

FACTORS INFLUENCING ORGANISATIONAL CULTURE: A CONSTRUCTION PROJECT PERSPECTIVE

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Abstract: In seeking to improve the processes and outputs of organisations in the construction industry, culture is an important consideration. Organisations need to be able to assess and understand their own culture, how it develops, and the possible consequences of their particular orientations. To this end, this study interrogates literature on factors influencing culture, examining these factors from a construction project perspective to gain useful insights into the manner in which the culture of construction project organisations (CPO) develops. Reviewing organisational culture theory and theory on ‘short life organisations,’ the study identifies the main project-dependent determinants of the organisational culture as composition of CPOs, project characteristics, Project Managers and dominant groups, significant events, procurement approach, goals and objectives, location, and project-independent determinants as macro-culture, business environment, recruitment, training, and technology. These factors are discussed in detail. A conceptual framework for examining how organisational culture develops in CPOs emerges from this discussion and with it, a number of hypotheses that will be tested in this on-going research.

Keywords: construction project organisation, construction industry, organisational culture, short life organisation.

1. INTRODUCTION

In seeking to improve the processes and outputs of organisations in the construction industry, culture is an important consideration (Ankrah and Proverbs, 2004), and organisations need to be able to assess and understand their own culture and the possible consequences of their particular orientations. However, culture in the construction industry is an area that is characterised by a paucity of research, and is only now beginning to receive significant attention in a systematic manner. In a bid to promote research in this genre and as part of a wider study to investigate empirically, the impact of organisational culture on construction project performance, this paper investigates factors influencing the development of organisational culture in construction project organisations (CPOs). It interrogates the literature on organisational culture and attempts to relate the factors influencing organisational culture to the structure, profile and characteristics of the construction industry. In particular, the paper examines theory on ‘short life organisations’ (SLOs) to accommodate the perspective that CPOs are effectively, SLOs. In the context of this study, CPOs are regarded as organisations responsible for undertaking the construction of civil and building facilities, and delivering the completed construction product to the client. This encompasses the whole project supply chain.

2. ORGANISATIONAL CULTURE

Organisational culture can be anything to any number of people, and this is evidenced by the plethora of definitions available (e.g. Eldridge and Crombie 1975; Deal and Kennedy, 1982; Peters and Waterman, 1982; Schein, 1985; Graves, 1986; Kotter and Heskett, 1992; Thompson, 1993; Hampden-Turner, 1994; Hofstede, 1997; McNamara, 1999; Schneider, 2000; Mullins, 2005). There is however consensus on the fact that organisational culture comprises shared values and basic assumptions and that it is manifested in organisational 'practices'. These organisational practices comprise symbols, rituals, rules, behaviour norms, heroes, stories, language, routines and power structures among others (Hofstede, 1997; Mullins, 2005). It is a group phenomenon influenced by contextual factors. As explained by Schein (1985), it is developed through the organisation's attempts to solve its problems of internal integration and external adaptation. It is these contextual factors that make organisational cultures in different organisations peculiar, and they represent the reason for this investigation which seeks to provide useful insights into those contextual factors influencing the development of organisational culture within CPOs.

Within the construction industry itself, organisational culture is considered to be about the characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry and the strategies, goals and values of the organisations within which they work (Abeysekera, 2002). This is consistent with views expressed in Ankrah *et al.* (2005b) to the effect that for the purposes of this research it is appropriate to concentrate on approaches to work or the 'practices' of construction organisations rather than on the core values or basic assumptions. As research evidence shows, there are more discernable differences in organisational practices than in the values or basic assumptions across organisations within any particular country (Hofstede *et al.*, 1990).

3. CONSTRUCTION PROJECT ORGANISATIONS

According to Harvey and Ashworth (1997), the construction industry is generally characterised by:

- Physically large and expensive products;
- Separation of design from construction (although new procurement arrangements are changing this);
- 'Powerful' clients;
- Extensive specialisation;
- Delivery of products at the clients premises;
- Bespoke designs, usually without prototype models or precedents to provide guidance; and
- Risk and uncertainty.

These characteristics necessitate the use of project-based and contractual arrangements for the procurement of construction products. The construction industry is thus generally very fragmented with an extensive list of specialisations and professions which all play important roles in the delivery of construction products to clients.

