

The influence of different leadership behaviours
on employees' perceptions of organisational culture

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Chapter 1

1. BACKGROUND

1.1. Background and introduction

According to Lory Block (2003), there is a large body of research that has explored leadership and organisational culture independently. However, the interconnection between these constructs remains more of an implicit theory than an empirical finding. Based on the leadership culture research published thus far, the following tentative conclusions have been suggested by researchers and these are listed below.

- The impact of leadership on firm performance is mediated by organisational culture.
- Leadership creates an environment in which fundamental organisational change is more or less likely to occur.
- Specific leadership behaviour is associated with distinct cultural traits.
- Contextual factors such as organisational culture have an impact on the emergence of specific leadership styles.
- Leaders use their knowledge of organisational culture to affect change.
- The behaviour of leaders influences the perceptions of organisational culture among followers.

Despite the limited amount of research published, there is a surprising degree of consistency among these proposed conclusions. This consistency is especially impressive given the variety of measurement strategies used, the types of organisations investigated, and the diverse concepts of leadership and organisational culture. Unfortunately, researchers who choose to delve into the mysteries underlying the leadership-culture connection must confront a myriad of definitional complexities. For the purpose of present research, however, Rost's (1991) conceptualisation of leadership was adopted. Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purpose.

The definitional challenges of organisational culture mirror those facing leadership researchers. Anthropologists have proposed at least 164 different definitions of organisational culture. Current models of organisational performance

and changes suggest that leadership and organisational culture are central explanatory constructs. The growing interest in this area stems from the fact that organisations now recognise that leadership is not simply a rational or technical activity, but that it involves the management of people and the development of a sense of community within the organisation.

According to Schein (1990:109) organisational culture can be defined as (a) a pattern of basic assumptions, (b) invented, discovered or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore to perceive, think and feel in relation to those problems. An examination of the Schein definition (1990) and others definitions suggest that corporate culture is the pattern of basic assumptions, values, norms and artifacts shared by organisation members. These shared meanings help members to make sense out of the organisation.

These meanings signal how work is to be done and evaluated, and how employees are to relate to each other and to other significant people, such as customers, suppliers, and government agencies.

Corporate culture includes four major elements existing at different levels of awareness. These are set out below.

Basic assumption – At the deepest level of cultural awareness are unconscious, taken-for-granted assumptions about how organisational problems should be solved.

Values - The next higher level of awareness includes values about what ought to be in the organisations. Values tell members what is important in the organisation and what they need to pay attention to.

Norms - Just below the surface of cultural awareness are norms guiding how members should behave in particular situation. These represent unwritten rules.

Artifacts - This is the highest level of cultural awareness and creations that are visible manifestations of the other levels of cultural elements. These include observational behaviour of members, as well as the structure, systems, procedures, rules, and physical aspects of the organisation.

Schein (1988) argues that leaders play a critical role in shaping and transmitting organisational culture. In other words, a leader's behaviour can have a profound effect on organisational culture and ultimately on how effectively the organisation performs. Leaders influence culture through what Schein refers to as primary and secondary mechanisms. The former relate to a leader's behaviour and the latter refer to systems level mechanisms like reward systems, selection systems and indoctrination.

Schein (1988) further argues that culture is ubiquitous. It covers all areas of group life. But he argues that culture assists the organisation or group in accomplishing critical external and internal tasks. He has identified a set of major external and internal tasks that all group face and with which they must learn to cope.

External and internal tasks facing all groups:

External adaptation tasks	Internal integration tasks
Developing consensus on:	Developing consensus on:
1. The core mission, functions, and primary tasks of the organisation vis-à-vis its environment.	1. The common language and conceptual system to be used including basic concepts of time and space.
2. The specific goals to be pursued by the organisation.	2. The group boundaries and criteria for inclusion.
3. The basic means to be used in accomplishment the goals.	3. The criteria for allocation of status, power, and authority.
4. The criteria to be used for measurement results.	4. The criteria for intimacy, Friendship, and love in different work family settings.
5. The remedial or repair strategies if goals are not achieved.	5. The criteria for the allocation of rewards and punishment.
6. Concepts for managing the unmanageable – ideology and religion.	

While there are many theories of leadership, a common thread running through behavioural models is the division of leader behaviour into task behaviours and relationship behaviours (Yukl, 2002). Yet there is very little work on establishing a link between leader behaviours and organisation culture.

To summarise, leaders have considerable influence in shaping organisational culture. While Schein (1988) identified the external and internal tasks that culture must assist the organisation to accomplish, there is less known about the relationship between culture and actual leader behaviour. Schein does suggest the primary and

secondary mechanisms by which leaders influence culture, but his work does not link culture and leader behaviour in terms of behavioural models of leadership.

1.2. Purpose of the research

The primary purpose of this research is to examine the relationship between leadership behaviours and employees' perceptions of organisation culture. Theory suggests that a leader has a significant influence on organisational culture. What is not known is how specific leadership behaviours correlate with different organisational culture dimensions.

1.3. Problem statement

Are there particular leader behaviours that correlate with different dimensions of organisational culture? In other words, what is not known is whether a relationship exists between how the leader behaves and the resulting perception employees have of the organisation's culture. Are there particular leader behaviours, for example, that correlate with the culture being perceived as innovative as apposed to risk averse? This research attempts to address these questions and to provide more insight into the general relationship suggested by the work of Edgar Schein (1988).

1.4. Importance of the problem

Although there is a theoretical argument that the internal role of the leader influences organisational culture, there is very little empirical research that demonstrates how particular leadership behaviours impact upon employees' perceptions of organisational culture

1.5. Assumptions

A basic assumption is that it is not possible to isolate a cause and effect relationship between leader behaviours and employee perceptions of organisational culture. An additional assumption is that employees will have similar perceptions of organisational culture.

1.6. Definitions: the organisational culture and leaderships styles in organisations

Organisational culture influences the performance of a company and the culture is influenced by the leadership styles. The biggest problem in a company is the

difference in the views of the organisational culture on the part of management and workers. This has occurred as a result of apartheid, and is often evident in the gap between the view of the leaders and the subordinates. The type of a culture is formulated at senior levels within organisations, usually in isolation from workers, who will in time be expected to implement the selected type of culture without any input or consideration from subordinates. The feeling of exclusion experienced by workers can manifest itself in frustration, which often leads to strategic plans being ignored, or at worst, consciously sabotaged.

Robbins (1998: 167) says "organisational cultures were shown to constrain managerial discretion. In no area is this constraint more explicit than in strategic planning. More and more contemporary analyses of strategy making are citing culture as a contingency variables that greatly influence the strategy that management chooses."

In terms of organisational cultures: "Schein (1992) defines the culture of a group or organisation as shared assumptions and beliefs about the world and their place in it, the nature of time and space, human nature, and human relationships" (Yukl, 2002).

Culture dimensions mean that organisational culture is typically operational into salient dimensions. So for instance the organisation culture profile of O'Reilly and colleagues identifies competitiveness, social responsibility, supportiveness, innovation, emphasis on rewards, performance orientation, and stability as dimensions of culture.

The behavioural theory of leadership suggests that effective leaders engage in two types of leader behaviour: task behaviour and relationship behaviour. The relative use of these behaviours translates into different leadership styles. For example, a leader who emphasises task relationship over relationship behaviour would be classified as using an autocratic style (Yukl, 2002).

On the leadership, Yukl says most definitions of leadership reflect the assumption that it involves a process whereby intentional influences is exerted by a

person over other people to guide, structure, and facilitate activities and relationships in a group or organisation (Yukl, 2002).

1.7. Research methodology

Quantitative methodology was used to conduct the study in the form of field questionnaires. Leadership behaviour was measured by the LBDQ (Leader behaviour description questionnaire). The OCP (Organisational Culture Profile) questionnaire was used to determine the type of culture in the organisations. The questionnaire also included a global question to determine whether the respondent's perception of the culture is positive or negative.

1.8. Testing of the hypothesis

The actions of immediate supervisors send strong messages to employees on a daily basis about the essential character of an organisation's culture. These behaviours are referred to as primary cultural embedding mechanisms (Schein, 1992) and include such things as what supervisors pay attention to, how they react to crises, and the criteria they use to allocate resource and/or rewards to employees.

H1. Employees' perception of organisational culture will be positively associated with the leadership-behaviours of their immediate supervisors.

One of the most important elements of culture in new organisations is the set of beliefs about the distinctive competence of the organisation that differentiates it from other organisations. The beliefs are likely to include the reason why the organisation's products or service are unique or superior and the internal processes that account for continued ability to provide these products and service.

H2. Employees' perception of the organisational culture will be positively correlated with the leaders/managers perception of the organisational culture.

The theory suggests there are particular leadership styles that correlate with different cultural dimensions. For example, relationship style behaviours should correlate positively with employees' perception that the culture is more supportive.

H3. The different types of leadership behaviours will be correlated to the different types of organisational cultures.

See Table 1 on page (40) for a detailed presentation of the expected correlations between leader behaviour factors and organisation culture.

CHAPTER 2

2. LITERATURE REVIEW AND DISCUSSION OF RELEVANT THEORY

2.1. Introduction

“Despite numerous references to a relationship between leadership and organisational culture in the academic and popular literature, little systematic research has been conducted to examine the specific nature of this relationship. Apart from a plethora of anecdotal reports (Allen and Thatcher, 1995; Quick, 1992; William et al., 2000; Wood, 1999), there are a limited number of published studies which have attempted to systematically examine the leadership-culture relationship. While there is a large body of research that has explored leadership and organisational culture independently, the interconnection between these constructs remains more an implicit theory than an empirical finding” (Block, 2003).

“The experimental research in laboratory and field settings found that increases in relations-orientated leadership behaviour usually resulted in higher subordinate satisfaction and productivity” (Yukl, 2002).

The relationship between culture and behaviour in regard to leadership and the effect of leadership on the perception of organisational culture will be shown as a crucial element in the merging of successful cultures.

2.2. Defining organisational culture

“Culture” has its roots from the Latin verb *colere*, meaning, “to cultivate” and in later years came to indicate a process of refinement and breeding in domesticating some particular crop. The modern-day meaning draws on this agricultural derivation – it relates to society’s control, refinement and domestication of itself. It is the set of important understandings that members of a community share in common (Rue & Byars, 1992).

The term organisational culture is used to describe the shared values and beliefs of members about the activities of the organisation and interpersonal relationships, according to Yukl (2002).

Culture in an organisation is “the personality of the organisation” according to Rue & Byars (1992:438). An organisation’s culture is transmitted in some of the following ways; long standing and unwritten rules; shared standards about what is commonly seen as important by all members of the organisation; traditions and social standards determine what is good behaviour and what is not. Organisational culture determine how people in the organisation should behave, by establishing a value system through rites, rituals, myths, legends and actions – corporate culture means “the way we do things around here”.

Culture is a perception and exists in the membership of the organisation. It is not an individual expression but rather an organisational and shared perception. It is also a descriptive term, concerned with how members perceive the organisation, and not if they like it or not. It describes rather than evaluates (Robbins, 1991).

Organisational culture refers to the impact on the environment resulting from group norms, values, philosophy and informal activities (Donnelly, 1992:518). Organisational culture is a phrase that means two different, but concerned things. On the one side there is a culture in a organisation that is similar to a culture in a society, consisting of things such as shared values, beliefs, assumptions, perceptions, norms, artefacts, and patterns of behaviours. Culture is to the organisation what personality is to the individual. On the other hand, culture is the way of looking at and thinking about the behaviour of organisations, a perspective of understanding what is occurring (Ott, 1989).

According to Van Tonder, Gordon (1992) states that organisational culture is the pattern of shared and stable beliefs and values that are developed with in a company over a period of time and that there is more to organisational culture than organograms, policy statements, annual after dinner speeches, company celebrations, pep-talks and the like, or the odd climate attitude survey, strategic workshops, quality circle meetings or outlandishly priced top management presentations by some guru specially imported from aboard.

Petersen (1991:26) believed that organisational culture means different things to different people. To some it is virtually everything an organisation consists of, from

the nuts and bolts activities of the factory floor to the high ideas about the organisation's mission, goals and values up in the managerial suite.

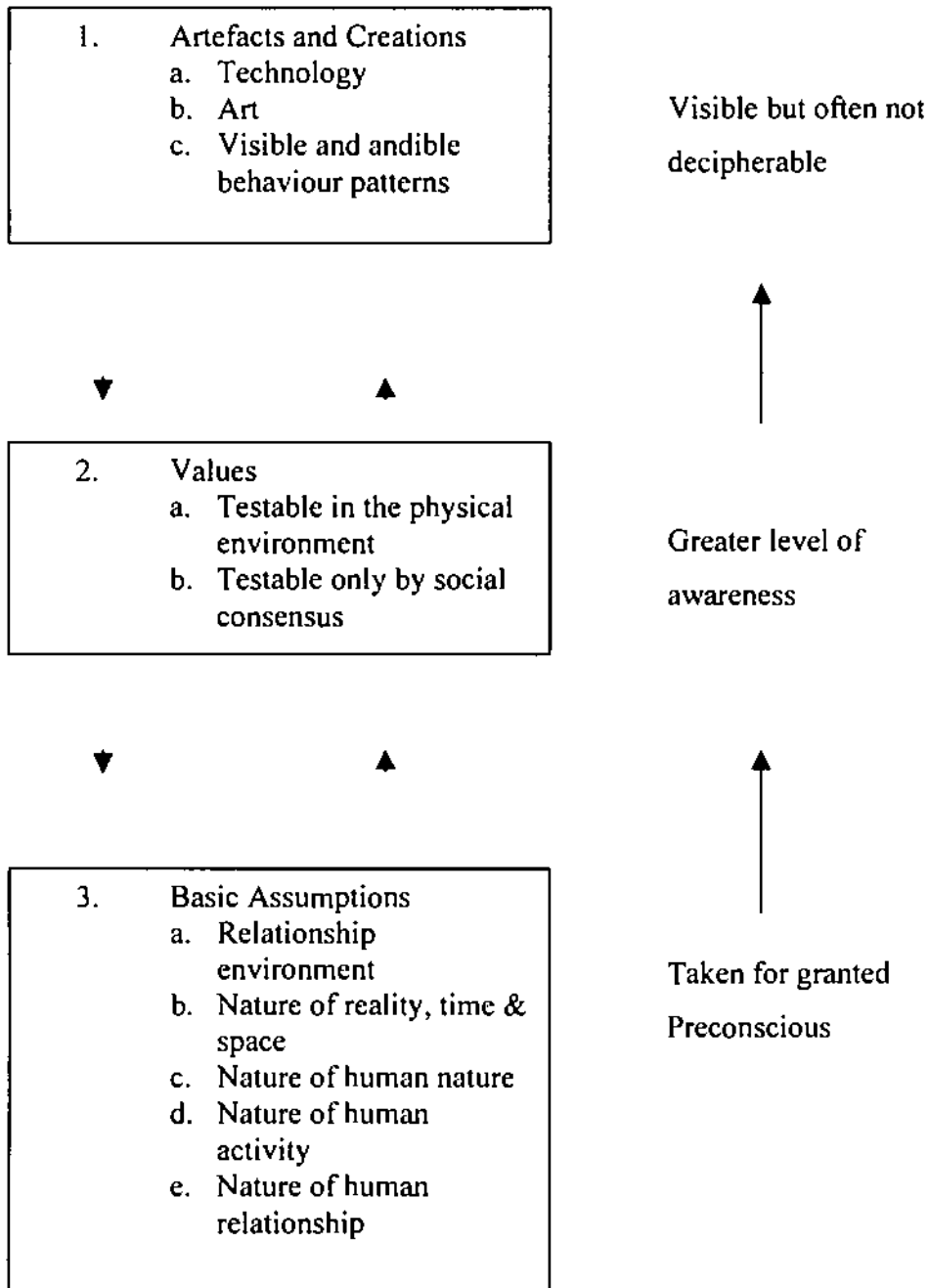
Schein (1988:9) describes organisational culture as a pattern of basic assumptions, invented, discovered, or developed by a given group as it has learned to cope with problems of external adaptation and internal integration and that it has worked well enough to be considered valid and, therefore is perceived as the norm.

Van Tonder, Sharplin (1985) as saying that organisational culture is a system of shared values, beliefs and habits within an organisation, which interacts with structure and policies to produce behavioural norms, but in addition includes a political element, i.e. the power used for carrying out those activities aimed at "influencing the distribution of advantage and disadvantages within the organisation"

Organisational culture is formed when a group has enough of a history to develop a set of basic assumptions about itself. The culture of the group a group exists at three levels, which are depicted below in figure 2.1.

Figure 2.1

The level of organisational culture



Source: Adapted from Schein, 1980, p.4

From Figure 2.1 the following three levels can be explained.

- At the most superficial level are the artefacts and creations – the visible behavioural manifestations which are easy to see, but hard to decipher;

- The next level represent the values – this is the reason for certain behaviours in the group, the “why” they do things.
- The last level is how the group will solve a problem.

Schein says that leaders create organisational cultures, and one of the most decisive functions of leadership may well be the creation, the management, and destruction of culture. Schein also highlights an important phenomenon of the relationship between leadership and culture in his book *Organisational Culture and Leadership*. He says that, culture and leadership, when one examines them closely, are two sides of the same coin, and neither can really be understood by itself. In fact, there is a possibility – underemphasised in leadership research that the only thing of real importance that a leader does is to create and manage culture and that the unique talent of leaders is their ability to work with culture.

A example of different leadership styles in a specific culture is explained when a American leader who assumes that solving a problem always has top priority encounters a different culture were they believe protecting the supervisors “face” are to has top priority. The following scenario may occur. In the traditional way the subordinate would not question the leader even if he/she knows that the solution to the problem is wrong. In another culture other leaders would ask the subordinate what would they have done solve the problem.

A dynamic analysis of organisational culture makes it clear that leadership is intertwined with culture formation, evolution, transformation, and destruction. Culture is created by the action of the leaders; culture also is embedded and strengthened by leaders. When culture becomes dysfunctional, leadership is needed to help the group unlearn some of its culture assumptions and learn new assumptions. Such a transformation requires the deliberate destruction of culture elements, and it is this aspect of culture dynamics that makes leadership important and difficult to define. In fact, the endless discussion of what leadership is and is not could, perhaps, be simplified if people recognised that the unique and essential function of leadership is the manipulation of culture.

It is sometimes nothing less than surmounting one's own taken-for-granted assumptions, seeing what is needed to ensure the health and survival of the group, and making things happen that enables the group to evolve toward new cultural assumptions. Without leadership, groups would not be able to adapt to changing environmental conditions.

2.3. The origins (lower level employees) of organisational culture in a company

When researchers commence a study of leadership or motivation, few people question where these concepts originated or whose perspective organisational behaviour is being viewed. There is normally tension between management and employees and their perception of purpose and culture in the organisation. There is usually a perception of us versus management and employees see most of management actions as a threat. In situations where management exercises autocratic control; the members may feel a greater sense of division and separation.

Employees have different reactions when management have excessive control; one is to cover things up and not admitting to errors and mistakes. These actions may cause a great deal of damage to a company and encourage a negative organisational culture.

The formative elements of culture at the lower levels are the shared beliefs and values with which members of the organisation members strongly identify. These become the accepted ways of interpreting experience and standard topics of conversations. It is these focal values and shared beliefs that give members a sense of kinship and belonging that they do not gain from their outcast status in the dominant managerial culture. While lower-level employees may resent their work, other departments, and the customers, their major problem always lies with management (Kilmann, Santon, Scrpa & Associates, 1985).

Closing the gap with lower-level cultures is one of the main goals of management. This will reduce the separation and isolation felt by those in lower-level jobs and ensure that the right organisational culture exists in the company.

When managers create a climate for culture change and to close the gap they need to look at five implications:

- planning for culture change - research shown that crises were manufacture when no planning was done;
- crisis and leadership paradox – neither leaders nor crisis are clear indicators that culture changes is taking place;
- the role of leadership in culture change – the combination of a crisis and new leadership provides fertile ground for initiating culture change in an organisation;
- conflict and culture changes – to manage culture changes, leaders must be willing and able to manage conflict, expert power, and recognise that not all parties are likely to be happy with the outcome;
- culture change and adoption – from the study of five companies it is apparent that no specific culture is related to a specific success.

2.4. Types of organisational culture

Van Tonder states in his research that Rue and Byars maintain that, although there are as many distinct cultures as there are organisations, most of them can be grouped into one of four basic types. The grouping is determined by two factors: the degree of risk associated with the organisation's activities and the speed with which the organisation and their employees gain feedback indicating the success of decisions (Rue & Byars, 1992: 442). The four generic types of culture are shown in Figure 2.2.

Figure 2.2

Generic types of organisational cultures, based on risk taking and speed of feedback on results

SPEED OF FEEDBACK		DEGREE OF RISK ASSOCIATED WITH ACTIVITIES	
RAPID	TOUGH-GUY, MACHO CULTURE	WORK-HARD/PLAY HARD CULTURE	
SLOW	BET YOUR COMPANY CULTURE	PROCESS CULTURE	

Source: Rue & Byars (1992:442)

The characteristics of the four types of culture can be defined as:

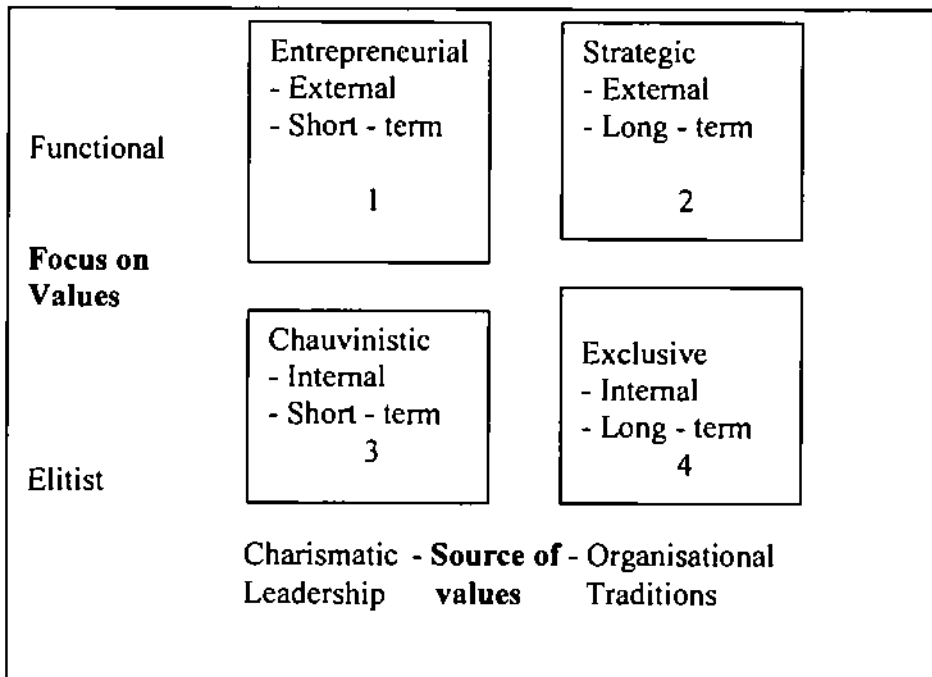
- tough-guy, macho culture – characterised by organisations where high risks are taken and where feedback is quick as to whether the decisions were right or wrong;
- work hard, play hard culture – employees are encouraged to take very few risks and they can expect rapid feedback;
- your company culture – requires big decisions, but feedback is slow and
- process culture – which involves low risk with very little feedback and the employees focus on how things are to be done and not on the outcome;

Van Tonder identified another approach as being that of Reimann and Kleiner (1989:39), who state that strong organisational culture does not build up overnight, but evolves over considerable periods of time. Organisations do not just allow cultures to develop but spend much effort, time and money to keep their cultures focused on their

core values. If these core values in organisation are classified according to the focus of values, then four generic types of culture can be identified, as shown in figure 2.3.

Figure 2.3

Generic organisational culture based on the source and focus of shared values



Source: Reimann & Kleiner (1988:40)

Form Figure 3.5 the generic culture can fall into one of the types description below.

- Entrepreneurial – influenced primarily by the charismatic leaders/founder of the organisation and his/her followers who help to build an organisation to meet the challenges of the environment and stakeholders. Such organisations will normally experience some problems when the leader/founder leaves the organisation.
- Strategic – in this type of organisations the core values are institutionalised and are looked upon as part of the tradition of the organisation. These organisations usually develop from entrepreneurial

cultures, when the source of values moves to professional management.

- Chauvinistic – if the functional orientation of the entrepreneurial culture become elitist, the culture becomes chauvinistic and internally focused with blind loyalty towards the organisation and its management neglecting the customer and other external stakeholder.
- Exclusive – this is when the culture became institutionalised and the organisation becomes an exclusive club, which is inward looking with well-entrenched traditions (Reimann & Kleiner, 1988).

2.5. Developing of organisational culture

2.5.1. Building blocks for organisational culture

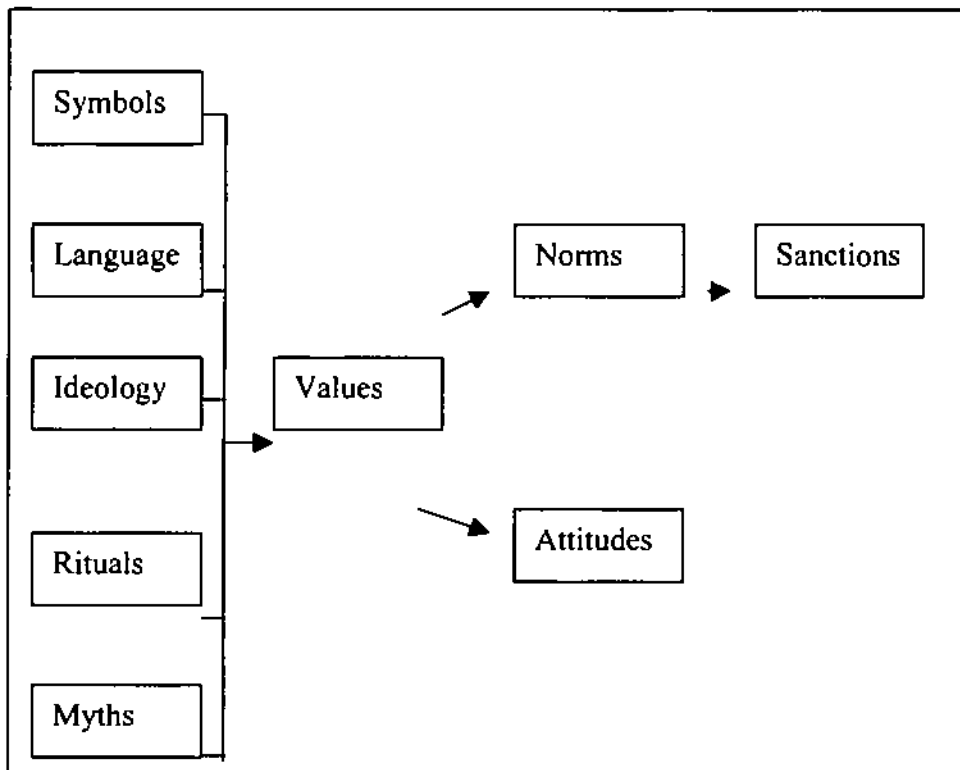
Schein (1988: 271) indicated that there are three major developmental stages that can be identified in organisations and for each stage is a likely culture.

