# Nishani Harinarain, Christina-Louise Bornman & Mandie Botha

# Organisational culture of the South African construction industry

Peer reviewed and revised

#### **Abstract**

Constant change and globalisation of the construction industry has prompted an international query into the understanding of organisations' culture, highlighting its impact on effectiveness and performance. Assessment of the likely culture type of the South African construction industry has been conducted. The aim of this article is to investigate the organisational culture of the South African construction industry by utilising the Competing Values Framework, with its measurement scale, the Organisational Culture Assessment Instrument. This model will identify the industry as either one of the following dominant cultures, namely the clan, adhocracy, market or hierarchy. The systematic sampling method was used and every third participant from a list of quantity surveyors and contractors was selected for the sample group. Each participant was emailed a standard questionnaire. From a sample of 235 quantity-surveying firms a total of 39 valid responses were received. From the 270 contractors that were emailed, 32 valid responses were received. The results revealed the market culture to be the predominant organisational culture in the South African construction industry, followed by the clan, hierarchy and, lastly, the adhocracy cultures. Understanding of their own and other firms' organisational culture could reduce conflict and misunderstanding between stakeholders, and enable managers to make business decisions that could improve competitiveness and create a more harmonious working environment.

**Keywords:** Organisational culture, construction industry, competing values, framework, Organisational Culture Assessment Instrument

#### **Abstrak**

Voortdurende verandering en globalisasie van die konstruksie-industrie, het die belangstelling in organisasiekultuur as 'n rolspeler in die produktiwiteit en werkverrigting aangevuur. Navorsing het al beramings gemaak omtrent die waarskynlike organisasiekultuur van die Suid-Afrikaanse konstruksie-industrie,

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maar die voorspellings is nog nie bevestig nie. Hierdie artikel beoog om deur middel van die Competing Values Framework met sy maatstaf, die Organisational Culture Assessment Instrument, die organisasiekultuur van die industrie te bepaal. Die model het vier hoofkultuurtipes, naamlik clan, adhocracy, market en hierarchy, en identifiseer die dominante eienskappe van 'n organisasie as een van die kulture. Die beskikbaarheidssteekproefmetode is gebruik en elke derde deelnemer uit 'n lys van bourekenaar en kontrakteurs is gekies vir die steekproef. Daar is 'n vraelys aan elke deelnemer per epos gestuur. Uit die steekproef van 235 bourekenaarmaatskappye was daar 'n totaal van 39 geldige antwoorde. Uit die 270 kontrakteurs wat vraelyste ontvang het, is slegs 32 geldige antwoorde ontvang. Die resultate het getoon dat die market kultuur as die oorheersende organisasiekultuur in Suid-Afrika aangewys is, gevolg deur die clan, hierarchy en adhocracy kulture. 'n Begrip vir organisasiekultuur in verskeie firmas kan konflik en misverstande tussen belanghebbendes verminder en bestuurders bemaatig in hul besluite om hul mededingende posisie in die industrie te verbeter en tot 'n meer harmonieuse werksomgewing by te dra.

**Sleutelwoorde:** Organisasiekultuur, konstruksie-industrie, Competing Values Framework, Organisational Culture Assessment Instrument

#### 1. Introduction

Knowledge of organisational culture has become a matter of increasing importance as organisations realise the impact such knowledge could have on their effectiveness and sustainability. Globalisation and the ever-growing demand of clients force organisations to adapt in order to remain competitive. The construction industry is dynamic and fragmented, and stakeholders are constantly confronted with new organisations in a changing environment. Understanding their organisational culture will enable firms to better manage their business and prevent misunderstandings and conflict often due to cultural differences. This could further enhance performance, quality and customer satisfaction ensuring their long-term success.

This article uses the Competing Values Framework (CVF) to assess the dominant organisational culture of the South African construction industry, through the assessment of the organisational culture of quantity-surveying and construction firms. In order to adequately understand the culture of the industry, the results were analysed according to the following criteria:

- The organisational culture of quantity-surveying and construction firms;
- The organisational culture of different size firms;
- The organisational culture in the different provinces, and
- The overall culture of the South African construction industry.

