

Predicting Normative Commitment in Construction Value Management

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ABSTRACT

Projects' goals expressed as time, cost and quality requirements are seldom disputed. However, it is not easy to ensure that the defined goals will be implemented by all parties in the implementation process, whilst goal commitment is one of key variables towards project success and participant satisfaction in construction projects. Value Management is a tool to enhance / ensure the commitment to project goals amongst professionals in construction projects. However, it is still a debate whether construction participants implement the project goals, which are set through the systematic decision process, in the real world. In order to improve the implementation of complex construction projects in Hong Kong, it is critical to investigate goal commitment amongst temporary project team members. The paper aims at identifying the antecedents leading to goal commitment and predicting the normative commitment amongst construction professionals in the industry. A questionnaire survey was conducted in the study. The results indicate that five behavioral variables are the essential antecedents to predict the normative commitment in the construction projects.

KEYWORDS

Antecedent, Behavior, Construction Project, Normative Commitment, Value Management

INTRODUCTION

A few years ago, the Premier of the People's Republic of China, Mr. R.J. Chu, criticized Hong Kong people with "no Volition after the Discussion; no Action after the Decision" (SCMP 9/2001). A lack of goal commitment does not only exist in construction-related governmental departments, but also spreads to private companies in HK due to the uncertain economic environment. Although the overall economic situation has been improved in Hong Kong, the unemployment rate of construction workers in the industry is still over 15% in Hong Kong in 2004 (Census & Statistics Department 2004). In recent years, Hong Kong

government formed an ad hoc group to review the current construction practices. The formal report in 2001 emphasized the need for commitment in construction projects amongst the various stakeholders such as clients, professionals and suppliers in ensuring that the construction works meet the clients' dynamic expectations (Tang 2001). Value Management (VM) technique was suggested as a useful tool for the teamwork to enhance the commitment amongst construction professionals. Construction professionals should work with client and other stakeholders together in the VM workshop for clarifying project objectives, comparing design options and setting project goals. However, it is still difficult to ensure project participants implementing the specific project goals in the real world, especially during this economic recession and uncertain environment in the industry. The study aims at identifying the antecedents of commitments amongst construction professionals in the industry in order to predict

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the normative commitment of professionals in construction projects.

NORMATIVE COMMITMENT

Allen and Meyer (1990) suggested three distinguishable components of commitment in the psychological aspect namely, affective, normative and continuance commitments. Affective Commitment (AC) denotes identification with, emotional attachment to and involvement in the organization. Continuance Commitment (CC) denotes the perceived costs when staff leaves the organization. Normative Commitment (NC) reflects a perceived obligation to remain in the organization (Meyer et al. 2001). These three forms of commitment characterize an individual’s relationship with the entity in question and have implication for the decision to remain involved with it.

Normative commitment (NC) reflects a perceived obligation to maintain membership in the organization. The underlying construct of NC is that commitment is the totality of internalized normative pressures to act in a way which meets organizational goals and interests (cf: Wiener, 1982). Such perceived feelings generally motivate individuals to behave appropriately

and do what is right for the organization (Meyer and Allen 1991). Employees with a high level of NC remain in the organization because they feel that they ‘ought to’ do so (Allen and Meyer 1990, 1996).

ANTECEDENTS OF NORMATIVE COMMITMENT

Based on the extensive literature review, hundreds of studies examined the antecedents of commitment. The wide range of antecedents of commitment can be grouped into three categories: (i) personal characteristics, e.g., professional qualification, identification, acceptance, belongingness, internalization, etc.; (ii) Task-related characteristics, e.g., task nature, role difficulty and assessment; and (iii) organizational characteristics, e.g., senior supportiveness, centralization of authority and clarification (Mathieu and Zajac 1990). 26 hypothetical antecedents of commitment in the construction value management process are summarized in Table 1.

