

# Influence of Organizational Culture on Frequency of Disputes in Commercial Projects in Egypt: A Contractor's Perspective

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**Abstract**—Over the recent decades, studies on organizational culture have gained global attention in the business management literature, where it has been established that the cultural factors embedded in the organization have an implicit yet significant influence on the organization's success. Unlike other industries, the construction industry is widely known to be operating in a dynamic and adversarial nature; considering the unique characteristics it denotes, thereby the level of disputes has propagated in the construction industry throughout the years. To that end, this paper aims to study the influence of organizational culture in the contractor's organization on the frequency of disputes caused between the owner and the contractor in commercial projects based in Egypt. This objective is achieved by using a quantitative approach through a survey questionnaire to explore the dominant cultural attributes that exist in the contractor's organization based on the Competing Value Framework (CVF) theory, which classifies organizational culture into four main cultural types: (1) clan, (2) adhocracy, (3) market, and (4) hierarchy. Accordingly, the collected data are statistically analyzed using Statistical Package for Social Sciences (SPSS 28) software, whereby a correlation analysis using Pearson Correlation is carried out to assess the relationship between these variables and their statistical significance using the p-value. The results show that there is an influence of organizational culture attributes on the frequency of disputes whereby market culture is identified to be the most dominant organizational culture that is currently practiced in contractor's organization, which consequently contributes to increasing the frequency of disputes in commercial projects. These findings suggest that alternative management practices should be adopted rather than the existing ones with an aim to minimize dispute occurrence.

**Keywords**—Construction projects, correlation analysis, disputes, Egypt, organizational culture.

## I. INTRODUCTION

THE concept of organizational culture comprises an organization's norms, values, rules of conduct, management style, priorities, beliefs, and behaviors that distinguish one organization from the other [1]. With regards to construction organizations, they mainly function through a project-based system where many parties are involved and each party has their own objectives, which eventually lead to disputes when these objectives clash. For that reason, the construction industry is widely known to be operating in a dynamic and adversarial nature considering the unique characteristics it denotes compared to other industries. So, the challenge in construction projects is to establish and adopt a

culture that integrates the project organization and encourage that the community builds up a cohesion among the project team to prevent hostile behavior [1]. Unfortunately, many construction practitioners, especially in Egypt, are not aware of the embedded culture during managing projects and its extent of influence on the dispute occurrence, and consequently on the project's success where they tend to maintain a narrowed vision by solely being task-oriented whereas adopting soft management skills to avoid disputes between the owner and contractor is usually overlooked.

Accordingly, this paper explores the cultural factors in the Egyptian construction industry to study their impact on the frequency of disputes occurrence in order to raise awareness among practitioners in the field. This paper intends to focus its analysis on the contractor's organization on the project level since contractors have a relatively larger workforce in projects compared to other project parties, which indicates that culture in the contractor's organization might have a relatively more influence on the disputes' emergence. This study will further analyze a specific project type, which is commercial projects. For the purposes of this paper, commercial projects are defined as the type of projects that excludes both industrial and infrastructure projects.

## II. LITERATURE REVIEW

### A. Organizational Culture

During the evolution of globalization in the 1990s, the management literature experienced a paradigm shift where organizational culture and change became the focus in cultural research field [2]. Several researchers studied the influence of organizational culture on various factors such as: company's success [3], [4], performance [5], [6], and organizational effectiveness [7]. According to [8], the definition of organizational culture is "the underlying values, beliefs and principles that serve as a foundation for an organization's management system as well as the set of management practices and behaviors that both exemplify and reinforce those basic principles". By reviewing literature on organizational culture in the construction industry, [9] emphasized the importance of studying and employing the aspects of organizational culture particularly in the construction industry considering its dynamic environment and fragmented nature. On the other hand, [10]

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stated that the presence of adversarial relations between project participants is anticipated as a result of the cultural differences between stakeholders. Accordingly, researchers argue that the culture within the project context should be designed to meet the goals and objectives of the organization along with those of the individual participants [11]. This design would help in minimizing conflicts, enhancing communication and coordination, and facilitating the achievement of the project objectives [11]. Despite the shared consensus on the influence of organizational culture on the organization's performance, it is the least studied area in the construction management literature [11].

