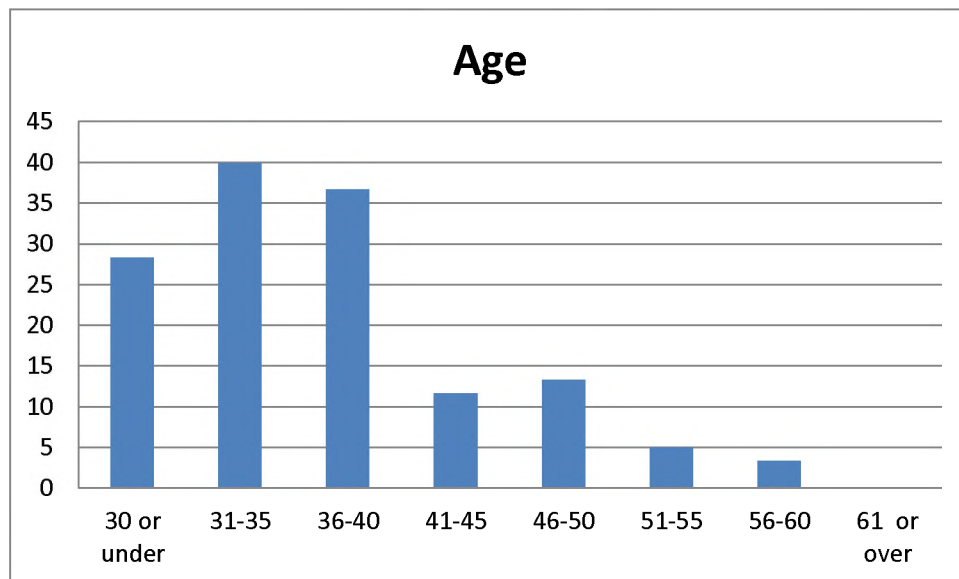
Figure 4.2: Age of respondents

4.2.3 Educational Qualification

The educational qualifications of the respondents ranged from matric to degree level. The highest qualification was an undergraduate degree, with only five respondents indicating that they had a Degree qualification, representing 3.6% of the sample. The majority of the respondents (n=68) had a matriculation certificate, constituting 49.27% of the sample. The respondents who had a Certificate numbered 35, which constitutes 25.36% of the sample, while those respondents who had a diploma (n= 15) represent 10.87% of the sample. This is the same with those who had "Other" qualifications. The results indicate that there is a trend with the qualifications that the higher the level of qualification, the less the number of employees with that qualification.

33
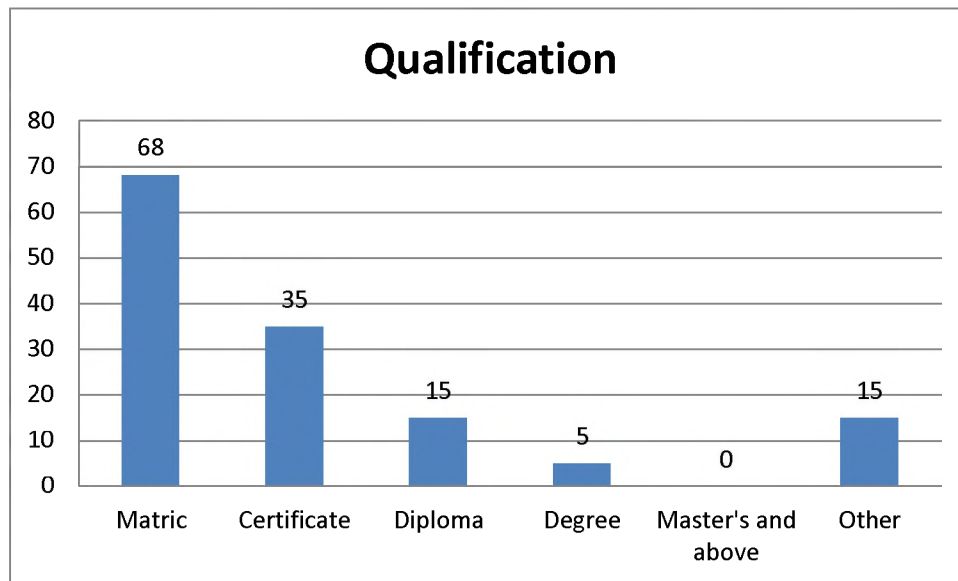
Qualification

Figure 4.3: Educational qualification

4.2.4 Position in Organization

There are nine broad position levels within the company; they consist of quality team leader, production group leader, logistics team-leader, re-worker, inspector, packer, hyster driver, tool-maker, material loader and setter. The sample consisted of five quality team leaders, two production group leaders; five logistics team leaders, 30 re-workers, 44 inspectors, 20 packers, 13 hyster drivers, 10 tool-makers, two material loaders and seven setters, thus representing all the levels.
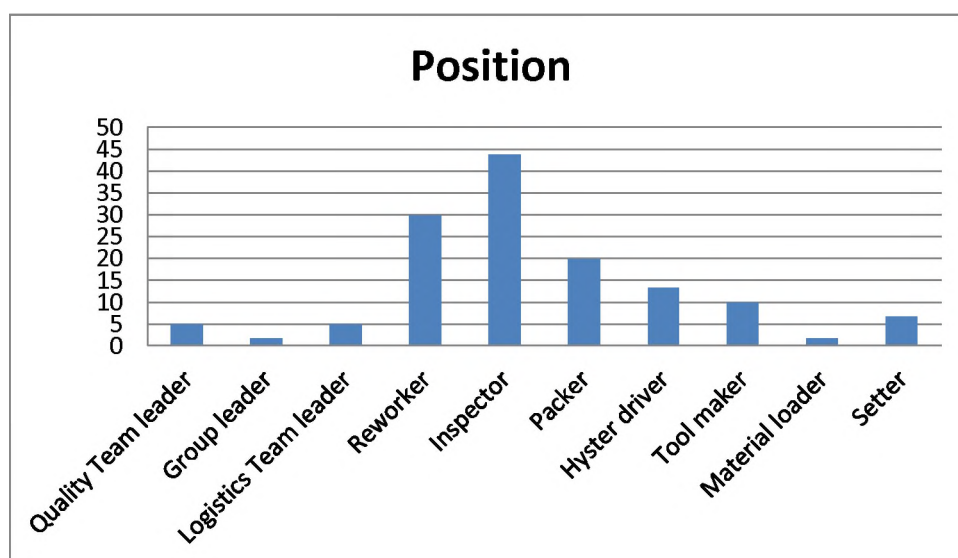
Position

Figure 4.4: Position in the Organization

4.3 Organizational Performance Indicators Used

The researcher obtained the following production quantity and quality data from the organization.

