Effect of National Culture on Construction Project Management

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Abstract

The seminal work of hofstede on national cultures (hofstede 1994) is the starting point for the work described in this paper, and it has been translated and transformed into an approach to consider the effect of national cultures on construction projects. The paper describes the results of a study by the author into the impact of cultural factors (cfs) on conflicts during 4 phases of a project, namely initiating, planning, executing, and controlling.

The impact of national culture components on the cost of a project are also considered, and indicators are given as to which factors, if present, might indicate a possible overspend or underspend on a project.

Keywords

National cultures: cost: project management.

1. Introduction

There have been many attempts at defining contextual cultures, among them hofstede, g. (1994), garrison, t. (1998), law, j. (1998), trompenaars, f. (1993), schwartz, s. (1994), rutland, p. (2003), and the author has drawn from these in developing the models described in this paper.

Hofstede's work with over 100,000 individuals from 40 countries identified 4 primary cultural dimensions and a fifth dimension, long term outlook. "culture is more often a source of conflict than of synergy. Cultural differences are a nuisance at best and often a disaster" dr. G. Hofstede.

Schwartz used value differences to identify the svi (schwartz value inventory), at the individual and overall culture level. From studies with >60,000 individuals in 63 countries, schwartz collected 10 distinct value types at an individual level analysis.

Rutland's work focussed on the relationship between 12 task (7) and people (5) dichotomous variables and 20 cultural factors broken down into task and people related (8 task – 12 people).

A combination of the approaches to culture measurement outlined above allowed the author to identify which cultural factors had a negative impact on projects performance at the 4 stages of a project, and then to assess the impact of such cultural factors as possible over/under on projects.

2.   Findings

2.2 Conflict caused by Cultural Factors

The twenty cultural factors (CFs) used were:

- Value of time (T)
- Language (P)
- Ethics (P)
- Religious Values (P)
- Cultural Stereotypes (P)
- Way business is organised (T)
- Conflict Management Style (T)
- Human Resources Practices (P)
- Political Pressures (P)
- Adherence to management principles (T)
- Socio-economic frameworks (P)
- Attitudes to service delivery (P)
- Accessibility to information (T)
- Speed of Communication (T)
- Symbolism (P)
- Attitude to groups (P)
- Acceptance of technology (T)
- Decision making processes (T)
- Flexibility of thought (P)
- Status (P)

And the 4 stages of a project are:

1. Initiating Phase:
   The stage at which a project should begin and committing to do so.
2. Planning Phase:
   Devising and maintaining a workable scheme to accomplish the need that the project was undertaken to address.
3. Executing Phase:
   Coordinating people and other resources to carry out the plan.
4. Controlling Phase:
   Ensuring that project objectives are met by monitoring and measuring progress and taking correct action where necessary.

It was decided not to include the Closing Phase as few of the case studies used to obtain the results had reached this stage.

Conflicts were measured on a scale of 1-5 (5 is high negative impact), and five were identified by each respondent. The relevant CFs that contributed to the conflict were then attached to each conflict.

75 conflicts were identified and 81% had a negative impact on the project of Levels 5 & 4, and 58% occurred at the Initiating/Planning phases.
When those cultural factors (CFs) with scores of 4 or 5 on their contribution to the conflict were considered at each phase and for phases 1-4 in total, the following was discovered:
- "The way business is organised" (6) is the most influential ICF on conflict generation.
- "Decision Making Processes" (18) are second overall, and particularly at Initiating and Executing stages.
- "Adherence to Management Principles" (10) is ranked in the top four for all but the Initiating phase. This was translated in each interview as "failing to adhere to management principles".
- "Political Pressures" (9) rank high in the Initiating and Planning phases, but are much lower in the Executing and Controlling phase.

- "Status" first appears at Rank 4 and is thus in the top two deciles.
- "Value of time" (1) also appears at Ranks 4 and 5 for Planning, Executing and Controlling.

