

Organizational climate, team conflict and project performance: Basis for construction management framework

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Abstract

With the increasingly fierce market competition and the increasing difficult problem and scale of construction projects, the problem of project conflicts has become increasingly serious, with team conflicts being the most prominent. In the process of construction projects, there are usually functional conflict and destructive conflict. Different kinds of conflicts can interact and transform, they have a positive or negative effect on project performance. Therefore, the handling of conflicts is crucial. As a key factor in resolving conflicts, the action of organizational climate in team conflicts and project performance deserves further exploration. Therefore, this article studies the relationship among organizational climate, team conflict, and project performance in construction projects, with the aim of providing theoretical guidance and decision reference for conflict managers. By analyzing and summarizing relevant literature, this article starts from the inherent characteristics of construction projects and project-based organizational characteristics and divides organizational climate into three dimensions: fairness perception, contract flexibility, and Organizational incentives. Divide conflicts into three dimensions: task conflicts, process conflicts, and relationship conflicts. Then analyze the relationship among the dimensions of organizational climate, different kinds of conflicts, and project performance. The research results indicate that: Organizational incentives, perceived fairness, and task conflict are significantly positively correlated, while process conflict and relationship conflict are significantly negatively correlated. Contract flexibility is significantly negatively correlated with process and relationship conflicts, and positively correlated with task conflicts. Task conflict is significantly positively correlated with project performance, while relationship conflict and process conflict are significantly negatively correlated with project performance. Organizational incentives, perceived fairness, and contract flexibility are significantly positively correlated with project performance. Conflict plays a partial mediating role in the impact of organizational climate on project performance. There is a significant negative correlation between team conflict and project performance, a significant negative correlation between team conflict and organizational climate, and a significant positive correlation between organizational climate and project performance.

Keywords: organizational climate, team conflicts, project performance, construction management framework

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1. Introduction

In recent years, with the rapid development of China's economy and the continuous growth of fixed assets investment, construction projects have become increasingly large-scale, complex and integrated. In the face of increasingly fierce competition and complex and changeable environment, despite the rapid development of construction technology and professional technology, the team conflict in project management has not been paid enough attention (Tang, et al., 2020). Serious conflicts not only lead to bad relations among organizations, causing difficulty in mutual trust among project teams and causing waste of social resources (Grammatikopoulos, et al., 2022).

The delivery process of construction projects involves different teams of project participants, including the owner, contractor, design team, etc. (Wu, et al., 2020). Due to the differences in the objectives, technical means and interest demands of the engineering project team, and the interdependence among them, as well as the temporary nature of the engineering project team, the one-time construction process, and the incompleteness of the contract, the conflict among project teams is inevitable (Yap, et al., 2020; Tariqet al., 2023). Failure to resolve conflicts in a timely manner not only leads to tense relationships among teams, but also makes quality, schedule, and cost difficult to control, which has a negative impact on project performance (Kiani, et al., 2021).

The construction engineering project team is established by project participants to adapt to the effective of the project and achieve timely handover for use of the project. Every effort of the project team is carried out to achieve project performance, with characteristics such as temporary, multi-objective, and complexity. There are generally differences in the knowledge structure, cultural values, and interest demands of each project team (Hamledari et al., 2021).

In the construction process of engineering projects, the ability to successfully resolve team conflicts, coordinate project operations, and complete project performance plays a key role in organizational conflict management, which is related to the success or failure of the project (Irfan, et al., 2019). As the integrator of project resources and the organizer of project construction, project-based organizations are the core of project management and the guarantee of achieving project success.

In the operation process of these organizations, organizational climate plays an important role. A good organizational climate makes the project team to fully understand the perspectives and intentions of both parties, and clarify each other's rights, responsibilities, and interests. Poor conflict resolution often escalates into disputes, hindering the normal progress of the overall project process and specific tasks, causing delays in the project schedule and damaging the overall benefits of the project (Dodanwala, et al., 2021).

Therefore, in order to examine the positive role of organizational climate, team conflict, and project performance in construction projects, and to improve project management level, this article combines the inherent characteristics of construction projects and the characteristics of project-based organizations to divide the organizational climate of construction projects into three dimensions: Organizational incentives, fairness perception, and contract flexibility. Team conflict is divided into three dimensions: task conflict, relationship conflict, and process conflict. Through current research and literature review, demonstrate the relationship among organizational climate, team conflict, performance in construction projects, establish a theoretical framework, and then conduct correlation analysis.

According to the real situation of construction projects in China, this article delves into the relationship among organizational climate, team conflict, and project performance in construction projects, providing reliable

reference for managing team conflict and improving project management performance. In addition, applying the research results to the field of engineering management can provide decision-making references for improving project performance and conflict management level in project management.

