

Exploring the Role of Ethical Climate on Knowledge Contribution Loafing in Construction Project Teams

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Abstract

Knowledge contribution loafing is seemingly perceived to be negative, and shall pose a threat to the team to success adequately fulfill the construction project. Arising from the organizational climate is lacked to facilitate the knowledge contribution. This paper aims to ascertain how to abate the negative impacts exerted by knowledge contribution loafing via ethical climate (instrumental climate, caring climate, rules climate, law and code climate, and independent climate) in construction project team. Through empirically anatomizing the 186 questionnaires that are adopted as an important source with the structural equation modeling analysis through the partial least squares method. It is bespoken from the results of this paper that the instrumental climate, caring climate, rules climate, and law and code climate help alleviate the negative impacts exerted by knowledge contribution loafing. And yet the independence climate exerts non-significant effect on knowledge contribution loafing in construction project team. For this reason, the instrumental climate, caring climate, rules climate, and law and code climate shall be established by the project team of construction to abate the negative impacts exerted by knowledge contribution loafing that shall conversely lead to benefits for the team as a whole.

Introduction

Construction project team emphasizes collaboration, which needs the knowledge sharing among project team members, and the formation of a virtuous feedback loop for knowledge contribution (Qi Wen & Maoshan Qiang, 2016). However, social loafing in knowledge contribution is a challenging issue. Knowledge Contribution Loafing reflects the effect of social loafing in knowledge sharing. It refers to the likelihood that an individual will not put full effort into knowledge contribution in a group setting. In a construction project team, Knowledge Contribution Loafing decreases various aspects of project performance (Brookes et al., 2006).

Mechanisms to abate Knowledge Contribution Loafing have aroused the progressively rising concern from researchers in project team, whereas merely one aspect of solutions is reflected to reduce Knowledge Contribution Loafing. Most project team members are reluctant to give up Knowledge Contribution Loafing, in that they may be short of shared beliefs and values, and fear of losing their self-competition. This may imply that one reason for a project team member's Knowledge Contribution Loafing lies in the lack of organization climates in project teams.

Organization climate plays an important role in a project team (Martine B. Hannevik et al., 2014). Ethical climate, an aspect of organization climate, shall be able to impact the ethical behaviors and the degree of participation in knowledge sharing activities. Knowledge sharing is regarded as a generous and ethical act of “donation” in the workplace (Wang, 2004). Nonetheless, social loafing in knowledge sharing maximizes the self-interest and bargaining power of team members, which hurts the operations and performances of teams and organizations. Therefore, it may be regarded as a moral transgression. Accordingly, introducing the perspective of ethical climate may help to reduce Knowledge Contribution Loafing. Surprisingly, no prior work has empirically investigated knowledge contribution from the perspective of ethical climate.

Hence, this study is among the first ones to consider ethical climate as an important precondition of Knowledge Contribution Loafing. Moreover, although the previous studies on Knowledge Contribution Loafing have been made among cross-industry groups, the research of Knowledge Contribution Loafing has not been conducted in a specific context, especially among construction project teams. In the following sections, an overview of the existing literature on Knowledge Contribution Loafing and ethical climate is first presented; subsequently, the research methodology including the hypotheses is described, then research design consisted of data collect and measure are represented; and results and discussions are assumed, the last section presents, the limitations and future research are provided.

Theory background

Knowledge Contribution Loafing

Knowledge Contribution Loafing tends to be perceived as negative, and abate the effectiveness of knowledge sharing. Since the social awareness would be decreased, individuals are inclined to hoard the knowledge contributions from other participants, other than proactively contribute their own knowledge in a group (Kerr, 1983). The project teams are frequently arranged as the temporary organizations in the context of construction projects (Bertrand & Andreas, 2013), individuals may be suspicious of and distrust group members, consequently resulting in the withhold effort in knowledge contribution in project teams. Moreover, knowledge is deemed as a highly personalized and intangible asset. Accordingly, it shall be difficult to distinguish knowledge, and the real knowledge contribution shall be also difficult to distinguish and measure. Hence, Knowledge Contribution Loafing is deemed as a threat to team project success.

