BASIC ASSUMPTIONS OF CONTRACTOR'S SUB CULTURE IN PUBLIC SECTOR BUILDING CONSTRUCTION PROJECTS IN SRI LANKA

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ABSTRACT

Contractor is considered as a dominant construction project participant, contributing to the construction project culture. Identifying the basic assumptions of contractor's professional sub-culture at project level could be worthwhile for better management of construction projects since, cultural differences among project participants could create risks of conflicts and dissatisfactions owing to underperformance of construction projects. Thus, this research aims to derive basic assumptions of contractor's sub culture in public sector building construction projects in Sri Lanka. The aim was approached through an exploratory case study research design. Three public sector building construction projects were selected as the cases using construction project culture as the unit of analysis. Cases were restricted to traditional method contracts and team setting to public sector clients and consultants and private sector contractors. Nine semi-structured interviews, observation of two progress review meetings and documentation review per case were used as the data collection techniques. Solutions for internal integration and external adaptation problems of each project team was questioned during data collection. Code based content analysis was used in data analysis. Findings revealed the existence of dominant professional sub-cultural groups of client, contractor and consultant within construction projects. Group boundaries were indicated by each party trying to defend themselves as a group and having matters which they thought not suitable disclosing to other parties. The basic assumptions of the contractor's sub culture were identified with regard to the eleven cultural dimensions of; nature of human relationships, nature of human nature, nature of reality and truth, nature of human activity, nature of time, acceptance on homogeneity or diversity, unknowable and uncontrollable, gender, motive for behaving, state-individual relationship and, organization's relationship to its environment. These findings are important for project managers for better understanding of the unique cultural behaviours of contractors to avoid any interpersonal conflicts among contractor's personnel and other team members.

Keywords:*Basic Assumptions; Construction Projects; Contractor's Sub-Culture; Sri Lanka.*

1. INTRODUCTION

Construction project team is formed with different participants such as consultants, contractors, client and other stakeholders from different organisations. Many difficulties seem to arise due to the conflicts of different business objectives and lack of sensitivity and tolerance between these participants. (Fellow *et al*., 2007). Many of these differences creating risk of conflicts and dissatisfactions are owing to cultural differences of construction project participants (Tijhuis, 2011; Ankrah and Langford 2005). Among these different construction project participants, contractor is identified as a dominant participant influencing project culture (Ankrah *et al*., 2009). Rameezdeen and Gunarathna (2003) elaborate the cultural differences between contractor and consultant organisations in Sri Lanka. According to these authors, consultants believe that their success depend on the development of human resources for achieving specific goals of the organisation which emphasises on a culture with loyalty, value traditions and openness. In contrast, contractors are driven towards output maximisation, where they encourage a competitive work environment and culture among contractor's personnel. Moreover, Ankrah and Langford (2005), who study on architectural and contracting organisations

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in Scotland explain that major differences exist in these two types of organisations, not only pertaining to their structures, but also in people issues. Authors declare that major differences exist among architects and contractors in aspects such as; organisation, rationalisation and standardisation of tasks, sources of power based on relationships with managers, control and coordination mechanisms, degree of formality, tolerance of ambiguity and need for recognition. Thus, these studies indicate that contractor has a distinct cultural demonstration compared to other construction project participants. It is apparent that the aforementioned studies attempt to capture these distinctions of the contractor at organisational level only. There can be differences in cultural manifestations of the contractor's personnel, when they start working with other stakeholders in a project at operational level, in contrast to their manifestations at their organisational context. Thus, a specific focus into the contractor's cultural manifestations at project level in a study could be worthwhile for better management of construction projects. Understanding cultural differences between sub-cultures could help removal of misunderstandings among sub-cultural members (Gajendran *et al*., 2012). Similarly, such an understanding could be helpful for construction project managers for conflict resolution and managing relationships among project participants.

More importantly, the biggest flaw in the aforementioned studies is the lack of consensus on what cultural manifestation better describe the culture at project level. The long list of cultural manifestations includes artefacts, norms, behaviours, values, basic assumptions and so on (Martin, 2002). However, only a limited number of researchers highlight the importance of studying the inner layers of a cultural context which include values and basic assumptions. Schein (1984, 2004) brings forward empirical evidence to convince the necessity of studying the basic assumptions of a cultural context, since basic assumptions are the real essence of culture. Learning basic assumptions gives way to interpret any of the other given cultural manifestations too. Hills (2002) brings in empirical evidences on how knowledge on cultural basic assumptions could be helpful for successful negotiations between different cultural groups. It is expected that studying basic assumptions of the contractor could add value to negotiation efforts with contractors in construction project teams too. Thus, this study aims to derive basic assumptions of contractor's sub culture in public sector building construction projects in Sri Lanka and basically attempts to answer two Research Questions (RQs), RQ1: What are the evidences available for sub-cultural existence in construction project culture? and RQ2: What are the underlying basic assumptions of contractor's sub-culture?. This paper presents a part of a bigger study, which attempts to derive the underlying basic assumptions of contractor, consultant and client to determine the public sector construction project culture in Sri Lanka.