Objectives of the Study - This study explores the relationship among organizational climate, team conflict, and project performance, and proposed relevant suggestions and strategies to provide dependable reference for promoting the level of construction project management. Specifically, determined the organizational climate from aspects such as contract flexibility, fairness, and Organizational incentives, determined the degree of team conflict among all participants involved in construction projects from three aspects: task conflict, process conflict, and relationship conflict. Evaluated the performance of construction projects from aspects such as overall project objectives, diversified project objectives, and project satisfaction. Analyzed the significant relationship between organizational climate, team conflict and project performance and developed a framework for the construction project management.

2. Methods

Research Design - In order to obtain relevant data to validate the research objectives, researchers used descriptive and correlation research methods. This research uses a quantitative method to study the correlation among organizational climate, team conflict, and project performance, and qualitatively explores the impact of three variables on the level of engineering project management. As defined by Thomas, (2022), descriptive methods contain collecting data to reply questions about the present situation of research subjects. This has been tested as the ability to provide basic knowledge about the character of the theme. Researchers get questionnaire data by WeChat questionnaire collection mini programs and manual distribution. In addition, the researchers actively liaise closely with the owners of 10 engineering projects located in 5 cities to ensure support and ensure that all participants in the projects are prepared to complete the survey questionnaire.

Participants of the Study - In this paper, the questionnaire survey is the main form of data collection. By comprehensively considering the views of various scholars, this paper sets the sample size as 300-400. In order to investigate the relationship among the organizational climate, team conflict and project performance of engineering projects, the large sample survey mainly focuses on the middle and senior managers of the project team, mainly targeting the project teams engaged in the construction engineering and real estate industry, including the project teams of owners, contractors and designers. The teams have more than half a year of project cooperation experience. The sample data of large sample survey is mainly taken from large and medium-sized engineering projects in China.

The questionnaire is mainly distributed in 10 engineering projects, which are located in five cities in China. Each engineering project collects 30-40 questionnaires from different participants of the engineering project, such as the owner, the general contractor, the project supervisor and the designer. The sample data of the large sample survey was mainly taken from large and medium-sized engineering projects in five cities, including Nanjing, Jinan, Zhengzhou, Hefei, and Bengbu. A total of 360 questionnaires were issued, 332 were returned, and the invalid questionnaires were disregarded. Finally, the number of samples used in this study was 320, and the measurement terms for the participants were 53.

From the education level of the sample, it can be seen that the surveyed population has a higher level of education, which is conducive to understanding concepts such as organizational climate, team conflict, and project performance, thus making more accurate and objective judgments; From the perspective of work experience, the vast majority of the surveyed population has more than 5 years of work experience, which is related to the research subjects of the sample, mainly targeting middle and senior managers; From a job perspective, the vast majority of the surveyed population are middle to senior managers; From the perspective of project types, most of the projects participated by the surveyed population are residential projects.

Data Gathering Instrument - The survey includes four parts. The first part is the basic information of the

respondents themselves and the basic situation of the engineering projects they undertake, including the location, scale, enterprise scale, individual gender, education level, position and work experience of the project; Second, the measurement of organizational climate; Third, team conflict measurement; Fourth, project performance measurement. When measuring organizational climate, the research results of Lee, et al. (2019), Mertens and Recker (2020), Xu, et al. (2022, 2019) were used for reference. Among them, contract flexibility includes 6 measurement clauses, fairness perception includes 6 measurement clauses, and organizational incentives include 5 measurement clauses.

When measuring project performance, the research results of Hongyan, et al. (2023). The overall project goal includes 5 measurement clauses, the diversified project goal includes 5 measurement clauses, and the project satisfaction includes 5 measurement clauses. Each scale item is fixed at numbers 1 to 4; 1 indicates strong disagreement; 2 indicates different expectations; 3 indicates agreement; 4 indicates strong agreement. The data used in this test were collected from three engineering projects in Hefei City and Bengbu City, Anhui Province, China through questionnaires. The participants of the engineering project (the owner, the contractor, the supervisor, the designer, etc.) were interviewed. Reliability results showed that Cronbach's alpha for contract flexibility (0.739), Fairness perception (0.834), Organizational incentives (0.739), Task conflict(0.798), Process conflict(0.733), Relationship conflict(0.748), Overall goal (0.825), Diversification goal (0.722) and Satisfaction (0.788) Indicate that these projects have acceptable internal uniformity.

Procedure - To examine the relationship among the organizational climate, team conflict, and project performance of engineering projects, a large sample survey mainly focused on middle and senior management personnel of project teams, mainly targeting project teams engaged in the construction and real estate industries, including owners, contractors, and design teams, all of which have over half a year of project cooperation experience. The questionnaire is entrusted to classmates and friends engaged in engineering projects to complete the distribution and collection of the questionnaire. The sample data of the large sample survey was mainly taken from large and medium-sized engineering projects in five cities, including Nanjing, Jinan, Zhengzhou, Hefei, and Bengbu. A total of 380 questionnaires were issued, 332 were returned, and the invalid questionnaires were deleted. Finally, the sample size used for this study is 320.