Table 4.1: Production Quantity Data

SHIFT	QUANTITY PRODUCED
SHIFT 1	39503
SHIFT 2	23845
SHIFT 3	20637

The production quantity data comprised of the daily number of parts produced between February and April 2016. The table above shows the totals of the parts produced over the 3 months.

Table 4.2: Production Quality Data

SHIFT	QUALITY PRODUCED (number of parts reworked)
SHIFT 1	1032
SHIFT 2	1193
SHIFT 3	1976

The production quality data consisted of the total number of parts reworked between February and April 2016.**4.4 Reliability Testing of the CVF Questionnaire**

The reliability of the organizational culture instrument was determined by means of the Cronbach's alpha reliability coefficient (Bohrnstedt, 1969). According to Luthans (1992:287) reliability values above 0.80 are regarded good, between 0.60 and 0.80 are regarded acceptable and values below 0.60 are regarded poor. Table 4.3 shows the Cronbach's alpha coefficients for the various organizational culture scales.

Table 4.3 Cronbach's Alpha Coefficient Scores for Organizational Culture Scales (Shift 1)

Organizational culture scales	Mean	Standard deviation	Cronbach's Alpha	Evaluation based on Sekeran (2000)
Clan-Q2	34	7.3	0.62	Acceptable
Adhocracy-Q1	20	5.2	0.68	Acceptable

| Market-Q4 | 25 | 5.2 | 0.65 | Acceptable |
| Hierarchy-Q3 | 21 | 9.1 | 0.61 | Acceptable |

The Clan culture has a Cronbach alpha of 0.62 whereas the Adhocracy culture has a Cronbach alpha of 0.68. According to Sekeran (2000) this is acceptable. The market culture and Hierarchy cultures have acceptable Cronbach alpha of 0.65 and 0.61 respectively.

Table 4.4 Cronbach's Alpha Coefficient Scores for Organizational Culture Scales (Shift 2)

Organizational culture scales	Mean	Standard deviation	Cronbach's Alpha	Evaluation based on Sekeran (2000)
Clan-Q2	29	9.0	0.67	Acceptable
Adhocracy-Q1	21	6.1	0.62	Acceptable
Market-Q4	25	5.4	0.65	Acceptable
Hierarchy-Q3	25	9.4	0.68	Acceptable

The Clan culture has a Cronbach's Alpha of 0.67 whereas the Adhocracy culture has a Cronbach's Alpha of 0.62. The Market and Hierarchy cultures have acceptable Cronbach's Alpha of 0.65 and 0.68 respectively. According to Sekeran (2000) this is acceptable and indicates the validity of the questionnaire.

Table 4.5 Cronbach's Alpha Coefficient Scores for Organizational CScales (Shift 3)

Organizational culture scales	Mean	Standard deviation	Cronbach's Alpha	Evaluation based on Sekeran (2000)
Clan-Q2	29	4.1	0.67	Acceptable
Adhocracy-Q1	25	4.3	0.69	Acceptable
Market-Q4	23	3.9	0.63	Acceptable
Hierarchy-Q3	23	3.9	0.65	Acceptable

The Clan culture has a Cronbach alpha of 0.67 whereas the Adhocracy culture has a Cronbach alpha of 0.69. The Market and Hierarchy cultures have acceptable Cronbach alpha of 0.63 and 0.65 respectively. The scores are acceptable and indicate validity of the questionnaire (Sekeran, 2000).

4.5 Shift Culture Analysis Scores

The following step was the evaluation of the shift culture profile of the three shifts according to the four dimensions as identified by Cameron and Quinn (2006). The results per shift are set out in Table 4.6. The organizational culture profile of the three shifts at the company under investigation has been determined by using descriptive statistics to summarise the mean scores of the existing organizational culture scale of each shift as illustrated in Table 4.6. The dominant culture is the culture with the highest overall mean score.