To deliver a construction product, a supply chain must be constituted bringing together the various specialisations, labour, capital and other resources required for the project. Given that organisations are generally groups of people cooperating and/or working together to achieve specific objectives which cannot be achieved by any single individual (Mullins, 2005), these construction supply chains can be viewed as organisations, and all the pre-requisites for effective functioning of an organisation apply, including an appropriate organisational culture that is congruent with the environment (Thompson, 1993). Given the project-based nature of such construction organisations, it is appropriate to refer to them as construction project organisations (CPOs).

Traditionally, this supply chain exists to deliver the client's product and once the project is complete, the supply chain breaks up and the constituent parts move on to become parts of other supply chains to work on other new projects. In other words, such supply chains are temporary and exist only for the duration of the project – from the award of the contract through construction on site to practical completion and the end of the defects liability period. The implication of this fact therefore, is that CPOs have a short lifespan, and with little or no history prior to a particular project, it begs the question of whether CPOs do indeed have a culture, and if they do, how this culture develops.

4. THE CULTURE OF CPOs

The absence of culture presupposes a randomness of behaviour within the CPO. However, the evidence suggests that this is not so. There are patterns of behaviour and a certain consistency and predictability in the way work on construction projects is undertaken and the nature of human relationships. It is as a result of this regularity of behaviour that the construction industry has acquired the various stereotypes with which it is associated such as being litigious (Rooke *et al.*, 2004), antagonistic (Latham, 1994), under-performing (Egan, 1998), dangerous and dirty (Barthoepel *et al.*, 2000), sexist and discriminatory (Dainty *et al.*, 2002).

Construction remains a people's business and CPOs are human institutions. As long as it can be argued that organisational behaviour within these institutions is not random, it can also be argued that there are cultures that regulate behaviour (Hofstede, 1984). Evidence of such project culture is reported in Thomas *et al.*, (2002) who examined its impact on quality outcomes, and in Dainty *et al.*, (2002) who examined its impact on women on construction sites – referring to a “site culture.” Moreover according to Deal and Kennedy (1982), every organisation has a culture, even if this culture is fragmented and difficult to read.

5. THE CULTURE OF CPOs – THE DETERMINANTS

Meudell and Gadd (1994) and Mullins (2005) describe organisations such as CPOs, which are created to run for short periods and to achieve specific goals, as “short life organisations” (SLOs). They question how such organisations develop their culture when there is little or no prior history, the organisation has specific short-term goals and objectives, and limited time for top management to exercise influence.

According to Meudell and Gadd (1994), this situation renders the traditional approaches for assessing the development of organisational culture inappropriate. From studies of typical SLOs, Meudell and Gadd (1994) found that rather than any other factors, the recruitment and training initiatives that were associated with SLOs were the overriding determinants of the organisational culture that developed, an idea echoed in Mullins (2005). An examination of how these factors operate within a construction project context will be helpful in determining whether they are on their own enough to determine the culture of a CPO, or there exist other moderating or mediating factors that need consideration.

5.1 CPOs and recruitment

The way and manner in which people are screened and selected for employment influences the sort of people who are recruited and become members of the organisation, and the values and behaviour they bring to the organisation. If these values and behaviour fit in with the organisation, then it leads to a perpetuation of the culture, otherwise it could lead to conflict and/or changes (Graves, 1986; Handy, 1993). The composition of the SLO will therefore be one of the most important determinants of culture.

The construction industry is characterised by a lack of formal hiring procedures at the operational level, and the hiring of complete gangs whose loyalty is to their boss rather than the CPO (Serpell and Rodriguez, 2002). Barthope *et al.* (2000) also identified the UK construction industry with casual employment where employees fail to identify themselves with the project and its successful completion. Such problems in the construction industry imply that there is difficulty in screening out those whose values and behaviours would not fit into the culture of the CPO. This is compounded by the fact that different parties are responsible for deciding who becomes part of the CPO at the operational level, with contractors employing subcontractors and suppliers who in turn contract other subcontractors and suppliers, and so on.

As a feature of the construction industry, this is a problem affecting all CPOs, and it indicates a greater likelihood of having a myriad of subcultures rather than a single pervasive culture. Within such an environment, training is a useful way of re-orienting project participants.

5.2 CPOs and training

As seen in Meudell and Gadd (1994), training initiatives are an important tool in cultivating a desired culture. Training initiatives can be used to transmit and embed in employees what is important and should be prioritised, what the goals and objectives of the organisation are, what the expected behaviour is, the relevant terminologies, what the various roles are and the extent of their responsibilities, and the communication networks. It can also be used to improve project leadership and management skills.