Data Gathering Procedure - To examine the relationship among the organizational climate, team conflict, and project performance of engineering projects, a large sample survey mainly focused on middle and senior management personnel of project teams, mainly targeting project teams engaged in the construction and real estate industries, including owners, contractors, and design teams, all of which have over half a year of project cooperation experience. The questionnaire is entrusted to classmates and friends engaged in engineering projects to complete the distribution and collection of the questionnaire. The sample data of the large sample survey was mainly taken from large and medium-sized engineering projects in five cities, including Nanjing, Jinan, Zhengzhou, Hefei, and Bengbu. A total of 380 questionnaires were issued, 332 were returned, and the invalid questionnaires were deleted. Finally, the sample size used for this study is 320.

Ethical Considerations - When conducting research work, it is ethical to make sure that every information got is just for research. In this study, the researcher signed a non-disclosure agreement to make sure the interviewees that every information collected will be kept confidential to the greatest extent to protect the public reputation of relevant organizations and individuals. In addition, the interviewees were also informed of the purpose of the study, which is to develop a reference framework for managing team conflicts in engineering projects and improving project management performance.

Data Analysis - In this study, descriptive statistics, weighted mean, Pearson product moment correlation, and analysis of variance (ANOVA) were used for data analysis. By obtaining basic descriptive analysis and statistical indicators of the data, it is possible to have a macro grasp of the data to be analyzed as a whole, observe the basic characteristics of the data, and make necessary preparations for subsequent correlation analysis. Correlation analysis is a statistical analysis method that does not consider the causal relationship among

variables and only studies the correlation among variables. The elements of correlation need to have a certain connection before correlation analysis can be conducted. Through correlation analysis, the correlation among variables can be determined. All data were analyzed and processed using statistical tools to explain the descriptive analysis of statistical indicators and the correlation among variables.

3. Results and Discussion

Table 1

Organizational Climate

Indicators	Weighted Mean	Verbal Interpretation	Rank
Contract Flexibility	2.84	Agree	3
Fairness Perception	2.89	Agree	1
Organizational incentives	2.88	Agree	2
Composite Mean	2.87	Agree	

Legend: 3.50 – 4.00 = Strongly Agree, 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

The descriptive statistical analysis of the three dimensions of organizational atmosphere including contract constraints, perceived fairness, and organizational incentives. The weighted average of all measurement indicators is 2.87, indicating that the respondents agree that the listed measurement dimensions can be used to study organizational climate. This study defines the organizational atmosphere of construction projects as the cognition and perception of the internal environment of each project team during the construction process of the construction project (Zheng, et al., 2019).

As a holistic understanding of organizational function and environment, organizational atmosphere has a significant impact on the psychology and behavior of project teams (Farahnak, et al., 2020). In addition, quantitative research on organizational atmosphere requires dividing its dimensions. Currently, researchers have not formed a unified opinion on the division of organizational atmosphere dimensions, and the division of organizational atmosphere dimensions is generally based on the research purpose.

Research on organizational atmosphere mainly focuses on team level "perception". Therefore, based on the background of construction projects in China and the characteristics of conflict antecedents, this article divides the organizational atmosphere of construction projects into organizational incentives, fair perception, and contract flexibility. Fairness perception refers to the perceived fairness of the project team towards the organization during the implementation of the construction project (Sheeraz, et al., 2020). Contract flexibility refers to the perceived ability of a project team to respond economically and quickly to the external environment of the project (Xu, et al., 2019).

Among the listed indicators, the highest weighted average of all measurement indicators is 2.89, indicating that respondents agree with the impact of perceived fairness on organizational atmosphere. In the construction process of engineering projects, project teams often use each other's advantages to gain their own interests. In this process, the benefits of both or more parties in the team may not be equal, but must be fair (Khosravi, et al., 2020). The fair atmosphere of the organization determines the likelihood of conflicts between project teams.

Among the listed indicators, the weighted average of all measurement indicators is followed by 2.88, indicating that respondents agree with the impact of Organizational incentives on organizational atmosphere. Good Organizational incentives focuses on improving team performance and team member abilities, encouraging effort and cooperation, and emphasizing the development of team member knowledge and skills. This atmosphere will promote project teams to develop more adaptive behaviors, such as better work performance Extra effort and higher attention to work. The minimum weighted average value is 2.84, which means that respondents agree with the impact of contract constraints on the organizational climate. Injecting flexibility into the contract makes it possible to achieve reasonable risk sharing and cooperation between project teams, which can effectively prevent opportunistic behavior and Moral hazard behavior between project teams when risk sharing is unreasonable. The organizational incentive atmosphere is particularly crucial.

The result reciprocal behavior between teams will greatly improve conflicts between project teams, thereby having a positive effect on project performance. In addition, during project implementation, contract flexibility plays a key role in resolving conflicts between teams, which is reflected in the post adjustment mechanism to deal with uncertain events and conflicts (Xu, et al., 2019).