Table 4.6: Shift Culture Scores

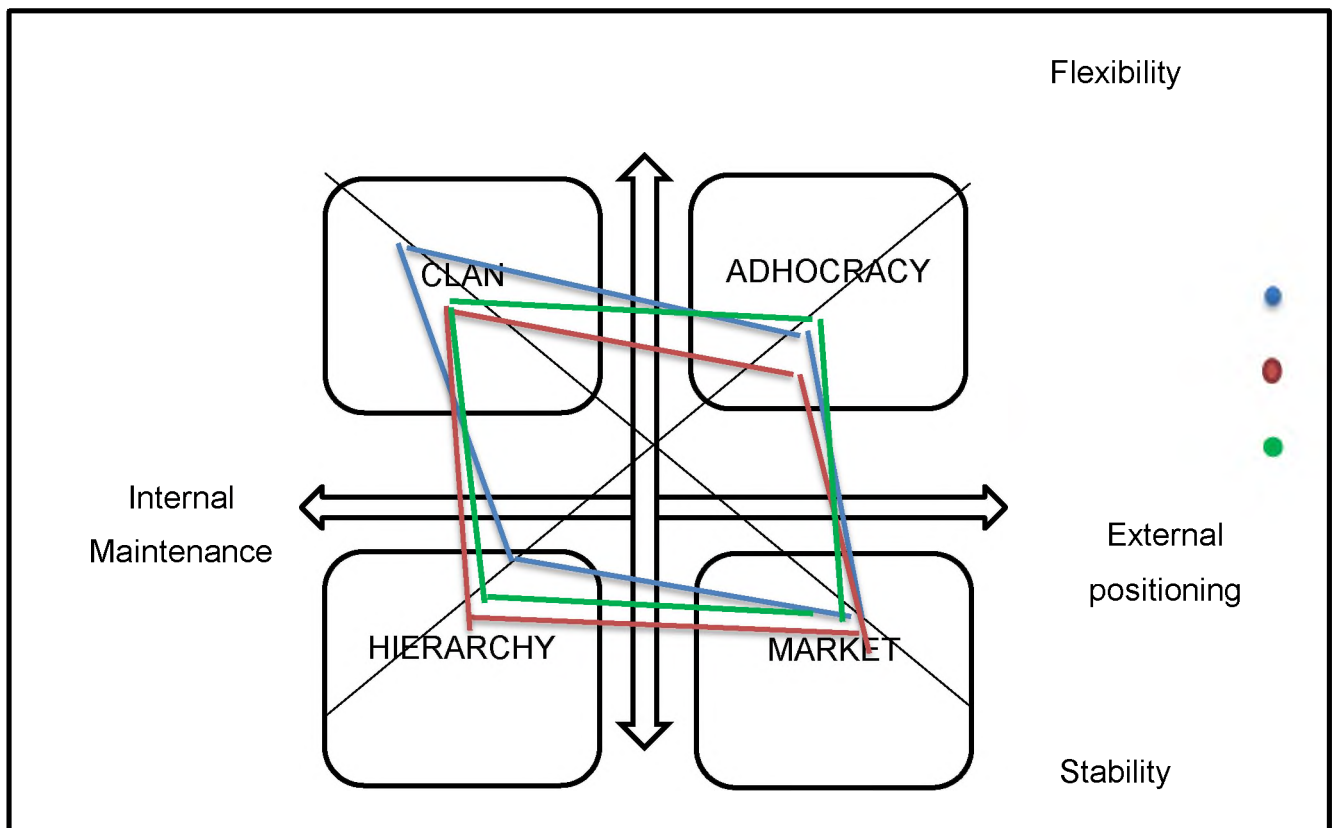| CULTURE TYPE		SHIFT 1		SHIFT 2		SHIFT 3	
		MEAN	ST DEV.	MEAN	ST DEV	MEAN	ST DEV
A-score	Clan-Q2	34	7.3	29	9.0	29	4.1
B-score	Adhocracy-Q1	20	5.2	21	6.1	25	4.3
C-score	Market-Q4	25	5.2	25	5.4	23	3.9
D-score	Hierarchy-Q3	21	9.1	25	9.4	23	3.9
		100		100		100	

Figure 4.5: Shift Culture Profile

Figure 4.5 indicates alignment between the three shifts of production. This implies some harmony within the three shifts of production and indicates a uniform organisational culture. The clan culture dominates each shift. This culture is closely followed by the market culture except in shift 3 when it is followed by the adhocracy culture. Shifts 1 and 2 are closely aligned, whereas shift 3 is slightly different.

Leadership activities associated with the clan culture are focused on building cohesion through consensus, and on achieving satisfaction through involvement (Cameron & Quinn, 2006:43). The findings indicate that the shifts are creating value by building competencies, developing people, and solidifying an organizational culture. Human and social capitals are prioritised over financial capital (Cameron, *et al.*, 2006:38; Martin & Simons, 2002:67). These strategies produce the most value when stability must be maintained in the face of uncertainty (Martin & Simons, 2002). Leaders who excel in this quadrant tend to take on roles of parent figure, mentor, facilitator, and team builder (Martin & Simons, 2002). The findings indicate that the leaders in the manufacturing company value shared objectives, mutual contribution, and a sense of collectivism among their employees (Cameron, *et al.*, 2006:38-39). The competencies associated with this clan quadrant are (Cameron, *et al.*, 2006:116-117):

- Leading through teamwork – Building effective, cohesive, smooth functioning teams.
- Leading through interpersonal relationships – Building effective relationships through communication and listening.
- Leading the development of human capital – Helping others improve performance and develop competency.
- Leading through cooperation and community – Fostering a sense of unity through involvement and empowerment.
- Leading through compassion and caring – Facilitating a climate of personal concern and support for others.

Where these leadership competencies are dominant, the organization will be motivated toward a "Clan" culture characterised by a spread of shared values and goals, unity, participativeness, uniqueness, and logic of "we-ness" (Cameron & Quinn, 2006:41). The findings therefore show that at the company under investigation,

emphasis is on the long-term benefit of individual development with high unity and confidence being important. Effectiveness is defined in terms of internal climate and concern for people, teamwork, participation and consensus. The organization is held together by loyalty and custom (Cameron & Quinn, 2006:43).

Shift 1 Culture Illustration

Figure 4.6 below indicates that the most dominant culture in Shift 1 is the clan-culture. This is demonstrated by the highest score of 34. This culture is followed closely by the market-culture with a score of 25. The hierarchy-culture comes next with a score of 21 and the adhocracy-culture comes last with a score of 20. It therefore implies that shift 1 exhibits features of a clan-culture to a large extent. Simultaneously, the data indicates that shift 1 culture does not have much of an adhocracy culture.
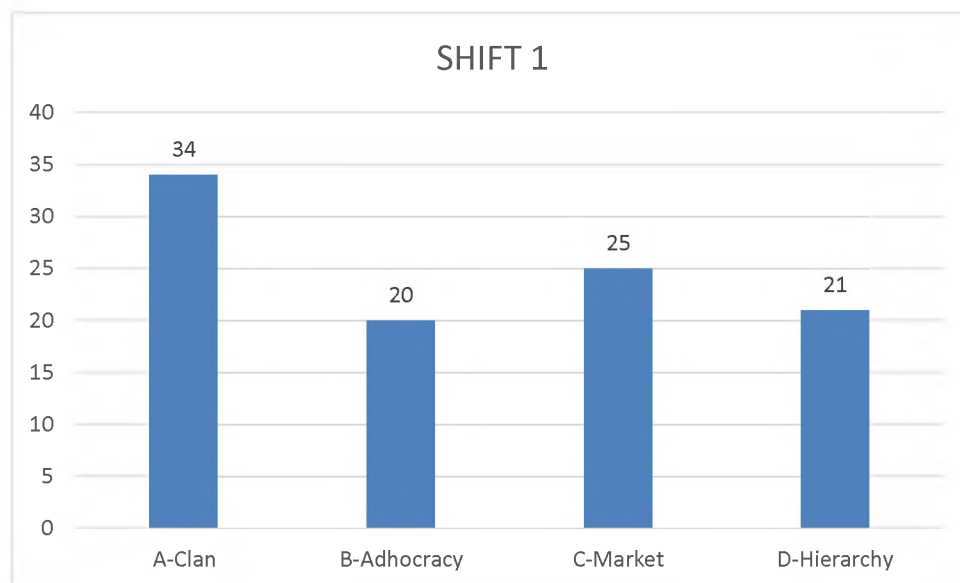
Figure 4.6: Shift 1 Culture Bar Chart