Reference [12] initially developed a theoretical model called the "Competing Values Framework" (CVF) for measuring the organizational culture. Later, [13] established the organizational culture dimensions based on the CVF theory by identifying four dominant cultural types: (1) clan, (2) adhocracy, (3) market, and (4) hierarchy.

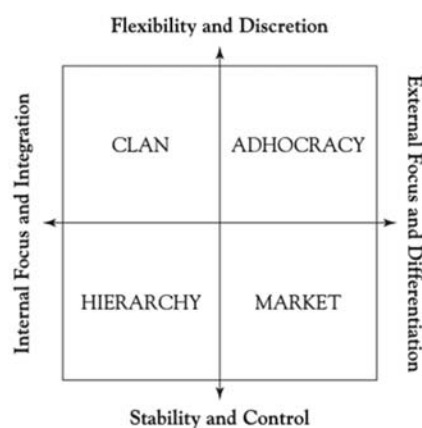


Fig. 1 Competing Values Framework [13]

As shown in Fig. 1, CVF framework portrays two major dimensions, which define the four quadrants of distinct cultural core values. The horizontal dimension is concerned with the company's strategic focus on the external and internal factors, while the vertical dimension is concerned with the company's response to the external environment either with flexibility and discretion or with stability and control [14]. Thus, each of the four cultural types has its own characteristics that reflects the organization's core values.

1. **Hierarchy Culture:** Organizations that adopt this culture type are characterized by a formalized and structured workplace where rules, policies, and procedures are well-established and strictly followed by members of these organizations as well as the line of decision-making authority. The primary focus is on maintaining an efficient and smooth-flowing production. Tasks are well defined for each employee where everyone has one specific job with known duties and responsibilities. Leaders are viewed as coordinators to ensure that tasks and functions are well integrated. The long-term concerns in these organizations are stability and control, where success relies upon

efficiency and predictability [14].

2. **Market Culture:** Organizations that adopt market culture are characterized by being competitive and hostile where the major focus is on productivity and profitability. The strategic emphasis is on achieving goals, maintaining a competitive market position, and securing profit. Having the lead in the market share and winning are important values fostered in the workplace. Consequently, leaders tend to be competitive, results-oriented, tough, and demanding [14].
3. **Clan Culture:** Organizations who foster clan culture value teamwork, employee involvement, loyalty, commitment, and collaboration. Their goal is to develop a humane work environment where managers empower subordinates and promote cohesion and morale among team members as part of improving the organization's effectiveness. The leader is seen as a mentor rather than a superior boss, whereas customers are seen as partners to the organization [14].
4. **Adhocracy Culture:** Organizations who foster this culture type are characterized by innovation, creativity, and entrepreneurship. The effectiveness of this type of organizations is measured by the organization's ability to experiment and produce innovative products, services, or ideas, in addition to rapidly adapt to new challenges once they arise. Structure of organization, policies, and procedures are prone to change since they are treated as being temporary depending on the current circumstances. Accordingly, members of these organizations are expected to have traits of adaptability to new changes, flexibility, risk-oriented, and initiative. To achieve success, leaders must be visionary and being at the cutting edge of new knowledge in order to produce unique products [14].

Having explained the four main cultural types, an assessment tool called Organizational Culture Assessment Instrument (OCAI) is developed based on the CVF theory, which is a form of a structured questionnaire matrix used to analyze the main cultural aspects of an organization through the following six attributes: (1) dominant characteristics, (2) organizational leadership, (3) management of employees, (4) organization glue, (5) strategic emphasis, and (6) criteria of success. By utilizing the OCAI tool, a cultural profile for the subject organization is plotted through integrating those six attributes where the dominant cultural type is identified with its respective core values [14].