In project teams, knowledge contribution self-efficacy and outcome expectations are considered by Yih-Chearng Shiue et al. (2010) as the important preconditions of knowledge withhold. The trust and justice were identified by Lin & Huang (2009) as critical factors to alleviate Knowledge Contribution Loafing in project team. In the meantime, some researches have examined Knowledge Contribution Loafing in project teams, whereas ignored a specific construction project context.

Ethical Climate

As Victor & Cullen (1987) state, ethical climate shall manifest the general perception of an individual towards the organization's operations. They defined it as

“the prevailing perceptions of typical organizational practices and procedures with ethical content”. A five-dimension framework of ethical climate was derived by Victor and Cullen empirically, comprising instrumental, caring, independence, law and code, and rules. In this paper, the foregoing five types are adopted in practice of construction project management.

In the case of project management, Martine et al. (2014) indicated that the ethical climate is perceived to be critical to the success in large-scale projects in the oil and gas industry. They highlighted that ethical climate shall exert an evident effect on communication and cooperation in the external/internal environment. As H. Jeff Smith et al. (2009) asserted, the impact exerted by ethical climate on alleviate project status misreporting. While some researches have examined ethical climate in construction projects, less attention has been paid to the impact exerted by the dimension of ethical climate in the construction project team.

Hypothesis

Knowledge Contribution Loafing is driven by individuals' concern for their own self-interest at the expense of the general welfare of other stakeholders. The effectuation of organizational ethical climate shall stimulate the ethical behaviors and punish unethical behaviors. Members shall devote themselves to a higher extent to their organizations when their ethical values conform to those values of the organizations (Ambrose et al., 2008), forming individuals share similar value systems. The conformity between the values of different individuals shall affect interaction among organization members, and accordingly the positive sharing attitude shall be established in work to fulfill the common objective. On the other hand, Tseng & Fan (2011) proposed that organizational ethical climate can encourages members to share their knowledge more willingly. The ethical climate reflects support climate of knowledge sharing, thus being conducive to optimizing the social loafing in knowledge contribution. In line with the foregoing analysis, the ethical climate could inhibit Knowledge Contribution Loafing in construction project teams. In the next section, the hypotheses inclusive of five dimensions of ethical climate are illuminated.

Instrumental

Instrumental climate emphasizes maximizing self-interest and organizations' interests (Filipova, 2011). Instrumental climate shall commonly exert impacts on the unethical behavior of organizational members, and alleviates the overall team performance in organization. Individuals perceiving instrumental ethical climate in their organizations tends to have norms stimulating the ethical decision-making from an egoistic perspective (Martin & Cullen, 2006). Organization members perceiving instrumental ethical climate make decisions for self-interest and team interest. Hence, when the instrumental climate turns dominated, the organization members shall be likely more interested in advancing the interests of the organization take the place of the concern about the consequences of violating the formal rule (James M et al., 2014). In construction project teams, members immersed in instrumental ethical climate inhibit breaking behavior in knowledge sharing. Therefore, the following hypotheses are proposed in this paper:

H1: Instrumental climate is negatively related to Knowledge Contribution Loafing.

Caring

The caring climate emphasizes the well-being of others. In the light of the benevolence ethical criterion, Martin & Cullen (2006) proposed that individuals in caring climate could perceive the norm of encourage ethical decision-making. In this climate, members make decisions with concerns for the well-being of others in the organization or organization members. Organization members immersed in caring climate have an imperative to help others, inclusive of other organization members, and organizational stakeholders. Moreover, Filipova (2011) suggest that caring climate is believed to prevent the workplace deviant behavior of organization members and alleviate their unethical behavior. In construction project teams, Knowledge Contribution Loafing causes behavior that violate norms, caring climate could help project team members perceive the needs of other members and respond accordingly. Hence, this paper proposes:

H2: Caring climate is negatively related to Knowledge Contribution Loafing.