Shift 2 Culture Illustration

As illustrated below in Figure 4.7, Shift 2 is also dominated by a clan-culture with a score of 29. The next dominant culture is the market culture with a score of 26. The hierarchy culture follows with a score of 24 whereas the adhocracy comes last with a score of 21. The data implies that shift 2 is more of a clan-culture than other cultures. Shift 2 is less of adhocracy culture.
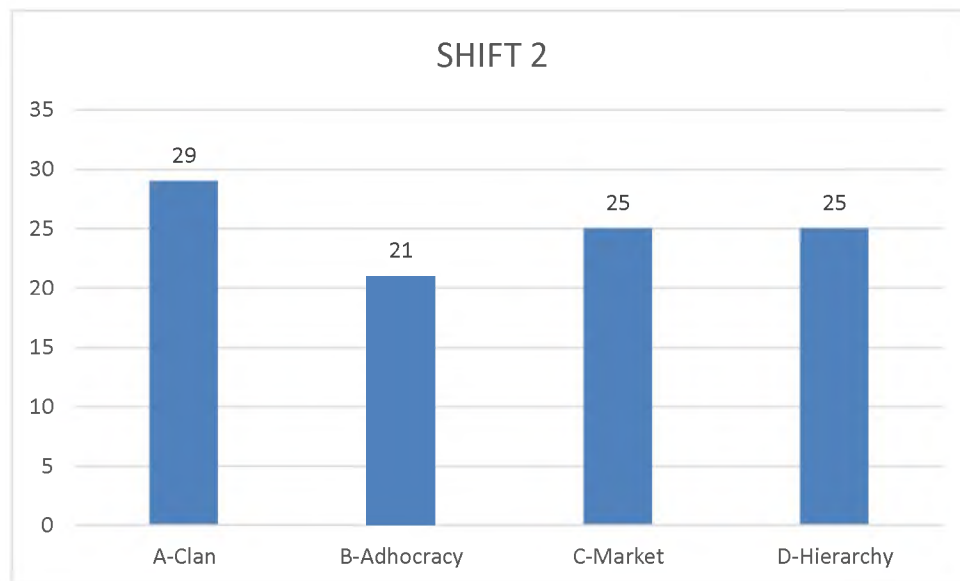
Figure 4.7: Shift 2 Culture Bar Chart

Shift 3 Culture Illustration

The data below indicates that shift 3 is also a clan-dominated culture with the highest score of 29. This is followed by adhocracy culture with a score of 25. The market-culture and the hierarchy culture come last with a score of 23 each. This data implies that the market and the hierarchy cultures do not feature to as large an extent in shift 3.
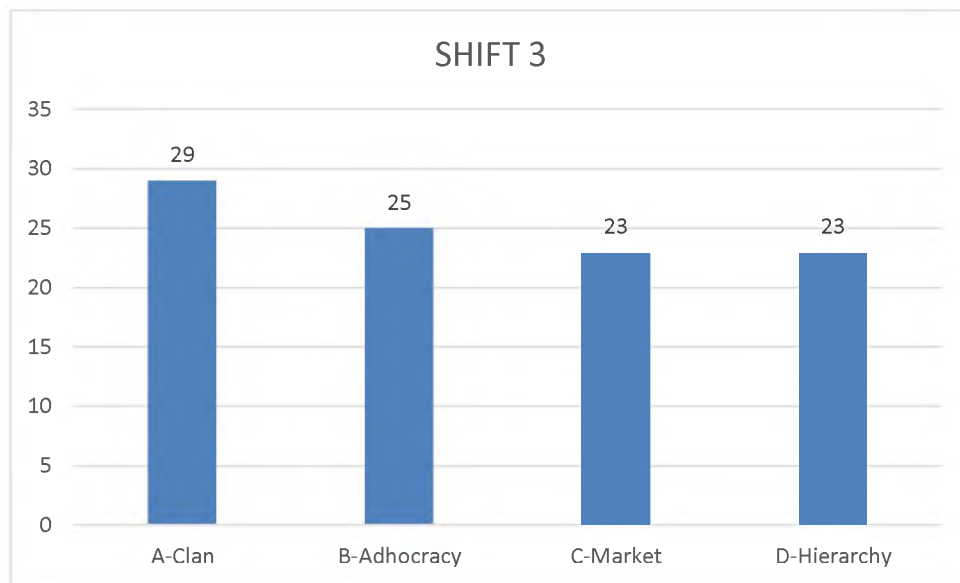
Figure 4.8: Shift 3 Culture Bar Chart

4.6 Analysis of Variance

Hypothesis 1a:

> Ho 1a: There is no statistically significant difference in **clan** culture between the three production shifts.

A four factorial ANOVA analysis of variance was used to assess whether the average item score, for each type of culture, was statistically significantly different between the three shifts. It is important that there is a statistically significant variance in the scores between the shifts to suggest that differences in culture could influence the organizational performance indicators. The results of the analysis of variance are set out in Table 4.7.