2. SUB-CULTURAL EXISTENCE AND CONTRACTOR'S SUB CULTURE IN CONSTRUCTION PROJECTS

Many researchers acknowledge the existence of strong sub-cultures in most cultural settings. Kumaraswamy *et al*. (2002) identify 'organisational', 'professional', 'operational' and 'individualistic' sub-cultures as the principal elements that come together to evolve the culture within a construction project. According to their explanations, 'organisational sub-cultures' are mainly influenced by national culture and industry culture, 'operational sub-cultures' are comprised of quality culture, safety culture, and learning culture, 'individualistic sub-cultures' are influenced by factors such as national culture, ethnic factors, social status and religion and 'professional sub-cultures' are influenced by the type of members, origin and history and type of task/function. Accordingly, Kumaraswamy *et al*. (2002) highlight the existence of sub-cultures based on the numerous projects participants and their specific roles within the project. Similarly, Liu and Fellows (1999) indicate about the existence of cultural differences among various professionals in construction projects. Pheng and Alfelor (2000) indicate that managing these differing professional cultures is a challenge to construction project managers.

Schein (1996) brings forward another interpretation of sub-cultures related to different occupations within an organisation, but not specifically for construction context yet, in generic grounds. These sub-cultures include: 'engineers' (technocrats) who design and monitor the technology for supporting an organisation's operations; 'operators', who deliver products and services and, 'executives' who primarily focus on financial performance. These sub-cultures are called 'engineering sub-culture', 'operator sub-culture' and 'executive sub-culture' respectively. According to Schein (1996), organisational learning and change failures are primarily due to inadequate understanding of occupational sub-cultures existing within organisations. It is because these occupational sub-groups hold different views and interpret differently the same aspect due to the difference in their professional background, which results in communication problems. Chapman *et al*. (2011), empirically

support this concept of occupational sub-cultures proposed by Schein (1996) by using the same concept in a cultural analysis of some organisations in the United States and Australia. However, their selection of individuals for each sub-culture group is based on: job titles such as chief executive officer, vice president and senior manager classified as 'executives'; job titles such as consultant, project manager and sales representative as 'operators', and job titles such as engineer, information technology analyst and operations manager as 'engineers'.

Going in line with the explanations by Schein (1996) and Chapman et al. (2011), it could be argued that even a construction projects could include similar occupational or professional sub-cultural groups (refer Figure 1).

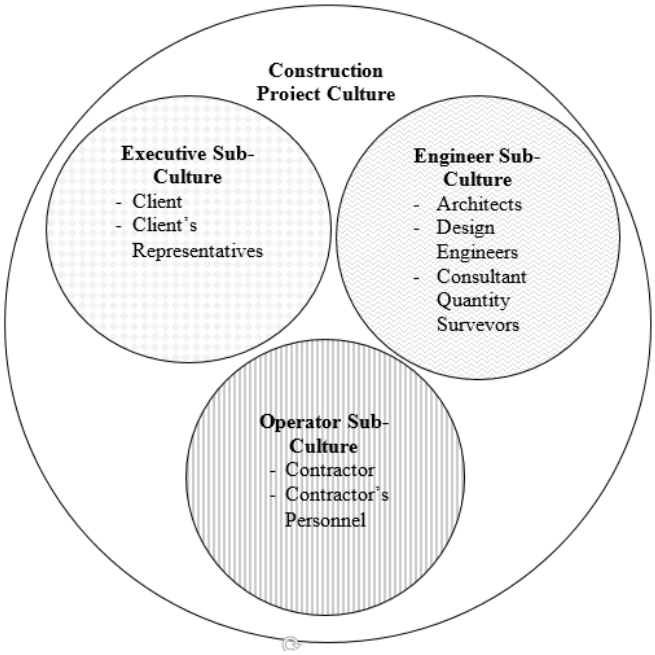

Figure 1: Sub-Cultures in Construction Project Culture

Accordingly, client and client's representatives can be identified as the 'executive sub-culture', since this sub-cultural group is more concerned on financial performance of the construction projects. Consultants including architects, design-engineers and consultant quantity surveyors can be identified as the 'engineer sub-culture', since they are more into design aspects, working mainly with technical backgrounds. Moreover, contractor's personal can be identified as having similarities with 'operator sub-culture', because they are the group that really struggle at the filed with labour, plant material to realise the construction output.