A good organizational atmosphere can enhance individual performance, organizational performance, and project performance, while a bad organizational atmosphere can weaken performance (Mohmand et al., 2020). Zeidan et al., (2020) pointed out that there is an interaction and influence between organizational atmosphere and project performance. A good organizational atmosphere can improve the improvement of project performance, and the improvement of project performance is beneficial for the formation of a good organizational atmosphere. Salzman et al., (2018) found in their study that an open organizational atmosphere is beneficial for improving job satisfaction among employees and teams and can promote project performance. Yin, et al. (2021) found through their survey of employees in enterprises in Chinese Mainland that the organizational atmosphere of high innovation and high support will enhance employees' work participation and enthusiasm and play a role in promoting work performance. Yuan (2018) pointed out through empirical research that an innovative and fair organizational atmosphere can enhance teamwork enthusiasm and innovation ability and have a positive impact on project performance.

Table 2

Respondent's Team Conflict

Indicators	Weighted Mean	Verbal Interpretation	Rank
Task Conflict	2.82	Agree	1
Process Conflict	2.61	Agree	2
Relationship Conflict	2.57	Agree	3
Composite Mean	2.66	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

The descriptive statistical analysis of the three dimensions of team conflict including task conflict, process conflict, and relationship conflict. The weighted average of all measurement indicators is 2.66, indicating that the respondents agree that the listed measurement dimensions can be used for research on team conflict.

In the construction process of engineering projects, project team conflicts mainly manifest as inter team conflicts, namely conflicts between teams of various project participants. Specifically, construction project team conflict refers to the interaction process between teams during the implementation of engineering projects due to differences among project participants in terms of quality, schedule, and cost (Farid, et al., 2019). The conflict between construction project teams not only reveals the differences in goals and interests between different project teams, but also reflects the differences in team relationships and task and process arrangements during project implementation.

Among the listed indicators, the highest weighted average of all measurement indicators is 2.82, indicating that the respondents agree that the task conflict dimension can be used for team conflict research. Due to the complexity, indeterminacy, and multi-objective nature of construction projects, many new viewpoints and information will inevitably arise during the discussion of project tasks, leading to task conflicts, Task conflicts can improve team performance and enhance project performance. Task conflict is the different views or divergences of the project team regarding the specific goals of the project (Homan, et al, 2020).

Process conflict refers to the conflicts, oppositions, or disagreements that arise during the project implementation process when the project team arranges task processes, which can easily occur in the process of arranging processes and tasks, involving project resources, status, responsibilities, etc. (Newaz, et al. ,2022). Relationship conflict is a conflict caused by uncoordinated or inconsistent relationships between teams, which can arise from multiple factors including differences of opinion, negative emotions, and interfering behaviors among teams (Irfan, et al., 2019).

The weighted average of all measurement indicators is followed by 2.61, indicating that respondents agree that the process conflict dimension can be used for team conflict research. Process conflict is common in construction projects, and its causes include unequal status of project participants, incomplete contracts, and asymmetric information. Process conflict not only reduces team cohesion and affects project performance, but also leads to a decrease in the smoothness of cooperation between teams, Make it difficult for each team to effectively cooperate to complete work tasks. The minimum weighted average value of all measurement indicators is 2.57, indicating that respondents agree that the relationship conflict dimension can be used for research on team conflict. Relationship conflict can have a significant impact on project team performance and decision-making, thereby affecting project performance. In the process of project decision-making, debates between project teams are often too intense, leading to feelings of tension, anger, hostility, and other negative emotions, making task conflicts the trigger for relationship conflicts (Franke & Foerstl,2018).

Compared to task conflicts, process conflicts involve the arrangement of task processes and the execution of specific tasks. Once the interests of the project team are involved, it will inevitably lead to inter team relationship conflicts (Yap, et al., 2020). Taking task conflict and relationship conflict as examples, they are often closely related, and the high correlation between them is supported by many empirical data (Tariqet al., 2023).

Table 3

Project Performance of the Companies

Indicators	Weighted Mean	Verbal Interpretation	Rank
Overall Goal of the Project	2.94	Agree	1
Diversification Goal of the Project	2.92	Agree	2
Satisfaction of the Project	2.84	Agree	3
Composite Mean	2.90	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

The descriptive statistical analysis of the three dimensions of project performance including overall goals, diversification goals, and project satisfaction. The weighted average of all measurement indicators is 2.90, indicating that the respondents agree that the listed measurement dimensions can be used for project performance research. In engineering projects, project performance reflects the operational benefits of the project, and the efficiency of business activities conducted to realize these benefits. It is reflected in the process and results of construction project implementation (Akram, et al.,2018).

This article primarily explores the relationship and mutual influence between the organizational atmosphere, team conflict, and project performance of engineering projects. Therefore, based on the intrinsic properties of engineering projects and the attributes of engineering project teams, the connotation of project performance is summarized into the following three parts from the time dimension and project stakeholder dimension: (1) overall project objectives, including cost, duration, and quality (Khosravi, Rezvani&Ashkanasy,2020). (2) The diversified objectives of the project, including risk management, conflict avoidance, and cooperation enhancement (Pitafi, et al., 2020); (3) Project satisfaction, including end-user satisfaction, design team satisfaction, and construction team satisfaction (Malik et al., 2021).