2.2 Cultural Factors and Cost

The same 20 cultural factors were used in this study as those for the conflicts study, together with the task/people breakdown on 12 components of project management, which are:

- Project Life Cycle Phases – Level Of Definition (T)
- Organisational System Of Client (P)
- Organisational System Of Pm Company (P)
- Project Integration Management (T)
- Scope Management (T)
- Time Management (T)
- Cost Management (T)
- Quality Management (T)
- Hr Management (P)
- Communications Management (P)
- Risk Management (P)
- Procurement (T)

Projects which perform will have the following six project management components highly existent in them:

- Project life cycle phases were well defined
- The client was good on timelines and meeting deadlines
- The client had a clear organisation structure
- The organisational system of the client was well defined
- The organisational system of the Construction Company was well defined
- Client communication needs were well defined

Culture factors which are very important to the performance of a project are:-
Highest:
(1) Value of Time
(2) Language
(5) Cultural Stereotypes
(17) Acceptance of Technology

Medium:
(3) Ethics
(6) The way the business is organised
(16) Attitude to groups
(20) Status

Lowest:
(4) Religious values
(7) Conflict Management Style
(8) H.R. Practices
(10) Adherence to management principles by Client
(14) Speed of communication

2.3 Predictions of Cost Underspend (U/S) and Overspend (O/S) Based on 11 case studies of projects

Scores for the Project Management Task (PMT) and Project Management People (PMP) and Cultural Factor Task (CFT) and Cultural Factors People (CFP), were calculated for each project based on estimated scores for these findings. The predictors are:

- If the average of the Project Management (People) (PMP) components and the Cultural Factor (People) (CFP) Component scores for a project are ≥65% there will likely be an underspend of 1.5- 20%.
- If the (PMP) and (CFP) average scores are ≤65% there will likely be an overspend of 11-30%
- If the (PMT) and the (CFT) average score is ≥75% it is possible there will be an underspend of 1.6-20%
- If (CFP)% divided by (PMP)% is ≤1.03 there is likely to be an underspend of 0-20%.
- If (CFP)% divided by (PMP)% is >1.04 an overspend is possible of 10-40%
- If (PMT)% - minus (CFT)% is positive an underspend of 1-20% is possible
- If (PMT)% - minus (CFT)% is negative then an overspend of 5-35% is possible

Example

An example is given below to show how the model is used and calculations carried out.

Table 1 shows the estimates for PMT and PMP.

Table 1 Scores For Project Management/Estimates

	Project Management Component	Task or People	High 5	Good 4	3	2	Low/Poor 1
1	Project Life Cycle	Task				2	
2	Organisational System of client	People					1
3	Organisational System of PM	People			3		
4	Project Integration management	Task				2	
5	Scope Management	Task			3		
6	Time Management	Task				2	
7	Cost Management	Task					1
8	Quality Management	Task		4			
9	HR Management People	People				2	
10	Communications Mgt	People				2	
11	Risk Management	People				2	
12	Procurement	Task		4			
	Task 18/35 (52%)			**People 10/25 (40%)**			

Table 2 shows the estimates for CFT and CFP

TABLE 2
SCORES FOR CULTURAL FACTORS (ESTIMATED)

	Cultural Factor		Important good/high 5	4	3	Not Important low/poor 2	1
1	Value of time	T	5				
2	Language	P		4			
3	Ethics	P				2	
4	Religious Values	P					1
5	Cultural Stereotypes	P		4			
6	Way business is organised	T			3		
7	Conflict management style	T				2	
8	Human resources practices	P			3		
9	Political pressures	P		4			
10	Adherence to mgmt principles	T					1
11	Socio-economic frameworks	P		4			
12	Attitudes to service delivery	P			3		
13	Accessibility to information	T				2	
14	Speed of communication	T		4			
15	Symbolism	P		4			
16	Attitude to groups	P			3		
17	Acceptance of technology	T	5				
18	Decision making processes	T			3		
19	Flexibility of thought	P	5				
20	Status	P	5				
	TASK Score 25/40 (63%)				**PEOPLE Score 42/60 (70%)**		

Calculations for the Example

- Average (PMP) & (CFP) percentages $= (40\% + 70\%)/2 = 55\%$ $(\leq 65\%)$ (likely overspend of 11-30%)

- Average (PMT) & (CFT) percentages $= (52\% + 63\%)/2 = 57.5\%$ $(\leq 75\%)$ likely overspend

- (CFP)% divided by (PMP)% $= 70\%/40\% = 1.75$ (≥ 1.03) likely overspend

- (PMT) minus (CFT) $= 52 - 63 = -9$ (-ve) likely overspend

3.Conclusions

There is a need for more longitudinal work to establish more rigorous relationships between (CFT) and (CFP) and (PMT) and (PMP) and costs. Based on the case study material used in these studies, there is existence of a relationship between Project Management factors and Cultural factors and the financial performance of projects, but this is not causal.

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