Table 4.7: Analysis of Variance Results on Perceptions of Clan Organizational Culture Between Shift 1, Shift 2 and Shift 3.

Anova: Single Factor   Clan

SUMMARY

Groups	Count	Sum	Average	Variance
Shift 1	19	544	28.63158	54.80117
Shift 2	19	529	27.84211	80.02924
Shift 3	19	428	22.52632	60.15205

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	418.9825	2	209.4912	3.223232	0.047601	3.168246
Within Groups	3509.684	54	64.99415			
Total	3928.667	56				

Rejection region: Reject $H0$ if $p-value<\alpha$

∴Reject $H0$ if $p-value<0.05$

∴ 0.047601<0.05

The results of the analysis of variance indicated in Table 4.7 indicate that at a significance level of 5% (α=0.05) there is a significant difference in the mean clan scores of shift 1, shift 2 and shift 3. Since the $p-value$ is 0.047601 which is less than 0.05, the $H1$a is therefore rejected.

Hypothesis 1b:

Ho 1b: There is no statistically significant difference in **adhocracy** culture between the three production shifts.

Table 4.8: Analysis of variance results on perceptions of Adhocracy Culture between Shift 1, Shift 2 and Shift 3.

Anova: Single Factor   Adhocracy

SUMMARY

Groups	Count	Sum	Average	Variance
Shift 1	19	481	25.31579	46.67251
Shift 2	19	415	21.84211	45.14035
Shift 3	19	378	19.89474	10.09942

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	286.5614	2	143.2807	4.217766	0.01986	3.168246
Within Groups	1834.421	54	33.97076			
Total	2120.982	56				

Rejection region: Reject $H0$ if $p\text{-}value < \alpha$

∴Reject $H0$ if $p\text{-}value < 0.05$

∴ $0.01986 < 0.05$

The results of the analysis of variance indicated in Table 4.8 indicate that at a significance level of 5% (α=0.05) there is a significant difference in the mean adhocracy scores of shift 1, shift 2 and shift 3. Since the $p\text{-}value$ is 0.01986 which is less than 0.05, the $H1b$ is therefore rejected.

Hypothesis 1c:

Ho 1c: There is no statistically significant difference in **market** culture between the three production shifts.

Table 4.9: Analysis of Variance Results on Perceptions of Market Culture between Shift 1, Shift 2 and Shift 3.

Anova: Single Factor   Market

SUMMARY

Groups	Count	Sum	Average	Variance
Shift 1	19	515	27.10526	27.32164
Shift 2	19	488	25.68421	30.00585
Shift 3	19	403	21.21053	12.39766

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	359.614	2	179.807	7.736392	0.001111	3.168246
Within Groups	1255.053	54	23.24172			
Total	1614.667	56				

Rejection region: Reject $H0$ if $p-value<\alpha$

∴Reject $H0$ if $p-value<0.05$

∴ 0.001111<0.05

The results of the analysis of variance indicated in Table 4.9 indicate that at a significance level of 5% ($\alpha=0.05$) there is a significant difference in the mean market scores of shift 1, shift 2 and shift 3. Since the $p-value$ is 0.001111 and is less than 0.05, the $H1c$ is therefore rejected.

Hypothesis 1d:

Ho 1d: There is no statistically significant difference in **hierarchy** culture between the three production shifts.

Table 4.10: Analysis of variance results on perceptions of Hierarchy Culture between Shift 1, Shift 2 and Shift 3.

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Shift 1	19	500	26.31579	76.89474
Shift 2	19	446	23.47368	58.15205
Shift 3	19	373	19.63158	9.245614

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	427.614	2	213.807	4.445287	0.016324	3.168246
Within Groups	2597.263	54	48.09747			
Total	3024.877	56				

Rejection region: Reject $H0$ if $p-value<\alpha$

∴Reject $H0$ if $p-value<0.05$

∴ $0.016324<0.05$

The results of the analysis of variance indicated in Table 4.10 indicate that at a significance level of 5% ($\alpha=0.05$) there is a significant difference in the mean hierarchy scores of shift 1, shift 2 and shift 3. Since $p-value$ is 0.016324 which is less than 0.05, $H1d$ is therefore rejected.

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Therefore, the null hypothesis which states that there is no statistically significant difference in organizational culture between the three production shifts is rejected. The next test is to determine whether there is a statistically significant difference in performance (i.e. production quantity and quality) between the three production shifts.

Hypothesis 2a:

Ho 2a: There is no statistically significant difference in production **quantity (volumes)** between the three production shifts.

Table 4.11: Results of Analysis of Variance Results on Quantity Produced Between Shift 1, Shift 2 and Shift 3.

ANOVA: Single Factor   Quantity

SUMMARY

Groups	Count	Sum	Average	Variance
Shift 1	59	39503	669.54237	219.87317
Shift 2	59	23845	404.15254	11.786674
Shift 3	59	20637	349.77966	1179.692

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3454181.831	2	1727090.9	3671.1418	5.2E-143	3.047906
Within Groups	81858.40678	174	470.45061			
Total	3536040.237	176				

Rejection region: Reject $H0$ if $p-value < 0.05$

∴Reject $H0$ if $p-value < 0.05$

∴ $p-value < 0.05$

The results of the ANOVA test indicated in Table 4.11 indicate that the $p-value$ (5.2E-143) is less than 0.05. The hypothesis $H2a$ is therefore rejected. At a significance level of 5% (α=0.05) there is significant difference in the mean quantity produced of shift 1, Shift 2 and shift 3. The next test was on the mean differences in quality produced between shift 1, shift 2 and shift 3.

Hypothesis 2b:

Ho 2b: There is no statistically significant difference in production quality (reworked and scrap parts) between the three production shifts.

Table 4.12: Results of Analysis of variance results on quality produced between Shift 1, Shift 2 and Shift 3.