Among the listed indicators, the highest weighted average of all measurement indicators is 2.94, indicating that the respondents agree that the overall goal dimension of the project is used for research on project performance. The three indicators of engineering cost, quality, and progress are popularly used in the assessment and measurement of project performance or project success.

The weighted average of all measurement indicators is followed by 2.92, indicating that the respondents agree that the project diversification goal dimension is used for project performance research. There is a diversity of evaluation perspectives on project performance, including the perspectives of the employer, contractor, user, and the public. Project performance is a more long-term judgment, including two stages before and after project handover and use, where the delivery stage primarily considers project cost, duration.

In terms of quality, the post-delivery stage mainly focuses on the satisfaction assessment of users and project participants, the impact evaluation on consumers, and the evaluation of commercial value. In construction projects, the interests and demands of each project participant are different, so the evaluation criteria of project performance are diverse and influenced by multiple factors (Graham, et al., 2020). The diversified objectives of the project include risk management, conflict avoidance, and cooperation enhancement (Tariq & Gardezi, 2023). This stage takes into account the concept of the project lifecycle and factors such as the post-delivery stage, and emphasizes the importance of project satisfaction, pleasant cooperation, reputation, etc. (Ghorbani, 2023).

There is a relationship between satisfaction and factors such as management level, salary, and work conditions. Combining project governance with project management, the study of project performance is more based on the perspective of project lifecycle (Papadonikolaki, et al., 2019).

Relationship of Organizational Climate to Team Conflict - The correlation analysis among various dimensions of organizational climate and team conflict. The p-value of contract flexibility and task conflict is 0.005, less than 0.05, and r is a positive number, indicating a significant positive correlation among contract flexibility and task conflict. The p-value of contract flexibility and process conflict is 0.001, less than 0.05, and r is negative, indicating a significant negative correlation among contract flexibility and process conflict. The p-value of contract flexibility and relationship conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation among contract flexibility and relationship conflict. The p-value of contract flexibility and team conflict is 0.011, less than 0.05, and r is negative, indicating a significant negative correlation among contract flexibility and team conflict. It can be seen that there is a significant positive correlation among contract flexibility and task conflict, while there is a significant negative correlation with process conflict, relationship conflict, and team conflict.

It implies that the higher the flexibility of the contract, the higher the task conflict among teams, the lower the relationship conflict and process conflict among teams, and the lower the team conflict. Liu (2018) stated that in construction projects, although the inclusion of flexible response mechanisms in contract terms provides a strategic tool for addressing risk uncertainty in the project, it helps to address risk uncertainty.

Adding a flexible reaction mechanism into the terms of contract can reserve space for dealing with project uncertainty. When the team of project participants encounters conflicts or conflicts during the construction project implementation process, both parties can respond in a timely and reasonable manner (You, et al., 2018). As an important component of construction project management, contract flexibility has the effect of rapid response, and project teams can quickly take corresponding measures to respond to uncertain events. However, although project-based organizations have a readjustment mechanism to address project uncertainty, there is inevitably a redistribution of benefits and risks among project teams during the readjustment process (Zaman, Nawaz, Tariq & Humayoun, 2019). In terms of constraints on the owner, including payment of a guaranteed letter, timely payment of project funds, and the right of the contractor to claim compensation in case of poor performance by the owner. In terms of constraints on contractors, including payment of performance bond, advance payment guarantee and quality bond (Song, Hou&Tang, 2021).

The p-value of fairness perception and task conflict is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation among fairness perception and task conflict. The p-value of fairness perception and process conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation among fairness perception and process conflict. The p-value of fairness perception and relationship conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation among fairness perception and relationship conflict. The p-value of fairness perception and team conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation among fairness perception and team conflict. Fairness perception is significantly positively correlated with task conflict, negatively correlated with process conflict and relationship conflict, and negatively correlated with team conflict.

It implies that the better the perception of fairness, the higher the task conflict among teams, the lower the process conflict and relationship conflict among teams, and the lower the team conflict. If team members feel fair about their own investment and returns, it is beneficial to enhance team satisfaction and enhance team members' work enthusiasm (Brykman et al., 2021).

The resulting sense of unfairness often leads to team members experiencing a state of tension and anxiety during the implementation of construction projects, leading to the outbreak of inter team relationship conflicts (Yin, et al., 2021). In addition, procedural fairness refers to the feeling of team members about whether the execution process of team benefits and team decisions is fair (Legood et al., 2021).