Rules

Rules climate emphasizes following the organization's policies and procedures. In the rules climate, Concurrent with local rules and conduct is the overarching norm in the organization (Filipova, 2011). A strong and pervasive set of local rules and standards could guide the decision of organization. Organization members embedded in rules climate shall likely be reluctant to violate the rules, and alleviate the deviant workplace behavior of members in organization. Knowledge contribution in project team would likely not consider social loafing in that this behavior is considered counter to principles of the team. Therefore, this paper proposed the following hypothesis:

H3: Rules climate is negatively related to Knowledge Contribution Loafing.

Law and code

Law and code climate emphasizes that the ethical climate shall comply with the law and professional standards. The law and code climate fosters the expectation that organization members conform to existing codes of conduct. When law and code climate turns out to be prominent in an organization, employees make decisions in the light of behavioral codes external to the organization (Victor & Cullen, 1988). Furthermore, the law and code climate has proven to exert negative effect on deviant behavior, and conformity to the professional or societal norms is effective at preventing rule breaking in an organization (Vardi, 2001). Knowledge Contribution Loafing is perceived as deviant behavior in knowledge sharing, and alleviates the effectiveness of knowledge sharing. Hence, this paper proposes:

H4: Law and code climate is negatively related to Knowledge Contribution Loafing.

Independence

The independence climate lays particular stress on abiding by the organization's policies and procedures. Individuals are immersed in independence climate making ethical decisions reliance on personal moral beliefs, values, and ethics (Filipova, 2011). The individual's belief has been derived by considerable introspection. The independence climate is bound by independence of thought and action. Somewhat, individuals shall make ethical decisions in the light of their own ethical judgment in the face of an ethical dilemma. Ambrose et al. (2008) proposed

that individuals with a post-conventional level of cognitive moral development work in independence climates. It is accordingly bespoken that independence climates shall exert impact on their own behavior decisions in knowledge sharing. Thus, this paper proposes:

H5: Independence climates are negatively related to Knowledge Contribution Loafing.

Research design

Sample and data collection

The data of all variables were from empirically tested through adopting a survey of professionals across different project teams of China. The potential respondents are targeted as the employee of Construction units, Contractors, Supervision units, Design units, and other units in construction projects. The respondents were asked to describe personal information and project they were working on, and subsequently answer questions in terms of the Knowledge Contribution Loafing and ethical climate. The questionnaire has selected through adopting a 5-point Likert scale ("1 = strongly disagree" to "5 = strongly agree").

The online questionnaire and printed questionnaire were adopted to collect data for this study from April 1 to June 15, 2017. Eventually, 186 usable questionnaires were collected; the respondent rate was attained as 85.3%. 55.38% of the respondents were male and 44.62% were female. 44.67% of the respondents were manager and 53.23% were non-manager. The team size ranged from 3 to 45 members and the year in working with project team members ranged from 1 to 17.

Measures

As one of the main methods to analyze statistical data of questionnaire that employs Likert scale, PLS-SEM (Partial-Least Squares Structural Equation Modeling) can be applied in researches with small sample sizes and skewed distribution. Because the paper performed an analysis on a research with 186 sample sizes, which are considered small, PLS-SEM was adopted to test the empirical model and verify the hypotheses of the research.

Multi-item scales were adopted to operationalize all the latent variables (see Table 1). Items were extracted from the literature, and backward translation (translated from English into Chinese, and back into English) was adopted to measure the items. The Knowledge Contribution Loafing was in the light of the well-established concept of Lin & Huang (2009), a six-item measure was developed to measure Knowledge Contribution Loafing. Similarly, the ethical climate is measured through adopting twenty-six items developed by Victor & Cullen, (1988). However, the pre-survey results demonstrate that not all twenty-six items of five dimensions exist in this context. After eliminating the items with factor loading less than 0.5, twenty-three items are retained as this paper hypotheses. The remaining items are exhibited in Table 1.