3. BASIC ASSUMPTIONS AS A CULTURAL MANIFESTATION

Schein (2004, 1990) describes that cultural manifestations can be identified in three levels as; 'visible artefacts' in the primary level, 'espoused values' in the next level and 'underline assumptions' in the highest level giving the proper interpretation to the exact organisational culture. It is the values of an individual or a group that lead to behaviour and when the behaviour begins to solve the problem, which led the behaviour in first instance that value is transformed into a basic assumption. Schein (1983, 1984) explains basic assumptions as mostly unconscious and are taught to new members as a reality and as the correct way to view things. Values become apparent by interviewing key members of the organisation to identify the reasons for the behaviour of the members. Nevertheless, he argues that to really understand the culture, it is important to identify the underlying assumptions. In addition, Hofstede (1980) also refers these underlying assumptions as 'taken for granted values'. Thus, underlying assumptions or otherwise called taken for granted values are considered as the core of the culture or the essence of the culture (Schein, 1984).

The Value Orientation Theory (VOT) by Kluckhohn and Strodtbeck (1961) is one of the theories that best describes the value content of culture. Many of the researchers who made the attempt to capture the taken for granted values or the basic assumptions of culture in cultural interpretations have followed the work of Kluckhohn and Strodtbeck (1961) (see Schein, 1984; Hofstede, 1980). It is important to note that though the

term 'values' is used in a more generic manner in this theory, it refers 'values' specifically for 'taken for granted values', thus the basic assumptions of human kind. Such basic assumptions identified in generic individual and organisational studies by Schein (1983) and Hills (2002), which are possibly available in contractor's sub-cultural context are described in Table 1. According to Table 1, basic assumptions are presented in question form. A selected answer from the 'Possible Answers' to the 'Questions to be Answered' demonstrates a basic assumption of the contractor's sub-culture. For example, if the selected answer by the contractor's sub-culture is 'dominant' for the question 'what is the relationship of construction project to its environment?', then 'the relationship of construction project to its environment being dominant' is identified as an underlying basic assumption of contractor.

Table 1: Proposed Underlying Basic Assumptions of Contractor Sub-Culture

No:	Dimensions	Questions to be Answered	Possible Answers
1	The nature of human relationships	In what way construction project team members relate to each other for distribution of power and affection?	- Competitive - Cooperative
		What is the best way to organise the project team?	- Individualism - Groupism
		What is the best authority system for a construction project team?	- Autocratic/paternalistic - Collegial/participative
2	The nature of human Nature	What is construction project considers the nature of human nature to be?	- Good - Neutral - Evil
3	The nature of reality and truth	What is the way reality and truth are defined by the construction project?	- Pragmatic test - Reliance on wisdom - Social consensus
4	The nature of human activity	What is the nature of human activity of construction project team members?	-Dominant/pro-active - Harmonizing - Passive/fatalistic
5	The nature of time	What is the most relevant time unit for the construction project?	- Past - Present - Future
6	Homogeneity vs. diversity	Is the construction project team best off if it is highly diverse or if it is highly homogeneous,	- Diverse - Homogeneous
		Should individuals in in the construction project be encouraged to innovate or conform?	- Innovate - Conform
7	Unknowable and Uncontrollable	Do we tend to believe in fate/god or not?	- believe in fate/god - do not believe
8	Gender	How should society distribute roles, power and responsibility between the genders?	- Male - Female - Both
9	Motive for Behaving	What should be the motive for behaving within the project context?	- Doing - Being - Being-in-Becoming
10	The State-Individual Relationship	Should precedent right and responsibility be accorded the nation, individual or both?	- Nation - Individual - Both
11	The organisation's relationship to its environment	What is the relationship of construction project to its environment?	- Dominant - Submissive - Harmonizing - Searching out a niche

(Adapted from Schein, 1983 and Hills, 2002)

As described by Schein (2004), in order to extract the underlying basic assumptions of a cultural group, it is required to question on internal integration and external adaptation problems of that group. Internal integration problems include: what is the group adopted language?; how group boundaries are decided upon?; how power and status are decided upon?; to what extent close relationships are appreciated among member?; how rewards and punishments are decided upon? and, what ideologies exist?. External adaptation problems include: how

strategy and goals are decided upon?; what means of accomplishing goals are adopted?; how performance is measured?; and, what corrective actions are adopted?. The solutions adopted by the cultural group for such problems could be analysed inductively to identify each basic assumption. Once this is done, it would be apparent that there is a deeper level of assumptions, which ties together the various solutions to these various problems (Schein, 1983). This deeper level deals with more ultimate questions as described in Table 1.