The implementation of a construction project is a long-term process, and achieving procedural fairness can effectively ensure the long-term interests of project team members, promote project progress, process planning, resource allocation, and facilitate the resolution of process conflicts among project teams (Chen et al., 2022). Unfair procedures often lead to emotional exhaustion and negative behavior among team members, leading to negative emotions such as depression and hostility among teams (Song et al., 2018). The fairness of the organizational climate determines the likelihood of conflicts occurring. The project participants (owners, contractors, designers, and supervisors) have a good organizational fairness climate, which can create a pleasant and relaxed work climate within the organization, help reduce the generation of negative emotions such as oppression and hostility among teams and promote the establishment of harmonious interpersonal relationships among teams (Riyanto et al., 2021).

The p-value of Organizational incentives and task conflict is 0.008, less than 0.05, and r is a positive number, indicating a significant positive correlation between organizational incentives and task conflict. The p-value of organizational incentives and process conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between organizational incentives and process conflict. The p-value of organizational incentives and relationship conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between organizational incentives and relationship conflict. The p-value of organizational incentives and team conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between organizational incentives and team conflict. It can be seen that organizational incentives is significantly positively correlated with task conflict, negatively correlated with process conflict and relationship conflict, and negatively correlated with team conflict.

This means that the better organizational incentives, the higher task conflicts among teams, the lower process and relationship conflicts among teams, and the lower team conflicts. This climate promotes more adaptive behavior in project teams, such as better work performance, additional effort, and higher attention to work (Budayan et al., 2022). There are generally differences in core competencies, interests, and demands among construction project teams, and the stability of team cooperation is not high (Trinh&Feng,2020). Good organizational incentives can effectively motivate the project team (Zailani, et al., 2019), which can encourage the project team to focus on the project task itself and communicate and discuss specific project content, generating views and ideas.

Relationship of Organizational Climate to Project Performance - The p-value between contract flexibility and overall project objectives is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between contract flexibility and overall project objectives. The p-value between contract flexibility and project diversification goals is 0.008, less than 0.05, and r is a positive number, indicating a significant positive correlation between contract flexibility and project diversification goals. The p-value between contract flexibility and project satisfaction is 0.002, less than 0.05, and r is a positive number, indicating a significant positive correlation between contract flexibility and project satisfaction. The p-value between contract flexibility and project performance is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between contract flexibility and project performance. Contract flexibility is significantly positively correlated with overall project goals, project diversification goals, satisfaction, and project performance.

This means that the higher the flexibility of the contract, the easier it is to achieve the overall and diversified goals of the project, the higher the satisfaction of all parties, and the higher the project performance. Liu (2018) stated that for contract flexibility, signing flexible construction project contract terms with the support of contract flexibility enables the project to have the ability to adapt to the environment under a flexible mechanism. On the one hand, for risk re sharing problems such as changes and claims during project implementation, the contract flexibility allowing re negotiation provides risk mitigation opportunities for the project, which can effectively remedy and adjust the initial risk sharing scheme and prevent opportunistic behavior and Moral hazard under unreasonable risk sharing and help maintain the project value.

The p-value between fairness perception and overall project goals is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between fairness perception and overall project goals. The p-value between fairness perception and project diversification goals is 0.001, less than 0.05, and r is a positive number, indicating a significant positive correlation between fairness perception and project diversification goals. The p-value between fairness perception and project satisfaction is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between fairness perception and project satisfaction. The p-value between fairness perception and project performance is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between fairness perception and project performance. Fairness perception is significantly positively correlated with overall project goals, project diversification goals, satisfaction, and project performance.

This means that the better the perception of fairness, the easier it is to achieve the overall and diversified goals of the project, the higher the satisfaction of all parties, and the higher the project performance. Liu (2018) pointed out that there is a significant positive correlation among fairness perception and project performance because in construction projects, project team members often pay the most attention to project risk sharing and benefit allocation, and a good sense of team fairness will reduce opportunistic behaviors such as cutting corners, non-standard construction, etc. that project teams experience during project implementation due to excessive risk sharing or insufficient benefit allocation.

The p-value between organizational incentives and overall project goals is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between organizational incentives and overall project goals. The p-value between organizational incentives and project diversification goals is 0.001, less than 0.05, and r is a positive number, indicating a significant positive correlation between organizational incentives and project diversification goals. The p-value between organizational incentives and project satisfaction is 0.004, less than 0.05, and r is a positive number, indicating a significant positive correlation between organizational incentives and project satisfaction. The p-value between organizational incentives and project performance is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between organizational incentives and project performance.

This means that the better organizational incentives, the easier it is to achieve the overall and diversified goals of the project, the higher the satisfaction of all parties, and the higher the project performance. Wang, et al. (2022) revealed the important role of inter organizational incentives through research, that is, inter organizational incentives can directly promote project performance improvement, as well as improve inter organizational relationships and project resource supply, thereby indirectly promoting project performance improvement. Liu (2018) pointed out that for organizational incentives, a reasonable and scientific organizational incentive mechanism creates viewpoints, ideas, and judgments related to project goals and tasks, which are beneficial for project teams to update their concepts and explore innovation.