Generally within CPOs, such training initiatives are not likely to exist. What exists are a series of project meetings that run over the project life, which are used to discuss project progress, problems and related issues. This implies that the only training which the participants bring to the CPO is the formal (e.g. apprenticeships) and informal training (e.g. socialisation) that they have received in their own parent organisations. It

has been shown elsewhere that differences in values and practices exist between the various parent organisations to which project participants belong (e.g. Maloney and Federle, 1990; Root, 2002; Rameezdeen and Gunarathna, 2003; and Ankrah and Langford, 2005), and this implies that different sub-cultures are likely to be found within the CPO, most probably differentiated along occupational lines. This is not inconsistent with organisational culture theory which recognises the existence of such organisational subcultures (e.g. Kotter and Heskett, 1992; Brown, 1998).

Going by the theory on SLOs, the two factors discussed above (i.e. recruitment strategy and training) should be adequate in explaining the cultural orientations likely to exist in CPOs. However, as seen in the discussion, the inadequacy of recruitment strategies and training initiatives only points to the lack of a homogenous culture within the CPO. These factors are useful in explaining the existent of various subcultures and communication networks, and cultures of litigation, antagonism and discrimination with which the industry is associated. They do not however adequately explain the structure of the project organisation, control and coordination mechanisms, reward systems, management philosophy, and other organisational processes that are influenced by organisational culture (see Thompson, 1993; Handy, 1993; Mullins, 2005). A more general approach to the development of organisational culture that goes beyond SLO theory is therefore required if adequate explanations are to be found.

From the literature, there is a fair degree of consensus on the factors that generally influence the development of organisational culture (Table 1).

Table 1 Factors influencing organisational culture

	Graves (1986)	Kotter and Heskett (1992)	Thompson (1993)	Handy (1985; 1993)	Hampden-Turner (1994)	Handy (1995)	Mullins (2005)
People	•	•	•	•		•	•
The environment	•	•	•	•			•
Size		•		•		•	•
History, crises and successes		•	•	•			•
Technology and primary function	•	•		•			•
Goals and objectives			•	•			•
Leaders and ownership		•		•			•
Location		•					•
Recruitment policy	•						
Macro-culture					•		

Some of these factors can provide additional insight into the cultural development of CPOs. These factors are now discussed in detail to see the extent to which they are applicable in the context of a CPO.

5.3 The people within a CPO

According to Kotter and Heskett (1992), ideas or solutions that become embedded in a culture can originate from all members of the organisation. Moreover, the successful implementation of new work methods and practices are dependent on effective cooperation of staff and management. Mullins (2005) also talked about the match between organisational culture and employees' perception of the psychological contract, an argument supported by Handy (1985) who stressed that different cultures call for different psychological contracts. Culture is taught to new members not only through formal training initiatives, but also through socialisation and this way, various organisational members play a part in the grounding and perpetuation of the

organisation's culture. From all these arguments, it can be concluded that the *composition of CPOs* is crucial to the culture.

The composition of the CPO can be differentiated along lines of gender, ethnicity, age profile and educational levels. Statistics from the CITB for 2002 estimated the UK construction workforce to be in the region of 2 million of which women make up only 9% and ethnic minorities make up only 2% (CITB, 2002). Pearce (2003) reported a fairly strong profile in terms of available skills with about 46% having an NVQ-equivalent level 3 or above. Since 1990, there has been a reduction in workers within the age range 16–29 years, indicating a decline in recruitment possibly attributable to the economic downturn of the 1990s. With a profile such as this, the culture of CPOs is skewed towards an exaggerated “macho” young white male behaviour (Barthorpe *et al.*, 2000; Serpell and Rodriguez, 2002) as characterised by the orientations shown in table 2. This is a situation that prevails widely across the construction industry. However, different behaviours are possible where local variations in employee profiles (such as number of female participants) exist. With particular regards to females, it has been noted that beyond reasons of social equality, women possess attitudes and attributes that new flexible organisations need (Handy, 1994 in Barthorpe *et al.*, 2000), and a more “female” culture in the construction industry has also been advocated for by Langford *et al.*, (1995 in Barthorpe *et al.*, 2000). Some of the desirable characteristics of the feminine culture in the workplace are identified by Hofstede (1997) as managers using intuition and striving for consensus, a stress on equality, solidarity, and quality of work life, and resolution of conflicts by compromise and negotiation. This seems to suggest that the greater the proportion of females, the greater the likelihood of developing an organisational culture that manifests these values, and the better the performance of the organisation is likely to be. This is an idea that can be put to the test in this research. Other such differences in *composition* may similarly lead to differences in the culture of CPOs.