- Birth and early growth – founder domination and culture is the “glue” that holds together the organisations;
- Organisational midlife – subcultures are spawned and identity crisis can develop, resulting in an opportunity to change.
- Organisational maturity – with mature markets, the possibility of stagnation in the organisation is high and the prevailing culture could become a constraint on innovation. It is normally necessary to change culture to survive.

According to Van Tonder, Clark (1996:90) shows that the culture of an organisation is made up of a number of building blocks, as shown in Figure 2.4.

Figure 2.4

Building blocks of a organisational culture



Source: Clark (1996:91)

The values of the organisation are formed by the five building blocks of:

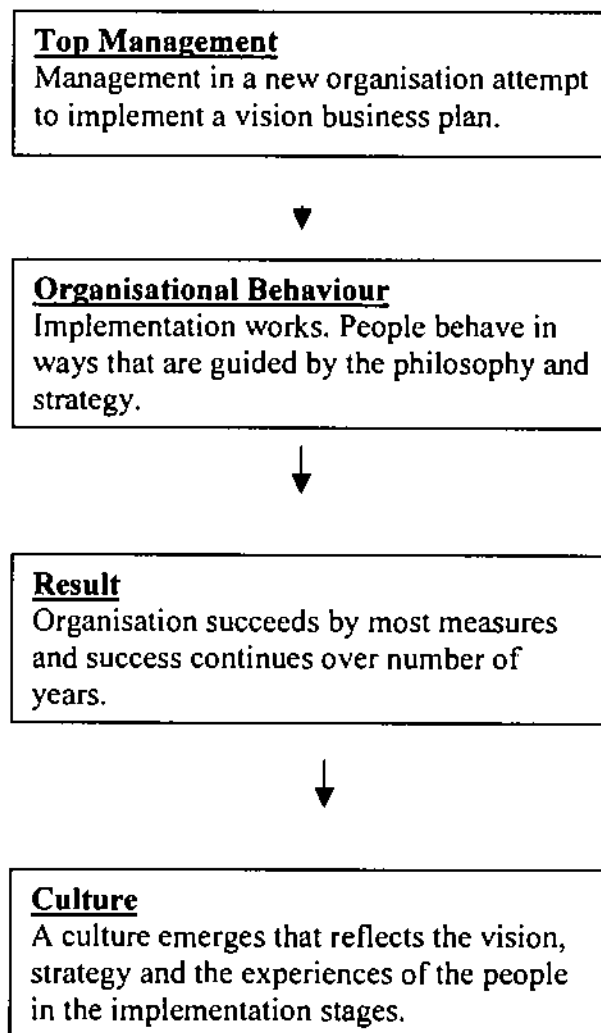
- symbols – objects, acts and relationships in the organisation that evoke emotions and drive the members to action;
- language – the vocabulary used in the organisation to describe situations and express meaning;
- ideology – the beliefs about the social world and how it operates and the reaction of the organisation towards inputs from it;
- rituals- the way in which the organisation celebrates its successes and recognise achievers; and
- myths – the organisation's folklore attesting to the successes of its members.

These values in turn influence the norms, attitudes and the sanctions of the organisation, i.e. if all the building blocks point towards a value of customer service, then the norms, the attitudes of the organisation's members and the sanctions in the organisation to reinforce these values, will all be consistent with the value of customer service (Clark, 1996).

Van Tonder summarises the development of culture in an organisation as a result of certain managerial decisions based on a vision, business strategy or a personal philosophy. This process is shown in Figure 2.5.

Figure 2.5

Common patterns in the emergence of organisational culture



Source: Kotter (1992:8)

2.6. Characteristics of organisational culture

In his doctoral thesis Van Tonder identifies four types of cultures whose characteristics can be identified in terms of their perceptiveness to change:

- creative culture – which tend to be innovative and entrepreneurial and inclined towards risk taking, change can be initiated in such culture;
- quality culture – focusing on the growth of employees within the organisation through effective planning and problem solving, this type of culture is relatively flexible and will accept change readily;
- productive culture – which tends to employ more rigid procedures and rules, concerning on efficiency and consistency and resisting change under normal circumstances; and
- supportive culture – characterised by teamwork and usually the type of organisation that would react very favourably to change.

2.7. Organisational culture and business performance

2.7.1. Influence of organisational culture on the performance of a company

One must look at how the organisational culture influences the performance of a company. Previously these researchers stated that one side of the coin is the leadership and the reverse side is the culture. Brown discusses the link between the performance and the culture in his book Organisation Culture. He states that many studies have outlined organisational culture and little has been done to link organisational culture and the performance of a company. The research of Denison (1990) has suggested that there are four different aspects of an organisation culture that have an impact on organisational effectiveness:

- Involvement
- Consistency
- Adaptability
- Mission.

These four meanings suggested the culture variables that influence an organisations performance.

One of the widely cited hypotheses is that a good culture enables the company to perform better. Commentators do not always spell out precisely how a strong culture leads to exceptional performance, but three key arguments are discernible here.

- A strong organisational culture facilitates goal alignment.
- A strong culture leads to high levels of employees motivation.
- A strong culture is better able to learn from the past.

To succeed, a company must have a strong culture and be able to adapt to its changing environment. An adaptive culture is generally characterised as one in which people will take risks, trust each other, have a proactive approach to organisational life, will work together to identify a problem, share considerable confidence in their own abilities and those of their colleagues, and have enthusiasm for their jobs.

Based on their research findings, Kotter and Heskett (1992) argue that a more coherent formulation of this perspective would emphasise two further points. First, the culture must be one which values and support all the large stakeholders in the organisation. Second, the culture must value excellent leadership from its managers at all levels. So organisations that provide effective leadership aimed at satisfying the legitimate and changing interest of stakeholders will be more successful than those organisations whose cultures are not so orientated. According to findings of their study over an eleven-year period, those organisations that emphasised leadership and key stakeholders increased revenue by 682 per cent as compared to 166 per cent for those that did not (Brown, 1995)

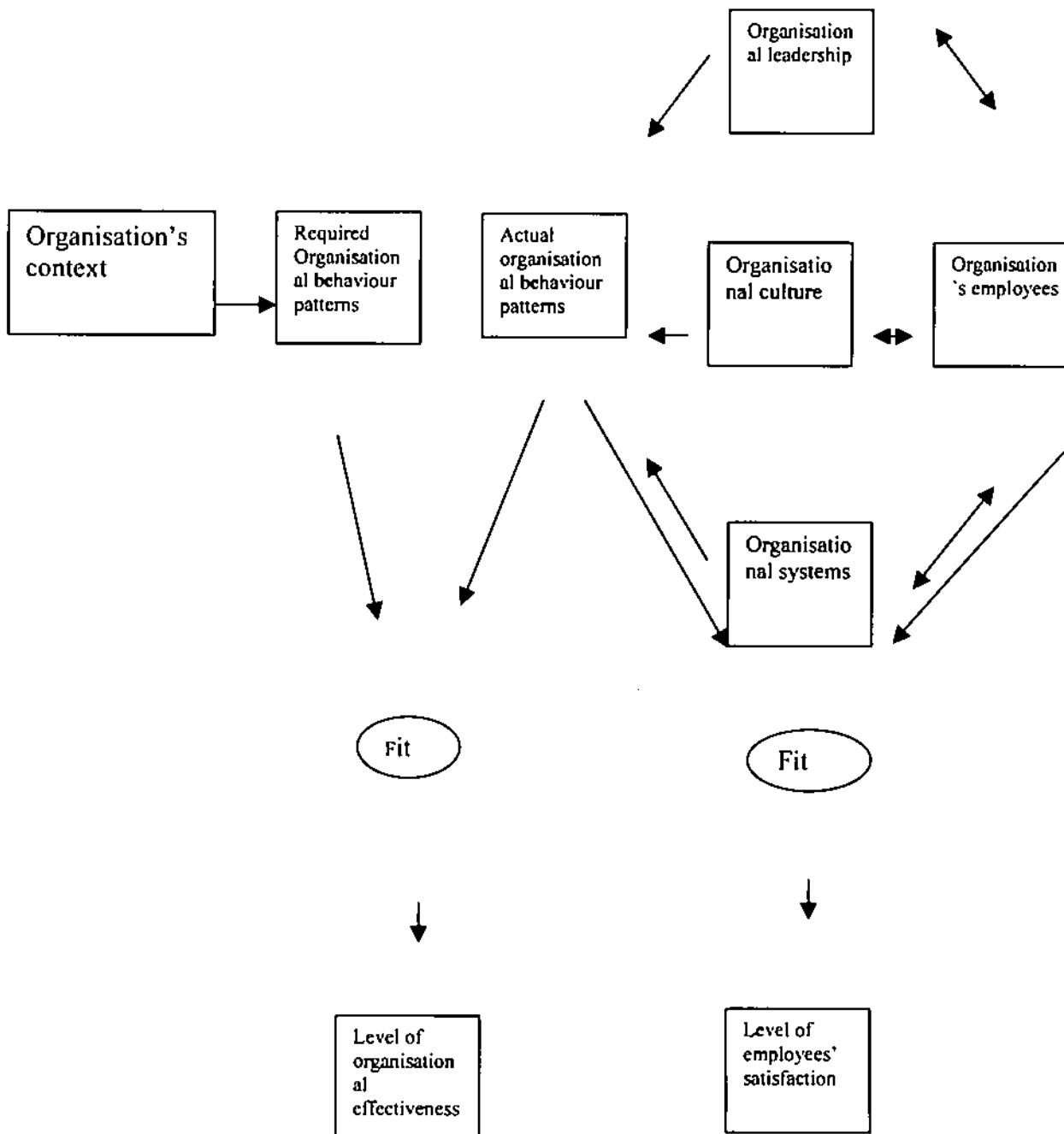
When looking at the history of Jaguar, the company started off as a niche company with specialised cars, but with the change of ownership, the vision also changed to mass production. This nearly closed the company down, but then, when John Egan changed the focus back to be a specialised car producer and employed new management the company became once again a market leader. It is obvious that leadership and the culture in a company can determine the success of it.

Deal and Kennedy (1998) claim that a strong company will deliberately develop cabals (group of two or more people who secretly join together to plot a common purpose), because when its interest matches the interest of the cabal, the result is a strong management lever. In creating a huge cabal, General Electric speaks to these managers as insiders. It is more effective than addressing each manager separately with a suggestion or request. To strengthen the cabal they need to say, "Here's what we are all about". This makes the people to identify themselves as group, not as individuals. A manager's real interest in cabals has to do with the fact that a cabal is a strong subculture within an organisation; because it is very hard to deal with 100 or 100 000 people all at once, managers actively foster cabals and then weld them together so that all will move in one common direction.

By now it has become apparent that leadership influence the organisational culture and culture influences the performance of a company, Sathe explain two models or framework to understand the organisational culture. Only model A will be used to explain how culture is part of the organisation. Model B explains the individual's behaviour within the organisation, which is not applicable to this study. To understand and be able to take effective action, managers must examine how culture and these realities together influence organisational performance.

Figure 2.6

**Model A – Organisational Dynamics: Organisation as the Unit of Analysis
(Culture as a Part of Organisational Reality)**



Source: Sathe V. (1985, p 33)

Model A assumes that actual behaviour may or may not match the required behaviour for three reasons. The organisation:

- may or want to behave as called for by the situation (Motivation problem);
- may not understand how behave in order to be effective (Knowledge problem);

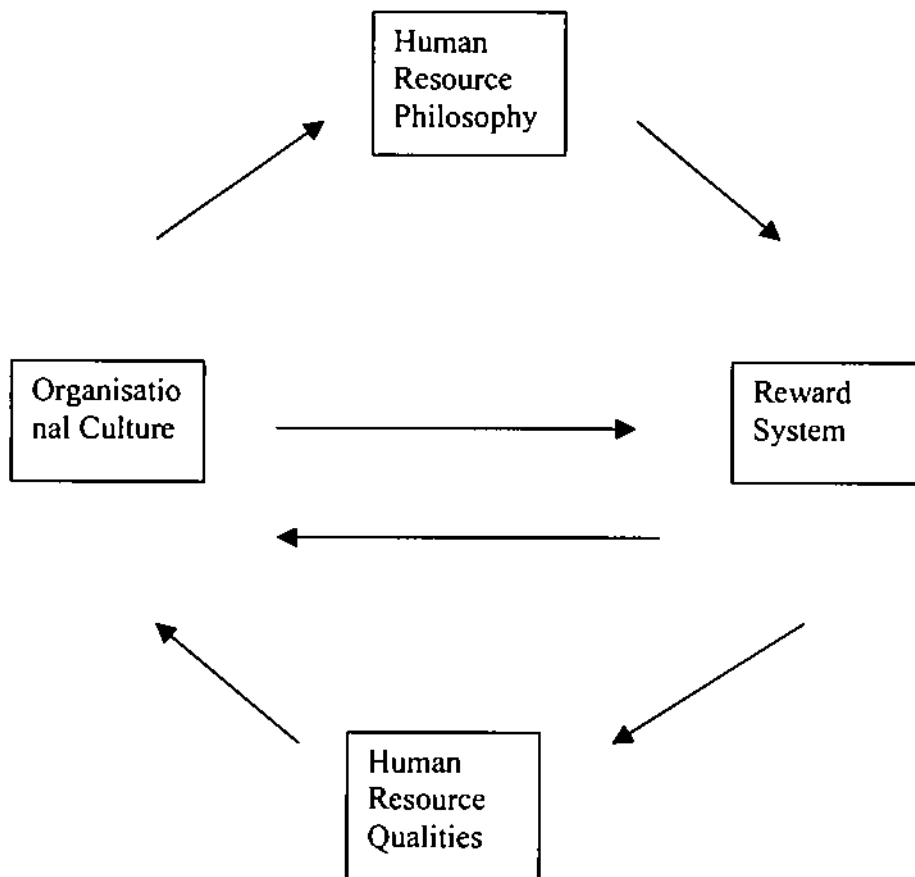
- may not be able to behave appropriately (skill problem).

The personal beliefs and values of company leaders and their perception and definition of the situation have an important influence on organisational behaviour patterns.

Leaders can use the culture reward system relationship to set and manage the relationship between culture and organisational performance. This is a difficult task and managers can use this model to simplify and illustrate how leaders can set up a reward system culture to improve the performance of a company.

Figure 2.7

The culture reward system relationship



Source: Kilmann (1986: 404) - Gaining Control of the Corporate Culture

This figure illustrates that (1) an organisation's culture can influence its reward system both directly and via a mediating human resource philosophy, and, reciprocally, (2) the organisation's reward system influences its culture both directly and via the quality of human resources in the organisation, that is the calibre of people in the organisation.

It is important for managers as leaders to control corporate culture to ensure the successes and to sustain the performance of a company. The leadership influences the culture and the culture influences the performance.

2.8. Reasons why the perception of organisational culture of the managerial level differ from that of the lower levels

Like most organisational research, the study of organisational culture is mainly from a managerial point of view. While managers have new ideas that can improve the organisation, such ideas often have a different reception at the lower levels of the organisation. One reason for this is that frequently an entirely different culture exists at the lower level.

Organisational culture has generally been treated as a unitary, homogeneous entity; only a few articles have examined organisational subcultures or countercultures. Martin and Siehl (1983) compared the dominant culture of General Motors with the subcultures created by John DeLorean during his term as a division head at the company. Seldom has the research and writing on organisational culture given attention to the different perspectives of management and the lower employees (Kilmann, Saxon, Serpa & Associates, 1986).

In this section the study will consider in ways to close the gaps between the perception of the organisational culture between the leaders and subordinates. This part of the literature review is important because the study correlates the LBDQ and the OCP and the OCP for the managers and employees will be correlated. One need to find ways in which leaders can manage themselves to close the gap between them and their subordinates to improve the performance and the culture for all the stakeholders.

The study of organisational culture would be incomplete without taking in account the prevailing culture that influences organisation members in lower jobs. The people at the bottom are equally important as the managers as they make the products or deliver the service to the customers. They are the people who are affected mostly by the type of culture that exists and are the showcase for the company's existing culture. Once the employees can see and live the same values and vision as the managers the overall performance will be improved, thus the former must feel part of the culture and organisation. The next few paragraphs we will review at (1) views of work at the lower level (2) managing lower level culture (3) differences that keep managers and lower level employees apart.

Looking at views of work at the lower levels the researcher commences a study of leadership or motivation. Few people question where these concepts came from or whose perspective organisational behaviour is being viewed. The managerial point of view accepts that authority, status, and rewards mainly derive from one's position and the hierarchy and that a manager has a right to make decisions affecting those in lower level positions. All managers must, in varying degrees, subscribe to this if they are to succeed and advance in their jobs. Workers in non-managerial jobs frequently do not accept their underprivileged status willingly. An uneasy tension often exists between the managers and the managed. Nonetheless, such views are considered radical because it runs counter to the dominant culture – the managerial perspective – which is the prevailing way of thinking in the organisation.

Looking at the managing of lower-level cultures the formative elements of culture at the lower level are the shared beliefs and values with which organisation members strongly identify. These become the accepted ways of interpreting experience and the standard topics of conversation. It is these values and shared beliefs that give members a sense of kinship and belonging that they do not get from their outcast status in the dominant managerial culture.

There are ten ways to close the Gap between the two perceptions of culture. Kilmann and his associate's (1986) summaries them as follows:

- attempting to change the major organisational values

- supervisory training
- better labour and personnel practice
- improving customer service
- restructuring and enriching jobs
- participative management
- job rotation
- job sharing
- improved benefits
- better physical conditions and amenities.

Once again the discussion of these ten managerial practices is far from comprehensive. People can talk and use many other techniques that can influence lower level culture, however, the problem of closing the gap is not necessarily going to be solved by how well-selected managerial techniques and practices applied. Nothing is worse than the kind of nagging adversarial relations that exist in many organisations between managers and subordinates. By far the biggest problem is the antagonism felt towards managers.

Looking at the difference that keeps managers and lower level employees apart an important feature is, the role of concept and symbolic interpretations of behaviour. Conflict within the organisation frequently arises over competing definition and interpretations of behaviour. Notorious among these is the tendency for managers to view their subordinates' behaviours negatively because the subordinates are unable to construe and symbolic relationship between the outward appearances of their subordinates' behaviour and the task their subordinates are charged with. Managers' views are normally the only interpretation when disputes arise. Organisational members may give tacit acceptance to these accounts but continue to view events in terms of the own concepts of reality. Organisational members may justify "skiving" because they consider their work dull and boring; management makes no allowance for this view. Likewise, workers may justify "covering up" because all errors are punished. Both parties of manager and subordinates consider their views to be equally legitimate. These conflicts and difficulties present a formidable problem because they are incorporated into the very language one uses one uses each day and the ingrained assumptions one holds about work and organisational behaviour.

In the long run, one way to ameliorate the problem of cultural or social differences between different levels of employees and managers can be done with training and education. Unfortunately, businesses education gives little attention to the role of stereotypes in the company culture and how damaging they can be (Kilmann, Saxon, Serpa & Associates, 1986).

2.9. The South African situation calls for a study of leadership and its influence on organisational culture

In the literature review it was found that there is no literature or study on the influence of leadership on organisational culture in the South African (S.A.) context. Herman Smit did a similar study on “The influence of leadership role competencies on organisation change outcome in the manufacturing industry in South Africa” by Herman, Smit and Carstens in 2003. This study focused on the influence leadership role congruence has on organisational change within three S.A. organisations in the manufacturing industry but did not include culture as a variable.

South Africa is a diverse country with enormous changes in political, economical, social and technological fields. The government instigates the changes without prior knowledge of what the effect of the changes will be. They force the changes in leadership only on the grounds of black empowerment and some of the results are already disastrous. This occurs due to a lack of leadership and previous managerial experience.

The effect of these changes has a major impact on the organisational culture. According to the literature, leadership influences the culture and the culture influences the performance and performances determine the global successes of S.A. as a country. There is a need for a study that focuses on the general organisational culture of companies in S.A.; a negative organisational culture can have disastrous consequences for everyone.

2.10. Leadership styles influencing organisational culture changes

2.10.1. Leadership behaviour styles

Leadership is used to influence direction of generality and abstraction. J. B. Nash (1929) suggested that, "Leadership implies influencing change in the conduct of people." Tead (1935) defined it the "activity of influencing people to cooperate toward some goal which they come to find desirable." Stogdill (1950) termed it "the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement."

Shartle (1951) proposed several definitions based on the influence process. Thus, the leaders may be considered individuals "who exercise positive influence acts upon other" or "who exercise important influence acts than any other members of the group or organisation". Similarly, Tannenbaum, Weschler, and Massarik (1961) define leadership as "interpersonal influence, exercised in a situation and detected through the communication process, toward the attainment of a specified goal or goals".

Defining effective leadership as successful influence by the leader that results in goal attainment by the influenced followers, that is, defining leadership in terms of goal attainment is particularly useful, for it permits the transfer of reinforcement theory to understanding leader-follower behaviour (Stogdill, 1978).

The Ohio State university leadership studies of the 1950's indicated that there are two major types of leadership behaviour, i.e. *consideration* – behaviour of mutual respect between managers and subordinates and *initiating structure* – the degree to which the manager defines structure and organises the roles of employees (Yukl, 2002).

The LBDQ is based on the theory of Stodgill; his work is seen as a more comprehensive theory of leader behaviours. As early as 1929, Aaronovich and Khotin (1929) reported using differential cued reinforcement leadership behaviour of monkeys in uncovering boxes of food. Mawhinney and Ford (1977) reinterpreted path-goal theory in terms of operant conditioning. Scott (1977) saw the need to replace the concept of leadership as due to influence or persuasion with an analysis of the observable leader behaviours that change the behaviour of subordinates. Sims

(1977) demonstrated that a leader's positive reward behaviour would increase a subordinate's performance. Supervisors do not directly cause behaviour; they merely set the occasion or provide a discriminative stimulus for the evocation of the subordinate's behaviour (Bass & Stogdill, 1983).

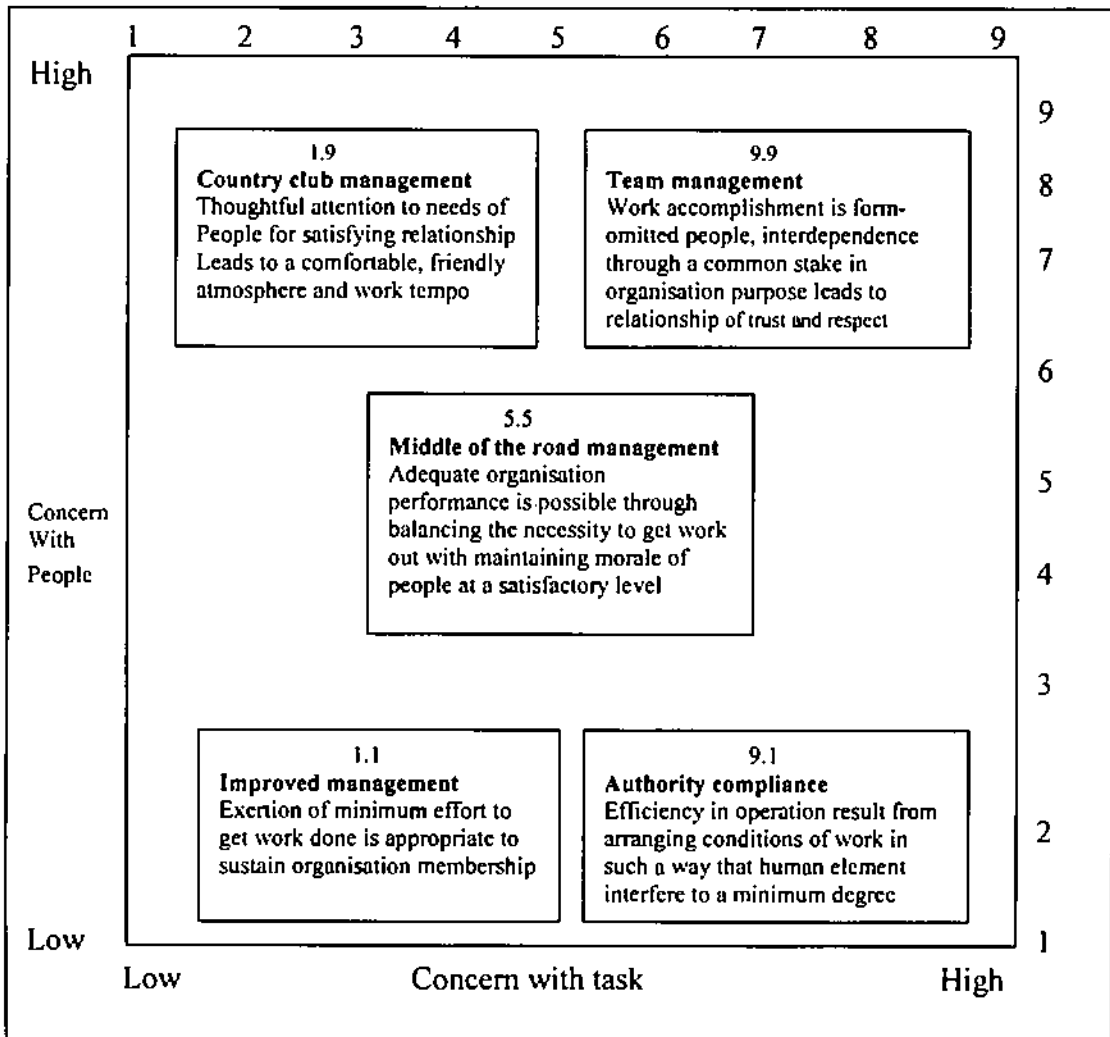
Blake and Mouton developed the Managerial Grid as a two-dimensional grid, plotting "Concern for Task against Concern for People" as shown in Figure 2.8.

The following five leadership styles are indicated in figure 2.8.