4. METHODOLOGY

This research basically attempts to answer the two research questions; RQ1: What are the evidences available for sub-cultural existence in construction project culture? and RQ2: What are the underlying basic assumptions of contractor's sub-culture?. According to Yin (2009), 'what' type of research questions support exploratory case study research designs. Therefore, case study was identified as the research strategy for this research. Three public sector building construction projects from Sri Lankan context were selected as the cases considering 'construction project culture' as the unit of analysis. According to Eisenhardt (1989), number of cases to be decided on the basis of theoretical sampling and not based on statistical sampling. Therefore, theoretical sampling method was adopted to select the three cases expecting literal replications. Data collection techniques included semi-structured interviews, observations and documentary survey for effective data triangulation. Semi-structured interviews were carried out with the participation of selected nine project team members from each case including three members from contractor's personnel (private sector contractors), three members from client's personnel (public sector clients) and three members from consultant's personnel (public sector consultants). A total of 27 interviews were conducted from all three cases. Observations were mainly done by participating at least two progress review meeting of each selected project including data recording following a progress review meeting observation guideline. Data were collected from contract documents and two progress review meeting minutes during the documentary survey. A pilot case study was carried out to refine the interview guideline and the progress review meeting observation guideline and to check the robustness of the questions and observation areas included. This pilot case study also acted as a pre-test for the interview and observation process. Data collection was done to indirectly question and observe the cultural context, in order to extract the underlying basic assumptions of the construction project culture considering the scope of the bigger study this paper is based on. However, this paper presents only the findings to RQ1 and RQ2. Further, both within-case analysis and cross-case analysis were done using code based content analysis during the data analysis process. A pattern-matching (Yin, 2009) effort is presented in the discussion at Section 6 for theoretical generalisation purposes.

5. CASE STUDY FINDINGS

Background details of the cases are given in Table 2.

Table 2: Background Details of the Cases

Case	Project A	Project B	Project C
Type	Extension to a ministry headquarters	Government hospital building	Administration building of a government commission
Project Cost (Sri Lankan Rupees)	1317 millions	500 million	800 million
Project Duration (Construction Phase)	21 months	24 months	30 months
Physical construction progress by the time of data collection	65%	70%	60%
Procurement Method	Traditional method with measure and pay contract	Traditional method with measure and pay contract	Traditional method with measure and pay contract
Past Working History	Contractor and Consultant had worked together for a previous building project	Consultant had worked for same Client's previous renovation project	Contractor had worked for the same Client's previous renovation project

Findings are presented in answering the RQ1 and RQ2 in sub-sections 5.1 and 5.2 respectively.

5.1. SUB-CULTURAL EXISTENCE IN CONSTRUCTION PROJECTS

Clear evidences for sub-cultural existence as; contractor's sub-culture, consultant's sub-culture and client's sub-culture were available within Projects A, B and C. These evidences were tracked both during interviews and during progress review meeting observations. Such evidences were related to existence of group boundaries in each sub group such as each party trying to defend themselves as a group and having matters which they thought not suitable disclosing to other parties. These behaviours had created the insiders and outsiders to each sub-group of client, contractor and consultant.

For example, although everybody worked as a single project team, when the Construction Manager of the Contractor of Project A was questioned about any differences among the parties in treating subordinates, he mentioned that he felt everybody in the project team was trying to protect each party in every occasion. This was clearly observed by the researcher during progress review meetings too. During 32nd progress review meeting, Consultant Project Design Engineer was asked by the Client about the date the design of connection bridge from existing building to new building was given to the contractor. By that time, even Consultant Project Architect joined explaining about the dates and the adequacy of the details given in favour of the Project Design Engineer. A similar situation was observed in contractor's group of Project B too where, Project Coordinator and Construction Manager both adding to the answer of the Contractor's Electrical Engineer over a matter about material approvals for data cabling. Progress review meeting was considered by the team members as a place to raise issues and defend themselves as sub-groups of the project team. Thus, this strong division as client, contractor and consultant could clearly develop unique values, which could later turn into basic assumptions of each sub-group.

Further, it was evident that there were matters related to the project that each party kept away from the other parties. In all three cases, contractor and consultant had kept their weaknesses hidden from others creating major boundaries between the groups. As explained by the Project Manager of Project A, who was a member of the Consultant's group mentioned that Consultant was having delays in the design works due to lack of staff. However, initially they were reluctant to give this reason to Client, but later they had explained it when they felt things getting worse if not revealed to the Client. As explained by the Project Manager, sometimes he was in a very uncomfortable situation as he could not explain some weaknesses of Consultant to Client directly. This was because, he was from the same Consultant's party and the duel responsibilities residing with him to his organisation and the Client.