ANOVA: Single Factor   Quality

SUMMARY

Groups	Count	Sum	Average	Variance
Shift 1	59	1032	17.48898	2.94923
Shift 2	59	1193	20.20763	0.29467
Shift 3	59	1976	33.47712	0.549683

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8635.455	2	4317.727	3671.142	5.2E-143	3.0479
Within Groups	204.646	174	1.176127			
Total	8840.101	176				

Rejection region: Reject $H0$ if $p-value$< 0.05

∴Reject $H0$ if $p-value$<0.05

$\therefore p\text{-}value{<}0.05$

The results of the ANOVA test indicated in Table 4.12 indicate that $p\text{-}value$ (5.2E-143) which is less than 0.05. the hypothesis $H2b$ is therefore rejected. Therefore, at a significance level of 5% (α=0.05) there is significant difference in the mean quality produced of shift 1, Shift 2 and shift 3.

4.7 Summary of the Various Findings of the Research

The results of the various hypotheses tests have been summarised in Table 5.1. For the hypotheses where the null hypothesis has been rejected, the alternative hypothesis has been accepted. In total, there was sufficient evidence to reject all six null hypotheses.

Table 4.13: Summary of the Results of the Hypotheses Testing

Hypothesis	Do not reject	Reject	Not tested
H0 1a: There is no statistically significant difference in **clan** culture of shift 1, shift 2 and shift 3		x	
H0 1b: There is no statistically significant difference in **adhocracy** culture of shift 1, shift 2 and shift 3		x	
H0 1c: There is no statistically significant difference in **market** culture of shift 1, shift 2 and shift 3		x	

HO 1d: There is no statistically significant difference in **hierarchy** culture of shift 1, shift 2 and shift 3		x	
HO 2a: There is no significant difference in the mean **quantity** produced of shift 1, shift 2 and shift 3		x	
HO 2b: There is no significant difference in the mean **quality** produced of shift 1, shift 2 and shift 3		x	

4.8 Conclusion

The results found above can be summarised as follows: There is a statistically significant difference between the cultures of the three shifts at the manufacturing company. The results also indicated statistically significant differences in the quantity and quality of production between the three shifts. Since there are differences between the cultures of the three shifts and their performance, it can be concluded that the cultural differences between shifts is probably a contributing factor to their performance variation, but this could not be proven statistically.

CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In the previous chapter, the results of the primary research were presented. In this chapter, the implications of these results are discussed, findings are presented and conclusions are given. An overview of the research has been presented in this chapter together with recommendations and the limitations of this research.

5.2 Overview of the Research

The company under investigation supplies metal products to the car manufacturing industry. Hence, quality and quantity of parts produced by this organization is of paramount importance since the buyers of these products are quality conscious. This organization has three production shifts that rotate on a weekly basis. The shifts run from 6 am to 2 pm, 2pm to 10pm and 10 pm to 6 am. It had been observed that irrespective of the time that a shift operates, the different shifts tend to perform at different levels in terms of quality and quantity of output. The purpose of the research was to explore the possible impact of organizational culture on the organizational performance of the company under investigation. Several objectives and hypotheses were formulated to achieve this purpose. ANOVA analyses allowed the researcher to conclude that there were differences between the cultures of the shifts, as well as in their production volume and quality. However, given the nature of the data collected across only three groups or shifts, it was not possible to test the relationship between culture and performance. The results and findings of the research will be discussed in the next section.

5.3 Discussion of the Findings

The findings of the research have been presented in this section, together with a discussion on their implications, as well as their relation to previous research. In section 5.3.1, findings from the organizational culture profile are presented and conclusions are made. Section 5.3.2 covers findings and conclusions on the impact of organizational culture on organizational performance.

5.3.1 The Organizational Culture Profile

The organizational culture at the company under investigation was analysed by means of Cameron and Quinn (2006) organizational culture questionnaire, based on their competing value framework. The organizational culture was diagnosed in terms of the perception of the shift workers on the existing culture of the shift they belonged to. The most prominent organizational culture type, was assessed to be the clan culture. This meant that the organizational culture focused on internal maintenance with flexibility, having a concern for people and being sensitive to customers (Berrio, 2003). According to Quinn (1988:37) this culture type is process oriented with a focus on "affiliation and harmony" amongst individuals. Managers in this type of culture are regarded as "mentors and facilitators" (Quinn, 1988:41) The literature review indicated that leadership activities in the clan quadrant focus on building cohesion (Cameron & Quinn, 2006). This is achieved through involvement, consensus and satisfaction (Cameron, et al., 2006:38; Martin & Simons, 2002:67). In the clan culture that is dominant in the manufacturing company, value is created through building competencies, developing people, and solidifying an organizational culture. Human and social capitals are prioritised over financial capital.

The literature also indicated that the clan quadrant strategies produces the most value when stability must be maintained in the face of uncertainty (Martin & Simons, 2002). Leaders who excel in this quadrant tend to take on roles of parent figure, mentor, facilitator, and team builder. The dominance of the clan culture shows that the leaders of the manufacturing company value shared objectives, mutual contribution, and a sense of collectivism among their employees (Cameron, et al., 2006:38-39). The findings indicate that the clan culture is dominant which implies that the competencies at the manufacturing company involve leadership through teamwork, building effective, cohesive, smooth functioning teams. It also includes leadership through compassion and caring, thereby facilitating a climate of personal concern and support for others (Cameron, *et al.*, 2006).

5.3.2 The Impact of Organizational Culture on Organizational Performance

In this research the researcher could not link the culture data to the performance data. The sample response rate did not allow the testing of the relationship between shift culture and shift performance of the organization. The current culture is the clan culture. According to the patterns observed in the research data, the results suggest clan culture may be linked to performance. The research indicated there are differences in culture and in performance; it is therefore possible that cultural differences between shifts may be contributing to performance differences.

5.4 Recommendations

With regards to the research findings, several recommendations pertaining to the company under investigation as well as future research within the company have been identified.