5.4 The environment

This determinant of culture considers the stability or dynamism, and standardisation or diversity of the environment and also takes into account threats and dangers in the form of take-overs, mergers, nationalisation and economic recessions. In order to be effective, organisations must be responsive to these external environmental influences (Mullins, 2005). Significant changes in the environment may require changes in the culture to avoid a long-term deterioration of economic performance. It can be argued that this influencing factor is independent of the project and all CPOs are affected by the state of the economic or business environment.

5.5 Size

Increasing size leads to departmentalisation and/or “split-site” operations (Mullins, 2005). This is inevitably accompanied by communication and coordination difficulties, and necessitates the formalisation of mechanisms for communication, control and coordination, as well as the structure of the organisation. Decreasing size also has its impact. Handy (1985) describes size as being perhaps the single most important variable in determining the culture of an organisation.

CPOs also vary in size and this is in relation to project scale, type, complexity and clients served. This has an influence on the composition of the CPO, who manages the project, the duration of the project, as well as communication networks, organisation structure, and control and coordination mechanisms. It can thus be proposed that in an industry where each project is unique, the different *project characteristics* will lead to different cultural orientations.

5.6 History, crises and successes

Any organisation with significant history has a culture. This factor considers the reason and manner in which the organisation was formed, and the extent to which an organisation has had to be flexible, adaptable and sensitive. It also considers the merger history and managerial changes that have occurred in a firm (Handy, 1993). Crises, in the form of key events such as a merger, major re-organisation, new management, diversification into very different businesses or geographical expansion may bring in its wake, a change in culture (Kotter and Heskett, 1992; Mullins, 2005). On the other hand, continued success leads to the emergence of a culture that reflects the vision or strategy that led to the success. The age of an organisation is therefore an important consideration.

In the case of CPOs, history can be said to be limited, because of the project-oriented nature of the industry. However, to the extent that *significant events*, in the form of disputes and/or project management changes (e.g. Low and Shi, 2001) can occur even during the relatively short project durations, cultural changes can result. For instance, a culture of mistrust, antagonism and conflict can develop following a dispute on a construction project site. It can be proposed therefore that when *significant events* such as disputes or project management changes occur, changes in the culture and the way a project proceeds can subsequently occur.

In modern procurement of construction projects, it is becoming popular to have arrangements which allow for partnering (relational contracting, serial contracting or alliancing), implying that though CPOs still remain SLOs, there is arguably, some history that informs the culture that prevails in the CPO. It has been argued elsewhere that through partnering, expertise is developed and knowledge is accumulated and transmitted from project to project (e.g. Packham *et al.*, 2003). The same argument can be made for an approach to work, an acceptable way of behaviour, an attitude, or more appropriately, a culture which develops from project to project and becomes pervasive. This culture is often associated with a spirit of collaboration, open interaction, trust, commitment, mutual advantage, learning, innovation and productivity (Cook and Hancher, 1990; Crowley and Karim, 1995; Drexler and Larson 2000; Naoum, 2003), and this contrasts sharply with the traditional culture of antagonism, conflict and disputes. It can be seen from this that the *procurement approach* has an impact on the culture of the CPO, with different procurement approaches leading to the development of different organisational cultures.

5.7 Technology and primary function

The technological processes and methods of undertaking work are determined by the primary function of the organisation (Mullins, 2005). Although the type of technology does not necessarily lead to the development of one or other culture, it is clear that

certain technologies appear to be more suitable for certain cultures (Handy, 1993). In the construction industry, the bespoke nature of projects implies that the primary function and associated technology may be dependent on project characteristics as already discussed. However generally speaking, construction technology is determined by the industry as a whole.

5.8 The leader/founder and ownership

This factor includes such issues as the founders' values, philosophy and dominance, nature of ownership, and extent to which the organisation has been centralised since its inception. Strong founders and strategic leaders are important in establishing organisational cultures that are both internally consistent and fit the environmental conditions (Kotter and Heskett, 1992). As mentioned before, ideas and solutions that become embedded in culture originate from various quarters within the organisation. However, more often than not, these ideas seem to be associated with leaders, particularly founders or other early leaders who articulate them as a vision, strategy or philosophy (Kotter and Heskett, 1992).