Companies differ in how to effectively and efficiently manage and control the construction process, due to the various inputs. The behaviour of organisations involved in the process is perceived to be caused by different organisational cultures, developed from differing control systems and structures (Harkink & Tijhuis, 2006: 43).

Culture is a powerful, tacit and often unconscious force, which determines the behaviour of both the individual and the group, the way they perceive things, their thought patterns, and their values. Organisational culture is important, because these cultural elements determine strategy, goals and modes of operating. In order to make organisations more efficient and effective, it is essential to comprehend the role of culture in organisational life (Schein, 2009: 19).

Wagner & Spencer (1996: 71) defined organisational culture as "the personality of the company". This personality includes what is valued, the dominant leadership style, language and symbols, procedures and routines, and the definitions of success that characterise an organisation (Cameron & Quinn, 2011: 17). Shared beliefs and a way of thinking enable people to distinguish different aspects in a situation. This is also described as the subconscious values and assumptions, people's expectations and their collective memories in an organisation (Schein, 1992; Cameron & Quinn, 2011: 16).

In his explanation of the origin of organisational culture, Schein (1986: 20) defines it as a group's shared learning or the development of its ability to survive. In order to survive, a company needs to have a mission or a reason for existing, definite goals relating to the mission and sufficient means such as structures to reach the set goals.

Culture in organisations provides a sense of meaning depending on the organisation's ability to reinforce its cultural characteristics and the extent to which the culture clarifies any ambiguity for employees. It also provides them with a sense of identity or belonging that becomes part of their own identification. As collective success increases, the culture strengthens, in turn, increasing member stability and improving their natural tendency to act in given situations (Wagner & Spencer, 1996: 67-8). It holds employees together and stimulates employees to commit and perform. Organisational culture has the potential to set the tone in organisations.

Managing cultural units has become increasingly important, due to:

 Mergers, acquisitions and joint ventures that require organisations to align;

- Globalisation diversifies the once traditional environment with multicultural units based on nationality, language and ethnicity;
- Technological complexity that must be considered when designing work flow, and
- Information technology that changes the location and timeframe of the work environment (Schein, 2009).

Culture gives direction or basic rules and reassures people how to respond as it provides predictability and stability (Wagner & Spencer, 1996: 67-87). It has been found that organisations that developed and maintained an adaptive culture performed well financially (Naoum, 2001: 180).

## 1.1 Organisational culture in construction

The globalisation of construction companies has increased their dependency on knowledge of cultural characteristics. Research shows that stakeholders in the construction environment share an understanding of how to behave and what is expected of all participants, but misunderstandings and conflict are often due to cultural differences (Oney-Yazi et al., 2006). All firms in the industry need to establish and understand their own organisational culture which will enable them to adjust their ways and traditions when conducting business with other firms and give them a competitive advantage (Oney-Yazi, Arditi & Uwakweh, 2006: 219-228).

Oney-Yazi et al. (2006: 219-228) pointed out that, because of the fragmented nature of the construction industry, sensitivity must be shown to the cultural differences of the participants. Culture in the construction industry is also considered an international phenomenon; different cultures should be approached with sensitivity (Kwan & Ofori, 2001).

The influence of culture within the construction industry has focused on many different aspects. Investigations include the impact of organisational culture on project goals and the procurement process (Liu & Fellows, 1999); partnering and performance of stakeholders (Latham, 1994); poor project performance (Rwelamila, Talukhaba & Kivaa, 2000: 457-466), and the cultural differences between various construction professionals (Ankrah & Langford, 2005: 426-438; Rameezdeen & Gunarathna, 2003: 19-27).