Due to the economic recession in Hong Kong, a lot of professionals stay in an organization with the CC rather than AC. In order to understand

Table 1 Hypothetical Antecedents of Commitment

Hypothetical Antecedents	
Factors	Variables
Personal	Relationship, Professional membership, Goal acceptance, Involvement, Belongingness, Goal specificity, Internalization, Resistant to change, Role specificity, and Participation
Task-related	Task nature, Task conflict, Task difficulty, and Assessment
Organisational	Authority, Senior supportiveness, Clarification, Equity, and Reward

the existing uncertain environment and improve the quality of construction projects, this study mainly investigated the antecedents of commitment in the construction projects, based on the identified behavioral variables.

the construction professionals in Hong Kong in 2002-03, including project managers, architects, civil / structural engineers, building services engineers, quantity surveyors, etc. Each set of questionnaire includes a four-page closed questionnaire. Out of 120 questionnaires, 75 were successfully returned in which 64 are valid for data analysis in the study. 11 respondents were returned with incomplete information and, thus, ignored in the data analysis stage.

A QUESTIONNAIRE SURVEY

A general questionnaire survey was conducted to

Table 2 *Pearson's Correlation of Normative Commitments and its Antecedents*

Model	Variables	Unstandardized Coefficients (B)	t	Sig.	R ²	ΔR ²
1	(Constant)	10.644	10.653	.000	.229	.229
	v10 : Reward	0.976	4.288	.000		
2	(Constant)	6.217	3.372	.001	.317	.088
	v10 : Reward	0.836	3.767	.000		
	v15 : Equity	1.228	2.800	.007		
3	(Constant)	9.032	4.520	.000	.399	.082
	v10 : Reward	0.979	4.542	.000		
	v15 : Equity	1.505	3.537	.001		
	v08 : Goal acceptance	-1.004	-2.878	.006		
4	(Constant)	7.548	3.975	.000	.496	.097
	v10 : Reward	0.761	3.637	.001		
	v15 : Equity	1.309	3.294	.002		
	v08 : Goal acceptance	-1.287	-3.862	.000		
	v04 : Role specificity	0.986	3.358	.001		
5	(Constant)	2.184	0.780	.439	.545	.049
	v10 : Reward	0.679	3.339	.001		
	v15 : Equity	1.369	3.591	.001		
	v08 : Goal acceptance	-1.090	-3.319	.002		
	v04 : Role specificity	1.003	3.563	.001		
	V25 : Internalization	1.116	2.518	.015		
6	(Constant)	4.971	1.697	.095	.587	.042
	v10 : Reward	0.815	4.008	.000		
	v15 : Equity	1.266	3.432	.001		
	v08 : Goal acceptance	-1.075	-3.404	.001		
	v04 : Role specificity	0.801	2.828	.006		
	V25 : + Internalization	1.544	3.346	.001		
	V24 : - Internalization	-0.960	-2.408	.019		

Ordinary least squares forward stepwise multiple regression analysis was used to predict the normative commitment caused by behavioural antecedents during the management process (cf: Pallant 2001). Table 2 summarises the results, showing that 'reward' (v12) was entered into the equation at first, followed by 'equity' (v17), 'goal acceptance' (v09), 'role specificity' (v05) and two 'internalization' variables (v27 and 28). The result provides support for the prediction that 'reward' (v12) is predominantly associated with the level of normative commitment, while the 'role specificity' (v05), 'equity' (v17) and 'goal acceptance' (v09) are also substantially related to the normative commitment incurred in construction management process (around 8-10% of variances).

Being a useful technique in exploring the predictive ability of a set of independent variables (e.g. antecedents) on a continuous dependent measure, the results of regression analysis indicate that only v12, v17, v09, v05, v28 and v27 are the antecedents influencing the normative commitment of construction professionals. Other possible related antecedents such as professional membership, relationship, clarification, authority, peer influence, belongingness, task difficulty and motive are excluded from the equation (refer to Table 1).