In the late 1990s, the International Council for Research and Innovation in Building and Construction (CIB) has established a Task Group (TG-23) dedicated to research the role and impact of culture in the construction industry where TG-23 was further developed to a Working Commission W112 since 2006. As highlighted by [15], the strategic goal of this initiative is mainly to: (1) continue research national culture and organizational culture in construction industry worldwide to maintain and extend the database of culture in construction, and (2) publish findings and encourage further investigation and collaborations. Reference [2] emphasized that the persistence of the construction business became more dependent on the cultural aspects employed in the construction companies since

maintaining profitability and high financial return are not sufficient anymore for the company to survive the increasing competitive market. Besides, cultural differences are evident to be the main causes of conflict and misunderstanding if organizations are unaware of their own cultural values and other organization's cultural values. Accordingly, this research studied the organizational culture in US construction companies as part of CIB's TG-23 project.

#### *B. Disputes in the Construction Industry*

For decades, the construction industry has been entangled in adversarial relationships between the contracted parties [16] where the goals of each party are consistently at odds with others, resulting in a never-ending cycle of hostility. Most construction researchers concede that disputes are unavoidable to occur among project stakeholders and could have a detrimental effect on projects since they result in cost overruns, delays, and loss of productivity [17]. Construction disputes usually affect achieving project objectives, strain relationships among project participants, and undermine team spirit [17]. Despite construction organizations' attempt to enhance their performance through adopting modern management practices by utilizing new techniques such as lean production, knowledge management, supply chain management, and many others, disputes remain prevalent [18].

There has been a wide range of research done to pinpoint the causes of disputes in the construction industry. According to [19], a combination of environmental and behavioral problems can lead to disputes where it suggests that the three main factors that influence disputes are project uncertainty, opportunistic behavior, and contractual problems. On the other hand, [20] identified four common causes of disputes which are inaccurate design information, slow owner response to decisions, poor communication, and unrealistic time objectives. Another research was done by [21] to develop a series of causal models using system dynamics where it concluded that people, organization, and project management were the main dispute sources.

Concerning disputes in the Egyptian construction industry, according to the Cairo Regional Center for International Commercial Arbitration (CRCICA)'s latest annual report, the number of cases filed until August 2022 have reached 1,585 cases following the 1,535 cases reached by end of 2021, which is the second highest number of annual registrations since 2016 [22]. CRCICA also reported that disputes arising from the construction sector alone represented 17% of the total number of cases, which is the top ranked sector [22]. Based on these facts, disputes have become a growing problem in the Egyptian construction industry where such disputes, if not properly managed, may jeopardize the success of many construction projects in Egypt [23]. Reference [23] also pointed out that understanding the root causes of construction disputes and the various dispute resolution techniques used by Egyptian practitioners are essential for managing them.

In view of the above, there is a research need to address the cultural factors that exist in construction projects and their influence on the emergence of disputes between the owner and

the contractor in the Egyptian construction industry.

### III. RESEARCH METHODOLOGY

#### *A. Research Approach*

The core of this research is to investigate the influence of organizational culture on the frequency of disputes occurrence in commercial projects. In order to achieve this objective, we need to first analyze the existing cultural practices in the contractor's organization. Accordingly, a survey questionnaire is formulated to acquire the necessary data where these quantitative data will be statistically analyzed through both descriptive and correlation analysis by using the Statistical Package for Social Sciences (SPSS 28) software. The descriptive analysis will identify the dominant organizational culture that exists in commercial projects and it will also rank the common dispute causes in terms of their frequency of occurrence. On the other hand, a correlation analysis will be performed using Pearson Correlation to statistically assess the relationship between the tested variables according to their statistical significance using p-value. In Pearson correlation, the coefficient value ranges between -1 and 1 where the value of 1 indicates a perfect positive linear correlation, zero means no correlation, and -1 means a perfect negative linear correlation. P-value is then used to test the statistical significance of the correlation where [24] reported that a cut-off correlation value of 0.3 can be considered for practical significance for correlations.