Studies on organisational culture in the construction industry have been carried out in countries such as Sri Lanka (Rameezdeen &

Gunarathna, 2003: 19-27), Australia (Igo & Skitmore, 2006: 121), China (Liu, Shuibo & Meiyung, 2006: 327-342), Finland (Nummelin, 2006: 57-68), Thailand (Novana & Ogunlana, 2006: 279-288), Turkey (Giritli, Oney-Yazici, Topcu-Oraz & Acar, 2006: 1-9), Indonesia (Coffey, Willar & Trigunarsyah, 2011: 1-6) and the United States of America (Oney-Yazic et al., 2006: 219). The different organisational cultures within different countries' construction industries revealed that the characteristics of a specific country's industry differ from those of other countries. This raised the question as to which organisational culture would dominate the South African construction industry. In consideration of this argument, assessment of the findings from the studies conducted in various countries led to the prediction by Bornman, Botha & Harinarain (2012) that the organisation culture in the South African construction industry was that of the market culture. This study was carried out in order investigate the organisational culture of the South African construction industry by utilising the Competing Values Framework and to understand the relationship between the different types of culture that exist in the industry, so that companies can use this information to improve the working environment within the industry.

# 1.2 The organisational culture framework

The organisational culture framework is built upon a theoretical model called the Competing Values Framework (CVF) developed by Cameron & Quinn (1999). The framework and its matched scale, the Organisational Culture Assessment Instrument (OCAI), have, according to Yu & Wu (2009: 39), become the "dominant model in quantitative research on organisational culture".

The purpose of the framework is to determine the predominant type of culture by utilising the OCAI, which identifies characteristics relating to the six dimensions of the organisation's core dimensions that accumulatively represent culture. These dimensions are the basis on which organisational culture is judged and estimated.

The CVF has two major dimensions and four main clusters (cf. Figure 1). The first dimension distinguishes between organisational focus (internal versus external), while the second one indicates the preference about structure (stability and control versus flexibility and discretion). These two dimensions form four quadrants, each representing a different set of organisational culture indicators. Each quadrant is given a distinguishing label that denotes its most notable cultural characteristic. They are the Clan, Adhocracy, Market and Hierarchy cultures (Cameron & Quinn, 2011: 39-40).

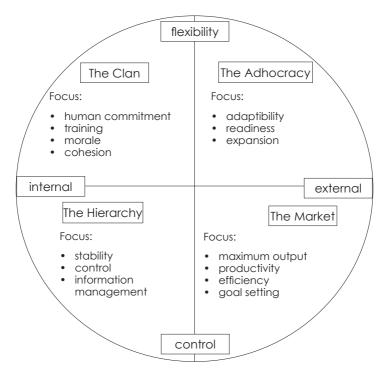


Figure 1: Competing Values Framework Source: Quinn & Rohrbaugh (1981: 136)

Cultural congruence is prominent in organisations where all the attributes are consistent with each other, that is, they are mostly of the same type of culture. The culture strength is shown by the dominance of a certain type within each quadrant (Schein, 2009: 17).

The Competing Values Framework identifies four main types of organisational cultures, also referred to as the four effectiveness criteria models.

#### A. Clan culture (based on the Human Resources Model)

The clan culture supports flexibility and individual differences, openness, participation and discussion. The organisation is committed to the members and their morale and aims to get everyone involved in decision-making and activities (Rameezdeen

& Gunarathna, 2003: 21). Shared values and common goals are common features and create an atmosphere of collectivity and mutual help (Yu & Wu, 2009: 38). Members put the advancement of the organisation before themselves. Cameron & Quinn (2011: 46-48) define the clan culture as a family-type organisation. They operate through teamwork, programmes to get employees involved, and corporate commitment to employees. They treat their employees as family and clients as partners. Teamwork and information-sharing is the key in an organisation of predominantly the clan culture. Rewards are based on organisational or group performance (Rameezdeen & Gunarathna, 2003: 21). Berrio (2003: 2) describes the clan culture as one that focuses on internal maintenance, is flexible, is customer sensitive and focuses on employees' needs.

These organisations are often viewed as a friendly workplace where people share of themselves. Tradition and loyalty holds these organisations together and their success is defined in terms of their concern for people (Hooijberg & Petrock, 1993: 31). The clan culture has a high moral and collegial decision-making style (Smart & Hamm, 1993: 96-100).

#### B. Adhocracy culture (based on the Open System Model)

Cameron & Quinn (2011: 49-51) view adhocracy culture in an organisation as creative and dynamic. The major goal is to achieve creativity, flexibility and adaptability in a constantly changing environment. The firm focuses on external positioning, with innovativeness as the key to its success. Entrepreneurial activity, creativity and acquiring resources are prominent features in the organisation, which is also known for its commitment to risk, innovation and development (Rameezdeen & Gunarathna, 2003: 21-22). The leaders are risk-takers and innovators, and employees share a commitment to experimentation. Their goal emphasises adaptability and being ahead of the latest developments. In the long term, they aim for growth and the acquisition of new resources (Hooijberg & Petrock, 1993: 31).