Within the context of a construction project, the concepts of relevance are Project Managers (PMs) and other dominant groups. Dominant groups may emerge from within the CPO, and where these are linked with particular occupations, the approach to work adopted by this occupation (their culture) may form the perspective from which this dominant group will seek to direct the approach to work on the construction project. Where for instance the dominant group takes health and safety seriously, the rest of the CPO will be more inclined to adopting a more health and safety conscious cultural orientation. It can thus be proposed that though they have limited time to exert influence on projects, *PMs* and *dominant groups* can influence different cultural orientations in the CPO usually linked to the respective occupations.

5.9 Goals and objectives

Differences in goals can be decisive in determining what the culture of an organization would be. Goals such as quality of product, good place of work, centre of employment, service to community, and growth influence different cultural orientations in organisations (Handy, 1985; Mullins, 2005). A charity with community service goals will not have the same culture as an airline with profit goals.

In the main, CPOs pursue a variety of project-related goals such as achieving adequate quality, minimising cost, health and safety, innovation etc. The prioritisation of these *goals* and *objectives* influences the organisational culture of the CPO, and CPOs set different priorities.

5.10 Macro cultures

Different macro cultures also have an influence on the development of organisational culture (Hampden-Turner, 1994; Abu Bakar, 1998) and this is because the organisation is a microcosm of society and bears similarities in some respects to society. Different nationalities prefer different organisational cultures (Handy, 1985).

The homogeneity that exists within the employee profile, with only 2% of the workforce being from the ethnic minorities (CITB, 2002), effectively rules out significant influence due to macro-cultural differences. Within the context of this study, where the focus is on the UK construction industry, the UK national culture will be the dominant macro-culture influencing individual behaviour. Using Hofstede's (1997) framework, the typical individual in a UK CPO will be expected to have a low power distance orientation, an individualist orientation, a masculine orientation and weak uncertainty avoidance. Table 2 summarises the key characteristics likely to prevail in the CPO as a result of these macro-cultural influences. Departure from these characteristics may be due to the influence of other determinants of culture.

5.11 Location

Geographical location can have an influence on the types of clients served and the staff employed by the organisation, as well as opportunities for development. The physical characteristics of the location such as a busy city centre or a rural area are important considerations. These can all have a significant influence on culture (Mullins, 2005).

Construction in the UK takes place all over the country, in various settings. Of some significance are the regional variations, which are well documented (e.g. Harvey and Ashworth, 1997). Such variations could potentially influence approaches to work. *Location* is therefore another relevant consideration.

Organisations generally have to live with the pressures of these countervailing forces (Handy, 1995). These pressures are felt differently by each organization and it is in reconciling these forces that the tone for jobs and cultures is set.

Table 2 Key characteristics due to UK macro-cultural influence (Adapted from Hofstede, 1997)

Cultural orientation	Workplace behaviour/attitude
Weak uncertainty avoidance	There should not be more rules than is absolutely necessary Time is a framework for orientation Hardworking only when needed, comfortable feeling when lazy Precision and punctuality have to be learned Tolerance of deviant and innovative ideas and behaviour Motivation by achievement and esteem or belongingness
Masculine	Live in order to work Managers expected to be decisive and assertive Stress on equity, competition among colleagues and performance Resolution of conflicts by fighting them out
Individualist	Employer-employee relationship is a contract supposed to be based on mutual advantage Hiring and promotion decisions are supposed to be based on skills and rules only Management is management of individuals Task prevails over relationship
Small power distance	More educated persons hold less authoritarian values than less educated persons Hierarchy in organisations means an inequality in roles, established for convenience Decentralisation is popular Narrow salary range between top and bottom of organisation Subordinates expected to be consulted Ideal boss is a resourceful democrat Privileges and status symbols are frowned upon

6. DISCUSSION

For the purposes of this research, it is possible to classify these determinants of culture in two ways; those that are *dependent* on the project and vary from CPO to CPO, and

those that are *independent* of the project and are a characteristic of the construction industry and the environment at large, acting in the same way irrespective of the CPO under consideration. These are listed in table 3.