#### *B. Survey Design*

The survey questionnaire is divided into three sections; the first section includes demographic information about the respondent and their associated commercial project. The second section includes a pre-constructed questionnaire tool 'OCAI' established by [14] to analyze the dimensions of organizational culture based on the CVF theory where four dominant types of culture were identified: (1) clan, (2) adhocracy, (3) market, and (4) hierarchy. Each of the four cultural types has its own characteristics to reflect the organization's core values through analyzing six cultural dimensions, as illustrated in the literature review section. Accordingly, OCAI contains 24 questions to measure these six dimensions, where each dimension includes four questions in a form of alternatives A, B, C, and D. The respondent is asked to rate their organization by using a scale of 100 points to distribute them on the four alternatives depending on the degree of similarity of each characteristic to the existing culture in their organization. Based on the data collected, a cultural profile can be plotted for the organization by integrating those six attributes where the dominant cultural type is identified with its respective core values, in addition to providing a comprehensive analysis of the organizational strategy, leadership style, decision-making process, employee's motivation, and organizational communication. The third and last section is designed for ranking the frequency of dispute causes that occur in commercial projects in Egypt. A list of 28 dispute causes were selected from literature findings where the respondents are asked to rate each of these dispute causes by

how frequent they occur in their projects using a 5-point Likert scale. Accordingly, the top-10 frequent disputes were identified, which will be used in the correlation analysis to explore their possible correlation with the organizational culture dimensions.

### C. Sampling Technique

Since this research's focus is to analyze the contractor's organization, the questionnaire is directed only to contracting companies in Egypt. Also, the research required that the sampling would represent contractor organizations that are project-based with a more focus on mega projects since these project-based organizations are more acquainted with the disputes' dynamics occurring between the owner and the contractor throughout the project duration. However, there are many factors that can affect the culture of the organization in a given project such as the project type and owner type. Hence, project-based organizations were further sampled to include only commercial projects (i.e., not infrastructure nor industrial projects) that are employed by an owner who is a private sector to ensure a more consistent and reliable data collection by providing a better representation of the population. Furthermore, the questionnaire was addressed only to the top managerial levels who can represent the project from the contractor's side (e.g., project managers or project directors). Accordingly, each project is represented by only one response.

Given the restrictive sampling selection, this study used purposive sampling, which is a non-probability sampling method whereby researchers rely on their own judgment to select respondents who are suitable to participate in the survey.

In order to determine the appropriate sample size that better represents the given population, Cochran's formula [25] is used to calculate the minimum sample size by applying (1) and (2):

$$X = \frac{Z_{\alpha/2}^2 \times p \times (1-p)}{D^2} \quad (1)$$

$$n = \frac{N \times X}{X + N - 1} \quad (2)$$

where:  $n$  = sample size,  $N$  = population size,  $Z$  = critical value for the confidence level,  $p$  = estimated proportion of an attribute present in the population, and  $D$  = acceptable margin of error for the estimated proportion.

According to the annual bulletin of construction and building statistics for private sector companies issued by the Central Agency for Public Mobilization and Statistics (CAPMAS) in 2021, the number of projects executed by private sectors in 2017 in Egypt totals to 4,646 projects [26]. Since it is quite difficult to determine the exact value of  $N$ ,  $N$  is assumed to be 10,000 since the sample size becomes less sensitive when population changes larger than 10,000. The value of  $p$  is commonly assumed to be 0.5, which reflects the worst-case scenario. The value of  $Z$  is 1.44, which corresponds to a confidence level of 85%, whereas  $D$  is assumed to be 10%. By plugging these values into Cochran's formula, the minimum sample size ( $n$ ) is calculated to be 52 respondents.

### D. Data Collection

The questionnaire was distributed among the targeted sample where a total of 264 questionnaires were circulated. Out of the 264 circulated questionnaires, 97 responses were received having a response rate of 37%. However, only 66 of the 97 responses have completed the full survey where six of the completed 66 responses were further discarded from the study due to unqualified respondents or irrelevant responses. As reported by [26], surveys are usually associated with a low response rate. Nonetheless, a total of 60 valid responses were collected, which exceeds the minimum sample size as required by Cochran's formula, and therefore feasible to be included in the data analysis.

## IV. RESULTS AND ANALYSIS

### A. Descriptive Analysis

#### 1. Demographic Information

The respondents' profile, shown in Table I, includes the respondent's years of experience particularly in the construction field and their education level. The experience of the respondents varied, where 7% of the respondents have 0-9 years of experience, 37% have 10-19 years of experience, 35% have 20-29 years of experience, and 22% have more than 30 years of experience. This shows that most respondents have quite high years of experience, which is consistent with the sampling criteria of respondents to be project managers (managerial level). As for the education level, 68% are bachelor's degree holders, 27% are master's degree holders, and 5% are PhD degree holders.