- Impoverished (1.1) – This is "Sorry, it's not my problem" - low on task and low on people relationship resulting in the minimum effort to see that work gets done and people are not disciplined.
- Country club (1.9) – This is "Don't worry be happy" - relationship where people drive the leader, resulting in a friendly and relaxed organisation where completion of task takes secondary importance.
- Task orientation (9.1) – "Nice guys finish last" the completion of the task is all important and the task is organised in such a way that human elements interfere to a minimum degree;
- Middle of the road (5.5) – "I can live with that" –the task needs are balanced with personnel needs and the work gets done in a way that the morale does not suffer; and
- Team player (9.9) – " All for one and one for all" – high on task needs and high on personnel needs. Work done is from committed people.

The Managerial grid tends to be an attitudinal model that measures the values and feelings of a leader, while Ohio State framework attempts to include behavioural concepts as well as attitudinal (Hersey & Blanchard, 1993)

Figure 2.8
The Managerial grid



Source: Blake & Mouton (1993:110)

Task and relationship behaviour are separate and distinct dimensions. They can be placed on separate axes of a two - dimensional graph, and four quadrants can be used to identify four basic leadership styles that can influence the organisational culture. Figure 2.9 illustrates these styles. The reader will note that task behaviour is on the horizontal axis and relationship behaviour on the vertical axis.

The following descriptions apply to the four styles.

- Style 1 (S1) – This leadership is characterised by above-average amounts of task behaviour and below-average amounts of relationship behaviour.

- Style 2 (S2) – This leadership style is characterised by above-average amounts of both task and relationship behaviour.
- Style 3 (S3) – This style is characterised by above-average amounts of relationship behaviour and below-average amounts of task behaviour.
- Style 4 (S4) – This style is characterised by below-average amounts of both relationship and task behaviour.

Figure 2.9

Leadership behaviour styles

		Effective leader behaviour	
Relationship Behaviours	(High)	High relationship and Low task S3	High task and high Relationship S2
	(Low)	Low relationship and Task S4	High task and low Relationship S1
		(Low)	(High)
		Task behaviour	

source: Adapted from P Hersey, Situational selling (Escondido, Claif: Centre For Leadership studies, 1985: 20)

2.10.2. Type of leaders

There is a continuing controversy about the difference between leadership and management. It is obvious that a person can be a leader without being a manager, and a person can be a manager without leading. Managers value stability, order and efficiency, whereas leaders value flexibility, innovation, and adaptation. Managers are concerned about how things are done, and they try to ensure people that perform better. Leaders are concerned with what things mean to people, and they try to make people agree about most important things to be done (Yukl, 2002).

According to Yukl (2002) & Bass (1981) there are various types of leadership styles that influence the organisational culture.

- Transformational leadership

With transformational leadership, the followers feel trust, admiration, loyalty, and respect toward the leader, and they are motivated to do more than they originally expected to do.

- Charismatic leadership

House (1977) proposed a theory to explain charismatic leadership in terms of a set of testable propositions involving observable processes rather than folklore and mystique. The theory identifies how charismatic leaders behave, their traits and skills, and the conditions in which they are most likely to emerge.

- Transactional leadership

Transactional leadership involves an exchange process that may result in follower compliance with leader requests but is not likely to generate enthusiasm for and commitment to task objectives.

- Situational leadership

Situational research attempts to identify aspects of the situation that “moderate” the relationship of leaders attributes to effectiveness.

- Autocratic leadership

This type of manager makes decisions without asking for the opinion or suggestions of other people, and these people have no direct influence on the decision; there is no participation.

- Consideration leadership

The leader acts in a friendly and supportive manner, shows concern for subordinates, and looks out for their welfare.

- Democratic leadership

This type of leader looks to represent the interests of other people and is relationship-orientated.

- Laissez-faire leadership

This term is seen as descriptive of leaders who avoid attempting to influence their subordinates and shirk their supervisory duties. They have no confidence

in their ability to supervise. They bury themselves in paperwork and stay away from subordinates.

- Participative leadership

Effective managers use more group supervision instead of supervising each subordinate separately.

- Relationship leadership

These types of managers are supportive and helpful with subordinates.

Supportive behaviour correlated with effective leadership included showing trust and confidence, acting amicably and considerately and further their careers, keeping subordinates informed, providing recognition for subordinates' contributions and accomplishments.

- Task-orientated leadership

Effective managers do not spend time on the same efforts as their subordinates. Instead, the more effective managers concentrate on task-orientated functions such as planning and scheduling work, coordinating subordinates' activities, and providing the necessary supplies, equipment, and technical assistance.

Goleman (2000) states there are four types of leadership styles. These are set out below.

- Affiliative

creates harmony and builds emotional bonds. They feel that people come first.

- Democratic

forges consensus through participation. They are concerned about "What do you think?"

- Pacesetting

setting high standards for performance. They believe that "Do as I do, now".

- Coaching

According to this article leader who have mastered four or more especially the authoritative, democratic, affiliative, and coaching styles have the best climate and business performance.

2.10.3. Leadership power

According to Bass (1981) power is regarded as a form of influence relationship. It can be observed that some leaders tend to transform leadership opportunities into an overt power relationship more than others do.

According to Yukl (2002) one must look at the five types of power to clearly achieve a clear understanding of what power is. These are listed below.

- **Reward power**
The target person complies in order to obtain rewards controlled by the agent.
- **Coercive power**
The target person complies in order to avoid punishment controlled by the agent.
- **Legitimate power**
The target person complies because he or she believes the agent has the right to make the request and the person has the obligation to comply.
- **Expert power**
The target person complies because he or she believes that the agent has knowledge about the best way to do things.
- **Referent power**
The target person complies because he or she admires or identifies with the agent and wants to gain the agent's approval.

Power is not a static condition; it changes over time due to changing conditions, and the actions of individuals and coalitions.

2.10.4. Leader behaviour categories

A major problem in research on the content of leadership behaviour has been the identification of behaviour categories that are relevant and meaningful for all leaders. In research it is seen that each study has produced a somewhat different set of behaviour categories, making it difficult to compare and integrate the results across studies. Factor analysis of survey questionnaires has been used to develop most of the behaviour taxonomies. It is a statistical tool, but it has some serious limitations that help to explain the lack of consistency even among the taxonomies that were developed with the same method for the same purpose. There are different types of

factor analysis procedures, and the results are affected by subjective choices among the procedures. The result is also affected by the content of the item pool, the amount of ambiguity in the behaviour items and the format and response choices used in the questionnaire.

According to Schein (2002) it is possible that the behaviour construct can be formulated at different levels of abstraction categories, whereas other taxonomies contain large numbers of narrowly focused behaviour categories. For example, initiating structure as defined by Fleishmann (1953) is a broad category, clarifying work roles is a middle range category, and setting concrete goals is a concrete, narrowly focused category. The categories are summarised as following:

- Broad, abstract categories are task-orientated behaviours.
- Middle range categories are clarifying and monitoring.
- Concrete, narrow categories are goal setting and touring.

2.10.5. Types of behaviour influences

In recent years, researchers have begun to examine the specific types of behaviour used to exercise influence, rather than focusing exclusively on power as a source of potential influence.

When attempts to influence behaviours it is necessary to use another form of influence behaviour called a “proactive influence tactic”. This method helps the leader to be ready in advance. Yukl and his colleagues have identified eleven proactive influence tactics that are relevant for influencing subordinates, peers and superiors in large organisations. Leaders must use the types of behaviours to influence the organisational cultures that are set out below.

- Rational persuasion

The agent uses logical argument to show that a proposal or request is feasible and relevant for attaining important task objectives.

- Apprising

The agent explains how carrying out a request or supporting a proposal will benefit a person.

- Inspirational

The agent makes an appeal to values and ideas or seeks to arouse the target person's emotions to gain commitment.

- Consultation

The agent encourages the target, to suggest improvements on a proposal, or to help plan an activity or change for which the target person's support and assistance is desired.

- Exchange

The agent offers an incentive if people will do as requested.

- Collaboration

The agent offers assistance and resources if target people do as requested

- Personal appeals

The agent asks for a favour out of friendship before the request is raised.

- Ingratiation

This is when the agent uses flattery and praises to influence the target.

- Legitimizing tactics

The agent use legality , policies to influence the targeted people.

- Pressure

The agent uses demands, threats and frequent checking to influence the targeted person

- Coalition tactics

The agent seeks the aid of others to persuade the target to do something or uses the support of others as a reason for the target to agree.

2.11. Ways in which a leader can influencing organisational culture

2.11.1. A brief look at the nature of organisational culture

Previously this work has at organisational culture per se; in this section the study considers at ways how the leader can have an effect on the culture. According to Yukl (2002) large-scale change in an organisational usually requires some change in the organisation culture as well as direct influence over individual subordinates. By changing the culture of an organisation, top management can indirectly influence the motivation and behaviour of organisation members. Leaders can use different leadership styles to influence and initiate the change.

Schein (1992) defines the culture of a group or organisation as the shared assumptions and beliefs about the world and their place in it, the nature of time and space, human nature, and human relationships.

2.11.2. Primary ways in which a leader can influence organisational culture

According to Schein (1992) there are five primary mechanisms by which leaders can influence organisational culture.

- **Attention**
Leaders communicate their priorities, values, and concern by their choice of things to ask, measure, comment on, praise, and criticise. Much of this takes place when the leader is planning activities and monitoring operations. Emotional outburst has an especially strong effect in communicating values and concerns. In contrast, by not paying attention, a message is sent out that it is not important.
- **Reaction to crises**
Because of the emotional surrounding crises, a leader's response to them can send a strong message about values and assumptions. A leader that faithfully supports espoused values even when under pressure for expedient action communicates clearly that the values are important.
- **Role modelling**
Leaders can communicate values and expectations by their own actions, especially actions showing loyalty, self-sacrifice, and service beyond the call of duty. A leader who institutes a policy or procedure but fails to act in accordance with it communicating the message that it is not really important or necessary.
- **Allocation of reward**
Using this criterion signal what is important to the organisation. Formal recognition in ceremonies and informal praise communicate a leader's concern and priorities. In contrast, failure to recognise contributions and achievements sends a message that they are not important. Finally, differential allocation of rewards and status signifies the importance of some members compared to others.
- **Criteria for selection and dismissal**

Leaders can influence culture by their choice of criteria for recruiting, selecting, promoting, and dismissing people. Leaders also communicate their values and concerns by providing realistic information about the criteria and requirements for success in the organisation.

2.11.3. Secondary ways in which a leader can influence organisational culture

In addition to the five primary mechanisms of in which leaders can influence organisational culture, Schein (1988) describe five secondary mechanisms that are useful for embedding and reinforcing culture when they are consistent with the primary mechanisms. These are set out below.

- **Design of systems and procedures**
Formal planning, budgeting, reports, performance rewards can be used to emphasise some activities and criteria, while also helping to reduce role ambiguity.
- **Design of organisation structure**
The design of structure is often influenced more by assumptions about internal relationship than by actual requirements for effective adaptation to the environment. A centralised structure reflects the beliefs that only the leader can determine what is best, whereas a decentralised structure believes in individual initiative and shared responsibility.
- **Design of facilities**
Although seldom done as an intentional strategy, leaders can design facilities to reflect basic values. For example, an open plan office indicates the value of open communication.
- **Stories, legends, and myths**
Stories about important events and people in the organisation help transmit values and assumptions. However, stories and myths are a more reflection of culture than a determinant of it. The potential use of this mechanism by leaders to influence culture is very limited in any organisation where open communication makes it possible to detect a false story. To be successful one must be clear about values, and describe a real event.
- **Formal statement**

A public statement of values by a leader and written value statements, charters, and philosophies can be useful as a supplement to other mechanisms. However, formal statements usually describe only a small portion of an organisation's cultural assumptions and beliefs, and they have no credibility unless the words are supported by leader action and decisions.

2.11.4. Ways in which leaders can form the culture

According to Yukl (2002), another way that leaders can influence the organisational culture is to change culture forms such as symbols, slogans, and rituals. This type of changes takes a long time to become part of the inner being of the subordinates. There are a number of different changes that are possible, including elimination of existing culture forms to express the new ideology, and the creation of new cultural forms.

Rituals, ceremonies, and rites of passage can be used to strengthen identification with the organisation as well as to emphasise core values. In many organisations new members have to take a public oath to demonstrate knowledge of the ideology. Also common are ceremonies to celebrate a member's advancement in rank, to inaugurate a new leader, and to socialise new employees and teach them about the culture of the organisation.

2.11.5. Culture and growth stages of organisations

According to Yukl (2002) the influence of a leader on the organisational culture of an organisation depends on the development stage of the organisation. A founder of an organisation has a much stronger influence on the culture than a manager at a more mature stage. However, to establish a culture in a new organisation is not without headaches and is not a smooth process. It may involve considerable conflict if the founder's ideas are not successful or other powerful members of the organisation have competing ideas.

One of the most important elements of culture in new organisations is the set of beliefs about the distinctive competence of the organisation that differentiates it from other organisations. These beliefs are likely to include the reason why the

organisation's products or service are unique or superior and the internal processes that account for continued ability to provide these products and service.

In general, it is much more difficult to change culture in a mature organisation than to create it in a new organisation. There are several reasons for this difficulty. Many of the underlying beliefs and assumptions shared by the people in an organisation are implicit and unconscious. Culture assumptions are also difficult to change when they justify the past and are a matter of pride. Moreover, cultural values influence the selection of leaders and the role expectations for them. In a mature, relatively prosperous organisation, culture influences leaders more than leaders influence culture. Drastic changes are unlikely unless there is a major crisis threatening the welfare and survival of the organisation. Even with a crisis, it takes considerable insight and skill for a leader to understand the current culture in a organisation and implement changes successfully (Yukl, 2002).

2.12. Relationship between leadership and culture

"I think good leaders are constantly learning from what they do, what they see, what they take in and process, and they recognise also that the status quo is not acceptable. Things have got to be better than what the status quo is and they are absolutely committed to changing things. The other side of what is of course, I think good leaders apart from just learning, are very reflective people too. As part of our processing and looking around and taking things in and chewing it over and thinking about it, I think they become quite reflective as well. Then finally, this does go back to the key issues of motivating people. I think they, one way or another, come to an understanding of how do you get results in spite of a whole bunch of difficulties and how do you leverage off a whole bunch of positives to get good results. That formula is always a one off. It's a mix between the leader and the followers. It's lot to do with the contingent circumstances of the day and all of those sorts of things. So in terms of what we do in Australia, I think a study of leadership across the board from, if you like, the shop floor production level through to the strategic leadership of issues of republics and governance and what sort of a country do we want, is absolutely vital" (Sarros, Gray & Densten, 2002).

This study reviews the leadership and culture, in the Australian Institute of Management (AIM) with a membership of 21,461. The study revealed that there are a strong relationship among leadership and organisational culture.

A stratified random sample of 5000 members was selected from the population. A number of mail-outs to the sample were conducted from July 2000 to February 2001, with a final total sample of 1918 usable responses. This final sample size represents an impressive 39% return rate from a final sample of 4,962, which is exceptional for a study of this type.

The study used the Multifactor leadership questionnaires (MLQ) Form 5X to measure transformational and transactional leadership styles. The reliability test scored as follow: Idealised Attributes, 0.86 (0.67); Idealised Behaviours, 0.85 (0.68); Inspirational Motivation, 0.88 (0.78); Individualised Consideration 0.86 (0.75); Intellectual Stimulation, 0.89 (0.74); Management by Exception Reward, 0.85 (0.61); and Laissez Faire, 0.81 (0.77).

The Organisational Culture Profile developed by O'Reilly, Chatman and Caldwell (1991) measures organisational culture in terms of eight factors, namely innovation, attention to detail, outcome orientation, aggressiveness, supportiveness, emphasis on rewards, team orientation and decisiveness. The instrument uses the Q-sort method of data collection to identify values that characterise a target organisation and an individual's preference for that particular configuration of values. O'Reilly et al. (1991) reported an average reliability coefficient for the OCP of 0.88, while the 1999 study of Vandenberghe's (1999) established an average reliability of 0.86.

The study found that individualised consideration was the prominent leadership style of Australian executives, followed by inspirational motivation, contingent reward, intellectual stimulation, and idealised behaviour. Idealised attributes registered the lowest mean score for transformational leadership. In other words, executives in the survey considered that they used all transformational leadership styles as well as transactional style of contingent reward fairly often.

The findings revealed that Australian executives were more likely to use coaching, reward, visionary and role modelling leadership behaviours that challenge workers ahead of appeals to charismatic leadership approaches. For all types of leadership in their study, the mean scores were generally higher for transformational leadership than those recorded by studies where other organisational members rated leaders.

Performance orientation was the predominant organisational culture for this sample, followed by social responsibility, supportiveness, and emphasis on rewards. Competitiveness and innovation were the lowest ranked cultures.

The study showed that minimal amounts of leadership were accounted for by organisational culture. The greatest amount of variance was accounted for by the transformational leadership factor of inspirational motivation (13%), which was best predicted by performance orientation and supportiveness. The transactional leadership factor of contingent reward was next best predicted by culture (10% of variance accounted for). Again, performance orientation was a main predictor of leadership and, in this case, emphasis on reward also featured.

In comparison, the findings revealed that leadership was a more prominent predictor of culture than culture was of leadership. On the basis of the findings in a study, they suggested that the process of building competitive and cooperative organisational cultures could be achieved when leaders raise workers' expectation and beliefs about the overall goals, and coach and mentor their staff in achieving these objectives. These innovative and high achieving cultures rely on commitment and supportive leaders for success.

According to Block (2003) in his article "The leadership-culture connection: an exploratory investigation" there is a large body of research that has explored leadership and organisational culture independently. The interconnection between these constructs remains more of an implicit theory than an empirical finding. Based on the leadership culture research published thus far, the following tentative conclusions have been suggested by researchers.

- The impact of leadership on firm performance is mediated by organisational culture.
- Leadership creates an environment in which fundamental organisational change is more or less likely to occur.
- Specific leadership behaviour is associated with distinct cultural traits.
- Contextual factors such as organisational culture have an impact on the emergence of specific leadership styles.
- Leaders used their knowledge of organisational culture to affect change.
- The behaviour of leaders influences the perceptions of organisational culture among followers.

Despite the limited amount of research published, there is a surprising degree of consistency among these proposed conclusions. This consistency is especially impressive given the variety of measurement strategies used, the types of organisations investigated, and the diverse conceptualisation of leadership and organisational culture. Unfortunately, researchers who choose to delve into the mysteries underlying the leadership-culture connection must confront a myriad of definitional complexities. For the purpose of present research, however, Rost's conceptualisation of leadership was adopted: leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purpose.

The definitive challenges of organisational culture mirror those facing leadership researchers. Anthropologists have proposed at least 164 different definitions of organisational culture. Current models of organisational performance and changes suggest that leadership and organisational culture are central explanatory constructs. The growing interest in this area stems from the fact that organisations now recognise that leadership is not simply a rational or technical activity, but that it involves the management of people and the development of a sense of community within the organisation (Block, 2003).

2.13. Summary of literature

According to Block (2003) there is a large body of research that has explored leadership and organisational culture independently. However, the interconnection between these constructs remains more of an implicit theory than an empirical finding. Based on the leadership culture research published thus far, the certain tentative conclusions have been suggested by researchers, and are listed below.

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now recognise that leadership is not simply a rational or technical activity, but that it involves the management of people and the development of a sense of community within the organisation.

According to Schein (1990:109) organisational culture can be defined as (a) a pattern of basic assumptions, (b) invented, discovered or developed by a given group, (c) as it learn to scope with its problem of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore to perceive, think and feel in relation to those problems. An examination of Schein's (1990) and other definitions suggest that corporate culture is the pattern of basic assumptions, values, norms and artifacts shared by organisation members. These shared meanings help members to make sense out of the organisation.

These meanings signal how work is to be done and evaluated, and how employees are to relate to each other and to other significant people, such as customers, suppliers, and government agencies.

Corporate culture includes four major elements existing at different levels of awareness:

Basic assumption – At the deepest level of cultural awareness are unconscious, taken-for-granted assumptions about how organisational problems should be solved.

Values - The next higher level of awareness includes values about what ought to be in the organisations. Values tell members what is important in the organisation and what they need to pay attention to.

Norms - Just below the surface of cultural awareness are norms guiding how members should behave in particular situation. These represent unwritten rules.

Artifacts - This is the highest level of cultural awareness and creations that are visible manifestations of the other levels of cultural elements. These include observational behaviour of members, as well as the structure, systems, procedures, rules, and physical aspects of the organisation.

Schein (1988) argues that leaders play a critical role shaping and transmitting organisational culture. In other words, a leader's behaviour can have a profound effect on organisational culture and ultimately how effectively the organisation performs.

Leaders influence culture through what Schein refers to as primary and secondary mechanisms. The former relate to a leader's and the latter refer to systems level mechanisms like reward systems, selection systems and indoctrination.

Schein (1988) further argues that culture is ubiquitous. It covers all areas of group life. But he argues that culture assists the organisation or group in accomplishing critical external and internal tasks. He identified a set of major external and internal tasks that all groups face and with which they must learn to cope.

Sarros performed a study on "Leadership and its impact on organisational culture" in 2002. In his study he used the Australian Institute of Management. The found that there is a strong relationship among leadership and organisational culture. In his study there was no correlation to see if the leadership behaviour has an influence on the perception of the organisational culture. They used the Multifactor Leadership Questionnaire (MLQ) and the Organisational Culture Profile (OCP). The MLQ does not test the same variables and therefore, one can not compare his results with these of this research but is useful in understanding the methodology and one can compare his results on the OCP with those of this study.

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1. Research objective, problems, hypothesis and limitations

The research objectives

The primary purpose of this research was to examine the correlation between leadership behaviours and employees' perceptions of organisational culture. Theory suggests that a leader has a significant influence on organisational culture. What was not known is the specifically linkage of leader behaviours to different dimensions of organisation culture.

Importance of the problem

There was a theory that discusses the internal role of leader in influencing the cultures. There was very little empirical research that demonstrates how particular leadership behaviours impact employees' perceptions of organisational culture.

Limitations of the study

The limitations are discussed in detail in the discussion section.

3.3. Sampling

Quantitatively methodology was used to conduct the study. The study examined the perceptions of corporate culture and its relationship to the behaviour of the leaders. The data collection strategy also allowed examination of the similarity in perceptions between managers and employees.

Seven companies out of the Iliad LTD group were selected, with four managers and twenty employees in each company. This research position as operational director of one of the 34 companies allowed for ready access to the sample. The managers and the employees completed the OCP (organisational culture profile) and LBDQ (leader behaviour description questionnaire). One of the challenges in leadership research was to achieve an accurate measure of leader behaviour. The total respondents were 134 of whom 24 were managers and 110 were employees. Four managers and 30 employees did not complete their questionnaires.

Some of the companies were too small with a staff complement of 25 employees and two managers. The total responses for employees were 78% and for managers 86%.

The managers' perception of the organisational culture and the perception of the employees were then correlated. The same was done for the completion of the LBDQ. Thus the study was able to determine the degree of consistency between the leaders' perceptions of his/her behaviour and those of his/her employees. The research also tested:

- (1) the correlation between different leader behaviours and a specific type of organisational culture;
- (2) whether there is similarity in the perceptions of organisational culture among leaders and employees.
- (3) if management's view of a positive and negative culture correlate to that of the subordinates.

Justification for using the method

The Iliad group are all independent companies that are subsidiaries of Iliad Ltd. This means that the management are responsible for all the operational activities and must ensure that the company makes the required return on assets targeted. The corporate governance does not enforce the corporate culture and the leadership styles. The relationship between leader behaviour and organisational culture behaviours is tested in various environments. Thus, it was similar to doing the research in seven different companies and should greatly enhance the generalisability of the results.

The second reason was that gaining access to companies where the researchers had no prior relationship could prove difficult because of the level and amount of data required to test the relationships under study. The design required data collection from both managers and supervisors in the form of rather long questionnaires.

Research instruments:

Leadership behaviour was measured by the LBDQ (leader behaviour description questionnaire). The organisation culture profile (OCP) was used to determine the type of culture perceived by employees and managers. The question "Is

the culture positive or negative?” was to determine whether culture was negative or positive.

Based on the result of the initial studies, two revised and shortened questionnaires were conducted to measure consideration and initiating structure: the LBDQ and the Supervisory Behaviour Description (SBD). Although these two questionnaires were often treated as equivalent, they differ somewhat with regard to the content of the behaviour scale (Schriesheim & Stodgill, 1975). A third questionnaire, called the: Leader Opinion Questionnaire “ (LOQ), has been treated by some researchers as a measure of behaviour, but it is viewed more appropriately as a measure a leader’s attitudes. Eventually, researchers (Stodgill, 1974, pp 128-141) at Ohio State University developed a fourth, questionnaire, called the “Leader Behaviour Description Questionnaire, Form XII.” In the LBDQ XII, the scope of consideration and initiating structure was narrowed, and 10 additional scales were added. Some of the new scales measured aspects of leadership behaviour (e.g., representation, integration), but other scales measures traits (e.g., uncertainty tolerance) or skill (e.g., predictive accuracy, persuasiveness).

It is interesting to note that, even after the new scales had been added, most researchers continued to use only the consideration and initiating structure scales.

The LBDQ questionnaire looks at how often leaders engage in the behaviour described and the participant must choose between 100 questions, if the leaders acts (A) always, (B) occasionally, (C) seldom or (E) never in a specific way.

The Ohio State leadership questionnaires and modified versions of them have been used in hundreds of surveys and studies by many different researchers. The result have been weak and inconsistent for most criteria of leadership effectiveness (Bass, 1990; Fisher & Edwards, 1988). In some studies subordinates were more satisfied and performed better with a structuring leader, whereas other studies found the opposite relationship or no significant relationship at all. The findings were also inconsistent for the relationship between consideration and subordinates’ performance. The only most consistent finding was a positive relationship between consideration and subordinate satisfaction. As suggested by the Fleishmann and

Harris study, subordinates are usually more satisfied with a leader who is at least moderately considerate (Yukl 2002: 53).

Judge, Piccolo, and Ilies (2004) demonstrated adequate construct validity for the LBDQ VII against the construct of leader effectiveness by means of a meta-analysis of studies using the survey. Reliability of the factors defined by the item sets, estimates by Cronbach's alpha, varies across culture, with some items apparently being interpreted differently within and between cultures. Reliability of a large majority of the factors within cultures ranged within acceptable ranges of 0.60 – 0.90. The range for this study was also 0.6 – 0.9. In previous studies (Littrell, 2002, Schneider and Litrell, 2003, Littrell and Baguma, 2004, and Littrell and Valentin, 2005) the factors scores do discriminate between cultures for critical managerial leadership behaviours, yielding useful information for managerial leadership development and application. (Littrell and Nkomo, 2005).

Stodgill theory suggested the following patterns of behaviour are involved in leadership, through not equally important in all situations.