Table 1. Summary of measurement scales

Item	Loading factors
Knowledge Contribution Loading (KCL) , Cronbach's alpha = 0.851, AVE=0.573, CR=0.889	
In group discussion for knowledge sharing, . . .	
I sometimes show up late even when I could make it in on time	0.762
I contribute less knowledge than I know I can	0.741
I give less effort on knowledge contribution than other member	0.749
I take it easy if others are around contributing his/her knowledge	0.746
I sometimes daydream	0.780
I sometimes call in sick even when I am not sick	0.764
Instrumental Climate , Cronbach's alpha =0.874, AVE=0.614, CR=0.905	
In project team, members protect their own interests above all else.	0.742
In project team, members are mostly out for themselves.	0.808
There is no room for one's own personal morals or ethics in this project team.	0.750
People are expected to do anything to further the project team's interests, regardless of the consequences.	0.828
People here are concerned with the project team's interests —to the exclusion of alt else.	0.826
Work is considered substandard only when it hurts the project team 's interests.	0.742
The major responsibility of people in this project team is to control costs.	0.742
Caring Climate , Cronbach's alpha =0.917, AVE=0.751, CR=0.938	
What is best for everyone in the project team is the major consideration here.	0.878
The most important concern is the good of all the people in the project team as a whole.	0.864
In project team, it is expected that you will always do what is right for the partners and public.	0.856
The most efficient way is always the right way in this project team.	0.850
In project team, each member is expected above all to work efficiently.	0.884
Rules Climate , Cronbach's alpha =0.859, AVE=0.693, CR=0.871	
it is very important to follow the project team 's rules and procedures here.	0.912
Every member is expected to stick by project team rules and procedures.	0.799
People in this project team strictly obey the team policies.	0.781
Law and Code Climate , Cronbach's alpha =0.893, AVE=0.758, CR=0.926	
In project team, members are expected to comply with the law and professional standards over and above other considerations.	0.877
In project team, the law or ethical code of their profession is the major consideration.	0.904
In project team, members are expected to strictly follow legal or professional standards.	0.810

In project team, the first consideration is whether a decision violates any law. 0.888

Independence Climate, Cronbach's alpha =0.793, AVE=0.702, CR=0.904

In project team, members are expected to follow their own personal and moral beliefs. 0.813

Each project team members decides for themselves what is right and wrong. 0.848

The most important concern in this team is each member's own sense of right and wrong. 0.824

In project team, members are guided by their own personal ethics. 0.866

Results and analysis

Measurement model

Evaluation of the measurement model was conducted upon reliability and validity. Reliability consisted of two aspects, reliability of individual item and construct reliability. Reliability of individual item was evaluated by factor loadings and the loadings of all items were significantly more than 0.7 (Table 1), which was proved to be in an appropriate level of reliability. In the aspect of construct reliability, this paper used composite reliability (CR) and Cronbach's alpha to evaluate it. The values of CR and Cronbach's alpha were more than 0.8 and 0.7 respectively, both of which reached their threshold values. As a result, the reliability of every construct was acceptable. Besides, convergent validity was evaluated by average variance extracted (AVE) and the AVEs of all latent variables were more than 0.5. Therefore, we could conclude that the reliability of measurement model reached an ideal level.

For satisfactory discriminant validity, the AVE for a construct are expected to be greater than the off-diagonal elements in the corresponding rows and columns. As shown in Table 2, the square roots of all AVEs in diagonals are greater than their corresponding off-diagonal elements, indicating that each construct exhibits acceptable discriminant validity. In this table, the off-diagonal elements show the correlations between the factors. Thus, it can be concluded that the discriminant validity of the constructs were satisfactory.

Table 2. Discriminate validity (Fornell - Larcker Criterion).