Relationship of Team Conflict to Project Performance - The p-value between task conflict and overall project goals is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between task conflict and overall project goals. The p-value between task conflict and project diversification goals is 0.006, less than 0.05, and r is a positive number, indicating a significant positive correlation between

task conflict and project diversification goals. The p-value between task conflict and project satisfaction is 0.004, less than 0.05, and r is a positive number, indicating a significant positive correlation between task conflict and project satisfaction. The p-value between task conflict and project performance is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between task conflict and project performance. Task conflict is significantly positively correlated with overall project goals, project diversification goals, satisfaction, and project performance. This means that the higher the task conflict, the easier it is to achieve the overall and diversified goals of the project, the higher the satisfaction of all parties, and the higher the project performance.

The p-value between process conflict and overall project goals is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between process conflict and overall project goals. The p-value between process conflict and project diversification goals is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between process conflict and project diversification goals. The p-value between process conflict and project satisfaction is 0.007, less than 0.05, and r is negative, indicating a significant negative correlation between process conflict and project satisfaction. The p-value between process conflict and project performance is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between process conflict and project performance.

This means that the higher the process conflict, the harder it is to achieve the overall and diversified goals of the project, the lower the satisfaction of all parties, and the lower the project performance. Process conflicts are prone to occur in the arrangement of processes and tasks, some caused by one of the project stakeholders (owners, contractors, supervisors, designers, etc.), and some jointly caused by both or several parties, involving project resources, status, responsibilities, etc., such as schedule arrangement, process planning and integration, and resource allocation during project implementation (Malik, et al., 2021).

Process conflicts are common in construction projects, and their causes include unequal status of project participants, incomplete contracts, and information asymmetry. Roberson (2019) pointed out through his research on process conflict that process conflict not only reduces team cohesion and affects project performance, but also leads to a decrease in the flow of cooperation among teams, making it difficult for each team to effectively cooperate to complete work tasks. At the same time, process conflicts can also interfere with team members completing tasks and have a negative effect on project performance. Liu (2018) stated that for process conflicts, once the project process is arranged and determined, it will be difficult to make significant changes.

The p-value between relationship conflict and overall project goals is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between relationship conflict and overall project goals. The p-value between relationship conflict and project diversification goals is 0.016, less than 0.05, and r is negative, indicating a significant negative correlation between relationship conflict and project diversification goals. The p-value among relationship conflict and project satisfaction is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between relationship conflict and project satisfaction. The p-value between relationship conflict and project performance is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between relationship conflict and project performance.

Relationship conflict is significantly negatively correlated with overall project goals, project diversification goals, satisfaction, and project performance. This means that the higher the relationship conflict, the harder it is to achieve the overall and diversified goals of the project, the lower the satisfaction of all parties, and the lower the project performance. Relationship conflict is a conflict caused by uncoordinated or inconsistent relationships among teams, which can arise from multiple factors including differences of opinion, negative emotions, and interfering behaviors among teams (Lacerenza, et al., 2018).

Relationship conflicts can have a significant negative effect on the performance and decision-making of project teams, which in turn can have an impact on project performance (Sinha, et al., 2021). The specific reasons can be summarized as two points. Firstly, relationship conflicts can lead to teams hiding their own opinions and opinions, limiting the flow of information among teams; The second is that relationship conflicts

can lead to negative emotions such as tension, anger, or hostility among teams, leading to the destruction of team relationships (Samimi, et al., 2022).

In summary, relationship conflicts hinder the flow of information among teams, causing the team's focus to deviate from the work content and tasks themselves, leading to a decrease in team performance and decision-making quality. Liu (2018) pointed out that a high level of relationship conflict can shift the focus of project teams from team work to interpersonal relationships among teams, limit the cognitive function of team members, stimulate opposing behaviors among project teams, and ultimately affect task progress, which has a negative impact on project performance.

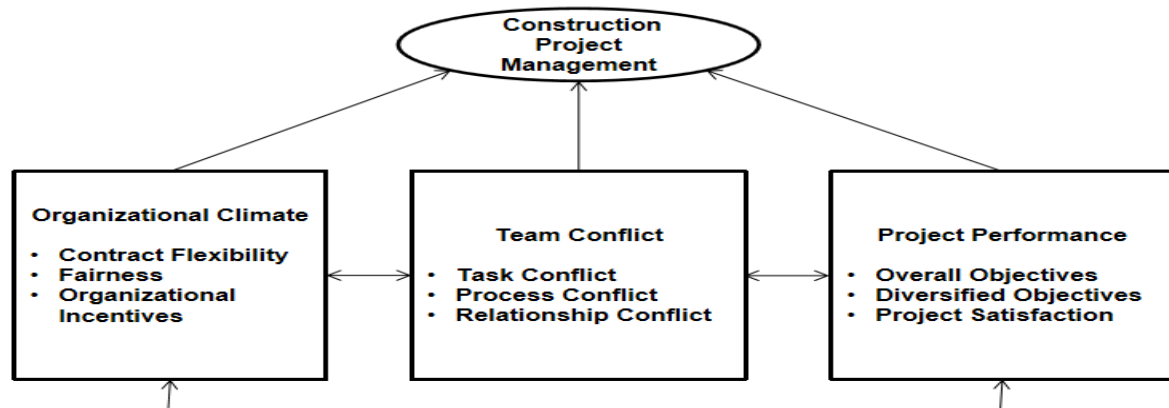
Relationship of Organizational Climate, Team Conflict and Project Performance - The p-value of organizational climate and team conflict is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between the variable organizational climate and team conflict. The p-value between team conflict and project performance is 0.000, less than 0.05, and r is negative, indicating a significant negative correlation between the variable team conflict and project performance. Conflicts among teams are inevitable and have become the main problem faced by each team (John-Eke& Akintokunbo,2020). In the construction process of engineering projects, the ability to successfully resolve team conflicts, coordinate project operations, and complete project performance plays an important role in organizational conflict management, which is related to the success or failure of the project (Irfan et al., 2019).