Yu & Wu (2009: 38) associate this culture with temporary institutions, which are established for the purpose of performing a specific task and disintegrates once the task is completed. Berrio (2003: 2) describes the adhocracy culture as the focus on external positioning and allowing employees to be flexible and focus on individuality.

#### C. Market culture (based on the Rational Goal Model)

This organisation focuses on external maintenance and transactions (Berrio, 2003: 2; Yu & Wu, 2009: 38). These result-oriented organisations are led by hard-driving, tough and demanding leaders (Hooijberg & Petrock, 1993: 31). It is rational and goal-oriented, emphasising maximum output, being decisive, and providing direction. It prides itself on accomplishment, productivity and making a profit or having an impact. Order, rational production, external interaction and goal accomplishment are the most significant factors of the market culture. Members have a clear instruction and are rewarded financially for their performance (Rameezdeen & Gunarathna, 2003: 22).

This culture has a competitive orientation, focusing on the achievement of goals (Yu & Wu, 2009: 38). Its success is defined by its market share and penetration (Hooijberg & Petrock, 1993: 31). The market culture focuses on its relationship between suppliers, clients and regulators and is more externally oriented (Cameron & Quinn, 2011: 43-45). Berrio (2003: 2) describes this type of organisation as one that functions with a high degree of stability and control, and with focus on external maintenance; it is proactive in adopting strong market initiatives (Smart & Hamm, 1993: 95-106).

#### D. Hierarchy culture (based on the Internal Process Model)

Also known as the bureaucratic culture, hierarchy culture strives towards equilibrium and consolidation and is characterised by internal bureaucracy (Rameezdeen & Gunarathna, 2003: 22). A clear organisational structure and standardised rules and procedures give well-defined responsibilities (Yu & Wu, 2009: 38). Leaders are often good coordinators and organisers (Hooijberg & Petrock, 1993: 31). Stability, control and continuity are achieved through measurement, documentation and information management. The internal system is highly regarded and maintained, and members are expected to follow the rules and procedures that govern their actions in well-defined roles (Rameezdeen & Gunarathna, 2003: 22).

The hierarchy culture is visible in a structured and formalised workplace. Their long-term goals are predictable and their business environment is stable and efficient (Cameron & Quinn, 2011: 41-43). A definite mechanistic structure can be observed.

# 2. Research methodology

A quantitative research design was adopted to gather data and explain the outcomes of this article. A broad overview and understanding of the research topic was gained through a literature review, followed by analysis of auantitative data collected via the use of the Organisational Culture Assessment Instrument (OCAI). The purpose of the OCAI is to investigate the core values. assumptions, interpretations, and approaches that characterise organisations. It consists of six questions with four alternatives that will categorise the orientation of the organisation. The six questions deal with the dominant characteristics of the organisation; the style of the organisation leader; organisational glue; the nature of organisational climate; success criteria of the organisation, and management style towards the employees. The reliability of this study was ensured because the framework was scrutinised and tested by multiple researchers, including Howard (1998), Lamond (2003) and Deshpande & Farley (2004).

The two target populations, quantity surveyors and construction firms, are major stakeholders in the industry. The systemic sampling method was used to randomly select a sample in each group, as illustrated in Figure 2.

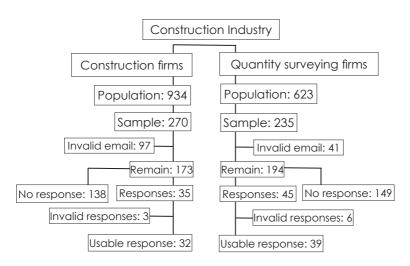


Figure 2: Response rate for the study

Members on the Association for South African Quantity Surveyors' (ASAQS) website were used as the population for the quantity-surveying firms in South Africa, where a total of 623 members were identified. The ASAQS divides the QS firms into eight juristic areas, namely Cape province, Eastern Cape, Free State, Gauteng South, Gauteng North, KwaZulu-Natal, Limpopo and North-West.