Similarly, Site Engineer of the Contractor of Project C specifically mentioned that they try to keep their internal matters away from the rest of the project team. Both Consultant Project Architect and Project Manager mentioned that the internal problems of contractor due to lack of labour force was kept hidden until such matter become obvious to both Client and Consultant. Even Contractor had gone to an extent of keeping formal written communication mode with Consultant and Client considering them as outsiders to their sub group and emails and other less formal communication modes with their domestic specialised sub-contractors, considering them as insiders. Accordingly, there were such strong evidences for the existence of sub-cultural groups in construction projects.

5.2. BASIC ASSUMPTIONS OF CONTRACTOR'S SUB-CULTURE

The similarities and differences of the abstract basic assumptions across the three case; Cases A, B and C for contractor's sub-cultural group are analysed in this sub-section and summarised in Figure 2.

Abstract Basic Assumptions of nature of human relationships – Contractors in all three cases held the abstract basic assumption of 'autocracy' as the best authority system within the construction project. They did not specifically concerned about whether such autocracy should be from the client or the consultant. However, they preferred an autocracy of an unbiased and dedicated leader. It was apparent in all cases that contractor got demotivated in the project context due to going against this abstract assumption of the contractor with the absence of an unbiased and dedicated leader.

Contractors A and B held the abstract assumption of 'groupism' as the best way to organise the project society. In contract, Contractor C assumed 'individualism' as the best way to organise the project society. Contractor C having most previous experience in working for design and build contracts was trying to strictly adhere only

to the construction responsibility in Project C with traditional method. However, both the Contractors A and C considered their previous experience with Consultant A and Client C respectively, when organising the teams, demonstrating their preference for 'groupism', unlike the consultant.

All contractor assumed 'competition' as the correct way to relate to each other, to distribute power and affection within project context. This was due to the power structure existed in construction projects within Sri Lankan construction industry, placing the contractor in the lowest position in terms of power. Thus, contractor constantly attempted to defend themselves from the suppressions of consultant and client and gain some power within the project team. This amounted to the competition, when contractor tried to relate to each other.