As the integrator of project resources and the organizer of project construction, project-based organizations are the core of project management and the guarantee of achieving project success. Project based organizations include owners, contractors, supervisors, designers, etc. (Lo & Kam, 2021). In the operation process of these organizations, organizational climate plays an important role. A good organizational climate enables the project team to fully understand the perspectives and intentions of both parties, and clarify each other's rights, responsibilities, and interests. Not only does it help promote the smooth progress of teamwork, but it also plays an important role in team conflict management, project performance management, and achieving project success (Khosravi et al., 2020).

A negative organizational climate not only leads to information asymmetry among teams, but also forms adversarial relationships and triggers conflicts among teams (Babaeian, Yiu, &Wilkinson,2022). Poor conflict resolution often escalates into disputes, hindering the normal progress of the overall project process and specific tasks, causing delays in the project schedule, and damaging the overall benefits of the project (Arar et al., 2022). The p-value between organizational climate and project performance is 0.000, less than 0.05, and r is a positive number, indicating a significant positive correlation between the variable organizational climate and project performance. There is a significant negative correlation between organizational climate and team conflict, a significant negative correlation between team conflict and project performance, and a significant positive correlation between organizational climate and project performance. This means that the better the organizational climate, the lower team conflicts, and the higher project performance, The higher the team conflict, the lower the project performance. Liu (2018) pointed out that the organizational climate of construction projects can effectively affect project performance through the team conflict dimension, and team conflict is a key factor affecting project performance. The organizational climate of construction projects can effectively affect team conflict.

Figure 1: Proposed Framework for improving construction project management - Based on the above correlation analysis results, develop a framework for improving construction project management, the framework reflects the correlation of construction project management with organizational climate, team conflict, and project performance, it also illustrated a direct link on the effects of organizational climate, team conflict, and project performance. The proposed framework infers three variables into a variable called improving the level of construction project management. As shown in the above figure, we can note that there is a significant correlation among organizational climate, team conflict and project performance. Good organizational climate

(organizational incentive, fairness perception, contract flexibility) is the key factor for the project team to track project progress, formulate project plans and decisions, and ensure the smooth progress of the project as planned. It can effectively reduce project risks and resolve destructive conflict among project teams, which is of great significance to achieve project performance and improve project management.



In the construction process of engineering projects, the ability to successfully resolve team conflicts, coordinate project operations, and complete project performance, Conflict management in organizations plays an important role, which is related to the success or failure of the project. With the rapid increase in the number of construction projects, the continuous increase in project scale, and the continuous growth of project construction cycles, the organizational structure of projects has become increasingly complex and huge. As the integrator of project resources and the organizer of project construction, project-based organizations are the core of project management and the guarantee of achieving project success. Project performance is usually used to evaluate the success of an organization in achieving its goals, and to evaluate the management level of engineering projects, which is directly influenced by team conflicts and organizational climate.

There is a significant correlation among the three variables, and it is of great significance for improving the level of construction project management. The framework proposed by the researcher is based on literature review, previous ideas, and data analysis. This framework will become a new variable correlation theory and be supported by empirical research.

4. Conclusions and Recommendations

The respondents have a very high regard on the importance of contract flexibility, fairness, and organizational incentives in improving organizational climate. The results revealed that the respondents have a very high regard on the importance of controlling task conflicts, relationship conflicts, and process conflicts. The respondents have a very high regard on the importance of overall objectives, diversified objectives, and satisfaction in improving project performance. There is highly significantly relationship between organizational climate, team conflict and performance management. A framework has been developed to improved construction project management. This paper recommends that effective organizational incentives and rewards and punishments may be established based on equal cooperation, and the team performance evaluation system may be improved to ensure fairness and justice. More attention may be paid for the effectiveness of project management elements such as organizational incentives, fairness, and contract flexibility in construction projects, to create a good and harmonious organizational climate for construction projects. The framework developed maybe adopted for project teams to develop scientific and effective conflict management strategies and improve project performance. Future research maybe conducted using different industry and different locale.

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