According to Bartlett, Kotrlik & Higgins (2001: 43-50), a reliable analysis of the population size would require a sample of at least 235 participants. The sampling formula used, as suggested by Bartlett *et al.* (2001: 47), is as follows:

$$\underline{n}_{\circ} = \frac{(t)^2 x (p)(q)}{(d)^2}$$

$$\underline{n}_{\circ} = \frac{(1.96)^2 x (.5)(.5)}{(.05)^2}$$
Where (p)(q) = estimate of variance = 0.25.

Where d = acceptable margin of error for proportion being estimated = 0.05.

Figure 3: Formula for sample size determination

The systematic sampling method was used and every third participant was selected for the sample group, starting at a random place on the list of the whole population. The standard questionnaire was emailed to each participant. All initial questionnaires were followed up with a reminder email a month later. Out of a sample of 235 QS firms, 41 (17.45%) had invalid email addresses. Of the remaining respondents (n=194), there was a total of 39 (20%) valid responses.

A population of 934 registered members was obtained from the Master Builders Association (MBA) websites for seven of the nine juristic areas, namely Boland, Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Northern Cape and Western Cape. A reliable analysis of a population size of 934 would require a sample of at least 270 participants (Bartlett et al. 2001). Once again, the systematic sampling method was used and every third participant was selected for the sample group, starting at a random place on the list of the whole population. From the 270 participants emailed, 97 (35.9%) emails failed to deliver. Out of the remaining 173 participants, 35 participants responded (of which 32 responses were valid.

## 3. Data analysis

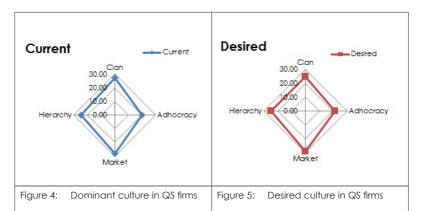
Analysis of the data gathered through questionnaires from the participants of construction and quantity-surveying firms illustrated the dominant and desired organisational culture in each of the respective groups. The results were also analysed in terms of different firm sizes and the organisational culture of firms in different provinces. This quantitative research used radial graphs to summarise the results, making it easier to interpret. In some instances, two or more organisational cultures were found to be equal for a single firm, being referred to as a dual culture.

Table 1 shows the total number of QS firms that possess each of the dominant or desired culture types.

Table 1: QS firms' organisational culture

	Clan	Adhocracy	Market	Hierarchy	Dual	Total
Current	14	0	15	6	4	39
Desired	7	4	21	3	4	39

The majority of the QS firms had a dominant market culture, followed by a clan, hierarchy and adhocracy culture. The majority of the QS firms desired a market culture, followed by the clan, adhocracy and hierarchy culture. Four firms had dual dominant or desired cultures. Figures 4 and 5 illustrate the organisational culture in all QS firms.



The desired organisational culture of QS

firms in South Africa is the market culture.

market culture.

The current dominant organisational

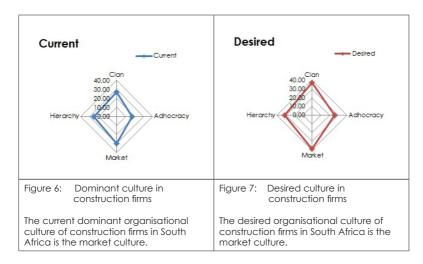
culture of QS firms in South Africa is the

The majority of the construction firms had a dominant market culture, as depicted in Table 2, followed by a clan, hierarchy and adhocracy culture. An analysis of these results also revealed that most construction firms desired a market culture, followed by the clan, hierarchy and adhocracy culture. Three firms had dual dominant cultures and four firms had dual desired cultures.

Table 2: Construction firms' organisational culture

	Clan	Adhocracy	Market	Hierarchy	Dual	Total	
Current	9	0	16	4	3	32	
Desired	10	0	13	5	4	32	

Figures 6 and 7 illustrate the average organisational culture when all the results received from the construction firms were analysed.