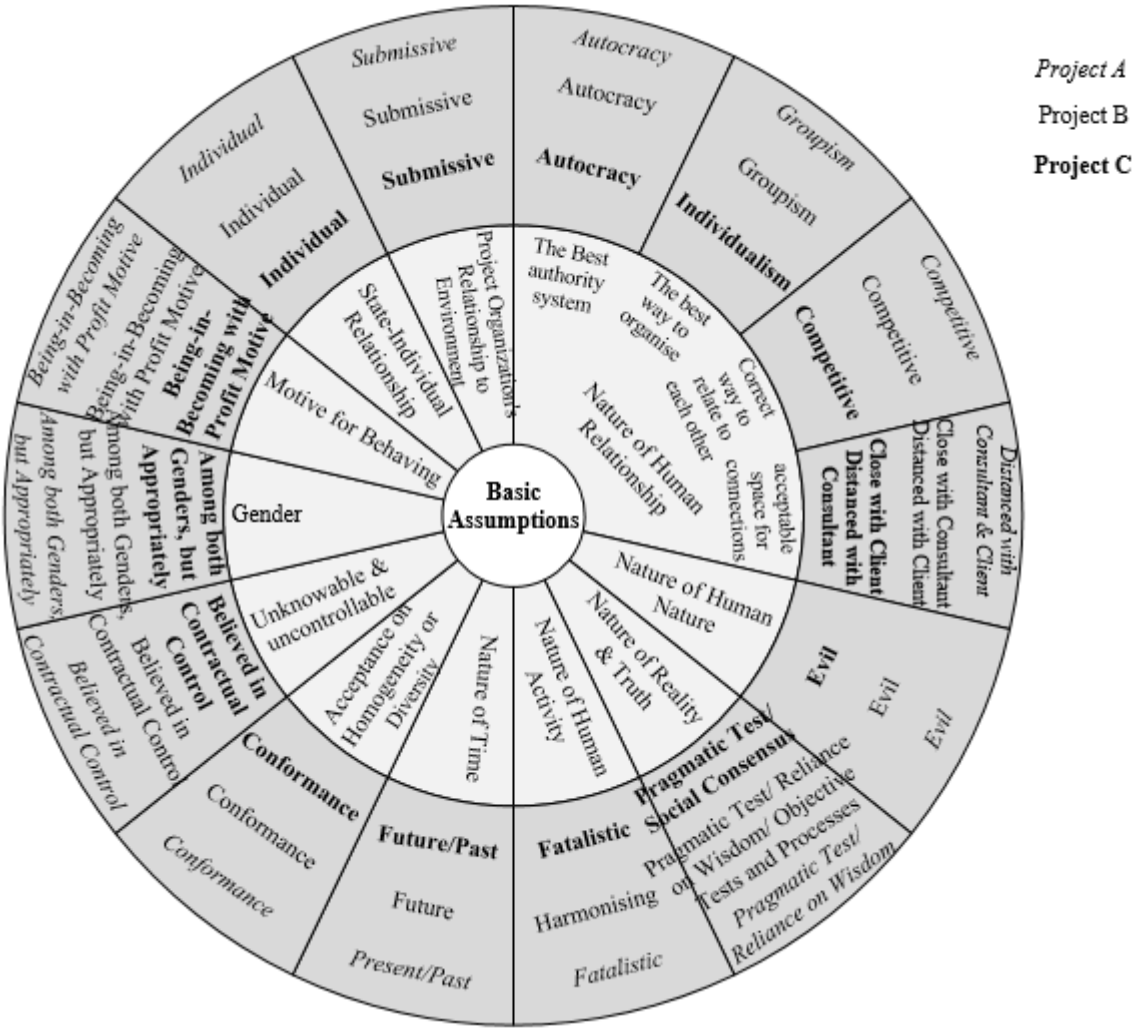

Figure 2: Basic Assumptions of Contractor's Sub Culture in Projects A, B and C

In addition to the three perspectives discussed above, another perspective could be identified for the determination of the nature of human relationship through case data. This was about looking into what was the acceptable space for cognitive, emotional and behavioural connection. The acceptable space could be either close or distanced. Contractor A did not prefer any close connection with consultant or client, Contractor B preferred close connections with the consultant and Contractor C preferred close connections with the client. There was no apparent reason for the contractor in determining the acceptable space for cognitive, emotional and behavioural connections among team members and was solely based on their personnel preferences. Necessity, preference and mutual trust of both parties at the same time for such a close connection made the possibility of emergence of a close connection. Although, Contractors A and C had previous work relationships with their respective consultant and client, only Contractor C wished to maintain a close connection, indicating no effect of previous work experience contributing for developing close connections. In addition, there was no relationship of strategic competitive advantage of contractor organisation affecting the development of close

connections too. Contractor B, who had a close connection with the Consultant B indicated that having such a connection was advantageous but, not acceptable in the industry practice. This was because, it was suspected that such a close connection could affect the impartial behaviour expected from a consultant. Further, Contractor C, who had a close relationship with Client C mentioned that having a close connection was advantageous, but not much acceptable in the industry. This was because, if consultant was appointed as the 'Engineer' to the construction contract, informal relationships could affect the formal instruction and communication flows indicated in standard construction contracts. Notably, when close connections existed, contractor demonstrated some cooperative beliefs on relating to each other, to distribute power and affection. However, they could not completely refrain from the competitive nature. Power struggle, still kept them busy in competition.

Abstract Basic Assumptions of nature of human nature – Contractors in all three cases held a strong abstract basic assumption of nature of human nature being 'evil'. Contractor normally did not receive appreciations or rewards within the team setting and complaints, punishments and criticisms were common in the project setting. Further, contractor lacked trust with other team members too. Contractor regarded meeting room as a place to discuss issues and defend themselves. This was evident during the meeting observations of all three cases. No any direct appreciation for the Contractor from Client or Consultant was witnessed by the researcher. All meetings and meeting minutes were full of problems, issues and lapses and indications on who was responsible and what actions to be taken to overcome those. Contractor's Project Manager of Project B mentioned that they absorbed many ill-treats by the Client and Consultant considering the maintenance of good relationship among the team members. He further elaborated that one reason for lack of appreciations by the Consultant may be because, it could be misunderstood by the Client as Consultant being bias to the Contractor.

Abstract Basic Assumptions of nature of reality and truth – Contractor preferred more subjective means of determining the reality and truth in project context. All contractors of Projects A,B and C commonly agreed 'pragmatic tests' as the best way to define what was true and what was not in project matters. In addition, Contractor A and B relied on wisdom too, pertaining to their ability to bring in strong arguments due to the maturity in industry. Moreover, Contractors B and C looked for 'social consensus', in addition to the other means, due to their organisational competitive strategic advantage being strong human relationships. They preferred the consensus of the consultant and client for making decisions as it improved the relationships. However, Contractor A and C believed that consultant assumed 'objective tests and processes' as the best way of determining the reality and truth in project context, in contrast to their belief on subjective means of determining reality and truth.