Table 3 Project-specific and project-independent determinants of culture

Project-dependent factors	Project-independent factors
Composition of CPO	Macro-culture
Project characteristics	Business environment
Project Manager & dominant groups	Recruitment strategies
Significant events	Training initiatives
Procurement approach	Technology & primary function
Goals and objectives	
Location	

In developing a framework that gives an understanding of how the culture of CPOs develop, this distinction is very useful as it makes it possible to distinguish between those contextual factors that are the same irrespective of the project under consideration, and which push all CPOs towards the specific cultural orientations, and those factors which vary from project to project and push CPOs in different cultural directions. It is thus possible to develop a conceptual model of the development of the organisational culture of CPOs (Figure 1) which takes into account these specific characteristics of construction projects.

Research into CPO culture requires the collection of data on all these various determinants of organisational culture. Generally, the contextual data associated with the project-independent factors are well documented and can be derived from the literature. Therefore, the contextual data that any subsequent survey needs to focus on principally are the project-dependent factors, which will be the most useful in explaining the cultural differences that exist between CPOs.

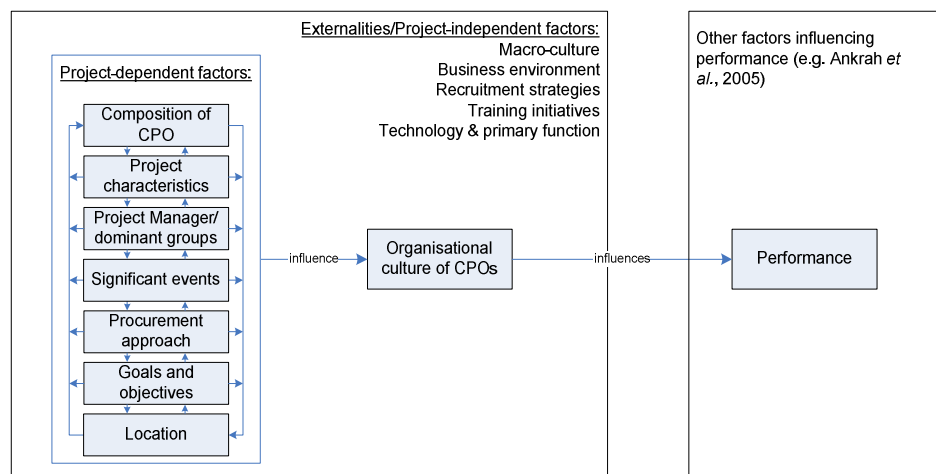


Figure 1 A conceptual model for analysing the development of the organisational culture of a CPO.

It is significant to note that all the factors identified as determinants of organisational culture are inter-related in fundamental ways (Brown, 1998). Leaders (Project Managers or dominant groups) for instance are influenced by the macro-cultures, and they in turn set the goals and objectives of the organisation.

7. IMPLICATIONS FOR ON-GOING RESEARCH

The foregoing discussion provides insight into the development of the organisational culture of CPOs. This is useful in the wider on-going research to examine the various ways in which the phenomenon of organisational culture impacts on project success or otherwise and the extent of its impact. It is useful to the extent that it permits the identification of the contextual factors that a questionnaire survey seeking to examine organisational culture, should focus on. Data on these contextual factors will provide evidence to support or question the existence of particular cultural orientations found to be present within CPOs. It will also be useful in categorising the data in terms of project composition and characteristics, dominant groups, occurrence or otherwise of significant events, procurement approach, prioritisation of goals and objectives, and location, and subsequently testing for significant differences in the categories. Hypotheses are very helpful in this regard, and from the framework above and the preceding discussions, some of the hypotheses that can be proposed are that:

- H₁: There is no significant difference between the culture of CPOs irrespective of the composition of CPOs.
- H₂: There is no significant difference between the cultures of CPOs irrespective of the characteristics of the projects on which they are engaged.
- H₃: There is no significant difference between the cultures of CPOs irrespective of the professional/occupational group that dominates and drives the project.
- H₄: There is no significant difference between the cultures of CPOs on projects irrespective of the occurrence or otherwise of significant events.
- H₅: There is no significant difference between the culture of CPOs working on projects procured through partnering (or other) arrangements and those working on the more traditionally procured projects.
- H₆: There is no significant difference between the cultures of CPOs irrespective of the prioritisation of goals and objectives.
- H₇: There is no significant difference between the cultures of CPOs irrespective of where the project is located.

By carrying out appropriate tests on these hypotheses, it will be possible to test the two main hypotheses for this research project given as follows:

- H₈: There is no significant difference between the organisational cultures of CPOs working on different construction projects within the UK.
- H₉: There is no relationship between organisational culture and construction project performance in the UK.