The data gathered could be analysed, in order to establish the different organisational cultures within firms of different size. There are various classifications for firm sizes. For the purpose of this research, small firms were defined as firms with less than 50 employees. Medium firms with 50 to 150 employees, and large firms with over 150 employees (Angelini & Generale, 2008: 427).

The average dominant and desired organisational culture for small, medium and large firms was established, as illustrated in Figures 8 to 13.

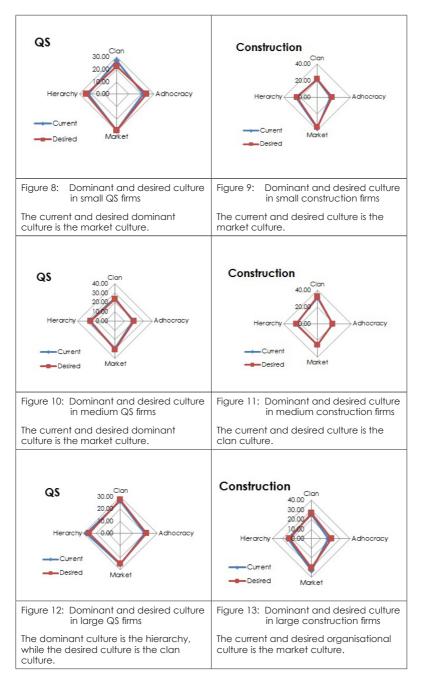


Table 3 shows the total number of quantity-surveying firms of each size that possess and desire each organisational culture type.

Table 3: Dominant culture of quantity-surveying organisations of each size

	Clan		Adhocracy		Market		Hierarchy		Dual		Total	
	Current	Desired	Current	Desired	Current	Desired	Current	Desired	Current	Desired	Current	Desired
Small	3	2	0	2	9	8	0	0	2	2	14	14
Medium	8	3	0	1	6	8	2	2	0	2	16	16
Large	3	2	0	0	1	5	3	1	2	1	9	9
									39	39		

As illustrated, the dominant culture type for small firms is the market culture, which is also the desired culture for small QS firms. The market culture was also found to be the dominant and desired culture for medium-size firms. The average culture of a large firm, however, had a dominant hierarchy culture, but desired a clan culture.

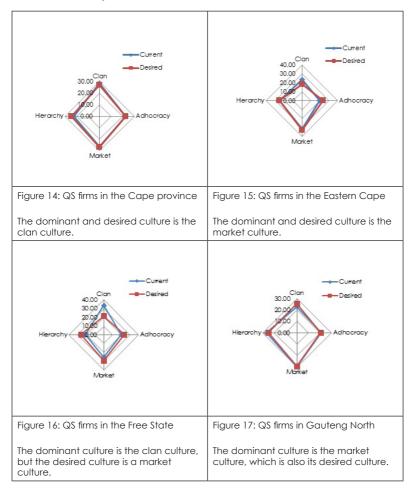
In the case of the construction firms, Table 4 shows the number of firms of each size that possess a certain dominant culture.

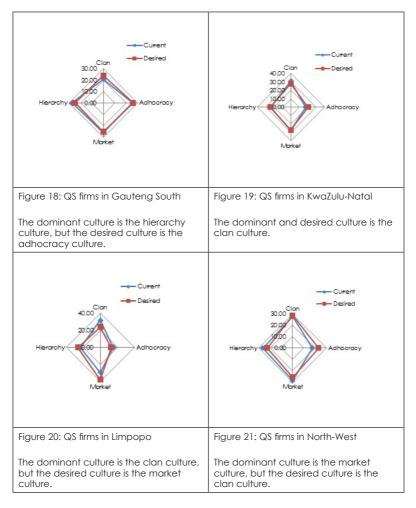
Table 4: Dominant culture of construction organisations of each size

	Clan		Adhocracy		Market		Hierarchy		Dual		Total	
	Current	Desired	Current	Desired	Current	Desired	Current	Desired	Current	Desired	Current	Desired
Small	0	0	0	0	3	2	2	3	1	1	6	6
Medium	6	6	0	0	6	7	2	3	1	0	15	16
Large	3	4	0	0	7	5	0	0	1	1	11	10
									32	32		

The dominant organisational culture type for small and large construction firms is the market culture, which is also the desired culture for small and large construction firms. The clan culture was found to be the dominant and desired culture for medium-size firms.