Abstract Basic Assumptions on nature of human activity – Contractors A and C, held the abstract assumption that being 'fatalistic' as the correct way for humans to behave within project context. The reason for this was because that being in the maturity stage of their organisational development, they had learnt to accept and obey pressures and forces from the project environment well. They were appeared to be more reactive than proactive in nature too. However, Contractor B, who was at the growth stage of organisational development, tried to harmonise with other team members, until they position themselves in the market. They did not carry the fantastic assumptions. The general power structure in a typical construction project in Sri Lankan construction industry existed in the order of contractor constantly placed with a very low power compared to client and consultant. This too had contributed to contractor refrain from being dominant and remain as either harmonising or fatalistic. The power order of client and consultant depended on client being the most powerful, when client was politically powerful or highly professional with educated background and consultant being the most powerful, when client was a layman, depending on consultant.

Abstract Basic Assumptions on nature of time – Contractors A and C, who had previous work experience with the consultant and client respectively, based their decisions of the current project involved on such past experiences. Both the contractors had considered appointing the most staff, especially the senior staff from the previous project as a strategic decision. This was to use the advantages of learned lessons in past relationships to the current projects. This indicated the contractor's abstract basic assumption of 'past' as a relevant time unit for the conduct of daily affairs in the project. In addition, Contractor A based most of other decisions on 'present' only. This was because, they did not see any advantage of considering future in their decisions, as the organisational competitive strategic advantage of Contractor A was on quality of output only. They never felt a necessity of continuing relationships with clients or the contractors. They believed that clients will come to them considering their differentiated work output and service. However, in contrast, Contractors B and C considered 'future' as the most relevant time unit for other decisions. This was mainly because, organisational

strategic competitive advantage of Contractors B and C was long term relationships with clients and consultants. Thus, they compelled to try out continuing relationships with other members.

Abstract Basic Assumptions on Acceptance on Homogeneity or Diversity – Since construction project teams were compulsorily diverse in nature, whether team should be highly diverse or homogeneous was not a concern in construction project context. However, contractors in all three cases strongly believed that individuals in the public sector construction project team were encouraged to conform and not to innovate. Contractor A brought in reasons for strict belief on conformance as time pressure and consultant and client preferring adherence to contract conditions including specification and drawings. However, no innovations were tried out at least to accelerate the project works and still followed all complex and time consuming documentation procedures with shop drawings. Contractors B and C too indicated that consultant and client required the strict conformance to project specifications and never tolerated any deviations. They indicated the difficulty of getting payments done, when not adhering to contract specifications. Construction contracts in all three projects included a contract clause for value engineering, which gave some provision for innovation for contractor. However, none of the contractors had used these condition for innovations.

Abstract Basic Assumptions on Unknowable and Uncontrollable – With regard to unknowability and uncontrollability, contractors in all three cases never solely depended on fate. They always believed on 'contractual control' in the uncertain project environment. They supposed that the decisions made by public sector clients were mostly uncertain and variations were unavoidable to a greater extent. However, adherence to construction contract by following contract clauses and maintaining evidences in black and white had always reduced their risks with uncertainties. All contractor's held the idea that the ultimate responsibility of time, cost and quality of the project resided with the contractor. Contractor of Project B highlighted that considerable number of small scale disruptions happened from the Client, which could not get compensated from the Client practically. They believed that ultimately, not everything could be claimed from the Client.

Abstract Basic Assumptions on Gender – Contractors in all three cases held the abstract basic assumption that distribution of roles, power and responsibilities should be among both genders, but appropriately. Contractor of Projects A and C believed that it was the attitudes that mattered in allocation of responsibilities to any gender. They were specifically concerned on attitudes of females since, they believed females lacked interest on obtaining practical construction experience by working on sites, which was an essential for any employee working under a contractor. However, Contractor B specifically mentioned that females had different capabilities and talents such as for documentation, compared to males, which could be effectively considered in team selection. It was noted that quantity surveying task of Projects A and B was mainly done by females, may be due to the same reason.

Abstract Basic Assumptions on Motive for Behaving – The motive for behaving of contractors in all cases were into being-in-becoming. They strived to develop, change grow and be better. All the contractors indicated the signs of necessity on continuous development, identifying the lapses in their systems and processes. Contractor A, based on an organisational competitive strategic advantage on quality of output, always considered providing a better quality construction output. Contractors B and C, holding on to the organisational strategic competitive advantage of maintaining long term relationships with clients and consultants, strived on building up the relationship. However, all were possessing the urge to make profits, being profit oriented commercial organisations. Thus, the motive for behaving of the contractor was into 'being-in-becoming with profit motive'.