Factor 1: Representation measures to what degree the manager speaks as the representative of the group.

Factor 2: Demand Reconciliation reflects how well the manager reconciles conflicting demands and reduces disorder to system.

Factor 3: Tolerance of Uncertainty depicts to what extent the manager is able to tolerate uncertainty and postponement without becoming anxious or getting upset.

Factor 4: Persuasiveness measures to what extent the manager uses persuasion and argument effectively; and exhibits strong convictions.

Factor 5: Initiation of Structure measures to what degree the manager clearly defines his/her own role, and lets followers know what is expected.

Factor 6: Tolerance of Freedom reflects to what extent the manager allows followers scope for initiative, decision and action.

Factor 7: Role Assumption measures to what degree the manager exercises actively the leadership role, rather than surrendering leadership to others.

Factor 8: Consideration depicts to what extent the manager regards the comfort, well being, status and contributions of followers.

Factor 9: Production Emphasis measures to what degree the manager applies pressure for productive output.

Factor 10: Predictive Accuracy measures to what extent the manager exhibit foresight and ability to predict outcomes accurately.

Factor 11: Integration reflects to what degree the manager maintains a closely-knit organisation; and resolves inter-member conflicts.

Factor 12: Superior Orientation measures to what extent the manager maintains cordial relations with superiors; has influence with them; and is striving for higher status.

Organisational Culture Profile

The Organisational Culture Profile (OCP) developed by O'Reilly, Chatman and Caldwell (1992), and since revised by Cable and Judge (1997) and Judge and Cable (1997), was used to measure organisational and personal culture orientations. Recent research by Vandenberghe (1999) had applied the OCP in a European context (Belgium) and a different occupational setting (the health care industry) compared to the original US study. Vandenberghe (1999:183) has recommended that more cross-culture analysis of the OCP be carried out: "additional work is needed on the structure of the OCP across nations and industries." Howard (1998) asserted "the reliability of all OCP value dimensions remains in need of examination." In personal correspondence too the researchers, both Cable (1999) and Vandenberghe (1999) have confirmed the need to examine the structure of the OCP in more detail.

The OCP measured organisational culture along eight factors, namely innovation, attention to detail, outcome orientation, aggressiveness, supportiveness, team orientation, decisiveness and emphasis on reward. The instrument uses the Q-sort method of data collection (Block, 1978) to identify values that characterise a target organisation and an individual's preference for that particular configuration of values. O'Reilly et al. (1991) reported an average reliability coefficient for the OCP of 0.88, while the Vandenberghe (1999) study established an average reliability of 0.86.

For the purpose of this study, an abbreviated version of the OCP (Cable and Judge, 1997; Sarros, Gray and Desten amended the version) was used. The shorter

version of the OCP has been modified for this study to allow respondents to indicate the organisation's characteristic cultural values orientation along a five-point Likert scale where 1=Not at all, 2=Minimally, 3=Moderately, 4=Considerably, and 5=Very much (amending the original Q-sort procedure by OCP i.e. "Adaptability," "Taking individual responsibility," and "Not being constrained by many rules." Permission to use the amended and revised version was received from the American Psychological Association (27 September 1999) and Professor Charles O'Reilly (21 December 1999).

Numerous samples consisting of graduate and practising executives attending graduate management classes in two universities and four campuses throughout Australia were used in the development of this research's version of the OCP. A total of 200 respondents established the following factors for the OCP and their associated Cronbach reliabilities (shown in parentheses): Competitiveness (formerly Outcome Orientation) (.79); Social Responsibility (combination of Outcome Orientation and Innovation) (.80); Supportiveness (.81); Autonomy (formerly Innovation) (.65); Emphasis on Rewards (.62); Performance Orientation (Outcome Orientation and Innovation) (.60); Stability (new factor) (.61); Detail Orientation (.56).

Subsequent to this pilot test, we this author has revised the OCP on the basis of the data collected from present study. The new, shortened version of the OCP now consists of a 28-item, seven factor structure as follows (reliabilities are shown in parentheses): Competitiveness (.75), Social responsibility (.74), Supportiveness (.87), Emphasis on reward (.80), Innovation (.80), Performance orientation (.74), and Stability (.66).

The Seven factors are explained in Dimensions and their properties in the following table:

Table 3.1:
DIMENSIONS OF THE ORGANISATIONAL CULTURE AND THEIR
PROPERTIES

Organisational Culture Dimensions	Properties
Competitiveness	Achievement orientation An emphasis on quality Being distinctive – being different from others Being competitive
Social Responsibility	Being reflective Having a good reputation Being socially responsible Having a clear guiding philosophy
Supportiveness	Being innovative Sharing information freely Being people-orientated Collaboration
Innovation	Being innovative Quick to take advantage of opportunities Risk-taking Taking individual responsibility
Emphasis on Rewards	Fairness

- Opportunities for professional growth
 - High pay for good performance
 - Praise for good performance
- Stability
 - Stability
 - Being calm
 - Security of employment
 - Low conflict
- Performance Orientation
 - Having high expectations for Performance
 - Enthusiasm for the job
 - Being results-orientated
 - Being highly organised

3.4. Method of data collection

Questionnaires consisting of the OCP and LBDQ were distributed to the selected seven companies. The two questionnaires were not filled out at the same time. Everyone filled in the Leader Behaviour Questionnaire in the first week and the OCP the next week. This was done to avoid - common method variance – “getting a correlation just because people were filling out the questionnaires at the same time and their ideas about each get intermingled”.

The managing director distributed the questionnaires to four managers and twenty-five subordinates represented by all levels of employees with the company. The managing director explained the questionnaire and he collected the questionnaires from all the participants and forwarded it backs to my office.

3.5. Statistical Methods

Canonical correlation was used as the major statistical method because a set of independent variables and dependent variables needed to be correlated. When correctly applied, canonical analysis is a highly useful and powerful technique for exploring the nature and strengths of relationships between sets of variables.

The canonical correlation coefficient reflects shared variation between linear composites of the original variables, not the variables themselves. For a measure of the original variables between the sets of variables, compute the redundancy between the sets, redundancy being the equivalent of the average multiple correlation coefficients squared between one set and variables in the other set.

Each pair of canonical variates is independent from previous pairs. Hence a different relationship arises from each one. The presence of some of the same key variables in two or more pairs will still yield a different “whole” when the other variables that are closely correlated with the same canonical variates area also considered.

Finally, determining cut-off points for including variables requires subjective judgment and depends on the purpose of the analysis. Care must be taken “not to twist the data”.

The data was analysed with the Canonical Correlation Multivariate method. There will be 12 independent variables from the LBDQ as an input, and the seven variables from the OCP as the dependent variables. Thus each independent variable on the LBDQ will have a specific influence on the 7 types of dependent cultures on the OCP. Each of the seven companies had a spreadsheet for the OCP and the LBDQ questionnaire. The counts for the populations were calculated on each of the sheets and then totalled on an eight sheet. The correlation between the OCP and LBDQ was then correlated.

CHAPTER 4

4. RESEARCH RESULTS

4.1. Reliability test for OCP and LBDQ

When selecting scales to include in the study it is important to find scales that are reliable. One of the main issues concerns the scale's internal consistency. This refers to the degree to which the items that make up the scale "hang together". The most commonly used indicator is the Cronbach Alpha (CA). The Ideally CA coefficient of a scale should be above 0.60.

In terms of reliability, the Alpha is the most important value – the CA. If the CA is, say 0.89 it would be considered reliable due to fact that it is above the 0.60. If the Cronbach Alpha deleted items are above the CA one should delete them to increase the CA to be more or closer to the desired 0.60 CA.

The other information of interest is the column market Corrected Item correlation. These figures give an indication of the degree to which each item correlates with the total score. Low values (less that 0.3) indicate that the item is measuring something different to the scale as whole. If one has a variable with a score lower than 0.3, it should be eliminated.

4.2. Screening and cleaning of data

The SSPS software was used to analyse the data and the next section briefly explains the process that was followed. It is essential to check the data set for errors. It is easy to make mistakes when entering data and unfortunately some errors can completely confuse the analysis. It is important to spend time checking for mistakes initially, rather than trying to repair the damage later. The data screening process involved a number of steps:

Step 1

Checking for errors. First, one needs to check each of the variables for scores that are out of range. This researcher used a Likert scale with 1 – 5, from least to best. If a participant selected 6, it would be out of the range.

Step 2

Finding the errors in the data file. Second, one needs to find where in the data file these errors occurred. One needs to type in the out of range number, this will enable the software to find the incorrect or out of range data.

Step 3

One needs to go back to the data and fix the data.

Step 4

The LBDQ had negative questions and these were reverse scored to get the correct results.

4.3. Leader Behaviour Description Questionnaire

4.3.1. Descriptive statistics (Mean, Standard Deviation)

The value one is interested in is the per cent trimmed mean. To obtain this value SPSS removed the top and bottom per cent of cases and recalculated a new mean value. If one compares the original mean and this new trimmed mean one can see if some of the more extreme scores are having a great deal of influence on the mean. If these mean values are very different one needs investigate these data further.

The mean is the average scale chosen between 1 to 5, for example representation the respondents chose 2.18, closer to two (Not at all - 1, Minimally - 2, Moderately - 3, Considerably - 4, Very much - 5). The STD deviation summarises how far away from the average the data values typically are. It is perhaps the most frequently used measure of spread because it improves interpretability by removing the variances square and expressing deviations in their original units. It is also an important concept for descriptive statistics because it reveals the amount of variability of individuals within the dataset. Like the mean, extreme scores affect the standard deviation. The means are shown in Table 4.1.

Table 4.1 – Descriptive study for LBDQ

Variable	Score	Mean	Ave Mean	STD deviation	Ave STD deviation
Representation	8	10.89	2.18	6.11	1.22
Demand reconciliation	6	13.43	2.24	7.42	1.24
Tolerance of uncertainty	1	26.59	2.66	12.68	1.27
Persuasiveness	9	20.87	2.09	10.90	1.09
Initiation of structure	12	18.14	1.81	9.78	0.98
Tolerance of freedom	2	23.36	2.34	12.34	1.23
Role assumption	4	23.02	2.30	12.34	1.23
Consideration	5	22.51	2.25	12.59	1.26
Production emphasis	7	22.13	2.21	11.34	1.13
Predictive accuracy	3	11.63	2.33	5.34	1.07
Integration	10	9.70	1.94	5.36	1.07
Superior orientation	11	19.35	1.94	10.33	1.03

In the next discussion the highest five variables are used to gain a sense of what leadership behaviours are preferred by employees, the variables are summarised in Table 4.1

The most important leadership behaviour with the highest mean is tolerance of uncertainty. Employees expect their managers or leaders to have the ability to tolerate uncertainty and postponement without being anxious or getting upset. These characteristics of managers give a sense of security to their subordinates.

It is evident that employees need to have the scope for initiative, decision and actions from their leaders. Employees need some space to develop and the only way to accomplish this is to have an environment in which they can develop.

The employees want their managers to plan for the future and have the ability to predict outcomes accurately. This leadership behaviour provides stability and a sense of security to the employees. The employees need to be in good hands because their future is in the hands of their managers.

Role assumption scored the fourth highest and, therefore, employees feel that managers need to exercise actively their role as leaders rather than to surrender to

others. Again, when managers accept their role as leaders the subordinates have a sense of security because they know that their leaders will always be a support for them.

Consideration is the fifth highest mean and therefore employees feel that managers should consider the comfort, well-being, status and contributions of followers. This variable highlights the need for personal comfort. Employees need to know that they are looked after and that they are rewarded and gain the necessary recognition for their contributions.

4.3.2. Reliability test for LBDQ

Table 4.2 – Reliability testing of LBDQ (More than 0.60, tested as reliable)

LBDQ - EMPLOYEES	RELIABILITY	
Representation	0.684	Yes
Demand reconciliation	0.784	Yes
Tolerance of uncertainty	0.616	Yes
Persuasiveness	0.782	Yes
Initiation of structure	0.842	Yes
Role of tolerance	0.737	Yes
Role assumption	0.651	Yes
Consideration	0.754	Yes
Production emphasis	0.791	Yes
Predictive accuracy	0.797	Yes
Integration	0.859	Yes
Superior orientation	0.792	Yes

The representation, demand reconciliation, tolerance of uncertainty, persuasiveness, initiation of structure, tolerance of freedom, role assumption, consideration, production emphasis, predictive accuracy, integration and superior orientation all tested reliable with a CA above 0.6 and, therefore, one can accept this study and its results as reliable.

4.3.3. Factor Analysis for LBDQ

The LBDQ was used in a South African environment and therefore the study intended to see if the same factors were presented as in other countries. Due to a small sample the analysis failed and relied on the well-tested twelve factors proven in many studies over the years.

4.4. Organisational culture factors (OCP)

4.4.1. Descriptive statistics (Mean, Standard Deviation)

The mean is the average scale chosen between 1 to 5, for example for Representation the respondents chose 2.18, closer to two (Not at all - 1, Minimally - 2, Moderately - 3, Considerably - 4, Very much - 5). The STD deviation summarises how far away from the average the data values typically are. It is perhaps the most frequently used measure of spread because it improves interpretability by removing the variances square and expressing deviations in their original units. It is also an important concept for descriptive statistics because it reveals the amount of variability of individuals within the dataset. Like the mean, extreme scores affect the standard deviation.

**Table 4.3 Descriptive Mean and
STD deviation of the OCP**

Variable	Score	Ave	STD	Ave STD
	Mean	Mean	Deviation	Deviation
Performance orientation	1 16.41	4.10	3.93	0.98
Social responsibility	4 15.24	3.81	4.25	1.06
Supportiveness	7 14.42	3.61	4.66	1.16
Emphasis on rewards	6 14.49	3.62	5.04	1.26
Stability	5 14.93	3.73	4.38	1.10
Competitiveness	2 16.13	4.03	4.06	1.02
Innovation	3 15.71	3.93	4.26	1.07

In the next discussion the highest three variables are used to gain a sense how the organisational culture perceived by employees. The variables are summarised in Table 4.3.

Performance orientation had the highest mean value and represented the culture most perceived. Employees feel that there is a high expectation for performance and that the company is results orientated.

Competitiveness had the second highest mean. Therefore, Employees perceive a culture of achievement orientation; with an emphasis on quality and being distinctive from competitors.

Innovation had the third highest mean. Employees feel the company acts quickly to take advantage of an opportunity; takes risk and that individuals take own responsibility.

4.4.2. Reliabilities for OCP factors

Table 4.4 - Reliability for OCP factors

OCP - EMPLOYEES	RELIABILITY	More than 0. 6, tested as reliable
Performance orientation	0.794	Yes
Social responsibility	0.797	Yes
Supportiveness	0.792	Yes
Emphasis on rewards	0.751	Yes
Stability	0.707	Yes
Competitiveness	0.740	Yes
Innovation	0.723	Yes

The required reliable CA is between 0.6 and 0.9. In this study the results were between 0.6 and 0.9 and therefore these results can be accepted as reliable.

4.4.3. Factor Analysis of the OCP

The OCP was used in a South African environment and therefore the study intended to see if the same factors were presented as in other countries. Due to a small sample the analysis failed and relied on the well-tested seven factors proven in many studies over the years.

4.5. Canonical Correlation Analysis (CCA) — Between the OCP and LBDQ

A general failure of empirical studies over the years to correlate the relationship between leadership behaviour and organisational culture has occurred and therefore the purpose of this study is to find any correlation in which the leadership behaviour influences the perception of the organisational culture.

CCA is a highly useful, powerful technique for exploring the relationship among multiple criterion and predictor variables. The technique is primarily descriptive, although it may be used for predictive purpose. Results obtained from a CA should suggest answers to questions concerning the number of ways in which the two sets of multiple variables are related, the strengths of the relationship, and the nature of the relationship so defined.

CCA enables the data analyst to combine into a composite measure what otherwise might be an unmanageably large number of bivariate correlations between

sets of variables. It is useful for identifying the overall relationship between multiple independents and dependent variables, particularly when the data analyst has little a priori knowledge about relationships between the set of variables.

The data collected sufficiently capture the relationship between the criterion (OCP variables) and the predictor (LBDQ variables). The following description shows the relationship and the results.

Table 4.5 – CCA of OCP and LBDQ

	1	2	3	4	
Criterion (OCP)	Rs	Rs	Rs	Rs	h2(%)
Performance - oriented	-0.49	-0.477	0.08	0.036	0.472
Socially responsible	-0.74	-0.131	-0.23	0.178	0.646
Supportiveness	-0.6	0.095	-0.24	-0.29	0.507
Emphases rewards	-0.68	0.193	0.324	-0.05	0.605
Stability	-0.11	0.143	-0.13	0.004	0.049
Competitiveness	-0.47	-0.165	0.177	0.187	0.31
Innovation	-0.5	0.081	-0.13	0.434	0.464
Predictive (LBDQ)					
Representation	0.536	0.016	0.03	0.207	0.331
Demands reconciliation	0.576	0.313	0.354	0.063	0.559
Tolerance of Uncertainty	0.147	-0.119	0.518	0.265	0.374
Persuasiveness	0.338	0.058	0.137	0.306	0.23
Initiation of structure	0.509	0.24	0.234	0.555	0.679
Tolerance of freedom	0.202	0.033	0.363	0.51	0.434
Role assumption	0.729	0.303	0.207	0.065	0.67
Consideration	0.682	-0.31	0.137	0.435	0.769
Production emphasis	0.551	0.122	-0.04	0.117	0.334
Predictive accuracy\	0.446	-0.086	0.506	0.025	0.463
Integration	0.651	-0.245	0.188	0.406	0.684
Superior Orientation	0.647	0.151	0.486	0.187	0.713
Roots	0.46	0.285	0.198	0.111	
Canonical R	0.562	0.471	0.407	0.316	
χ^2	31.50%	22.20%	16.50%	10%	
d.f.	84	66	50	36	
Probability	0.003	0.159	0.609	0.929	

Coefficients above 0.5 are used with a statistical significant level of .001.

Canonical analysis provides both a more persuasive case for the relationship under study and some hints concerning the kinds of structures involved. That is far from saying that canonical analysis illuminates the field; it is notoriously difficult to interpret beyond the significance levels of R 's associated with particular roots.

Table 4.6 shows the first four canonical roots with R 's of 0.0003, 0.159, 0.609 and 0.929 respectively, leaving little doubt that there are significant relationships involved. More interesting, since the basic relationship involved has not really been in doubt, it is the nature of the relationship suggested. Extracting the items with heavy loading from the predictor and criterion set, somewhat simplifying the picture, can crudely approximate the meanings of roots. In this case, items with a coefficient above .3 are used.

The squared structure coefficients (X^2) are also given, which represent the percentage of shared variance between the observed variables and the synthetic variables created from the observed variable set.

Only the functions that reach the desired level of significance can be used to interpret the relationship between the criterion and predictor sets. Therefore only function 1 can be used with a significant level of .0003. The others do not reach the required .05 significant levels.

In this data the researchers has thus far concluded that there indeed was a noteworthy relationship between our variables sets by evidence of statistical significance and effect sizes. Furthermore, this relationship was only captured by the first function in canonical model.

Because it has been established that there are something, one can turn to the second question in the interpretation strategy. That is, what variables are contributing to this relationship between the variables sets across the four functions. Other researchers have less often consulted structure coefficients, which reflect the direct contribution of one predictor to the predictor criterion variables regardless of the other predictors. In multivariate analysis, structure coefficients are more often consulted, such as when

a factor analysis reports the structure matrix for correlated factors. Structure coefficient increase in importance when the observed variables in the model increase in their correlation with each other (Anderson 1985).

Looking at the function 1 coefficient, one sees that relevant criterion variables were primarily performance - oriented, socially responsible, supportiveness, production emphasis, competitiveness, and innovation having made secondary contributions to the synthetic criterion variables. The other side of the equation on function 1 involve the predictor set. The Table 4.6 results reveal that the representation, demand reconciliation, persuasiveness, initiation of structure, role assumption, consideration, production emphasis, predictive accuracy, integration and superior orientation leader behaviours were primary contributors to the predictor synthetic variables. It makes sense to think that leaders who have the following leadership styles: representation, demand reconciliation, persuasiveness, initiation of structure, role assumption, consideration, production emphasis, predictive accuracy, integration, superior orientation, will influence the following perceptions of organisational culture: performance - oriented, socially responsible, supportiveness, production emphasis, competitiveness and innovation

In sum, only one function was statistically significant and the magnitude of the canonical root was acceptable to allow for interpretation of the relationship between the criterion and predictor sets of variables. It should be noted, however, that the r-squared was only 31 percent.

4.6. Different perceptions of culture

4.6.1. Managerial perception of the organisational culture

Due to the sample size, SSPS was not able to gain a perception of the managers per say.

4.6.2. Subordinates' perceptions of organisational culture

Due to the sample size, SSPS was not able to gain a perception of the managers per say

4.6.3. Correlation of two perceptions of organisational culture

Due to the sample size, no information was collected or analysis to make a correlation between the two perceptions.

CHAPTER 5

S

5. DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1. Results for the hypothesis

H1. Employees' perception of organisational culture will be positively associated with the leadership style of their immediate supervisor/manager.

The action of immediate supervisors send strong message to employees on a daily basis about the essential character of an organisations' culture. Theses behaviour are referred to as primary cultural embedding mechanisms (Schein, 1992) and include such things as what supervisor pay attention to, how they react to crises, and the criteria they use to allocate resources and/or rewards to employees. In the present study, it is assumed that specific kinds of leadership behaviour/styles among leaders would be more likely to evoke specific kinds of employee perceptions. The sample on the managers was too small; therefore it was not possible to test this hypothesis.

H2. Employees' perceptions of the organisational culture will be positively correlated with the leaders'/managers' perception of the organisational culture.

One of the most important elements of culture in new organisations is the set of beliefs about the distinctive competence of the organisation that differentiates it from other organisations. These beliefs are likely to include the reason why the organisation's products or service are unique or superior and the internal processes that account for continued ability to provide theses products and service. The sample of the managers was too small; therefore it was not possible to test this hypothesis.

H3. The different types of leadership behaviours will be correlated to the different types of organisational cultures.

The following correlations were found:

Table 5.1

Leadership Styles	Organisational Cultures
Factor 1: Representation Demand reconciliation Persuasiveness Initiation of structure Role assumption Consideration Production emphasis Predictive accuracy Integration Superior orientation	Performance - oriented Performance - oriented Supportiveness Supportiveness Supportiveness Socially responsible Emphasis on reward Performance oriented, Innovation Competitiveness Supportiveness
Factor 2: Demand reconciliation and role assumption	Performance oriented
Factor 3: Demand reconciliation, tolerance of uncertainty, tolerance of freedom, predictive accuracy and superior orientation	Emphasis on reward
Factor 4: Persuasiveness, initiation of structure, consideration and integration	Innovation

Referring to the above, it is perceived that the four factors of leader behaviour are correlated with perceptions of organisational culture.

It is perceived that managers need to speak as the representative of their group to influence the performance and enthusiasm of employees for their work. When managers need a results - orientated culture they need to improve their leadership

skills by being a representative of the team, the subordinates need to know that there leader in control.

Being highly organised managers need to reconcile conflicting demands and reduce disorder in the system to enable their staff to work in a stable environment to ensure that they maintain a culture of high expectation on performance and to sustain enthusiasm for their jobs. Once employees lose interest in their work it is difficult to make them positive and a negative attitude spreads like a fire. It is as difficult to stop as a run away fire.

Subordinates expect their leaders to use persuasion and argument effectively and exhibit strong convictions. Managers must clearly define their own role, and let followers know what is expected from them. They need to know where their boundaries are. Subordinates lose trust in their leaders when the latter surrender leadership to others and when this happen it is impossible to get respect back. These leadership styles are important to ensure that one's subordinates are being innovative and that they share information that will build a better company. This leadership styles are essential to have collaboration in the business, and it will ensure a continuous expansion of the business and improvement on service.

To keep a culture of social responsibility managers need to consideration the comfort of their subordinates. Managers also need to look after the well-being and status and contributions of followers. All people have social responsibilities and needs. Once employees know that they are in good hands they will perform better.

Production Emphasis measures to what degree the manager applies pressure for productive output. To ensure the future of such an organisational, culture managers need put emphasis on rewards. There are several types of culture in this variable. The first is fairness. There not many people who enjoy unfairness, and everyone needs praise for good performance. Apart from receiving pay for good performance they need to ensure professional growth. If good employees feel that they are in a company with no future or opportunities they will look for another position external. Losing competent staff can be devastating in the long run.

To establish a culture of performance orientation and innovation, managers must ensure that they exhibit foresight and the ability to predict outcomes accurately. Once employees have lost trust in a manager's decision, they will never be 100% for the decision and this can have devastating consequences for the company.

Integration reflects to what degree the manager maintains a closely-knit organisation and resolves inter-member conflicts. To build on a competitiveness culture the manager needs to resolve conflict and maintain unity in the organisation.

To build on an organisational culture of supportiveness, managers need to ensure superior orientation. This variable measures to what extent the manager maintains cordial relations with superiors; has influence with them and is striving for higher status. Managers need to show the way for upcoming managers. The way in which they manage and react to problems with their superiors will influence the way in which their subordinates react to conflict with them.

The second factor represents a culture of performance orientation. This type of culture is one that put its emphasis on being innovative, sharing information freely and being people orientated. The factor does not have a significant value of .001 and therefore cannot be used.

The third organisational culture that is influenced by the way in which leaders behave is the emphasis on reward. To ensure fairness and opportunity for personal growth, and to have a culture of praise and good pay for performance, managers need to look at several leadership behaviours. The factor does not have a significant value of .001 and cannot be used.

The last organisational culture is one of innovation. In this culture managers need to be quick to take advantages of opportunities, take calculated risks and assume individual responsibility. The significant value of this factor is not .001 and therefore not interpretable.

5.2. Test for reliability of LBDQ

The test for reliability of the LBDQ results was good, with twelve variables tested above the required 0.6 for the Cronbach Alpha. This showed that the data collected could be used for general research.

5.3. Test for reliability of OCP

The test for reliability of the OCP results was good, with seven variables tested above the required 0.7 for the Cronbach Alpha but a general accepted required value is 0.6. This showed that the data collected could be used for general research.

5.4. Factor Analysis for LBDQ and OCP

To have a successful factor analysis one needs a big sample. In this study there were 24 managers and 110 employees. The sample was not big enough and therefore failed. The LBDQ and OCP are well-tested instruments and therefore one can rely on them as proven and tested statistical instruments.