5.4.1 Recommendations for the Company Under Investigation

The results indicate that the clan culture may be linked to performance. It is therefore necessary for the manufacturing company to continue emphasising the clan culture. However, the results also indicate that the hierarchy culture is less prominent than that of the clan culture in all the three shifts, with the greatest difference in Shift 1, and yet a control culture is crucial in a production environment and should therefore be strengthened. Value in this quadrant results from increasing certainty, predictability, regularity, and eliminating anything inhibiting a perfect or error free outcome (Cameron, *et al.,* 2006:32-33; Martin & Simons, 2002:67). This is because the control quadrant is inwardly focused and involves disciplined strategies aimed at improving efficiency through the extensive use of processes, systems, and technology (Cameron, *et al.,* 2006).

The leadership activities associated with the control quadrant include pursuing improvements in efficiency by implementing better processes with a view to improve quality and reduce costs (Martin & Simons, 2002). The hierarchy culture could therefore be increased, with more formalised rules and policies to hold the organization together (Cameron & Quinn, 2006) and thereby maintain production consistency.

The hierarchy culture can be strengthened through developing leaders who are (1) more systematic in the analysis of data and problem solving, (2) clarify expectations, goals, and policies, (3) ensure smooth flowing processes, and (4) measure and keep records of how the organization is performing (Cameron, et al., 2006:116-117). In summary, the following recommendations are therefore made: The company should strengthen the control culture through developing the leadership activities associated with the control quadrant, as described above. However, the clan culture also needs to be maintained within the company. Since shift 1, with a prominent clan culture performed better than the other shifts, the company should align the culture of shift two and three with the culture of shift one, to encourage cohesion and better performance.

5.4.2 Recommendations for Future Research Within the Company

For future research, it is recommended that this research be extended to the branches of the manufacturing company in other regions, in order to determine whether there are any significant differences in culture and performance between branches. Secondly, only shift workers were surveyed in this study. A more extensive survey can be conducted to measure organizational culture in the entire business unit across all employee levels (including managerial staff), with a view of gathering information on the perceptions of both the current and future desired culture. These findings can be used in gaining a more comprehensive understanding of the organizational culture as shared in the business unit, and allow leadership to be in a more informed position when seeking to effect organizational culture change.

5.5 Limitations of the Research

Some limitations pertaining to this research have been listed below:

- The research results were obtained by means of using the total population from each of the three shifts at the manufacturing company in Eastern Cape and care should be taken when generalising beyond the sample. A much broader research across various branches of the company would need to be done to generalise the results to the entire organization.

- Similarly, the organizational culture ratings and performance results in terms of quality and quantity were, obtained only from the branch under consideration. The limitation thereof is that the organizational performance ratings may differ from branch to branch. For example, a clan culture may not be as prominent elsewhere. This would therefore have an impact on the relationship between the various organizational culture types or dimensions and organizational performance.

- Whilst conducting the research, the researcher could not correlate the organizational culture and organizational performance. This was because of the nature of the data the researcher could access. The data did not directly link organizational culture to organizational performance at the level at which the data was observed. Data measuring culture was collected through questionnaires while the measurements of performance were collated from secondary data. This made it impossible to statistically correlate the two data sets. However, this link could be tested if one culture and performance of more than one organization were compared, though this was not the objective of the study at hand. Nevertheless, if future research was extended to other South African manufacturing organizations, to collect data from a sample of companies with shifts, this would allow for the testing of the hypothesised relationship between organization culture and performance at the shift level.

5.6 Conclusion

Employing a questionnaire, this research on culture and performance utilized a quantitative approach to test hypotheses on differences in culture and performance between production shifts within the same company. The CVF was used as a yardstick for exploring organizational culture, mainly because of its extensive use, the existence of a suitable measurement instrument, and its appropriateness to inform organizational change process. The research was based on answers by 150 staff in a manufacturing company who worked in three rotating shifts. The research discovered that the current culture at the manufacturing company is the clan culture and that there is a statistically significant difference between the cultures of all the three shifts at the manufacturing company. The results also clearly show a statistically significant

difference in the quantity and quality of production between the three shifts. The research therefore clearly shows that there is difference in culture and in performance.

Due to the scope of the study and design delimitations, the relationship between organizational culture and performance in the selected organization could not be tested. Nevertheless, the research results are of use to the organization in understanding the its current culture and recommendations to develop the culture have been made based on the literature. Recommendations have also been made for more extensive research to test the relationship between culture and performance in production orientated organizations that work shifts.

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APPENDIX A: A SURVEY QUESTIONNARE COVER LETTER TO PARTICIPANTS

Dear Participant

The researcher is a MBA Student at Rhodes University. As a prerequisite to the completion of the MBA programme the researcher is requested to undertake a research project. This questionnaire therefore forms part of the research project and the data collected would be very useful.

To determine whether the culture of each shift has an impact on the performance of an organization in terms of product quantity and quality, the researcher is undertaking this survey on the shift workers at the company under investigation. I would greatly appreciate your voluntary participation and would keep the information confidential and anonymity will be ensured.

The survey questionnaire consists of two Sections and should take you approximately 15 minutes to complete.

Section A is a demographics one and you need to tick with an 'X' the response appropriate to you.

Section B reflects on the shift culture in Production line of the company under investigation and has 6 sections. Each subsection has 4 alternatives with points adding up to 100 depending on the extent to which each alternative depending on the extent at which each alternative is similar to the culture in your shift (e.g. on Section 1 if you think alternative A is very similar to your shift, alternative B and C are somewhat similar and alternative D is hardly similar at all you might give 60 points to A, 15 points to B and C and 10 points to D). Repeat the same approach for other 5 sections.

Once completed, please email the questionnaire to veliswa.dom@za.ma.gruppocln.com. You may also keep the hardcopy for collection on a weekly basis. Should you have any questions relating to the completion of the survey do not hesitate to contact me at 072 1033 557.

Regards

Veliswa Dom

APPENDIX B: A SURVEY QUESTIONNARE - PRODUCTION PERSONNEL

The Organizational Culture Assessment Instrument-of the company under investigation Production Line. Adapted from the book "Diagnosing organizational Culture "by Kim S. Cameron and Robert E. Quinn, 2006.