DISCUSSION

Out of the 26 hypothetical antecedents, 6 antecedents including two variables in personal factors and two variables in organisational factors and three variables in

personal-related factor are significantly related to the AC of construction professionals. This suggests that the NC of professionals is related to different types of behavioural variables in the management process.

Role specificity has been positively correlated to NC. Construction projects are normally complicated and involve various professionals within a limited period. A specific professional role induces feelings of obligation to maintain the project among professionals. Construction professionals thus believe that it is the 'right and moral' thing to do (Meyer and Allen 1991; Wiener 1982) and, will to make an extra effort in the project to achieve the project goal, since they feel they 'ought to do' so.

In goal setting theory, personal value and motive are the origins to stimulate individual's behaviour (Locke and Latham 1990). Normally, they contribute a positive influence to the individual behaviour and job performance, because *internalization* aims at congruent personal value with the team member's value systems (Becker et al. 1996). However, the study reveals that either positive or negative internalization can induce the NC among construction professionals. Professionals in the construction team will to attach to the project and devote their job if they involve the NC in the project.

VM workshop provides an opportunity to the participants in the decision process to identify the best value (project goal), but it is meaningless if the team members do not accept the common

Table 3 Antecedents of Normative Commitment in the Value Management Study

	Value Engineering Phases (SAVE 2004)	Antecedents of Normative Commitment
1.	Information	Role specificity *
2.	Function analysis	→ Equity +
3.	Creative	→ Equity +
4.	Evaluation	→ Equity +, Internalization *
5.	Development	→ Internalization *, Reward *, Goal acceptance *
6.	Presentation	→ Internalization *, Reward *, Goal acceptance *

Note: + – Organizational factors; * – Personal factors

goal and implement it according to the schedule. Hence, goal acceptance has to be established in the teamwork in order to ensure that the defined goal will be implemented in the actual process.

Apart from the personal-related variables, the equation also indicates two organizational variables (*equity and reward*) to predict the NC of construction professionals. To ensure that the outcome decided in the construction value management study workshop is implemented in the real world successful, the assessment method should be fair and just in the analysis and the evaluation phases of VM, as well as during the post-VM study, while some reward system (e.g., overtime payment, bonus, promotion, etc.) can be discussed and developed in the VM study. Of course, the whole team must ensure that all members accept the project goal at the end of workshop, as it will subsequently enhance the working performance during the implementation process. Antecedents of Normative Commitment are allocated throughout the Value Management study from the information phase to the presentation phase (see Table 3).

It is interesting to note that NC can be not predicted by any task-related variable for construction professionals, though task difficulty was found as one of the predicted variables for the AC of construction professionals (Leung and Sham 2004). Value management has a beneficial to assist team members to understand, expose and solve the task difficulties among professionals in the workshop. Task difficult requires construction professionals work together for solving the problems well, but task-related variables (nature/conflict/difficult) has no effect to their obligation for the completion of task.

CONCLUSION

A comprehensive study on value management provides us with valuable information to enhance the goal commitment amongst project participants

throughout the entire management process. Three forms of commitment have been identified in this paper based on literature in organizational behavior. NC concentrate the reason (ought) to do the project.

This paper indicates that, out of 26 hypothetical variables, 6 behavioral variables are found as antecedents of NC for construction professionals. It covers organization-related and personal-related variables in the value management workshop for construction projects. 'Reward', 'role specificity', 'equity', 'goal acceptance' and 'internalization' are critical antecedents to predict the NC of professionals. Hence, specific organizational system must be considered as a major problem in the VM workshop. Facilitators have to identify the role of professionals in the project in the beginning of VM workshop and set up an equity system among professionals in the analysis and evaluation processes. Since the professional will to devote their time and effort to finish the task in any situation, it is not necessary for facilitators to identify the personal and team values in the workshop. A fair and just analysis / evaluation approach and reward system should be adopted during and after the VM workshop, in order to ensure that the participants accepted the project goals normatively and will to implement it in the industry during the post-workshop stage.

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