5.5. Limitations of the study

Due to sample size, it was not possible to test any of the hypotheses involving managers. The perception of managers could not be correlated with those of the employees and the influence of the leadership style on organisational culture was negative due to the small sample size. This was because of:

- negative attitude towards research questionnaires;
- lack of understanding the questions at hand;
- time to complete the questionnaires;
- accuracy of answers due to own perception;
- distraction of participants due to their environment;
- accuracy of answers due to subjectivity and tendency for respondents to give socially acceptable response;
- high internal validity but limited external validity since the study was done in a single organisation;
- there is not much literature on the linkage between the influences of different leadership style on organisational culture;

- the factor analysis failed on the LBDQ and had no correlation on OCP. The OCP failed because the sample that was too small;
- most of the participants were Afrikaans speaking and did not understand the English questions. The researchers should explain each question to the population;
- one needs to explain the meaning of the questions before respondents answer it;
- the questionnaires should be distributed by the researcher him or herself. Other parties do not have the same interest as the researcher does;
- canonical correlation reflects the variance shared by the linear composites of the sets of variables, and not the variance extracted from the variables;
- canonical weights derived in computing canonical functions are subject to a great deal of instability;
- canonical weights are derived to maximize the correlation between linear composites, not to maximise the variance between the subsets of independent and dependent to interpret canonical analysis, and one must rely on inadequate measures such as loading or cross-loadings.

5.6. Implications and Conclusions

Future researchers could look at how competencies of the leaders influence the behaviour of subordinates. In business one tends to see that managers with more influence power than other managers affect the behaviour of the subordinates negatively or positively.

One of the most important factors is the methodology. The way in which the data is collected can make or break the research. Researchers should use the well-tested questionnaires to collect data. This will ensure reliability and validity.

The results of the study have implications for leader behaviour.

Leaders can concentrate on the leadership styles listed below.

Representation measures to what degree the manager speaks as the representative of the group.

Demand Reconciliation reflects how well the manager reconciles conflicting demands and reduces disorder in the system.

Tolerance of Uncertainty depicts to what extent the manager is able to tolerate uncertainty and postponement without anxiety, or getting upset.

Persuasiveness measures to what extent the manager uses persuasion and argument effectively or exhibits strong convictions.

Initiations of Structure measures to what degree the manager clearly defines his/her own role, and lets followers know what is expected.

Tolerance of Freedom reflects to what extent the manager allows followers scope for initiative, decision and action.

Role Assumption measures to what degree the manager exercises actively the leadership role rather than surrendering leadership to others.

Consideration depicts to what extent the manager regards the comfort, well-being, status and contributions of followers.

Production Emphasis measures to what degree the manager applies pressure for productive output.

Predictive Accuracy measures to what extent the manager exhibits foresight and ability to predict outcomes accurately.

Integration reflects to what degree the manager maintains a closely-knit organisation and resolves inter-member conflicts.

Superior Orientation measures to what extent the manager maintains cordial relations with superiors; has influence with them and is striving for higher status.

All of these leadership styles influence the organisational culture in one of the listed ways:

- competitiveness - achievement orientation, an emphasis on quality, being distinctive – being different from others and being competitive;

- social Responsibility - being reflective, having a good reputation, being socially responsible and having a clear guiding philosophy;

- supportiveness - being innovative, sharing information freely, being people orientated, collaboration and innovation;

- being innovative - quick to take advantage of opportunities, risk taking and taking individual responsibility;

emphasis on rewards – fairness, opportunities for professional growth, high pay for good performance and praise for good performance; stability – stability, being calm, security of employment and low conflict; and performance orientation - having high expectations for performance, enthusiasm for the job, being results - orientated and being highly organised.

Manager and leaders must focus on the type of organisational culture they expect and foresee then select the type of leadership style as per Table 5.1 to build or sustain the type of culture.

The research can be done in future with a bigger sample and by ensuring that the participants are educated well enough to understand the questionnaires. If the sample size had been bigger all three hypothesis could have been tested. *H1. Employees' perception of organisational culture will be positively associated with the leadership style of their immediate supervisor/manager and H2. Employees' perception of the organisational culture will be positively correlated with the leaders'/managers' perception of the organisational culture* were not tested because only a small sample of managers completed the questionnaires.

Due to a lack of leadership skills there are managers who are not leaders. The employees have a positive perception or trust for the organisations with little trust in their leaders. The participants would never choose for a specific leadership style but always for an organisational culture variable. Therefore, the companies need to improve on their middle management leadership skills. This will improve the companies' performance, stability and long-term profitability. Due to poor leadership skills, employees tend to leave the companies before they reach their full potential and before they can start to build the company for the future. The time, money and effort required to employ and educate staff are immense and costly. Senior managers need to invest time and money in middle management to ensure that they implement the vision and culture required.

Leaders should keep up considerate behaviour to improve existing innovative organisational culture. Managers need their staff to explore themselves to empower

their staff. When employees feel that they are part of the company they will always give more than is expected.

Leaders should be more patient in developing their staff. Managers need to spend more time and money in ensuring that their staffs are educated and that they have adequate time to be developed. The managers must look at the long-term results. When employees feel that they are competent, they will stay with the company and build a career. When they are trained, their skill level will improve the performance-orientated culture in the organisation.

Management can be more humanistic. The company are production and performance - orientated and when one looks after the well-being of one's employees their performance will increase as well. Employees are people with a social life and social problems that influence their work. The managers should build up social responsibility to stop potential litigations, if one stand up others may follow.

Employees are the people who run the business and should be regarded as important and not only as people to make targets. To ensure long-term goals management must empower their employees and build a sustainable relationship with their most important asset, their employees.

It would also be important to examine the tenure of leader's position. One would expect that this would influence a leader's ability to influence employee's perceptions of organisation culture. In terms of the methodology, a number of suggestions can be made. First, researchers should collect their own data. While this researcher collected the data at his branch, distributing the questionnaires to branch managers affected data collection since it appears some managers did follow the exact guidelines provided for data collection. . Although this study had a response rate of 86% for managers and 78% for employees the sample was still too small for the testing of all hypotheses and some of the questionnaires were not completed in full. In some of the questionnaires, it is evident that the participants did not follow the guidelines, which resulted in incorrect data. If future researchers were to collect their own data, they would be able to explain the questions to the participants.

CHAPTER 6

ARTICLE FOR PUBLICATION

The article would be intended for publication in the Southern African Business Review.

The influence of different leadership behaviours on employees' perceptions of organisational culture: An Empirical Study

A.S. Strydom

Introduction

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“Despite numerous references to a relationship between leadership and organisational culture in the academic and popular literature, little systematic research has been conducted to examine the specific nature of this relationship. Apart from a plethora of anecdotal reports (Allen and Thatcher, 1995; Quick, 1992; William et al., 2000; Wood, 1999), there are a limited number of published studies which have attempted to systematically examine the leadership-culture relationship. While there is a large body of research that has explored leadership and organisational culture independently, the interconnection between these constructs remains more an implicit theory than an empirical finding” (Block, 2003).

“The experimental research in laboratory and field settings found that increases in relations-orientated leadership behaviour usually resulted in higher subordinate satisfaction and productivity” (Yukl, 2002).

The relationship between the culture and the behaviour of leadership and the effect of leadership on the perception of organisational culture will be shown as a crucial element in the merging of successful cultures.

According to Lory Block (2003) in his article “The leadership-culture connection: an exploratory investigation” there is a large body of research that has explored leadership and organisational culture independently, the interconnection between these constructs remains more of an implicit theory than an empirical finding. Based on the leadership culture research published thus far, the following tentative conclusions have been suggested by researchers.

- The impact of leadership on firm performance is mediated by organisational culture.
- Leadership creates an environment in which fundamental organisational change is more or less likely to occur.
- Specific leadership behaviour is associated with distinct cultural traits.
- Contextual factors such as organisational culture have an impact on the emergence of specific leadership styles.
- Leaders used their knowledge of organisational culture to effect change.
- The behaviour of leaders influences the perceptions of organisational culture among followers.

Despite the limited amount of research published, there is a surprising degree of consistency among these proposed conclusions. This consistency is especially impressive given the variety of measurement strategies used, the types of organisations investigated, and the diverse conceptualisation of leadership and organisational culture. Unfortunately, researchers who choose to delve into the mysteries underlying the leadership-culture connection must confront a myriad of definitional complexities. For the purpose of present research, however, Rost’s conceptualisation of leadership was adopted. Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purpose (Rost, 1991).

Schein argues that leaders play a critical role shaping and transmitting organisational culture. In other words, a leader’s behaviour can have a profound effect on organisational culture and ultimately on how effectively the organisation performs. Leaders influence culture through what Schein refers to as primary and secondary

mechanisms. The former relate to a leader's and the latter refer to systems level mechanisms like reward systems, selection systems and indoctrination.

Schein (1988) further argues that culture is ubiquitous. It covers all areas of group life. But he argues that culture assists the organisation or group in accomplishing critical external and internal tasks. He identifies a set of major external and internal tasks that all groups face and with which they must learn to cope (Schein, 1988).

Background

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Organisational Culture

"Culture" has its roots from the Latin verb Colere, meaning, "to cultivate" and in later years came to indicate a process of refinement and breeding in domesticating some particular crop. The modern-day meaning draws on this agricultural derivation – it relates to society's control, refinement and domestication of itself. It is the set of important understandings that members of a community share in common (Rue & Byars, 1992).

The term organisational culture is used to describe the shared values and beliefs of members about the activities of the organisation and interpersonal relationships, according to Yukl (2002).

Culture in an organisation is "the personality of the organisation" according to Rue & Byars (1992:438). An organisation's culture is transmitted in some of the following ways; long standing and unwritten rules; shared standards about what is commonly seen as important by all members of the organisation; traditions and social standards determine what is good behaviour and what is not. Organisational culture determines how people in the organisation should behave, by establishing a value system through rites, rituals, myths, legends and actions – corporate culture means "the way we do things around here"

Culture is a perception and exists in the membership of the organisation and is not an individual expression but rather an organisational and shared perception. It is also a

descriptive term, concerned with how members perceive the organisation, and not if whether they like it or not. It describes rather than evaluates (Robbins, 1991).

Organisational culture refers to the impact on the environment resulting from group norms, values, philosophy and informal activities (Donnelly, 1992:518).

Organisational culture is a phrase that means two different, but connected things. On the one side we have a culture in a organisation that is similar to a culture in a society, consisting things such as shared values, beliefs, assumptions, perceptions, norms, artefacts, and patterns of behaviours. Culture is to the organisation what personality is to the individual. On the other hand culture is the way of looking at and thinking about the behaviour of organisations, a perspective of understanding what is occurring (Ott, 1989).

One must look at how the organisational culture influences the performance of a company influence. Previously it has been said that one side of the coin is the leadership and the reverse side is the culture. Brown discusses the link between the performance and the culture in his book Organisation Culture. He said that many studies have outlined organisational culture and little has been done to linkage between organisational culture and the performance of a company. The research of Denison (1990) has suggested that there are four different aspects of an organisation culture that have an impact on organisational effectiveness:

- Involvement
- Consistency
- Adaptability
- Mission.

These conjointly implicate those culture variables that influence an organisations performance.

One of the widely cited hypotheses is that a good culture enables the company to perform better. Commentators do not always spell out precisely how a strong culture leads to exceptional performance, but three key arguments are discernible here.

- A strong organisational culture facilitates goal alignment.
- A strong culture leads to high levels of employees motivation.

- A strong culture is better able to learn from the past.

To succeed, a company must have a strong culture and be able to adapt to its changing environment. An adaptive culture is generally characterised as one in which people will take risks, trust each other, have a proactive approach to organisational life, will work together to identify a problem, share considerable confidence in their own abilities and those of their colleagues, and have enthusiasm for their jobs.

Based on their research findings, Kotter and Heskett (1992) argue that a more coherent formulation of this perspective would emphasise two further points. First, the culture must be one which values and supports all the large stakeholders in the organisation. Second, the culture must value excellent leadership from its managers at all levels. So, organisations that provide effective leadership aimed at satisfying the legitimate and changing interest of stakeholders will be more successful than those organisations whose cultures are not so orientated. According to findings of their study over an eleven-year period span, those organisations that emphasised leadership and key stakeholders increased revenue by 682 per cent against 166 per cent for those that did not (Brown, 1995).

When reviewing the history of Jaguar, the company started off as a niche company with specialised cars, but with the change of ownership the vision also changed to mass production. This nearly closed the company down. When John Egan changed the focus back to be a specialised car producer and employed new management, the company became once again a market leader. One can see that leadership and the culture in a company can determine the success of it.

Deal and Kennedy (1998) claim that a strong company will deliberately develop cabals groups of two or more people who secretly join together to plot a common purpose, because when its interest match those of the cabals, the result is a strong management lever. In creating huge cabal, General Electric speaks to these managers as insiders. It is more effective than addressing each manager separately with a suggestion or request. To strengthen the cabal they need to say, "Here's what we are all about". This makes the people identify themselves as group, not as individuals. Strengthen the cabal and one strengthens the culture. Intelligent managers use cabals

for their motivation effect. A manager's real interest in cabals has to do with the fact that a cabal is a strong subculture within an organisation; because it is very hard to deal with 100 or 100 000 people all at once, managers actively foster cabals and then weld them together so all will move in one common direction.

The South African situation calls for a study of leadership and its influence on organisational culture

In the literature review it was found that there is no literature or study, on the influence of leadership on organisational culture in the South African (S.A.) context. A similar study was done on "The influence of leadership role competencies on organisation change outcome in the manufacturing industry in South Africa"; by Herman Smit & Louis Carstens in 2003. This study focused on the influence leadership role congruence has on organisational change within three S.A. organisations in the manufacturing industry.

South Africa is in a diverse country with an enormous amount of changes on political, economical, social and technological fields. The government instigates the changes without prior knowledge of what the effect of the changes will be. They force the changes in leadership only on the grounds of black empowerment and some of the results are already disastrous. This occurs due to a lack of leadership and previous managerial experience.

These changes have a major impact on the organisational culture. According to literature, leadership influences the culture and the culture influences the performance and performances determine the global successes of South Africa as a country. There is a need for a study that focus on the general organisational culture of companies in South Africa. Negative organisational culture can have disastrous consequences for us everyone.

Leadership behaviour styles

Leadership is used to influence marked direction of generality and abstraction in defining leadership. J. B. Nash (1929) suggested that, "Leadership implies influencing change in the conduct of people." Tead (1935) defined it as "activity of influencing people to cooperate toward some goal which they come to find desirable." Stogdill

(1950) termed it “the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement.”

Shartle (1951) proposed several definitions based on the influence process. Thus, the leaders may be considered as individuals “who exercise positive influence acts upon other” or “who exercise important influence acts than any other members of the group or organisation”. Similarly, Tannenbaum, Weschler, and Massarik (1961) defined leadership as “interpersonal influence, exercised in a situation and detected through the communication process, toward the attainment of a specified goal or goals”.

Defining effective leadership as successful influence by the leader that result in goal attainment by the influenced followers, that is, defining leadership terms of goal attainment is particularly useful, for it permits the transfer of reinforcement theory to understanding leader-follower behaviour (Stogdill 1978).

The Ohio State university leadership studies of the 1950’s indicated that there are two major types of leadership behaviour, i.e. *consideration* – behaviour of mutual respect between managers and subordinates and *initiating structure* – the degree to which the manager defines structure and organises the roles of employees (Yukl 2002).

The LBDQ is based on the theory of Stodgill. His work is seen as a more comprehensive theory of leader behaviours. As early as 1929, Aaronovich and Khotin (1929) reported using differential cued reinforcement to later the leadership behaviour of monkeys in uncovering boxes of food. Mawhinney and Ford (1977) reinterpreted path-goal theory in terms of operant conditioning. Scott (1977) saw the need to replace the concept of leadership as due to influence or persuasion with an analysis of the observable leader behaviours that change the behaviour of subordinates. Sims (1977) demonstrated that a leader’s positive reward behaviour would increase a subordinate’s performance. Supervisors do not directly cause behaviour; they merely set the occasion or provide a discriminative stimulus for the evocation of the subordinate’s behaviour (Bass & Stodgill 1983).

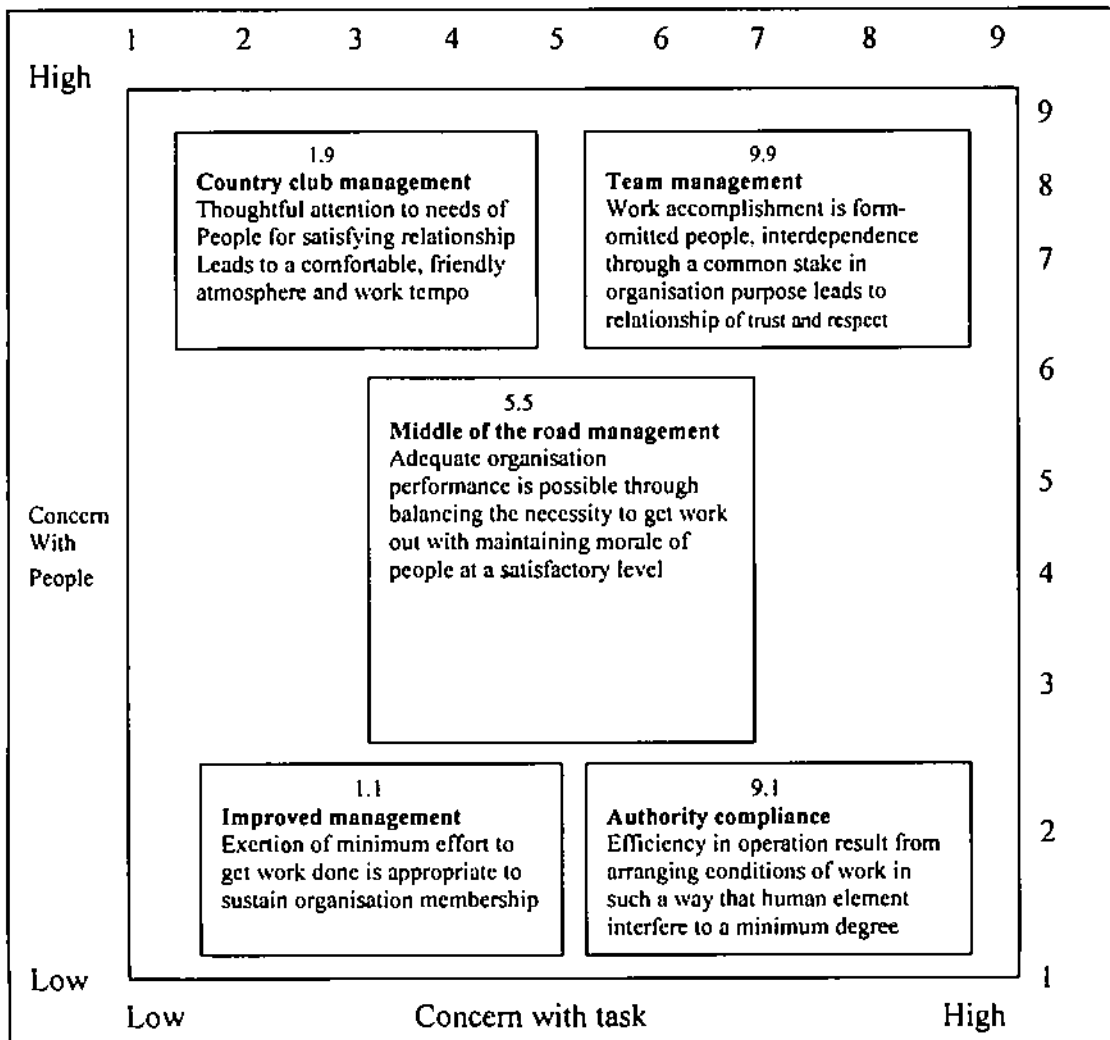
Blake and Mouton developed the Managerial Grid as two-dimensional grid, plotting “Concern for Task against Concern for People” as shown in figure below.

The following five leadership styles are indicated in the next figure:

- Impoverished (1.1) – “Sorry, it’s not my problem” - low on task and low on people relationship resulting in the minimum effort to see that work gets done and people are not disciplined;
- Country club (1.9) – “Don’t worry be happy” - relationship where people drive the leader, resulting in a friendly and relaxed organisation where completion of task takes secondary importance;
- Task orientation (9.1) – “Nice guys finish last” the completion of the task is all important and the task is organised in such a way that human elements interfere to a minimum degree;
- Middle of the road (5.5) – “I can live with that” –the task needs are balanced with personnel needs and the work gets done in a way that the morale does not suffer; and
- Team player (9.9) – “All for one and one for all” – high on task needs and high on personnel needs. Work done is from committed people.

The Managerial grid tends to be an attitudinal model that measures the values and feelings of a leader, while Ohio State framework attempts to include behavioural concepts as well as attitudinal (Hersey & Blanchard, 1993)

The Managerial grid



Source: Blake & Mouton (1993:110)

Task and relationship behaviour are separate and distinct dimensions. They can be placed on separate axes of a two dimensional graph, and four quadrants can be used to identify four basic leadership styles that can influence the organisational culture. The next figure illustrates these styles. One will see that task behaviour is on the horizontal axis and relationship behaviour on the vertical axis.

The following descriptions apply to the four styles:

- Style 1 (S1) – This leadership is characterised by above-average amounts of task behaviour and below-average amounts of relationship behaviour.
- Style 2 (S2) – This leadership style is characterised by above-average amounts of both task and relationship behaviour.

- Style 3 (S3) – This style is characterised by above-average amounts of relationship behaviour and below-average amounts of task behaviour.
- Style 4 (S4) – This style is characterised by below-average amounts of both relationship and task behaviour.

		Effective leader behaviour	
Relationship Behaviours	(High)	High relationship and Low task S3	High task and high Relationship S2
	(Low)	Low relationship and Task S4	High task and low Relationship S1
		(Low)	(High)
		Task behaviour	

Source: Adapted from P Hersey, Situational selling (Escondido, Claif: Centre For Leadership studies, 1985: 20)

Type of leaders

There is a continuing controversy about the difference between leadership and management. It is obvious that a person can be a leader without being a manager, and a person can be a manager without leading. Managers value stability, order and efficiency, whereas leaders value flexibility, innovation, and adaptation. Managers are concerned about how things get done, and they try to get people to perform better. Leaders are concerned with what things mean to people, and they try to get people to agree about most important things to be done (Yukl, 2002).

According to Yukl (2002) & Bass (1981) there are several types of leadership styles that influence the organisational culture. These are presented below.

- **Transformational leadership**
With transformational leadership, the followers feel trust, admiration, loyalty, and respect toward the leader, and they motivated to do more than they originally expected to do.
- **Charismatic leadership**
House (1977) proposed a theory to explain charismatic leadership in terms of a set of testable propositions involving observable processes rather than folklore and mystique. The theory identifies how charismatic leaders behave, their traits and skills, and the conditions in which they are most likely to emerge.
- **Transactional leadership**
Transactional leadership involve an exchange process that may result in follower compliance with leader requests but is not likely to generate enthusiasm and commitment to task objectives.
- **Situational leadership**
Situational research attempt to identify aspects of the situation that “moderate” the relationship of leaders attributes to effectiveness.
- **Autocratic leadership**
This type of manager makes decisions without asking the opinion or suggestions of other people, and these people have no direct influence on the decision; there is no participation.
- **Consideration leadership**
The leader acts in a friendly and supportive manner, shows concern for subordinates, and looks out for their welfare.
- **Democratic leadership**
This type of leader looks to represent the interest of other people and is relationship orientated.
- **Laissez-faire leadership**
This term is seen as descriptive of leaders who avoid attempting to influence their subordinates and shirk their supervisor duties. They have no confidence in their ability to supervise. They bury themselves in paperwork and stay away from subordinates.

- Participative leadership

Effective managers used more group supervision instead of supervising each subordinate separately.

- Relationship leadership

These types of managers are supportive and helpful with subordinates.

Supportive behaviour that was correlated with effective leadership included showing trust and confidence, acting amicably and considerately and further their careers, keeping subordinates informed, providing recognition for subordinates' contributions and accomplishments.

- Task-orientated leadership

Effective managers do not spend time on the same efforts as their subordinates. Instead, the more effective managers concentrate on task-orientated functions such as planning and scheduling work, coordinating subordinates activities, and providing necessary supplies, equipment, and technical assistance.

Goleman (2000) said there are four types of leadership styles. They are listed below.

- Affiliative

This creates harmony and builds emotional bonds. They feel that people come first.

- Democratic

This forges consensus through participation. They are concerned about "What do you think?"

- Pacesetting

This sets high standards for performance. They believe that "Do as I do, now".

According to this article leaders who have mastered four or more especially the authoritative, democratic, affiliative, and coaching styles create the best climate for business performance.

Primary ways in which a leader can influence organisational culture

According to Schein (1992) there are five primary mechanisms how leaders can influence organisational culture. These are presented below.

- Attention

Leaders communicate their priorities, values, and concern by their choice of things to ask, measure, comment on, praise, and criticise. Much of this takes place when the leader is planning activities and monitoring operations.

Emotional outburst has an especially strong effect in communicating values and concerns. In contrast, by not paying attention, a message is sent out that it is not important.

- **Reaction to crises**

Because of the emotions surrounding crises, a leader's response to them can send a strong message about values and assumptions. A leader who faithfully supports espoused values even when under pressure for expedient action communicates clearly that the values are important.

- **Role modelling**

Leaders can communicate values and expectations by their own actions, especially actions showing loyalty, self-sacrifice, and service beyond the call of duty. A leader who institutes a policy or procedure but fails to act in accordance with it communicates the message that it is not really important or necessary.

- **Allocation of reward**

Using this criterion signal what is important to the organisation. Formal recognition in ceremonies and informal praise communicate a leader's concern and priorities. In contrast, failure to recognise contributions and achievements sends a message that they are not important. Finally, differential allocation of rewards and status symbolises the importance of some members compared to others.

- **Criteria for selection and dismissal**

Leaders can influence culture by their choice of criteria for recruiting, selecting, promoting, and dismissing people. Leaders also communicate their values and concerns by providing realistic information about the criteria and requirements for success in the organisation.

Secondary ways in which a leader can influence organisational culture

In addition to the five primary mechanisms by which leaders can influence organisational culture, Schein describe five secondary mechanisms that are useful for

embedding and reinforcing culture when they are consistent with the primary mechanisms. These are reviewed below.