8. CONCLUSION

Organisational culture in the construction industry is an area that is characterised by a paucity of research, and is only now beginning to receive significant attention in a systematic manner. In a bid to promote research in this genre and as part of a wider study to investigate empirically, the impact of organisational culture on construction project performance, this paper presents an investigation into the factors influencing the development of organisational culture in construction project organisations (CPOs).

Insights gained from the literature include the fact that CPOs need to be examined against the background that they are in actual fact 'short life organisations' (SLOs). Drawing from theory on SLOs and organisational culture, the study identifies the main determinants of the organisational culture within CPOs generally as project –specific factors including the composition of the CPO, size, leader and dominant group, history and crises, and procurement approach, and project-independent factors including the macro-culture, industry characteristics, people, business environment, and technology and primary function. Drawing from these findings, a conceptual framework for understanding the development of organisational culture in UK CPOs is proposed. Six hypotheses are also developed and proposed on the basis of these findings. Testing of these hypotheses will help in drawing conclusions on one of the main hypotheses of this research which is to the effect that the organisational culture of CPOs does not vary significantly irrespective of the project being undertaken.

9. REFERENCES

- Abeysekera, V. (2002) Understanding "Culture" in an International Construction Context *In: Fellows, R. and Seymour, D. E. (Eds), Perspectives on culture in construction, CIB report, Vol. 275*, pp. 39-51.
- Abu Bakar, R. (1998) *The management practices and organisational culture of large Malaysian construction contractors*, Unpublished PhD thesis, University of Reading, Reading.
- Ankrah, N. A. and Langford, D. A. (2005) Architects and Contractors: A comparative study of organizational cultures, *Construction Management and Economics, (In Press)*.
- Ankrah, N. A. and Proverbs, D. (2004) Treading the softer areas of construction management: A critical review of culture, *20th Annual ARCOM Conference*, Edinburgh.
- Ankrah, N. A., Proverbs, D., Antwi, A. and Debrah, Y. (2005) The influence of organisational culture on contractor performance, *In: Sullivan, K. and Kashiwagi, D. T. (Eds.), Proceedings of the CIB W92/T23/W107 International Symposium on Procurement Systems: The Impact of Cultural Differences and Systems on Construction Performance*, Vol. 2, CIB, Las Vegas, pp. 373-381.
- Ankrah, N. A., Proverbs, D., Antwi, A. and Debrah, Y. (2005b) Towards a new approach for assessing organisational culture in construction project organisations: Overcoming key methodological challenges, *2005 PRoBE Conference*, Glasgow, **(Under review)**.
- Barthorpe, S., Duncan, R. and Miller, C. (2000) The pluralistic facets of culture and its impact on construction, *Property Management*, **18** (5), 335-351.
- Brown, A. (1998) *Organisational culture*, 2nd edition, Pearson Education Limited, Harlow.
- CITB (2002) *Equal opportunities: Stats & Facts*, http://www.citb.co.uk/equal_ops/, [04/03/05].
- Cook, E. L. and Hancher, D. E. (1990) Partnering. Contracting for the future, *Journal of management in engineering*, **6** (4), 431-446.
- Crowley, L. and Karim, A. (1995) Conceptual model of partnering, *Journal of management in engineering*, **11** (5), 33-39.
- Dainty, A. R. J., Bagilhole, B. M. and Neale, R. H. (2002) Coping with construction culture: A longitudinal case study of a woman's experiences of working on a British construction site, *In: Fellows, R. and Seymour, D. E. (Eds.), Perspectives on culture in construction, CIB report, Vol. 275*.
- Deal, T. E. and Kennedy, A. A. (1982) *Corporate cultures: the rites and rituals of corporate life*, Addison-Wesley Pub. Co., Reading, Mass.
- Drexler, J. A. and Larson, E. W. (2000) Partnering: Why project owner-contractor relationships change, *Journal of construction engineering and management*, **126** (4), 293-297.
- Egan, J. (1998) *Rethinking construction*, Construction Task Force, HMSO, London.
- Eldridge, J. E. T. and Crombie, A. D. (1975) *A sociology of organisations*, International Publications Service, New York.