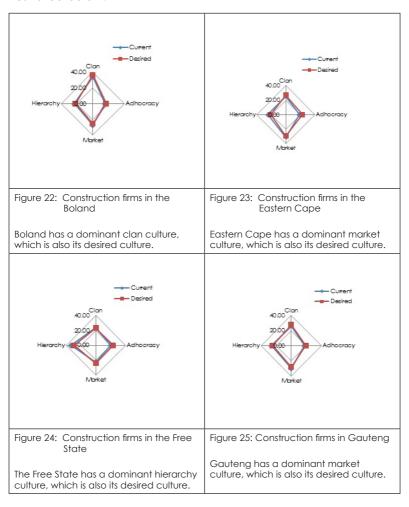
Analysis of the gathered data further enabled an assessment of the organisational culture within the juristic areas of the population. The following section illustrates the dominant and desired organisational culture in each juristic area

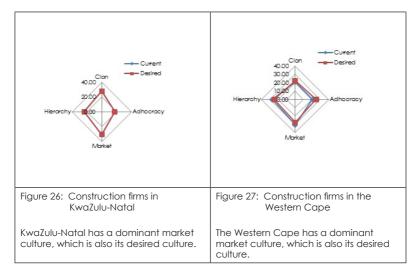




The analysis revealed that the clan culture is the dominant and desired culture in quantity-surveying firms in both the Cape province and KwaZulu-Natal; the market culture is the dominant and desired culture in the Eastern Cape and Gauteng North. The Free State has a dominant clan culture, but desires a market culture. Gauteng South has a dominant hierarchy culture and desires an adhocracy culture. Limpopo has a dominant clan culture, but desires a market culture. North-West has a dominant market culture, but desires a clan culture.

The dominant organisational culture for construction firms in each of the Master Builders Associations' seven approachable areas is illustrated below.





The national survey revealed that the market culture was the dominant and desired culture of organisations in the Eastern Cape, Gauteng, KwaZulu-Natal and the Western Cape. In the Boland, the clan culture was the dominant and desired organisational culture, and the hierarchy culture was the dominant and desired culture in the Free State. There were no respondents from the Northern Cape.

Finally, the survey questionnaires were analysed to establish the dominant and desired organisational culture of the South African construction industry. The findings are illustrated in Figures 28 and 29.

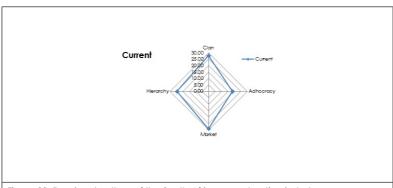


Figure 28: Dominant culture of the South African construction industry

The current dominant organisational culture of the South African construction industry is the market culture.

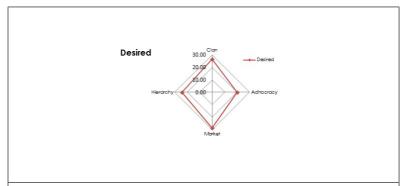


Figure 29: Desired culture of the South African construction industry

The desired organisational culture of the South African construction industry is the market culture.

The results revealed that the organisational culture in the South African construction industry is the predominant market culture. This is followed by the clan culture, the hierarchy culture and, lastly, the adhocracy culture. The market culture was also found to be the desired organisational culture, followed by the clan, the hierarchy and, lastly, the adhocracy culture.

#### 4. Conclusion and recommendations

This primary study of organisational culture in the South African construction industry revealed the market culture to be the predominant organisational culture in the South African construction industry. The South African construction industry, therefore, possesses the majority of the market culture characteristics. This means that it has an external competitive focus. These organisations are result-oriented, taking pride in accomplishment, productivity and turning a profit. The leaders are demanding and focus on the stability and control of the organisation. Firms in the South African construction industry can thus use this data to help improve managerial and organisational performance. It can also be used to improve their relationship between the various stakeholders and prevent misunderstandings and conflict, often due to cultural differences.

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