Abstract Basic Assumptions on State-Individual Relationship – All contractors in the three cases believed that the precedent right and responsibility should be accorded the 'individual', despite they were working for public sector construction project. This was mainly because, contractors were from private sector organisations with profit motives, where they were into satisfying the client's individual interests and making a profit, rather than believing on delivering a product to the nation. The strategic competitive advantage of Contractors B and C being long term relationships with clients, it was evident that those contractors were putting in a specific effort to satisfy the client even though the client's requirements were not reflecting the best for a public building with regard to the public funds being spent and the expected functionality of the building. For example, in Project B, doctors being end-users requested for luxury types of finishes for their rest room areas, for which contractor attended providing the same without any hesitation, though consultant criticised such client requirement as not fitting for a public building.

Abstract Basic Assumptions on Project Organization's Relationship to its Environment – All contractors in the three cases believed that the project organisation's relationship to its external environment was 'submissive'. This was because, contractor was in a constant battle with the external environment in procuring labour, plant, good, works and services for the project functions, facing financial issues, lack of resources and consequences of poor systems and process, which had rooted into their minds that the project organisation was submissive to the external environment. Many of the project level issues stemmed out from the issues at contractor's organisational level, which they were unable to control of their own.

6. DISCUSSION

In pattern matching, it was identified that some of the research findings on contractor's basic assumptions at project level were in line, while some were contrasting to the Sri Lankan contractor's organisational cultural orientations identified by Rameezdeen and Gunarathna (2003). Contractors believing on correct way to relate to each other to distribute power being competitive was in line with competitive orientation towards rivals as described by Rameezdeen and Gunarathna (2003). Assuming that the best authority system being the autocracy of an unbiased and dedicated leader being in line with the explanations on considering leaders as hard-drivers. However, according to the case study findings, within project cultural context, contractors were more collective in project organisation. However, according to Rameezdeen and Gunarathna (2003), contractors emphasise goal achievement over team work. Further, case study findings did not indicate contractors being innovative and valued conformance the most.

Further, in comparison of the case study findings with the elaborations of Ankrah and Langford (2005) on cultural orientations of Scottish contractors, Sri Lankan contractors at project cultural were not always formal. Their basic assumptions on acceptable space for cognitive, emotional and behavioural connection were vaguely close and distanced according to their personal preferences. Moreover, Sri Lankan contractors were more of fatalistic in behaviour, in contract to the proactive attitudes held by the Scottish contractors. However, Sri Lankan contractors too preferred high direction as Scottish contractors preferring the autocracy of unbiased, dedicated leader.

7. CONCLUSIONS

This research intended to answer the two research questions RQ1: What are the evidences available for sub-cultural existence in construction project culture and RQ2: What are the underlying basic assumptions of contractor's sub-culture. In answering the RQ1, case study findings revealed the existence of professional sub-culture of contractor, consultant and client. Group boundaries were indicated in each sub group such as each party trying to defend themselves as a group and having matters which they thought not suitable disclosing to other parties. These behaviours had created the insiders and outsiders to each sub-group of client, contractor and consultant.

In answering RQ2, underlying basic assumptions of the contractor's sub-culture was identified related to eleven cultural orientations. Several assumptions varied across the three cases subjected to some situational factors. The basic assumptions of the contractor's sub-culture as agreed across all three cases included: the best authority system being autocracy of an unbiased and dedicated leader; the best way to organise the project society being groupism; the correct way to relate to each other to distribute power and affection within project context being competitive in behaviour; nature of human nature being evil; reality and truth to be defined within project context by subjective means; individuals in a project team to be encouraged to conform; faith to be kept in contractual control; project society should distribute roles, power and responsibilities among both genders, but appropriately; the motive for behaving to be being-in-becoming with profit motive; precedent right and responsibility be accorded the individual and, project organisation perceive itself to be submissive to its environment. The varied assumptions across the three cases included: the most relevant time unit being past, present or future; the correct way for humans to behave within project context being fatalistic or client, consultant dominance and, the acceptable space for cognitive, emotional and behavioural connection to be close or distanced.

These findings would be useful for project managers for better understanding of the unique cultural behaviours of contractors to avoid any interpersonal conflicts among contractor's personnel and other team members and help contractor to integrate properly with other team members. Further research directions include developing

guidelines for better negotiations with contractor during change initiatives using the underlying basic assumptions derived through this research.

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