- Graves, D. (1986) *Corporate culture--diagnosis and change: auditing and changing the culture of organizations*, St. Martin's Press, New York.
- Hampden-Turner, C. (1994) *Corporate culture*, Piatkus.
- Handy, C. (1985) *Understanding organizations*, Third edition, Penguin Books, London.
- Handy, C. B. (1993) *Understanding organizations*, Oxford University Press, New York.
- Handy, C. B. (1995) *Gods of management: the changing work of organizations*, Oxford University Press, New York.
- Harris, F. and McCaffer, R. (2001) *Modern construction management*, 5th Blackwell Science, Oxford, UK; Malden, MA.
- Harvey, R. C. and Ashworth, A. (1997) *The construction industry of Great Britain*, Newnes, Oxford, England; Boston.
- Hofstede, G. (1984) *Culture's consequences: international differences in work-related values*, Abridged ed, Sage, London; Beverly Hills.
- Hofstede, G. (2001) *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*, 2nd ed, Sage Publications, London; Thousand Oaks, California.
- Hofstede, G., Neuijen, B., Ohayv, D. D. and Sanders, G. (1990) Measuring organizational cultures: A qualitative and quantitative study across twenty cases, *Administrative Science Quarterly*, **35**, 286-316.
- Hofstede, G. H. (1997) *Cultures and organizations: software of the mind*, [Rev., McGraw-Hill, New York.
- Kotter, J. P. and Heskett, J. L. (1992) *Corporate culture and performance*, Free Press; Maxwell Macmillan Canada; Maxwell Macmillan International, New York, Toronto.
- Latham, M. (1994) *Constructing the team, Final report of the government/industry review of procurement and contractual arrangements in the United Kingdom construction industry*, HMSO, Department of Environment, London.
- Low, S. P. and Shi, Y. (2001) Cultural influences on organizational processes in international projects: two case studies, *Work Study*, **50** (7), 267-285.
- Maloney, W. F. and Federle, M. O. (1990) *Organizational culture in engineering and construction organizations*, University of Michigan, Ann Arbor.
- McNamara, C. (1999) *Organisational culture*, http://www.mapnp.org/library/org_thry/culture/culture.htm, [27/02/04].
- Meudell, K. and Gadd, K. (1994) Culture and climate in short life organizations: sunny spells or thunderstorms *International Journal of Contemporary Hospitality Management*, **6** (5), 27-32.
- Mullins, L. J. (2005) *Management and Organisational Behaviour*, Seventh edition, Pitman Publishing, London.
- Naoum, S. (2003) An overview into the concept of partnering, *International journal of project management*, **21** (1), 71-76.
- Packham, G., Thomas, B. and Miller, C. (2003) Partnering in the house building sector: A subcontractor's view, *International journal of project management*, **21** (5), 327-332.
- Pearce, D. (2003) *The social and economic value of construction: The construction industry's contribution to sustainable development*, nCRISP, London.
- Peters, T. J. and Waterman, R. H. (1982) *In search of excellence: lessons from America's best-run companies*, 1st, Harper & Row, New York.
- Phua, F. T. T. and Rowlinson, S. (2005) Operationalising culture in construction management research: a social identity perspective in the Hong Kong context, *Construction Management and Economics*, **22**, 913-925.
- Rameezdeen, R. and Gunarathna, N. (2003) Organizational culture in construction: an employee perspective, *The Australian Journal of Construction Economics and Building*, **3** (1).
- Rooke, J., Seymour, D. and Fellows, R. (2004) Planning for claims: an ethnography of industry culture, *Construction Management and Economics*, **22**, 655-662.
- Root, D. (2002) Validating occupational imagery in construction; Applying Hofstede's VSM to occupations and roles in the UK construction industry, *CIB Report*, **275**, 151-171.

- Schein, E. (1985) *Organizational culture and leadership*, Jossey-Bass Publishers, San Francisco, Washington, London.
- Schneider, W. E. (2000) Why good management ideas fail: the neglected power of organizational culture, *Strategy and Leadership*, **28**, 24-29.
- Serpell, A. F. and Rodriguez, D. (2002) Studying construction organisational culture: Preliminary findings, *CIB Report*, **275**, 76-91.
- Thomas, R., Marosszeky, M., Karim, K., Davis, S. and McGeorge, D. (2002) The importance of project culture in achieving quality outcomes in construction, *In: Proceedings IGLC-10*, Gramado, Brazil.
- Thompson, J. L. (1993) *Strategic management: awareness and change*, 2nd, Chapman & Hall, University and Professional Division, London; New York