- **Design of systems and procedures**
Formal planning, budgeting, reports, performance rewards can be used to emphasise some activities and criteria, while also helping to reduce role ambiguity.
- **Design of organisation structure**
The design of structure is often influenced more by assumptions about internal relationships than actual requirements for effective adaptation to the environment. A centralised structure reflects the beliefs that only the leader can determine what is best, whereas a decentralised structure belief in individual initiative and shared responsibility.
- **Design of facilities**
Although seldom used as an intentional strategy, leaders can design facilities to reflect basic values. For example, an open plan office indicates the value of open communication.
- **Stories, legends, and myths**
Stories about important events and people in the organisation help transmit values and assumptions. However, stories and myths are more reflection of culture than a determinant of it. The potential use of this mechanism by leaders to influence culture is very limited in any organisation where open ambiguity communication makes it possible to detect a false story. To be successful leaders must be clear about values, and describe a real event.
- **Formal statement**
A public statement of values by a leader and written value statements, charters, and philosophies can be useful as a supplement to other mechanisms. However, formal statements usually describe only a small portion of an organisation's cultural assumptions and beliefs, and they have no credibility unless the words are supported by the leader's action and decisions.

Ways in which leaders can form the culture

According to Yukl (2002) another way that leaders can influence the organisational culture is to change culture forms such a symbols, slogans, and rituals. This type of

change takes a long time to become part of the inner being of the subordinates. There are a number of different changes that are possible, including the elimination of existing culture forms of culture to express the new ideology, and the creation of new cultural forms.

Rituals, ceremonies, and rites of passage can be used to strengthen identification with the organisation as well as to emphasise core values. In many organisations new members have to take a public oath to demonstrate knowledge of the ideology. Also common are ceremonies to celebrate a member's advancement in rank, to inaugurate a new leader, and to socialise new employees and teach them about the culture of the organisation.

Interrelationship between leadership and culture

According to Block (2003) in his article "The leadership-culture connection: an exploratory investigation", there is large body of research that has explored leadership and organisational culture independently. The interconnection between theses constructs remains more of an implicit theory than an empirical finding. Based on the leadership culture research published thus far, certain tentative conclusions have been suggested by researchers. These are listed below.

- The impact of leadership on firm performance is mediated by organisational culture.
- Leadership creates an environment in which fundamental organisational change is more or less likely to occur.
- Specific leadership behaviour is associated with distinct cultural traits.
- Contextual factors such as organisational culture have an impact on the emergence of specific leadership styles.
- Leaders use their knowledge of organisational culture to effect change.
- The behaviour of leaders influences the perceptions of organisational culture among followers.

Despite the limited amount of research published, there is a surprising degree of consistency among these proposed conclusions. This consistency is especially impressive, given the variety of measurements strategies used, the types of

organisations investigated, and the diverse concepts of leadership and organisational culture. Unfortunately, researchers who choose to delve into the mysteries underlying the leadership-culture connection must confront a myriad of definitional complexities. For the purpose of present research, however, Rost's conceptualisation of leadership was adopted: leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purpose.

The definitive challenges of organisational culture mirror those facing leadership researchers. Anthropologists have proposed at least 164 different definitions of organisational culture. Current models of organisational performance and changes suggest that leadership and organisational culture are central explanatory construct. The growing interest in this area stems from the fact that organisations now recognise that leadership is not simply a rational or technical activity, but that it involves the management of people and the development of a sense of community within the organisation (Block, 2003).

Objective of the study

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The primary purpose of this research is to examine the correlation between leadership behaviours and employees' perceptions of organisation culture. The theory suggests that a leader has a significant influence on organisational culture. What is not known is if there are a specifically link between leader behaviours to different dimensions of organisation culture.

The study also determined the degree of consistency between the leaders' perceptions of his/her behaviour and that of his/her employees. The study tested:

- (1) whether some of the leadership styles correlate to a specific type of organisational culture;
- (2) whether there is similarity in the in OCP ratings of leaders and employees, does the same view about the organisations culture shared by both management and employees;
- (3) if management's view of a positive and negative culture correlates to these of the subordinates.

Research methodology

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Quantitatively methodology was used to conduct the study. Leadership behaviour is measured by the LBDQ (leader behaviour description questionnaire). The organisation culture profile (OCP) was used to determine the type of culture in the organisations. The questionnaire “Is the culture positive or negative?” was used to determine whether culture is negative or positive.

Seven companies out of the Iliad LTD group were selected with four managers and twenty employees in each company. This writer is an operational director of one of the 34 companies and should be able to gain access to a representative sample. The managers and the employees completed the OCP (organisational culture profile) and LBDQ (leader behaviour description questionnaire). One of the challenges in leadership research is to gain an accurate measure of leader behaviour.

The manager’s perception of the organisational culture and the perception of the employees were then to be correlated.

Testing of the hypothesis

H1. Employees’ perception of organisational culture will be positively associated with the leadership style of their immediate supervisor/manager.

The action of immediate supervisors send strong message to employees on a daily basis about the essential character of an organisations’ culture. Theses behaviours are referred to as primary cultural embedding mechanisms (Schein, 1992) and include such things as what supervisor pay attention to, how they react to crises, and the criteria they use to allocate resources and/or rewards to employees. In the present study, it was assumed that specific kinds of leadership behaviour/styles among leaders would be more likely to evoke specific kinds of employee perceptions.

H2. Employees’ perception of the organisational culture will be positively correlated with the leaders/managers perception of the organisational culture.

One of the most important elements of culture in new organisations is the set of beliefs about the distinctive competence of the organisation that differentiates it from other organisations. The beliefs are likely to include the reason why the organisation's products or service are unique or superior and the internal processes that account for continued ability to provide these products and service.

Theory suggests that there are particular leadership styles that correlate with different cultural dimensions. For example, relationship style behaviours correlate positively with employees' perception of the culture as being more supportive.

H3. The different types of leadership behaviours will be correlated with the different types of organisational cultures.

For example, if a company want to emphasis on a Performance Orientation type of culture according to the OCP factor 1, they need to implement a Production Emphasis according to the LBDQ, Factor 9.

Data Collection

Seven companies out of the Iliad Ltd group were be selected with four managers and twenty employees in each company. The managers and the employees completed the OCP (organisational culture profile) and LBDQ (leader behaviour description questionnaire). One of the challenges in leadership research is to obtain an accurate measure of leader behaviour. The managing directors selected employees at all levels to complete the two questionnaires. The participants received the OCP and LBDQ to complete; the same questionnaires were distributed to the managers. This enabled the researcher us to correlate the two perceptions of culture and leadership behaviour. The variables of the OCP and the variables of the LBDQ are correlated with the canonical correlation analysis to see if the organisational culture as the criterion and the leadership behaviour as the predictor have any relationship.

Data Analysis

When correctly applied, canonical analysis is an extremely useful and powerful technique for exploring the nature and strengths of relationships between sets of variables.

The canonical correlation coefficient reflects shared variation between linear composites of the original variables, not the variables themselves. For a measure of the original variables between the sets of variables, compute the redundancy between the sets, redundancy being the equivalent of the average multiple correlation coefficient squared between one set and variables in the other set.

Each pair of canonical variates is independent from previous pairs. Hence a different relationship arises from each one. The presence of some of the same key variables in two or more pairs still yield a different “whole” when the other variables that are closely correlated with the same canonical variates area also considered.

Finally, determining cut-off points for including variables requires subjective judgment and depends on the purpose of the analysis. Care must be taken “not to twist the data”.

The data is analysed with the Canonical Correlation Multivariate method. There are 12 independent predictor variables from the LBDQ as an input, and the seven variables from the OCP as the criterion dependent variables. Thus each independent variable on the LBDQ has a specific influence on the seven types of dependent cultures on the OCP.

The canonical correlation analysis (CCA) is used to correlate the perception of the organisational culture and the leadership behaviour perception between the managers and the employees. This helps the managers to see themselves through the eyes of the employees and to improve their leadership style and behaviour.

Respondent profile

Seven companies out of the Iliad Ltd group were selected, with four managers and twenty employees in each company. The managers and the employees completed the OCP (organisational culture profile) and LBDQ (leader behaviour description questionnaire). The employees and managers were selected out of all the levels in the organisations. The demographics of the respondents were not completed; this information is not critical for the data analysis in this study.

Research findings

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Reliability test for OCP and LBDQ

When selecting scales to include in the study it is important to find scales that are reliable. One of the main issues concerns the scale's internal consistency. This refers to the degree to which the items that make up the scale "hang together". The most commonly used indicator is the Cronbach Alpha (CA). Ideally the CA coefficient of a scale should be above 0.60.

In terms of reliability the Alpha is the most important value – the CA. If the CA is, say 0.89, it would be considered reliable due to fact that it is above the 0.60. If the Cronbach Alpha deleted items is above the CA, one should delete it to increase the CA closer to the desired 0.60 CA.

The other information of interest is the column marked Corrected Item correlation. These figures give an indication of the degree to which each item correlates with the total score. Low values (less than 0.3) indicate that the item is measuring something different to the scale as whole. If one has a variable with a score lower than 0.3, it should be eliminated.

Screening and cleaning of data

The SPSS software was used to analyse the data and the next section briefly explains the process that was followed. It is essential to check the data set for errors. It is easy to make mistakes when entering data and unfortunately some errors can completely confuse the analysis. It is important to spend time checking for mistakes initially, rather than trying to repair the damage later. The data screening process involve a number of steps.

Step 1

First, one needs to check each of the variables for scores that are out of range. This researcher used a Likert scale with 1 – 5, from least to best. If a participant selected 6, it would be out of the range.

Step 2

Second, one needs to find where in the data file these errors occurred. One needs to type in the out of range number. This will enable the software to find the incorrect or out of range data.

Step 3

One needs to go back to the data and fix the data.

Step 4

The LBDQ had negative questions and these were reverse scored to get the correct results.

Descriptive statistics (Mean, Standard Deviation)

The mean is the average scale chosen between 1 to 5, for example representation the respondents chose 2.18, closer to two (Not at all - 1, Minimally - 2, Moderately - 3, Considerably - 4, Very much - 5). The STD deviation summarizes how far away from the average the data values typically are. It is perhaps the most frequently used measure of spread because it improves interpretability by removing the variances square and expressing deviations in their original units. It is also an important concept for descriptive statistics because it reveals the amount of variability of individuals within the dataset. Like the mean, extreme scores affect the standard deviation. The means are shown in the table below.

Descriptive study for LBDQ

Variable	Score	Mean	Ave Mean	STD deviation	Ave STD deviation
Representation	8	10.89	2.18	6.11	1.22
Demand reconciliation	6	13.43	2.24	7.42	1.24

Tolerance of uncertainty	1	26.59	2.66	12.68	1.27
Persuasiveness	9	20.87	2.09	10.90	1.09
Initiation of structure	12	18.14	1.81	9.78	0.98
Tolerance of freedom	2	23.36	2.34	12.34	1.23
Role assumption	4	23.02	2.30	12.34	1.23
Consideration	5	22.51	2.25	12.59	1.26
Production emphasis	7	22.13	2.21	11.34	1.13
Predictive accuracy	3	11.63	2.33	5.34	1.07
Integration	10	9.70	1.94	5.36	1.07
Superior orientation	11	19.35	1.94	10.33	1.03

In the next discussion the highest five variables are used to gain a sense of leadership behaviours preferred by employees. The variables are summarised in the above table.

The most important leadership behaviour with the highest mean is tolerance of uncertainty. Employees expect that their managers or leaders will be able to tolerate uncertainty and postponement without anxiety or getting upset. These characteristics of managers give a sense of security to their subordinates.

It is evident that employees need to feel that there is scope for initiative, decision and actions in their leaders. Employees need some space to develop them and the only way to accomplish this is to have an environment in which they can develop.

The employees want their managers to plan for the future and have the ability to predict outcomes accurately. This leadership behaviour gives stability and a sense of security to the employees. The employees need to be in good hands because their future is in the hands of their managers.

Role assumption scored the fourth highest, and therefore employees feel that managers exercise actively their role as leaders rather than to surrender to others. Again, when managers accept their role as leaders the subordinates have a sense of security because they know that their leaders will support them.

Consideration is the fifth highest mean and therefore employees feel that managers take into account the comfort, well-being, status and contributions of followers. This

variable highlights the need for personal comfort. Employees need to know that they are looked after and that they are rewarded and gain the necessary recognition for their contributions.

Reliability test for LBDQ

Table 4.2 – Reliability testing of LBDQ (More than 0.60, tested as reliable)

LBDQ - EMPLOYEES	RELIABILITY	
Representation	0.684	Yes
Demand reconciliation	0.784	Yes
Tolerance of uncertainty	0.616	Yes
Persuasiveness	0.782	Yes
Initiation of structure	0.842	Yes
Role of tolerance	0.737	Yes
Role assumption	0.651	Yes
Consideration	0.754	Yes
Production emphasis	0.791	Yes
Predictive accuracy	0.797	Yes
Integration	0.859	Yes
Superior orientation	0.792	Yes

Representation, demand reconciliation, tolerance of uncertainty, persuasiveness, initiation of structure, tolerance of freedom, role assumption, consideration, production emphasis, predictive accuracy, integration and superior orientation all tested reliable, with a CA above 0.6 and therefore, one can accept this study and its results as reliable.

Factor Analysis for LBDQ

The LBDQ was used in a South African environment and therefore the study intends to see if the same factors were presented as in other countries. Because the sample was small, the analysis failed and relied on the well-tested twelve factors proven in many studies over the years.

Organisational culture factors (OCP)

Descriptive statistics (Mean, Standard Deviation)

The mean is the average scale chosen between 1 to 5, for example, in representation the respondents chose 2.18, closer to two (Not at all - 1, Minimally - 2, Moderately - 3, Considerably - 4, Very much - 5). The STD deviation summarises how far away from the average the data values typically are. It is perhaps the most frequently used measure of spread because it improves interpretability by removing the variances square and expressing deviations in their original units. It is also important concept for descriptive statistics because it reveals the amount of variability of individuals within the dataset. Like the mean, extreme scores affect the standard deviation.

Descriptive Mean and STD

Deviation of the OCP

Variable	Score	Ave	STD	Ave STD
	Mean	Mean	Deviation	Deviation
Performance orientation	1 16.41	4.10	3.93	0.98
Social responsibility	4 15.24	3.81	4.25	1.06
Supportiveness	7 14.42	3.61	4.66	1.16
Emphasis on rewards	6 14.49	3.62	5.04	1.26
Stability	5 14.93	3.73	4.38	1.10
Competitiveness	2 16.13	4.03	4.06	1.02
Innovation	3 15.71	3.93	4.26	1.07

In the next discussion the highest three variables are used to gain a sense of how organisational culture is perceived by employees. The variables are summarised in the above table.

Performance orientation had the highest mean value and represents the culture most perceived. Employees feel that there is a high expectation for performance and that the company is results orientated in a highly organised environment.

Competitiveness had the second highest mean, therefore it is perceived that the employees feel there is a culture of achievement orientation; emphasis on quality; and a distinctive different from their competitors.

Innovation scored the third highest therefore it is perceived that most of the employees feel that the company acts quickly to take advantage of an opportunity and taking risk. They feel that individuals take own responsibility as well.

Reliabilities for OCP factors

Reliability for OCP factors

OCP - EMPLOYEES	RELIABILITY	More than 0. 6, tested as reliable
Performance orientation	0.794	Yes
Social responsibility	0.797	Yes
Supportiveness	0.792	Yes
Emphasis on rewards	0.751	Yes
Stability	0.707	Yes
Competitiveness	0.740	Yes
Innovation	0.723	Yes

The required reliable CA is between 0.6 and 0.9. In this study the results were between 0.6 and 0.9 and therefore these results can accepted as reliable.

Factor Analysis of the OCP

The OCP was used in a South African environment and therefore the study intends to see if the same factors were presented as in other countries. Due to the small size of the sample the analysis failed and relied on the well-tested seven factors proven in many studies over the years.

Canonical Correlation Analysis (CCA) — Between the OCP and LBDQ

A general failure of empirical studies over the years to correlate the relationship between leadership behaviour and organisational culture occurred and therefore the purpose of this study is to find any correlation in which the leadership behaviour and the perception of the organisational culture.

CCA is a highly useful, powerful technique for exploring the relationship between multiple criterion and predictor variables. The technique is primarily descriptive, although it may be used for predictive purpose. Results obtained from a CA should suggest answers to questions concerning the number of ways in which the two sets of multiple variables are related, the strengths of the relationship, and the nature of the relationship so defined.

CCA enables the data analyst to combine into a composite measure what otherwise might be an unmanageably large number of bivariate correlations between sets of variables. It is useful for identifying the overall relationship between multiple independents and dependent variables, particularly when data analyst has little a priori knowledge about relationships among the set of variables.

The data sufficiently capture the relationship between the criterion (OCP variables) and the predictor (LBDQ variables). The following description shows the relationship and the results.

CCA of OCP and LBDQ

	1	2	3	4	
Criterion (OCP)	Rs	Rs	Rs	Rs	h2(%)
Performance oriented	-0.49	-0.477	0.08	0.036	0.472
Socially responsible	-0.74	-0.131	-0.23	0.178	0.646
Supportiveness	-0.6	0.095	-0.24	-0.29	0.507
Emphasises rewards	-0.68	0.193	0.324	-0.05	0.605
Stability	-0.11	0.143	-0.13	0.004	0.049
Competitiveness	-0.47	-0.165	0.177	0.187	0.31
Innovation	-0.5	0.081	-0.13	0.434	0.464
Predictive (LBDQ)					
Representation	0.536	0.016	0.03	0.207	0.331
Demand reconciliation	0.576	0.313	0.354	0.063	0.559
Tolerance of Uncertainty	0.147	-0.119	0.518	0.265	0.374
Persuasiveness	0.338	0.058	0.137	0.306	0.23
Initiation of structure	0.509	0.24	0.234	0.555	0.679
Tolerance of freedom	0.202	0.033	0.363	0.51	0.434
Role assumption	0.729	0.303	0.207	0.065	0.67
Consideration	0.682	-0.31	0.137	0.435	0.769
Production emphasis	0.551	0.122	-0.04	0.117	0.334
Predictive accuracy	0.446	-0.086	0.506	0.025	0.463
Integration	0.651	-0.245	0.188	0.406	0.684
Superior Orientation	0.647	0.151	0.486	0.187	0.713
Roots	0.46	0.285	0.198	0.111	
Canonical R	0.562	0.471	0.407	0.316	
R2c	31.50%	22.20%	16.50%	10%	
d.f.	84	66	50	36	
Probability	0.003	0.159	0.609	0.929	

Coefficients above 0.5 are used

Canonical analysis provides both a more persuasive case for the relationship under study and some hints concerning the kinds of personality structures involved. That is far from saying that canonical analysis illuminates the field; it is notoriously difficult to interpret beyond the significance levels of R's associated with particular roots.

Table 4.6 shows the first four canonical roots with R's of 0.0003, 0.159, 0.609 and 0.929 respectively, leaving little doubt that there are significant relationships

involved. More interesting since the basic relationship involved has not really been in doubt, is the nature of the relationship suggested. Extracting the items with heavy loading from the predictor and criterion set, somewhat simplifying the picture, can crudely approximate the meanings of roots. In this case, items with coefficient above .3 are used.

The squared structure coefficients (r^2/s) are also given, which represent the percentage of shared variance between the observed variables and the synthetic variables created from the observed variable set.

Only the functions that explain a reasonable amount of variance between the variables sets or risk interpreting an affect that may not be noteworthy or replicable in future studies. This means that it is decided that the first four factors will be selected. The first four (R^2c) are respectively 31%, 22%, 17% and 10% adding to 80%.

In this data it has thus far been concluded that there indeed was a noteworthy relationship between our variables sets by evidence of statistical significance and effect sizes. Furthermore, this relationship was largely captured by the first four functions in canonical model.

Because it is established that there is a relationship, one can turn to the second question in the interpretation strategy, that is, what variables are contributing to this relationship between the variables sets across the four functions. Researcher have less often consulted structure coefficient, which reflect the direct contribution of one predictor to the predictor criterion variables regardless of the other predictors. In multivariate analysis, structure coefficients are more often consulted, such as when a factor analysis reports the structure matrix for correlated factors. Structure coefficients increase in importance when the observed variables in the model increase in their correlation with each other.

Looking at the function 1 coefficient, one sees that relevant criterion variables were primarily performance - oriented, socially responsible, supportiveness, production emphasis, competitiveness, and innovation having made secondary contributions to the synthetic criterion variables. The other side of the equation on function 1 involve

the predictor set. Table 4.6 results reveals us that the representation, demand reconciliation, persuasiveness, initiation of structure, role assumption, consideration, production emphasis, predictive accuracy, integration and superior orientation were primary contributors to the predictor synthetic variables. It makes sense to think that leaders that have the following leadership styles: representation, demand reconciliation, persuasiveness, initiation of structure, role assumption, consideration, production emphasis, predictive accuracy, integration, superior orientation will influence the following: organisational culture performance - oriented, socially responsible, supportiveness, production emphasis, competitiveness and innovation

The second factor represents a culture of performance orientation. This type of culture is one that put its emphasis on being innovative, sharing information freely and are people - orientated. The factor does not have a significant value of .001 and therefore cannot be used.

The third organisational culture that is influenced by the way in which leaders behave is the emphasis on reward. To ensure fairness, opportunity for personal growth, having a culture of praise and good pay for performance, managers need to look at several leadership behaviours. The factor does not have a significant value of .001 and cannot be used.

The last organisational culture is one of innovation. In this culture managers need to be quick to take advantages of opportunities, take calculated risks and take individual responsibility. The significant value of this factor is not .001 and therefore not interpretable.

Different perceptions of culture

Managerial perception of the organisational culture

Due to the sample size, SSPS was not able to obtain a perception of the managers per se.

Subordinates perceptions of organisational culture

Due to the sample size, SSPS was not able to gain a perception of the managers per se.

Correlation between two perceptions of organisational culture

Due to the sample size, no information was collected or analysed to make a correlation between the two perceptions.

Recommendations

Researchers should collect their own data. Distributing the questionnaires to branch managers one need to trust that they will follow the exact guidelines collecting data. Although this study had a response rate of 86% for managers and 78% for employees, the sample was still too small and some of the questionnaires were not completed in full. From the questionnaires it is evident that they did not follow the guidelines, which resulted in incorrect data. When future researchers collect their own data they will be able to explain the questions to the participants. This researcher would suggest that they collect the data by completing it question by question because, the population or participants tend to rush through the questions. One of the reasons why they do not spend time completing the questionnaires is because they do not want to be finish last and feel incompetent. For the same reason they do not ask if they do not understand the question at hand. Therefore one should explain every single question, whether they understand it or not.

Leaders can concentrate on the following leadership styles listed below.

Representation measures to what degree the manager speaks as the representative of the group.

Demand Reconciliation reflects how well the manager reconciles conflicting demands and reduces disorder to system.

Tolerance of Uncertainty depicts to what extent the manager is able to tolerate uncertainty and postponement without feeling anxiety or getting upset.

Persuasiveness measures to what extent the manager uses persuasion and argument effectively and exhibits strong convictions.

Initiations of Structure measures to what degree the manager clearly defines his/her own role, and lets followers know what is expected.

Tolerance of Freedom reflects to what extent the manager allows followers scope for initiative, decision and action.

Role Assumption measures to what degree the manager actively exercises the leadership role rather than surrendering leadership to others.

Consideration depicts to what extent the manager considers the comfort, well-being, status and contributions of followers.

Production Emphasis measures to what degree the manager applies pressure for productive output.

Predictive Accuracy measures to what extent the manager exhibits foresight and ability to predict outcomes accurately.

Integration reflects to what degree the manager maintains a closely-knit organisation and resolves inter-member conflicts.

Superior Orientation measures to what extent the manager maintains cordial relations with superiors; has influence with them and is striving for higher status.

All of these leadership styles influence the organisational culture in one of the ways:

- competitiveness - achievement orientation, an emphasis on quality, being distinctive – being different from others and being competitive;
- social responsibility - being reflective, having a good reputation, being socially responsible and having a clear guiding philosophy;
- supportiveness - being innovative, sharing information freely, being people orientated, collaboration and innovation;
- being innovative - quick to take advantage of opportunities, risk taking and taking individual responsibility;
- emphasis on rewards – fairness, opportunities for professional growth, high pay for good performance and praise for good performance;
- stability – stability, being calm, security of employment and low conflict;
- performance orientation - having high expectations for performance, enthusiasm for the job, being results - orientated and being highly organised.

Managers and leaders must focus on the type of organisational culture they expect and foresee then select the type of leadership style as per Table 5.1 to build or sustain the type of culture.

The research can be done in the future with a bigger sample and by ensuring that the participants are informed well enough to understand the questionnaires. If the sample size had been bigger all three hypotheses could have been tested. *H1.*

Employees' perception of organisational culture will be positively associated with the

leadership style of their immediate supervisor/manager and H2. Employees perception of the organisational culture will be positively correlated with the leaders'/managers' perception of the organisational culture were not tested because only sample of managers completed the questionnaires.

Due to a lack of leadership skills, there are managers who are not leaders; the employees have a positive perception of trust for the organisations with little trust in their leaders. The participants would never choose for a specific leadership style but always for an organisational culture variable. Therefore the companies need to improve on their middle management leadership skills. This will improve the companies' performance, stability and long-term profitability. Due to poor leadership skills, employees tend to leave the companies before they reach their full potential and before they can start to build the company for the future. The time, money and effort needed to employ and educate staff are immense and costly. Senior managers need to invest time and money in their middle management to ensure that they implement the vision and culture they require.

Leaders should maintain considerate behaviour to improve existing innovative organisational culture. Managers need their staff to explore themselves to be empowered. When employees feel that they are part of the company they will always give more than is expected from them.

Leaders should be more patient in developing their staff. Managers need to spend more time and money to ensure that their staffs are educated and that they have adequate time to be developed. The managers must look at the long-term results. When employees feel that they are competent they will stay with the company and build a career. When they are trained, their skills level will improve the performance-orientated culture in the organisation.

Management can be more humanistic. The company are production and performance - orientated and when one looks after the well-being of one's employees their performance will increase as well. Employees are people with a social life and social problems that influence their work. The managers should build up social responsibility to stop potential litigations.

Employees are the people who run the business and should be negotiated as important and not only as people needed to make targets. To ensure long-term goals management must empower their employees and build a sustainable relationship with their most important asset, their employees.

Conclusion

CCA (canonical correlation analysis) we were able to correlate the LBDQ and the OCP models with four functions as a result. The theory suggests there are particular leadership styles that correlate with different cultural dimensions. For example, relationship style behaviours will correlate positively with employees' perception of the culture as more supportive. *H3 - The different types of leadership behaviours will be correlated to the different types of organisational cultures*) and therefore it has been proved that the leadership styles does influence the perception of the organisational culture.

As a limitation of the study H1 and H2 (H1 Employees' perception of organisational culture will be positively associated with the leadership style of their immediate supervisor/manager and H2. Employees perception of the organisational culture will be positively correlated with the leaders/managers perception of the organisational culture) were not tested. The study tried to correlate the perceptions of managers and employees, but because only a small sample of managers completed the questionnaires, the correlation failed.