	Caring	Rules	Instrumental	KCL	Law and Code	Independence
Caring	0.866					
Rules	0.228	0.833				
Instrumental	0.285	0.334	0.784			
KCL	-0.585	-0.298	-0.549	0.757		
Law and Code	0.317	0.283	0.572	-0.592	0.870	
Independence	0.332	0.211	0.388	-0.568	0.466	0.838

Structural model

The structural model shows potential causal dependencies between each dimension of ethical climate (instrumental, caring, rules, law and code, and independence) and Knowledge Contribution Loading. To test the hypotheses, the path

coefficients between all constructs were examined, then computed the coefficients of determination R^2 by each path.

The result of path coefficients, out of the five hypotheses H1, H2, H3 and H4 are supported; while H5 is rejected. Results demonstrate that the relational instrumental climate, caring climate, rules and law and code of ethical climate have a positive effect on Knowledge Contribution Loafing (H1: $b=-0.235$; $p<0.001$; H2: $b=-0.253$; $p<0.001$; H3: $b=-0.363$; $p<0.001$; H4: $b=-0.204$; $p<0.001$). However, the effect of the independence climate of ethical climate on Knowledge Contribution Loafing is insignificant (H5: $b=-0.027$).

Discussion

Overall, this study examines the role of ethical climate on Knowledge Contribution Loafing in construction project teams. Accordingly, the findings below are attained.

From the supported H1, it is evident that instrumental climate exhibits evidently negative relationship with Knowledge Contribution Loafing. This is in line with the findings of Pablo (2016). High performance instrumental climate bespeaks that it is more interested in advancing the interests, productivity, and profitability of the organization consequently, supporting the project team member's willingness to adequately commit to cooperation. It can therefore be further inferred that, instrumental climate between project team members shall effectively make them more willing to share knowledge.

From the supported H2, caring climate is more likely to encourage willingness to help others, inclusive of organization members, organizational stakeholders, and society at large. Therefore, project team members perceiving a caring climate have an imperative to knowledge sharing between members.

From the supported H3, rules climate, through creating a relationship atmosphere of suppress deviant behavior such as rule breaking, which is more in alignment with Bulutlar (2009). Accordingly, a project team exist rules climate likewise affects an individual's knowledge sharing to behave unethically behavior and control the Knowledge Contribution Loafing in project team.

The supported H4 suggest that a project team with law and code climate shall commonly take on more behavioral codes which goes guide decision-making to pursue team-interests. Therefore, a project team with a law and code climate is more likely to perceive high knowledge sharing atmosphere in construction projects.

It is bespoken from the test results of H5 that, the independent climate and Knowledge Contribution Loafing. This may arise from that independent climate is encouraged to make decisions in the light of their own moral code. Compared with external forces or outside influence, individuals in project team of construction tend to make decisions in the light of an individualized set of principles (Martin & Cullen, 2006). Additionally, an independence climate creates an atmosphere if the individual confronts an ethical dilemma, which individual's moral code runs counter to organizational rules. In independent climate, the construction project team members usually considerate their own interests than team interests. For this reason, it can be attained that an independence climate shall exert non-significant effect on Knowledge Contribution Loafing in construction project team.

Implications and Limitations

As the first research paper to empirically study Knowledge Contribution Loafing in the context of construction project team. The study references ethical climate theory to ascertain the Knowledge Contribution Loafing, brings a new perspective about ethical climate to Knowledge Contribution Loafing literature. Then, this research first considers five dimensions of ethical climate, and indicating that instrumental, caring, law and codes and rules climate exert an important effect on prevent Knowledge Contribution Loafing in construction project team. It is asserted in this paper that ethical climates of a project team are evidently bound by its Knowledge Contribution Loafing behavior. This is an important observation in that it opens a possible pathway for controlling project member Knowledge Contribution Loafing. To alleviate the Knowledge Contribution Loafing of the team member, the construction project should be more concerned about the potential influence of organizational climate about ethical.

In this study, there is no strict distinction in construction project team of different context in this research. Therefore, the data classification can be amplified to ascertain the influence exerted by ethical climate influence on Knowledge Contribution Loafing for different types of project team (construction units, contraction, design units and supervision units, etc.) in the future research.

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