SECTION A: Demographic Information

In order to provide comparative feedback, please provide the following information about yourself. Mark your answers in the box with an "x"

1. What is your gender?

Female	
Male	

2. What is your age?

30 or under	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61 or over	

3. What qualification do you have?

Matric	
Certificate	
Diploma	
Degree	
MBA and above	
Other	

4. What is your job title

Quality Team leader	
Production Group leader	
Production Team leader	
Logistics Team leader	
Reworker	
Inspector	
Packer	
Hyster driver	

Tool maker 76	
Blank Storeman	
Automation technician	

5. Which shift do you belong to?

Shift 1	
Shift 2	
Shift 3	

SECTION B: The Organizational Culture Assessment

Instrument—Current Profile

1. Dominant Characteristics

A	The shift is very personal. It is like an extended family. People seem to share a lot of themselves.	
B	The shift is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.	
C	The shift is very results-oriented. A major concern is with getting the job done. People are very competitive and achievement-oriented.	
D	The shift is a very controlled and structured place. Formal procedures generally govern what people do	
	Subtotals	
	Enter values in grey cells above until each subtotal is 100	

2. Organizational Leadership Now Preferred

A	The leadership on the shift is generally considered to exemplify mentoring, facilitating, or nurturing.	
B	The leadership in the shift is generally considered to exemplify entrepreneurship, innovation, or risk taking.	
C	The leadership in the shift is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.	
D	The leadership in the shift is generally considered to exemplify coordinating, organizing, or smooth-running efficiency.	
	Subtotals	
	Enter values in grey cells above until each subtotal is 100	

3. Management of Employees Now Preferred

A	The management style on the shift is characterized by teamwork, consensus, and participation.	
B	The management style on the shift is characterized by individual risk taking, innovation, freedom, and uniqueness.	
C	The management style on the shift is characterized by hard-driving competitiveness, high demands, and achievement.	
D	The management style on the shift is characterized by security of employment, conformity, predictability, and stability in relationships.	
	Subtotals	
	Enter values in grey cells above until each subtotal is 100	

A	The glue that holds the shift together is loyalty and mutual trust. Commitment to this shift runs high.	
B	The glue that holds the shift together is commitment to innovation and development. There is an emphasis on being on the cutting edge.	
C	The glue that holds the shift together is the emphasis on achievement and goal accomplishment.	
D	The glue that holds the shift together is formal rules and policies. Maintaining a smooth running shift is important.	
	Subtotals	
	Enter values in grey cells above until each subtotal is 100	

5. Strategic Emphases Now Preferred

A	The shift emphasizes human development. High trust, openness, and participation persist.	
B	The shift emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.	
C	The shift emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.	
D	The shift emphasizes permanence and stability. Efficiency, control, and smooth operations are important.	
	Subtotals	
	Enter values in grey cells above until each subtotal is 100	

6. Criteria of Success Now Preferred

A	The shift defines success on the basis of the development of human resources, team work, employee commitment and concern for people.	
B	The shift defines success on the basis of having the most unique or newest products. It is a product leader and innovator.	
C	The shift defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key and achievement. Hitting stretch targets and winning in the marketplace are dominant.	
D	The shift defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.	
	Subtotals	
	Enter values in grey cells above until each subtotal is 100	

APPENDIX C: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

RHODES UNIVERSITY
Grahamstown • 6140 • South Africa

RHODES BUSINESS SCHOOL
Tel: [+27] 046 [603 8852]
Fax: [+27] 046 [603 8613]
E-mail: [veliswa.dom]@ru.ac.za
[09.03.2016]

The Plant Manager
Ma Automotive Tool & Die (Pty) Ltd
Berlin, East London
South Africa
Cell: 082 373 7992
Phone: 043 685 5706

Dear Mr Matthysen

Re: Invitation to conduct research at your institution

Veliswa Dom under the supervision of Professor Noel Pearse is a Master of Business Administration (MBA) postgraduate student at Rhodes University carrying out research on the impact of organisational culture on organisational performance. The aim of this research is to determine whether differences in performance between shifts can be explained by differences in organisational culture. The participation and cooperation of your institution as the site for this research would be appreciated.

The research will be undertaken through a survey questionnaire that is conducted within the population of production personnel, including group leaders, team leaders, packers, inspectors, folklift drivers and tool markers. The identity of your institution and the employees who voluntarily consent to participate in the survey will be treated with complete anonymity. The completion of the questionnaire will take a participant about 15 minutes to complete.

Attached for your information is a copy of the participant's Informed Consent Form. If you have any questions about the research, please feel free to contact us by email at v.dom@za.ma.gruppocln.com or N.Pearse@ru.ac.za.

If you would like your organisation to participate in this research, please complete and return the attached form to Veliswa Dom at v.dom@za.ma.gruppocln.com.

Thank you for your time and I hope that you will find our request favourable.

Yours sincerely,

Veliswa Dom

Research Student

Prof Noel Pearse

Supervisor

www.ru.ac.za

APPENDIX D: INSTITUTION CONSENT FORM

Impact of Organisational Culture on Organisational Performance

Institution Consent Form

Participation Consent
I consent for you to approach Production employees to participate in the Impact of Organisational Culture on Organisational Performance.
I acknowledge and understand:

- The role of the institution is voluntary.
- I may decide to withdraw the institution's participation at any time without penalty.
- Employees in Production department will be invited to participate and that permission will be sought from them too.
- Only employees who consent will participate in the project.
- All information obtained will be treated in strictest confidence.
- The employees' names will not be used and individual employees will not be identifiable in any written reports about the study.
- The institution will not be identifiable in any written reports about the study.
- Participants may withdraw from the study at any time without penalty.
- A report of the findings will be made available to the institution.
- I may seek further information on the project from Veliswa Dom on 0721033557.

Full Name:	Edward Winter Matthysen
Position:	Plant Manager
Signature:	
Date:	14/03/2016

Please return to:	DEPARTMENT OF BUSINESS STUDIES
	Grahamstown
	6140
	South Africa

www.ru.ac.za

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