Future researchers need to explain the questionnaires to participants. In South Africa there is a cross - cultural population with many perceptions and understandings. To ensure better results researchers should explain and work question by question with the participants.

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8. APPENDICES

8.1. LEADERSHIP BEHAVIOURAL DESCRIPTION QUESTIONNAIRE (LBDQ)

No. _____

IDEAL LEADER BEHAVIOUR DESCRIPTION QUESTIONNAIRE – FORM XII

Purpose of the Questionnaire

On the following pages is a list of items that may be used to describe the behaviour of a supervisor as you think he or she should act, to be the ideal supervisor. Although some items may appear similar, they express differences that are important in the description of leadership. Each item should be considered as a separate description. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to describe, as accurately as you can, the behaviour of an ideal supervisor.

- READ each item carefully.
 - THINK about how frequently the leader engages in the behaviour described by the item.
 - DECIDE whether he/she (A) *always*, (B) *often*, (C) *occasionally*, (D) *seldom* or (E) *never* acts as described by the item.
 - DRAW A CIRCLE around one of the five letters (A B C D E) following the item to show the answer you have selected.
 - MARK your answers as shown in the example below.
- A=Always B=Often C=Occasionally D=Seldom E=Never

1. Acts as the spokesman of the group	1.	A	B	C	D	E
2. Waits patiently for the results of a decision	2.	A	B	C	D	E
3. Gives pep talks to stimulate the group	3.	A	B	C	D	E
4. Lets group members know what is expected of them	4.	A	B	C	D	E
5. Allows the members complete freedom in their work	5.	A	B	C	D	E
6. Is hesitant about taking the initiative in the group	6.	A	B	C	D	E
7. Is friendly and approachable	7.	A	B	C	D	E
8. Encourages overtime work	8.	A	B	C	D	E

9. Makes accurate decisions	9.	A	B	C	D	E	
10. Gets along well with the people above him/her	10.	A	B	C	D	E	
11. Publicises the activities of the group	11.	A	B	C	D	E	
12. Becomes anxious when he/she cannot find out what is coming next	12.	A	B	C	D	E	
13. His/her arguments are convincing	13.	A	B	C	D	E	
14. Encourages the use of uniform procedures	14.	A	B	C	D	E	
15. Permits the members to use their own judgement in solving problems	15.	A	B	C	D	E	
A = Always B= Often C = Occasionally D = Seldom E=Never		16.	A	B	C	D	E
17. Does little things to make it pleasant to be a member of the group	17.	A	B	C	D	E	
18. Stresses being ahead of competing groups	18.	A	B	C	D	E	
19. Keeps the group working together as a team	19.	A	B	C	D	E	
20. Keeps the group in good standing with higher authority	20.	A	B	C	D	E	
21. Speaks as the representative of the group	21.	A	B	C	D	E	
22. Accepts defeat in stride	22.	A	B	C	D	E	
23. Argues persuasively for his/her point of view	23.	A	B	C	D	E	
24. Tries out his/her ideas in the group	24.	A	B	C	D	E	
25. Encourages initiative in the group members	25.	A	B	C	D	E	
26. Lets other persons take away his/her leadership in the group	26.	A	B	C	D	E	
27. Puts suggestions made by the group into operation	27.	A	B	C	D	E	
28. Needles members for greater effort	28.	A	B	C	D	E	
29. Seems able to predict what is coming next	29.	A	B	C	D	E	
30. Is working hard for a promotion	30.	A	B	C	D	E	
31. Speaks for the group when visitors are present	31.	A	B	C	D	E	
32. Accepts delays without becoming upset	32.	A	B	C	D	E	
33. Is a very persuasive talker	33.	A	B	C	D	E	

34. Makes his/her attitudes clear to the group	34	A	B	C	D	E
35. Lets the members do their work the way they think best	35	A	B	C	D	E
36. Lets some members take advantage of him/her	36	A	B	C	D	E
37. Treats all group members as his/her equals	37	A	B	C	D	E
38. Keeps the work moving at a rapid pace	38	A	B	C	D	E
39. Settles conflicts when they occur in the group	39	A	B	C	D	E
40. His/her superiors act favourably on most of his/her suggestions	40	A	B	C	D	E
41. Represents the group at outside meetings	41	A	B	C	D	E
42. Becomes anxious when waiting for new developments	42	A	B	C	D	E
43. Is very skilful in an argument	43	A	B	C	D	E
44. Decides what will be done and how it will be done	44	A	B	C	D	E
45. Assigns a task, then lets the members handle it	45	A	B	C	D	E
46. Is the leader of the group in name only	46	A	B	C	D	E
47. Gives advance notice of changes	47	A	B	C	D	E
48. A=Always B=Often C=Occasionally D= Seldom E = Never				C	D	E
49. Things usually turn out as he/she predicts	49	A	B	C	D	E
50. Enjoys the privileges of his/her position	50	A	B	C	D	E
51. Handles complex problems efficiently	51	A	B	C	D	E
52. Is able to tolerate postponement and uncertainty	52	A	B	C	D	E
53. Is not a very convincing talker	53	A	B	C	D	E
54. Assigns group members to particular tasks	54	A	B	C	D	E
55. Turns the members loose on a job, and lets them go to it	55	A	B	C	D	E
56. Backs down when he/she ought to stand firm	56	A	B	C	D	E
57. Keeps to himself/herself	57	A	B	C	D	E
58. Asks the members to work harder	58	A	B	C	D	E

59. Is accurate in predicting the trend of events	59	A	B	C	D	E
60. Gets his/her superiors to act for the welfare of the group members	60	A	B	C	D	E
61. Gets swamped by details	61	A	B	C	D	E
62. Can wait just so long, then blows up	62	A	B	C	D	E
63. Speaks from a strong inner conviction	63	A	B	C	D	E
64. Makes sure that his/her part in the group is understood	64	A	B	C	D	E
65. Is reluctant to allow the members any freedom of action	65	A	B	C	D	E
66. Lets some members have authority that he/she should keep	66	A	B	C	D	E
67. Looks out for the personal welfare of group members	67	A	B	C	D	E
68. Permits the members to take it easy in their work	68	A	B	C	D	E
69. Sees to it that the work of the group is co-ordinated	69	A	B	C	D	E
70. His/her word carries weight with superiors	70	A	B	C	D	E
71. Gets things all tangled up	71	A	B	C	D	E
72. Remains calm when uncertain about coming events	72	A	B	C	D	E
73. Is an inspiring talker	73	A	B	C	D	E
74. Schedules the work to be done	74	A	B	C	D	E
75. Allows the group a high degree of initiative	75	A	B	C	D	E
76. Takes full charge when emergencies arise	76	A	B	C	D	E
77. Is willing to make changes	77	A	B	C	D	E
78. Drives hard when there is a job to be done	78	A	B	C	D	E
79. Helps group members settle their differences	79	A	B	C	D	E
80. Gets what he/she asks for from his/her superiors	80	A	B	C	D	E
81. Can reduce a madhouse to system and order	81	A	B	C	D	E
82. Is able to delay action until the proper time occurs	82	A	B	C	D	E
83. Persuades others that his/her ideas are to their advantage	83	A	B	C	D	E

8	A = Always B = Often C=Occasionally D = Seldom E= Never	84	A	B	C	D	E
85.	Trusts members to exercise good judgement	85	A	B	C	D	E
86.	Overcomes attempts made to challenge his/her leadership	86	A	B	C	D	E
87.	Refuses to explain his/her actions	87	A	B	C	D	E
88.	Urges the group to beat its previous record	88	A	B	C	D	E
89.	Anticipates problems and plans for them	89	A	B	C	D	E
90.	Is working his/her way to the top	90	A	B	C	D	E
91.	Gets confused when too many demands are made of him/her	91	A	B	C	D	E
92.	Worries about the outcome of any new procedure	92	A	B	C	D	E
93.	Can inspire enthusiasm for a project	93	A	B	C	D	E
94.	Asks that group members follow standard rules and regulations	94	A	B	C	D	E
95.	Permits the group to set its own pace	95	A	B	C	D	E
96.	Is easily recognised as the leader of the group	96	A	B	C	D	E
97.	Acts without consulting the group	97	A	B	C	D	E
98.	Keeps the group working up to capacity	98	A	B	C	D	E
99.	Maintains a closely knit group	99	A	B	C	D	E
100.	Maintains cordial relations with superiors	100	A	B	C	D	E

8.2. ORGANISATIONAL CULTURE PROFILE (OCP)

(Amended version by Sarros, Gray and Densten)

Indicate by circling the appropriate number the extent to which you perceive each organisational culture item is characteristic of your organisation and its values.

Not At All	Minimally	Moderately	Considerably	Very Much
1	2	3	4	5

To what extent is your organisation recognized for its ...

1. Stability	1	2	3	4	5
2. Being people - oriented	1	2	3	4	5
3. Being innovative	1	2	3	4	5
4. Fairness	1	2	3	4	5
5. Being calm	1	2	3	4	5
6. Being reflective	1	2	3	4	5
7. Achievement orientation	1	2	3	4	5
8. Quick to take advantage of opportunities	1	2	3	4	5
9. Having high expectations for performance	1	2	3	4	5
10. High pay for good performance	1	2	3	4	5
11. Security of employment	1	2	3	4	5
12. Enthusiasm for the job	1	2	3	4	5
13. An emphasis on quality	1	2	3	4	5
14. Risk taking	1	2	3	4	5
15. Being distinctive-different from others	1	2	3	4	5
16. Having a good reputation	1	2	3	4	5
17. Being team - oriented	1	2	3	4	5
18. Being results - oriented	1	2	3	4	5
19. Having a clear guiding philosophy	1	2	3	4	5
20. Being competitive	1	2	3	4	5
21. Sharing information freely	1	2	3	4	5

22. Being highly organised	1	2	3	4	5
23. Being socially responsible	1	2	3	4	5
24. Low conflict	1	2	3	4	5
25. Opportunities for professional growth	1	2	3	4	5
26. Collaboration	1	2	3	4	5
27. Praise for good performance	1	2	3	4	5
28. Taking individual responsibility	1	2	3	4	5
29. Please circle the number that best captures how you feel about your Company's culture	1	2	3	4	5
30. Please circle the number that captures if others perception of the Companies culture influence your perception of the culture	1	2	3	4	5

*This form of the OCP was developed from the shortened version by D.M. Cable and T.A. Judge. (1997). Interviewers' perceptions of person-organization fit and organizational selection decisions. *Journal of Applied Psychology*, 82(4), 546-561, and as based on the original instrument by C.A. O'Reilly, J. Chatman and D.F. Caldwell, (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, 34(3), 487-516. Copyright © 1997 by the American Psychological Association. Adapted with permission. This current version is reported in Sarros, J.C., Gray, J. and Densten, I.L. (2002). Leadership and its impact on organizational culture. *International Journal of Business Studies*, 10(2), 1-25.

Scores for the OCP

Value factors	OCP items	Totals	Mean
---------------	-----------	--------	------

Performance Orientation	9,12,18,22	/4
Social Responsibility	6,16,23,19	/4
Supportiveness	17,21,2,26	/4
Emphasis on rewards	4,25,10,27	/4
Stability	1,5,11,24	/4
Competitiveness	7,13,15,20	/4
Innovation	3,8,14,28	/4
Organisational Culture + or -	29,30	/2

8.3. MONOVA for the CCA analysis between the OCP and LBDQ

The default error term in MANOVA has been changed from WITHIN CELLS to WITHIN+RESIDUAL. Note that these are the same for all full factorial designs.

***** Analysis of Variance *****

134 cases accepted.

0 cases rejected because of out-of-range factor values.

5 cases rejected because of missing data.

1 non-empty cell.

1 design will be processed.

* * * * * A n a l y s i s o f V a r i a n c e -- design 1 * * * * *

EFFECT .. WITHIN CELLS Regression

Multivariate Tests of Significance (S = 7, M = 2 , N = 56 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.89341	1.47522	84.00	847.00	.005
Hotellings	1.14971	1.55054	84.00	793.00	.002
Wilks	.36473	1.51806	84.00	712.32	.003
Roys	.31530				

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor
1	.460	40.052	40.052	.562	.315
2	.285	24.756	64.808	.471	.222
3	.198	17.228	82.035	.407	.165
4	.111	9.667	91.702	.316	.100
5	.060	5.238	96.940	.238	.057
6	.027	2.334	99.274	.162	.026
7	.008	.726	100.000	.091	.008

Dimension Reduction Analysis

Roots	Wilks L.	F Hypoth. DF	Error DF	Sig. of F	
1 TO 7	.36473	1.51806	84.00	712.32	.003
2 TO 7	.53268	1.18508	66.00	626.15	.159
3 TO 7	.68429	.93152	50.00	536.97	.609
4 TO 7	.81983	.67135	36.00	443.94	.929
5 TO 7	.91095	.47078	24.00	345.74	.985

6 TO 7	.96581	.30083	14.00	240.00	.994
7 TO 7	.99173	.16824	6.00	121.00	.985

EFFECT .. WITHIN CELLS Regression (Cont.)

Univariate F-tests with (12,121) D. F.

Variable	Sq. Mul. R	Adj. R-sq.	Hypoth. MS	Error MS	F
OCPPRFMC	.14280	.05779	.94475	.56242	1.67979
OCPSOCAL	.20530	.12649	1.51716	.58243	2.60490
OCPSUPRT	.14899	.06459	1.38803	.78629	1.76530
OCPEMPLHS	.18555	.10478	1.87624	.81676	2.29717
OCPSTBLT	.05431	.00000	.38709	.66843	.57911
OCPCOMPT	.11263	.02462	.72362	.56542	1.27979
OCPINVTN	.11080	.02262	.80506	.64073	1.25647

* * * * * Analysis of Variance -- design 1 * * * * *

Standardized canonical coefficients for DEPENDENT variables

Function No.

Variable	1	2	3	4	5	6
OCPPRFMC	.177	-1.570	.266	-.389	-.305	-.654
OCPSOCAL	-.823	-.297	-.883	.660	.213	-.325
OCPSUPRT	-.358	.335	-.767	-1.404	-.140	.648
OCPEMPLHS	-.580	.647	1.263	-.161	-.231	-.557
OCPSTBLT	.931	.302	-.194	.201	.931	-.596
OCPCOMPT	.059	.155	.642	.273	.890	1.346
OCPINVTN	-.012	.473	-.311	.994	-.572	-.017

Correlations between DEPENDENT and canonical variables

Function No.

Variable	1	2	3	4	5	6
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OCPPRFMC	-.487	-.477	.080	.036	.496	-.122
OCPSOCAL	-.737	-.131	-.232	.178	.548	-.199
OCPSUPRT	-.596	.095	-.244	-.289	.515	.012
OCPPEMPS	-.679	.193	.324	-.047	.441	-.324
OCPSTBLT	-.113	.143	-.125	.004	.822	-.370
OCPCOMPT	-.465	-.165	.177	.187	.676	.332
OCPINVTN	-.502	.081	-.130	.434	.277	.033

* * * * * Analysis of Variance -- design 1 * * * * *

Variance in dependent variables explained by canonical variables

CAN. VAR.	Pct Var DE	Cum Pct DE	Pct Var CO	Cum Pct CO
1	29.659	29.659	9.351	9.351
2	4.926	34.585	1.091	10.443
3	4.118	38.703	.681	11.124
4	4.890	43.593	.489	11.613
5	31.658	75.251	1.798	13.411
6	5.832	81.084	.152	13.563
7	18.916	100.000	.157	13.720

Standardised canonical coefficients for COVARIATES

CAN. VAR.	1	2	3	4	5	6
COVARIATE	1	2	3	4	5	6
REP5VAR	.366	.115	-.330	.101	.208	.396
DDRECON3	.159	.600	.026	-.513	-.749	-.141
MTOLUNC6	-.178	.076	.319	.129	-.385	.427
MPRSV10	-.396	-.215	-.357	.305	-.096	-.146
MINSTR10	-.215	.770	-.096	1.192	.269	.931
MTOLFR8	-.396	.210	.437	.402	-.148	-.830
MROLASM7	.425	.323	.139	-.205	-.285	.209
MCNSDR9	.471	-.470	-.366	.524	-.039	.252
MPRDAMP	.263	.333	-.876	-.497	-.086	-.436
MPRDACR5	-.094	-.747	.777	-.717	.078	.489

MINTRGN5	.221	-1.055	.075	-.311	-.239	-.469
MSUPOR10	.286	.219	.667	.030	1.088	-.691

Correlations between COVARIATES and canonical variables

CAN. VAR.

COVARIATE	1	2	3	4	5	6
REP5VAR	.536	.016	.030	.207	.107	.194
DDRECON3	.576	.313	.354	.063	-.465	-.133
MTOLUNC6	.147	-.119	.518	.265	-.380	.119
MPRSV10	.338	.058	.137	.306	-.176	-.137
MINSTR10	.509	.240	.234	.555	.012	.077
MTOLFR8	.202	.033	.363	.510	-.290	-.433
MROLASM7	.729	.303	.207	.065	-.262	.025
MCNSDR9	.682	-.310	.137	.435	-.296	-.125
MPRDEMP	.551	.122	-.044	.117	.008	-.246
MPRDACR5	.446	-.086	.506	.025	.008	.119
MINTRGN5	.651	-.245	.188	.406	-.189	-.198
MSUPOR10	.647	.151	.486	.187	.266	-.246

* * * * * Analysis of Variance -- design 1 * * * * *

Variance in covariates explained by canonical variables

CAN. VAR.	Pct Var DE	Cum Pct DE	Pct Var CO	Cum Pct CO
1	8.921	8.921	28.295	28.295
2	.863	9.785	3.896	32.192
3	1.639	11.424	9.916	42.108
4	.988	12.412	9.878	51.986
5	.355	12.767	6.249	58.235
6	.103	12.870	3.939	62.173
7	.074	12.944	8.982	71.155

Regression analysis for WITHIN CELLS error term

--- Individual Univariate .9500 confidence intervals

Dependent variable .. OCPPRFMC

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
REP5VAR	-.11717	-.12242	.105	-1.119	.265
DDRECON3	-.21878	-.24402	.123	-1.785	.077
MTOLUNC6	-.03047	-.02855	.116	-.262	.793
MPRSV10	.15042	.12155	.172	.875	.383
MINSTR10	-.08901	-.06869	.212	-.420	.675
MTOLFR8	.09386	.08574	.143	.657	.512
MROLASM7	-.29796	-.26260	.150	-1.983	.050
MCNSDR9	-.03493	-.03225	.147	-.238	.813
MPRDAMP	-.18572	-.15061	.173	-1.074	.285
MPRDACR5	.24717	.25055	.150	1.645	.103
MINTRGN5	.13079	.14254	.152	.860	.391
MSUPOR10	.01052	.00823	.185	.057	.955

COVARIATE Lower -95% CL- Upper

REP5VAR	-.325	.090
DDRECON3	-.461	.024
MTOLUNC6	-.260	.199
MPRSV10	-.190	.491
MINSTR10	-.509	.331
MTOLFR8	-.189	.377
MROLASM7	-.595	.000
MCNSDR9	-.326	.256
MPRDAMP	-.528	.157
MPRDACR5	-.050	.545
MINTRGN5	-.170	.432
MSUPOR10	-.356	.377

* * * * * Analysis of Variance -- design 1 * * * * *

Regression analysis for WITHIN CELLS error term (Cont.)

Dependent variable .. OCPSOCAL

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
-----------	---	------	-----------	---------	-----------

REP5VAR	-.10925	-.10799	.107	-1.025	.307
DDRECON3	-.20979	-.22139	.125	-1.682	.095
MTOLUNC6	-.02471	-.02191	.118	-.209	.835
MPRSV10	.28215	.21574	.175	1.613	.109
MINSTR10	.17523	.12795	.216	.813	.418
MTOLFR8	.16363	.14143	.145	1.126	.262
MROLASM7	-.32749	-.27309	.153	-2.141	.034
MCNSDR9	-.13004	-.11357	.150	-.869	.386
MPRDEMP	-.08367	-.06420	.176	-.475	.635
MPRDACR5	-.02622	-.02515	.153	-.171	.864
MINTRGN5	-.06843	-.07056	.155	-.442	.659
MSUPOR10	-.04778	-.03537	.188	-.254	.800

COVARIATE Lower -95% CL- Upper

REP5VAR	-.320	.102
DDRECON3	-.457	.037
MTOLUNC6	-.259	.209
MPRSV10	-.064	.628
MINSTR10	-.252	.602
MTOLFR8	-.124	.451
MROLASM7	-.630	-.025
MCNSDR9	-.426	.166
MPRDEMP	-.432	.265
MPRDACR5	-.329	.277
MINTRGN5	-.375	.238
MSUPOR10	-.420	.325

Dependent variable .. OCPSUPRT

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
REP5VAR	-.08065	-.07101	.124	-.651	.516
DDRECON3	-.05450	-.05122	.145	-.376	.708
MTOLUNC6	-.05485	-.04331	.137	-.399	.690
MPRSV10	.14877	.10131	.203	.732	.465
MINSTR10	.09482	.06167	.251	.378	.706
MTOLFR8	.06326	.04869	.169	.375	.709
MROLASM7	-.25974	-.19291	.178	-1.462	.146
MCNSDR9	-.24221	-.18840	.174	-1.394	.166

MPRDEMP	.11269	.07701	.204	.551	.583
MPRDACR5	.04041	.03452	.178	.227	.820
MINTRGN5	-.15565	-.14294	.180	-.866	.388
MSUPOR10	-.07470	-.04926	.219	-.342	.733

* * * * * Analysis of Variance -- design 1 * * * * *

Regression analysis for WITHIN CELLS error term (Cont.)

Dependent variable .. OCPSUPRT

COVARIATE Lower -95% CL- Upper

REP5VAR	-.326	.165
DDRECON3	-.341	.232
MTOLUNC6	-.327	.217
MPRSV10	-.254	.551
MINSTR10	-.401	.591
MTOLFR8	-.271	.397
MROLASM7	-.612	.092
MCNSDR9	-.586	.102
MPRDEMP	-.292	.518
MPRDACR5	-.311	.392
MINTRGN5	-.512	.200
MSUPOR10	-.508	.358

Dependent variable .. OCPMPHS

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
REP5VAR	-.20709	-.17501	.126	-1.641	.103
DDRECON3	-.05727	-.05167	.148	-.388	.699
MTOLUNC6	.05459	.04137	.140	.390	.697
MPRSV10	.10160	.06641	.207	.491	.625
MINSTR10	.18270	.11405	.255	.715	.476
MTOLFR8	.34362	.25390	.172	1.997	.048
MROLASM7	-.24563	-.17510	.181	-1.356	.178
MCNSDR9	-.39028	-.29140	.177	-2.203	.029
MPRDEMP	-.22130	-.14517	.208	-1.062	.290
MPRDACR5	.10709	.08780	.181	.591	.555
MINTRGN5	-.19779	-.17436	.183	-1.079	.283

MSUPOR10	.20775	.13149	.223	.932	.353
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COVARIATE	Lower	-95%	CL-	Upper
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REP5VAR	-.457	.043
DDRECON3	-.350	.235
MTOLUNC6	-.222	.332
MPRSV10	-.308	.512
MINSTR10	-.323	.688
MTOLFR8	.003	.684
MROLASM7	-.604	.113
MCNSDR9	-.741	-.040
MPRDEMP	-.634	.191
MPRDACR5	-.251	.466
MINTRGN5	-.561	.165
MSUPOR10	-.233	.649

* * * * * A n a l y s i s o f V a r i a n c e -- design 1 * * * * *

Regression analysis for WITHIN CELLS error term (Cont.)

Dependent variable .. OCPSTBLT

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
REP5VAR	.01578	.01588	.114	.138	.890
DDRECON3	-.08563	-.09202	.134	-.641	.523
MTOLUNC6	-.12574	-.11351	.127	-.993	.323
MPRSV10	.00755	.00588	.187	.040	.968
MINSTR10	.11345	.08436	.231	.491	.624
MTOLFR8	.04922	.04332	.156	.316	.752
MROLASM7	-.12779	-.10851	.164	-.780	.437
MCNSDR9	-.06804	-.06051	.160	-.425	.672
MPRDEMP	.10462	.08174	.189	.555	.580
MPRDACR5	-.07161	-.06993	.164	-.437	.663
MINTRGN5	-.11232	-.11794	.166	-.677	.499
MSUPOR10	.26075	.19658	.202	1.293	.198

COVARIATE	Lower	-95%	CL-	Upper
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REP5VAR	-.210	.242
DDRECON3	-.350	.179
MTOLUNC6	-.376	.125
MPRSV10	-.363	.378
MINSTR10	-.344	.571
MTOLFR8	-.259	.357
MROLASM7	-.452	.197
MCNSDR9	-.385	.249
MPRDEMP	-.269	.478
MPRDACR5	-.396	.253
MINTRGN5	-.441	.216
MSUPOR10	-.138	.660

Dependent variable .. OCPCOMPT

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
REP5VAR	-.06593	-.06989	.105	-.628	.531
DDRECON3	-.20133	-.22786	.123	-1.638	.104
MTOLUNC6	.02097	.01993	.116	.180	.857
MPRSV10	.09350	.07667	.172	.543	.588
MINSTR10	.21478	.16821	.212	1.011	.314
MTOLFR8	.08491	.07871	.143	.593	.554
MROLASM7	-.22232	-.19883	.151	-1.475	.143
MCNSDR9	-.07479	-.07005	.147	-.507	.613
MPRDEMP	-.24624	-.20264	.173	-1.420	.158
MPRDACR5	.15760	.16212	.151	1.046	.298
MINTRGN5	-.05598	-.06191	.152	-.367	.714
MSUPOR10	.09667	.07676	.185	.521	.603

* * * * * A n a l y s i s o f V a r i a n c e -- design 1 * * * * *

Regression analysis for WITHIN CELLS error term (Cont.)

Dependent variable .. OCPCOMPT

COVARIATE Lower -95% CL- Upper

REP5VAR	-.274	.142
DDRECON3	-.445	.042

MTOLUNC6	-.210	.252
MPRSV10	-.248	.435
MINSTR10	-.206	.635
MTOLFR8	-.198	.368
MROLASM7	-.521	.076
MCNSDR9	-.367	.217
MPRDEMP	-.590	.097
MPRDACR5	-.141	.456
MINTRGN5	-.358	.246
MSUPOR10	-.270	.464

Dependent variable .. OCPINVTN

COVARIATE	B	Beta	Std. Err.	t-Value	Sig. of t
REP5VAR	-.05681	-.05663	.112	-.508	.612
DDRECON3	-.10453	-.11125	.131	-.799	.426
MTOLUNC6	.00837	.00748	.124	.068	.946
MPRSV10	.17245	.13298	.183	.940	.349
MINSTR10	.42089	.30996	.226	1.861	.065
MTOLFR8	.16883	.14717	.152	1.108	.270
MROLASM7	-.25096	-.21106	.160	-1.565	.120
MCNSDR9	-.05954	-.05244	.157	-.379	.705
MPRDEMP	-.06492	-.05024	.185	-.352	.726
MPRDACR5	-.08347	-.08074	.160	-.520	.604
MINTRGN5	-.17840	-.18553	.162	-1.099	.274
MSUPOR10	-.09726	-.07262	.197	-.493	.623

COVARIATE	Lower -95%	CL- Upper
REP5VAR	-.278	.165
DDRECON3	-.364	.154
MTOLUNC6	-.237	.254
MPRSV10	-.191	.536
MINSTR10	-.027	.869
MTOLFR8	-.133	.471
MROLASM7	-.569	.067
MCNSDR9	-.370	.251
MPRDEMP	-.430	.301
MPRDACR5	-.401	.234
MINTRGN5	-.500	.143

MSUPOR10 -.488 .294

* * * * * A n a l y s i s o f V a r i a n c e -- design 1 * * * * *

EFFECT .. CONSTANT

Multivariate Tests of Significance (S = 1, M = 2 1/2, N = 56 1/2)

Test Name	Value	Exact F	Hypoth. DF	Error DF	Sig. of F
Pillais	.65774	31.57196	7.00	115.00	.000
Hotellings	1.92177	31.57196	7.00	115.00	.000
Wilks	.34226	31.57196	7.00	115.00	.000
Roys	.65774				

Note.. F statistics are exact.

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.
1	1.922	100.000	100.000	.811

EFFECT .. CONSTANT (Cont.)

Univariate F-tests with (1,121) D. F.

Variable	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F	Sig. of F
OCPPRFMC	114.57191	68.05293	114.57191	.56242	203.71204	.000
OCPSOCAL	111.81275	70.47363	111.81275	.58243	191.97739	.000
OCPSUPRT	108.33349	95.14071	108.33349	.78629	137.77858	.000
OCPMPHS	92.56262	98.82836	92.56262	.81676	113.32856	.000
OCPSTBLT	80.20978	80.87964	80.20978	.66843	119.99786	.000
OCPCOMPT	100.24212	68.41549	100.24212	.56542	177.28874	.000
OCPINVTN	80.11858	77.52823	80.11858	.64073	125.04282	.000

EFFECT .. CONSTANT (Cont.)
Standardised discriminant function coefficients
Function No.

Variable	1
OCPPRFMC	-.450
OCPSOCAL	-.466
OCPSUPRT	.030
OCPEMPHS	.115
OCPSTBLT	-.049
OCPCOMPT	-.281
OCPINVTN	.030

* * * * * A n a l y s i s o f V a r i a n c e -- design 1 * * * * *

EFFECT .. CONSTANT (Cont.)
Estimates of effects for canonical variables
Canonical Variable

Parameter	1
1	-6.706

Correlations between DEPENDENT and canonical variables
Canonical Variable

Variable	1
OCPPRFMC	-.936
OCPSOCAL	-.909
OCPSUPRT	-.770
OCPEMPHS	-.698
OCPSTBLT	-.718
OCPCOMPT	-.873
OCPINVTN	-.733

9. TABLES AND FIGURES IN THE RESEARCH REPORT

9.1. Reliability Test for LBDQ (these tables are available if needed in bigger fond, unfortunately a small fond is used to fit page)

Reliability - Representation

		Notes
Output Created		
Comments		
Input	Date	C:\Documents and Settings\ISBL01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	C:\Documents and Settings\ISBL01\My Documents
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var001 var011 var021 var031 var0 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	272 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.684	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if
var001	0.07	
var011	0.20	

var021	8.95
var031	8.72
var041	8.59

Reliability - Demand reconciliation

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\USBL01\My Documents\
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var051 var061 var071 /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	272 bytes

Warnings

The specs saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.845	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
var051	9.25	
var061	8.48	
var071	8.85	

var081	9.04
var091	8.89

Reliability

Notes

Output Created	
Comments	
Input	Data
	C:\Documents and Settings\USBLD1\My Documents\
	Filter
	<none>
	Weight
	<none>
	Split File
	<none>
	N of Rows in Working Data File
	Matrix Input
Missing Value Handling	Definition of Missing
	User-defined missing values are treated as missing
	Cases Used
	Statistics are based on all cases with valid data for
Syntax	
	RELIABILITY /VARIABLES=var051 var071 var081 var091 /FORMAT=HOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time
	Memory Available
	524288 bytes
	Largest Contiguous Area
	524288 bytes
	Workspace Required
	224 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(n)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.592	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var051	6.61	
var071	6.23	
var081	6.38	
var091	6.21	

Reliability

Notes

Output Created		
Comments		
Input	Date	C:\Documents and Settings\SLB\My Documents\
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var051 var081 var091 /FORMAT=HOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	176 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.672	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var051	4.30	
var081	4.14	
var091	3.90	

Reliability

Notes

Output Created	
----------------	--

Comments		
Input	Data	C:\Documents and Settings\SLB01\My Documents\
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var051 var061 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	125 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.784	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var051	2.09	
var061	1.87	

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Reliability - Tolerance of uncertainty

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SLB01\My Documents\
	Filter	<none>

	Weight	<none>
	Spss File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var002 var012 var022 var032 var042 /FORMAT=HOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.488	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var002	24.38	
var012	23.54	
var022	23.57	
var032	23.48	
var042	24.15	
var052	23.87	
var062	24.03	
var072	24.44	
var082	24.17	
var092	23.80	

Reliability

Notes

Output Created

Comments		
Input	Data	C:\Documents and Settings\SBLO1\My Documents\
	Filter	<none>
	Weights	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var002 var022 var032 var052 var062 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	418 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.587	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var002	18.89	
var022	18.07	
var032	17.98	
var052	18.17	
var062	18.53	
var072	18.94	
var082	18.67	
var092	18.30	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SSLD1\My Documents\
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var002 var022 var032 var052 var072 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	320 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.618	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
var002	13.57	
var022	12.75	
var032	12.65	
var052	12.85	
var072	13.62	
var082	13.34	

Reliability - Parsimony

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\ISBL01\My Documents\
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var003 var013 var023 var033 var043 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL .
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.782	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var003	18.40	
var013	18.65	
var023	18.80	
var033	18.90	
var043	18.98	
var053	18.70	
var063	18.83	
var073	18.85	
var083	18.59	
var093	18.89	

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SBLO1\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Missing Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var004 var014 var024 var034 var044 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The sparse matrix method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.828	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var004	18.42	
var014	18.38	
var024	18.02	
var034	18.38	
var044	18.27	
var054	18.06	

var004	16.53
var074	16.07
var084	16.38
var094	16.72

Reliability

Notes

Output Created	
Comments	
Input	Data
	C:\Documents and Settings\ISBL01\My Documents
	Filter
	<none>
	Weight
	<none>
	Split File
	<none>
	N of Rows in Working Data File
	Matrix Input
Missing Value Handling	Definition of Missing
	User-defined missing values are treated as missing
	Cases Used
	Statistics are based on all cases with valid data for
Syntax	
	RELIABILITY
	/VARIABLES=var004 var074 var084 var094
	/FORMAT=NOLABELS
	/SCALE(ALPHA)=ALL/MODEL=ALPHA
	/SUMMARY=TOTAL.
Resources	
	Elapsed Time
	Memory Available
	524288 bytes
	Largest Continuous Area
	524288 bytes
	Workspace Required
	418 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

	N
Cases	
Valid	
Excluded(a)	
Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.842	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var004	12.80	
var024	12.40	

var034	12.73
var054	12.47
var054	12.91
var074	12.45
var084	12.75
var094	13.00

Reliability - Totarance of freedom

Reliability - Role Assumption

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SLD01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var008 var018 var026 var038 var0 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

	N
--	---

Cases	Valid	Excluded(a)	Total

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.481	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var008	20.85	
var018	20.87	
var028	19.05	
var038	20.95	
var048	20.98	
var058	20.90	
var068	20.16	
var078	21.35	
var088	20.88	
var098	21.30	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SLB01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Missing Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var008 var018 var028 var038 var048 var058 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	454 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(n)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.583	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
var006	16.70	
var016	16.81	
var036	16.93	
var046	17.00	
var056	16.94	
var066	16.20	
var076	17.32	
var086	16.92	
var096	17.35	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SSLD1\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var016 var036 var046 var056 var0 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	368 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.831	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
var016	11.71	
var036	11.70	
var046	11.80	
var056	11.74	
var076	12.19	
var086	11.72	
var096	12.14	

Reliability - Consideration

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SL01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var007 var017 var027 var037 var0 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The listwise deletion method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.746	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if It
var007	20.00	
var017	19.70	
var027	20.22	
var037	20.23	
var047	20.50	
var057	19.02	
var067	20.42	
var077	20.83	
var087	20.22	
var097	19.70	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SELD1\My Documents\
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Mydata Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var007 var027 var037 var047 var0 /FORMAT=HOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524256 bytes

Largest Contiguous Area	524288 bytes
Workspace Required	484 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.754	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var007	16.12	
var027	17.48	
var037	17.48	
var047	17.85	
var057	17.17	
var067	17.67	
var077	17.68	
var087	17.47	
var097	16.90	

Reliability - Production Emphasis

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SL01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		<pre> RELIABILITY /VARIABLES=var006 var018 var02 var058 var098 /FORMAT=NOLABELS /SCALE(/SUMMARY=TOTAL. </pre>

Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Configured Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.662	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var005	19.04	
var018	19.25	
var028	19.84	
var035	20.35	
var048	20.27	
var056	20.30	
var068	18.66	
var075	20.51	
var088	20.42	
var098	20.33	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SBLO1\My Document
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for

Syntax			RELIABILITY /VARIABLES=var008 var028 var038 var048 var058 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL .
Resources	Elapsed Time		
	Memory Available		524288 bytes
	Largest Contiguous Area		524288 bytes
	Workspace Required		416 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.761	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var008	12.89	
var028	13.89	
var038	14.20	
var048	14.12	
var058	14.15	
var078	14.36	
var088	14.27	
var098	14.17	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SL01\My Document:
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing

Syntax	Cases Used	Statistics are based on all cases with valid data for
		RELIABILITY /VARIABLES=var028 var038 var048 var058 var078 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	368 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.791	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
var028	10.80	
var038	11.11	
var048	11.03	
var058	11.07	
var078	11.28	
var088	11.18	
var098	11.09	

Reliability - Predictive Accuracy

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SBL01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var009 var029 var049 var059 var069 /FORMAT=HOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL .
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	272 bytes

Warnings

The sparse solver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.797	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var009	9.54	
var029	9.12	
var049	9.08	
var059	9.36	
var069	9.37	

Reliability - Integration

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SBLO1\My Document
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var019 var039 var069 var079 var099 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	272 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(s)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.858	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var019	7.86	
var039	7.82	
var069	7.85	
var079	7.84	
var099	7.82	

Reliability - Superior orientation

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SLB01\My Documents
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var010 var020 var030 var040 var050 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL .
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	512 bytes

Warnings

The space saver method is used. That is, the covariance matrix is not calculated or used in the analysis.

Cases Processing Summary

		N
Cases	Valid	
	Excluded(s)	
	Total	

a. List-wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.785	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
var010	17.72	
var020	17.55	
var030	17.44	
var040	17.06	
var050	17.66	
var060	17.00	
var070	17.41	
var080	17.09	
var090	17.62	
var100	17.58	

Reliability

Notes

Output Created		
Comments		
Input	Data	C:\Documents and Settings\SLB\1\My Document
	Filter	<none>

	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
	Cases Used	Statistics are based on all cases with valid data for
Syntax		RELIABILITY /VARIABLES=var010 var020 var030 var050 var060 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Elapsed Time	
	Memory Available	524288 bytes
	Largest Contiguous Area	524288 bytes
	Workspace Required	484 bytes

Warnings

The space saving method is used. That is, the covariance matrix is not calculated or used in the analysis.

Case Processing Summary

		N
Cases	Valid	
	Excluded(a)	
	Total	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.782	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Deleted
var010	15.43	
var020	15.28	
var030	15.15	
var050	15.37	
var060	14.71	
var070	15.12	
var080	14.80	
var090	15.33	
var100	15.20	

9.2. Reliability Test for OCP

Performance orientation

Reliability Statistics

Cronbach's Alpha	N of Items
0.794	4

Social responsibility

Notes

Reliability Statistics

Cronbach's Alpha	N of Items
0.767	4

Supportiveness

Notes

Reliability Statistics

Cronbach's Alpha	N of Items
0.792	4

Emphasis on rewards

Notes

Reliability Statistics

Cronbach's Alpha	N of Items
0.751	4

Stability

Notes

Reliability Statistics

Cronbach's Alpha	N of Items
0.707	4

Competitiveness

Notes

Reliability Statistics

Cronbach's Alpha	N of Items
0.74	4

Innovation

Reliability Statistics

Cronbach's Alpha	N of Items
0.723	3

9.3. Descriptive statistical for LBDQ

Descriptive statistical analysis for LBDQ

Variable	Mean	Ave Mean	STD deviation	Ave STD deviation
Representation	10.89	2.18	6.11	1.22
Demand reconciliation	13.43	2.24	7.42	1.24
Tolerance of uncertainty	26.59	2.66	12.68	1.27
Persuasiveness	20.87	2.09	10.90	1.09
Initiation of structure	18.14	1.81	9.78	0.98
Tolerance of freedom	23.36	2.34	12.34	1.23
Role assumption	23.02	2.30	12.34	1.23
Consideration	22.51	2.25	12.59	1.26
Production emphasis	22.13	2.21	11.34	1.13
Predictive accuracy	11.63	2.33	5.34	1.07
Integration	9.70	1.94	5.36	1.07
Superior orientation	19.35	1.94	10.33	1.03

LBDQ

Descriptive statistics

	Mean	Std. Deviation	Analysis N	Missing N
VAR001	1.83	0.963	138	1

VAR002	2.19	1.098	138	1
VAR003	2.41	1.294	138	1
VAR004	1.72	0.982	138	1
VAR005	2.09	1.237	138	1
VAR006	2.36	1.392	138	1
VAR007	1.64	0.98	138	1
VAR008	3.09	1.526	138	1
VAR009	2.04	0.915	138	1
VAR010	1.63	0.913	138	1
VAR011	2.64	1.334	138	1
VAR012	3.07	1.354	138	1
VAR013	2.22	1.032	138	1
VAR014	1.75	1.017	138	1
VAR015	2.25	1.207	138	1
VAR016	2.14	1.291	138	1
VAR017	2.75	1.404	138	1
VAR018	2.88	1.415	138	1
VAR019	1.84	1.048	138	1
VAR020	1.8	0.99	138	1
VAR021	1.95	1.155	138	1
VAR022	3.01	1.343	138	1
VAR023	2.01	1.053	138	1
VAR024	2.12	1.108	138	1
VAR025	1.86	1.055	138	1
VAR026	3.96	1.284	138	1
VAR027	2.28	1.153	138	1
VAR028	2.29	1.115	138	1
VAR029	2.51	1.222	138	1
VAR030	1.91	1.356	138	1
VAR031	2.17	1.255	138	1
VAR032	3.1	1.325	138	1
VAR033	1.89	0.902	138	1
VAR034	1.78	0.934	138	1
VAR035	2.6	1.391	138	1
VAR036	2.06	1.371	138	1
VAR037	2.28	1.498	138	1
VAR038	1.78	0.949	138	1
VAR039	1.88	0.978	138	1
VAR040	2.29	1.082	138	1

VAR041	2.3	1.402	138	1
VAR042	2.43	1.22	138	1
VAR043	1.9	0.961	138	1
VAR044	1.87	0.973	138	1
VAR045	2.2	1.203	138	1
VAR046	2.05	1.363	138	1
VAR047	1.91	1.174	138	1
VAR048	1.86	1.041	138	1
VAR049	2.55	1.04	138	1
VAR050	1.69	0.919	138	1
VAR051	1.87	0.919	138	1
VAR052	2.91	1.249	138	1
VAR053	2.09	1.217	138	1
VAR054	2.04	0.995	138	1
VAR055	2.83	1.393	138	1
VAR056	2.11	1.265	138	1
VAR057	2.59	1.464	138	1
VAR058	1.83	0.981	138	1
VAR059	2.27	0.986	138	1
VAR060	2.35	1.23	138	1
VAR061	2.65	1.254	138	1
VAR062	2.55	1.302	138	1
VAR063	2.05	1.096	138	1
VAR064	1.61	0.85	138	1
VAR065	2.59	1.282	138	1
VAR066	2.85	1.323	138	1
VAR067	2.09	1.174	138	1
VAR068	3.27	1.473	138	1
VAR069	1.85	1.017	138	1
VAR070	1.93	0.961	138	1
VAR071	2.25	1.392	138	1
VAR072	2.14	1.135	138	1
VAR073	2.03	1.146	138	1
VAR074	2.07	1.263	138	1
VAR075	2.03	1.127	138	1
VAR076	1.66	0.955	138	1
VAR077	1.88	0.978	138	1
VAR078	1.62	0.907	138	1
VAR079	2.05	1.173	138	1

VAR080	2.25	0.982	138	1
VAR081	2.09	1.1	138	1
VAR082	2.41	1.236	138	1
VAR083	2.28	1.12	138	1
VAR084	1.76	0.892	138	1
VAR085	2.06	1.151	138	1
VAR086	2.13	1.201	138	1
VAR087	2.29	1.347	138	1
VAR088	1.71	1.048	138	1
VAR089	2.26	1.18	138	1
VAR090	1.73	0.971	138	1
VAR091	2.27	1.348	138	1
VAR092	2.78	1.419	138	1
VAR093	1.99	1.081	138	1
VAR094	1.42	0.762	138	1
VAR095	2.85	1.295	138	1
VAR096	1.7	0.899	138	1
VAR097	2.8	1.419	138	1
VAR098	1.8	0.887	138	1
VAR099	2.08	1.147	138	1
VAR100	1.77	0.922	138	1

9.4. Descriptive statistical for OCP

Mean and STD deviation of the OCP

Variable	Mean	Ave Mean	STD Deviation	Ave STD Deviation
performance orientation	16.41	4.1025	3.928	0.982

social responsibility	15.24	3.81	4.247	1.06175
supportiveness	14.42	3.605	4.652	1.163
emphasis on rewards	14.49	3.6225	5.041	1.26025
stability	14.93	3.7325	4.38	1.095
competitiveness	16.13	4.0325	4.058	1.0145
innovation	15.7	3.925	4.259	1.06475

Descriptive Statistics for the OCP

	Mean	Std. Deviation	Analysis N	Missing N
VAR101	4.14	0.975	134	5
VAR102	3.64	1.204	134	5
VAR103	3.65	1.119	134	5
VAR104	3.64	1.334	134	5
VAR105	3.38	1.188	134	5
VAR106	3.6	1.055	134	5
VAR107	4.17	0.993	134	5
VAR108	4.13	1.1	134	5
VAR109	4.4	0.902	134	5
VAR110	3.42	1.299	134	5
VAR111	4.07	1.027	134	5
VAR112	3.93	0.993	134	5
VAR113	4.04	1.025	134	5
VAR114	3.12	1.251	134	5
VAR116	3.61	1.096	134	5
VAR116	4.16	0.943	134	5
VAR117	3.81	1.229	134	5
VAR118	4.24	0.998	134	5
VAR119	3.8	1.155	134	5
VAR120	4.31	0.944	134	5
VAR121	3.25	1.243	134	5
VAR122	3.84	1.035	134	5
VAR123	3.68	1.094	134	5
VAR124	3.34	1.19	134	5
VAR125	3.63	1.272	134	5
VAR126	3.72	0.976	134	5
VAR127	3.8	1.136	134	5
VAR128	3.66	1.069	134	5

9.5. Factor Analysis for OCP

Covariance Matrix(a) for OCP

a Determinant = 5.855E-06

KMO and Bartlett's Test(a)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.92
Bartlett's Test of Sphericity	Approx. Chi-Square	2106.588
	df	378
	Sig.	0
a. Based on correlations		

Communalities

	Raw		Rescaled	
	Initial	Extraction	Initial	Extraction
VAR101	0.95	0.598	1	0.63
VAR102	1.45	1.128	1	0.778
VAR103	1.252	0.84	1	0.671
VAR104	1.78	1.372	1	0.77
VAR105	1.41	1.066	1	0.756
VAR106	1.113	0.666	1	0.599
VAR107	0.985	0.519	1	0.526
VAR108	1.209	0.725	1	0.599
VAR109	0.814	0.466	1	0.573
VAR110	1.689	1.515	1	0.897
VAR111	1.056	0.612	1	0.579
VAR112	0.987	0.547	1	0.555
VAR113	1.051	0.693	1	0.66
VAR114	1.565	1.327	1	0.848
VAR115	1.202	0.861	1	0.716
VAR116	0.89	0.511	1	0.574
VAR117	1.511	1.223	1	0.81
VAR118	0.995	0.741	1	0.745
VAR119	1.335	0.861	1	0.645
VAR120	0.891	0.51	1	0.572
VAR121	1.544	0.895	1	0.58
VAR122	1.071	0.61	1	0.57
VAR123	1.197	0.692	1	0.578
VAR124	1.415	0.991	1	0.7
VAR125	1.617	1.34	1	0.829
VAR126	0.953	0.622	1	0.652
VAR127	1.29	1.018	1	0.789
VAR128	1.142	0.832	1	0.728
Extraction Method: Principal Component Analysis.				

9.6. Factor Analysis for LBDQ

KMO and Bartlett's Test for LBDQ

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.696
Bartlett's Test of Sphericity	Approx. Chi-Square	9875.855
	df	4950
	Sig.	0

Communalities

	Initial	Extraction
VAR001	1	0.531
VAR002	1	0.512
VAR003	1	0.578
VAR004	1	0.497
VAR005	1	0.463
VAR006	1	0.249
VAR007	1	0.627
VAR008	1	0.497
VAR009	1	0.651
VAR010	1	0.622
VAR011	1	0.496
VAR012	1	0.536
VAR013	1	0.558
VAR014	1	0.56
VAR015	1	0.529
VAR016	1	0.621
VAR017	1	0.482
VAR018	1	0.457
VAR019	1	0.626
VAR020	1	0.572
VAR021	1	0.58
VAR022	1	0.476
VAR023	1	0.463
VAR024	1	0.648
VAR025	1	0.639
VAR026	1	0.449
VAR027	1	0.592
VAR028	1	0.46
VAR029	1	0.544

VAR030	1	0.682
VAR031	1	0.481
VAR032	1	0.472
VAR033	1	0.41
VAR034	1	0.577
VAR035	1	0.59
VAR036	1	0.465
VAR037	1	0.602
VAR038	1	0.527
VAR039	1	0.661
VAR040	1	0.429
VAR041	1	0.579
VAR042	1	0.475
VAR043	1	0.591
VAR044	1	0.441
VAR045	1	0.497
VAR046	1	0.344
VAR047	1	0.64
VAR048	1	0.567
VAR049	1	0.541
VAR050	1	0.534
VAR051	1	0.709
VAR052	1	0.368
VAR053	1	0.503
VAR054	1	0.633
VAR055	1	0.376
VAR056	1	0.531
VAR057	1	0.557
VAR058	1	0.376
VAR059	1	0.645
VAR060	1	0.531
VAR061	1	0.425
VAR062	1	0.467
VAR063	1	0.567
VAR064	1	0.564
VAR065	1	0.529
VAR066	1	0.436
VAR067	1	0.485
VAR068	1	0.58

VAR069	1	0.637
VAR070	1	0.519
VAR071	1	0.627
VAR072	1	0.504
VAR073	1	0.635
VAR074	1	0.624
VAR075	1	0.662
VAR076	1	0.584
VAR077	1	0.466
VAR078	1	0.559
VAR079	1	0.598
VAR080	1	0.565
VAR081	1	0.664
VAR082	1	0.477
VAR083	1	0.563
VAR084	1	0.593
VAR085	1	0.672
VAR086	1	0.477
VAR087	1	0.529
VAR088	1	0.549
VAR089	1	0.561
VAR090	1	0.564
VAR091	1	0.68
VAR092	1	0.568
VAR093	1	0.598
VAR094	1	0.455
VAR095	1	0.404
VAR096	1	0.584
VAR097	1	0.619
VAR098	1	0.631
VAR099	1	0.59
VAR100	1	0.509
Extraction Method: Principal Component Analysis.		

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	23.832	23.832	23.832	23.832	23.832	23.832
2	5.25	5.25	29.082	5.25	5.25	29.082

3	4.135	4.135	33.217	4.135	4.135	33.217
4	3.059	3.059	36.276	3.059	3.059	36.276
5	2.751	2.751	39.028	2.751	2.751	39.028
6	2.518	2.518	41.545	2.518	2.518	41.545
7	2.421	2.421	43.966	2.421	2.421	43.966
8	2.296	2.296	46.262	2.296	2.296	46.262
9	2.077	2.077	48.339	2.077	2.077	48.339
10	2.03	2.03	50.368	2.03	2.03	50.368
11	1.984	1.984	52.352	1.984	1.984	52.352
12	1.817	1.817	54.169	1.817	1.817	54.169
13	1.777	1.777	55.946			
14	1.704	1.704	57.65			
15	1.614	1.614	59.264			
16	1.582	1.582	60.846			
17	1.512	1.512	62.358			
18	1.456	1.456	63.813			
19	1.357	1.357	65.17			
20	1.328	1.328	66.498			
21	1.293	1.293	67.791			
22	1.279	1.279	69.07			
23	1.231	1.231	70.301			
24	1.185	1.185	71.486			
25	1.173	1.173	72.658			
26	1.117	1.117	73.775			
27	1.098	1.098	74.874			
28	1.044	1.044	75.918			
29	0.983	0.983	76.901			
30	0.937	0.937	77.837			
31	0.899	0.899	78.736			
32	0.861	0.861	79.597			
33	0.856	0.856	80.454			
34	0.808	0.808	81.262			
35	0.789	0.789	82.051			
36	0.773	0.773	82.824			
37	0.742	0.742	83.565			
38	0.71	0.71	84.275			
39	0.684	0.684	84.959			
40	0.664	0.664	85.623			
41	0.649	0.649	86.272			
42	0.633	0.633	86.905			
43	0.613	0.613	87.518			
44	0.607	0.607	88.126			
45	0.573	0.573	88.699			
46	0.554	0.554	89.253			
47	0.537	0.537	89.79			
48	0.522	0.522	90.313			
49	0.482	0.482	90.795			
50	0.477	0.477	91.271			