TABLE I  
 RESPONDENTS' PROFILE

Respondents' Profile	Frequency	Percentage
Years of Experience (in construction)		
0-9 years	4	7%
10-19 years	22	37%
20-29 years	21	35%
30 years and above	13	22%
Education		
Bachelor's Degree	41	68%
Master's Degree	16	27%
PhD Degree	3	5%

The project's profile, shown in Table II, comprises the characteristics of the surveyed commercial projects with regards to the commercial project type, contract type, delivery method, and estimated project value. The type of commercial projects are as follows: 38% for mixed-use, 23% for office/administrative buildings, 10% for hotels/resorts, 8% for malls and hospitals, and 3% for educational buildings. As for the project's contract type, the results show that 60% are re-measured contracts, 23% are fixed-price contracts, 10% are fixed-price with escalation, and 5% are cost-plus contracts. Concerning the project's delivery method, the majority adopts the traditional method, which comprises 60% of the sampled projects; whereas, construction project management and design-build methods comprise 28% and 12%, respectively. As

for the project estimated value, 52% of the sampled projects are estimated at a value of more than \$90,000,000. The remaining sampled projects varied where 15% are estimated at a value ranging from \$10,000,000 to \$30,000,000, 10% are estimated at a value ranging from \$30,000,000 to \$50,000,000, 15% are estimated at a value ranging from \$50,000,000 to \$70,000,000, and 3% are estimated at a value ranging from \$70,000,000 to \$90,000,000. This indicates that most of the sampled projects are mega projects due to their relatively high values.

TABLE II  
PROJECTS' PROFILE

Projects' Profile	Frequency	Percentage
Commercial Project type		
Office/Administrative Building	14	23%
Educational Building	2	3%
Hotel/Resort	6	10%
Mall	5	8%
Hospital	5	8%
Mixed-use (e.g., compounds, cities, etc.)	23	38%
Other (please specify)	5	8%
Contract Type		
Fixed Price (Lump-sum)	14	23%
Fixed Price with escalation	6	10%
Re-measured	36	60%
Cost-plus	3	5%
Other (please specify)	1	2%
Project Delivery Method		
Traditional (Design-Bid-Build)	36	60%
Design-Build	7	12%
Construction Project Management	17	28%
Public Private Partnership (PPP)	0	0%
Other (please specify)	0	0%
Project Estimated Value (in \$)		
Less than \$10,000,000	3	5%
\$10,000,000 - \$30,000,000	9	15%
\$30,000,000 - \$50,000,000	6	10%
\$50,000,000 - \$70,000,000	9	15%
\$70,000,000 - \$90,000,000	2	3%
More than \$90,000,000	31	52%

## 2. Organizational Culture

Table III shows the statistical analysis for the organizational culture. According to the OCAI results obtained from the survey, market culture is shown to be the most dominant organizational culture that exists in the contractor's organization with a mean value of 32.15 and a standard deviation of 11.58. The following dominant organizational culture is the hierarchy culture with a mean value of 25.92 and a standard deviation of 6.99; whereas, clan culture comes in third place with a mean value of 22.7 and a standard deviation of 7.39 followed by adhocracy culture with a mean value of 19.23 and a standard deviation of 7.42.

Based on these results, the OCAI profile of the sampled data is plotted as shown in Fig. 2. The dominant culture being market is realistic with the nature of sampled organizations since they are project-based that tend to be results-oriented and compatible with the demands of the environment. According to [27], firms operating in unpredictable markets would probably place a

greater emphasis on the result-oriented strategies, which is symbolized in the market culture. The second dominant culture is hierarchy, which requires maintaining a level of stability and control, and respecting power structure organizations. On the other hand, the least two dominant organizational culture types being clan and adhocracy are the ones that symbolize flexibility in the organization, which means that project-based contractor's organizations in Egypt prefer to uphold a more stable and controlled system rather than a flexible system.

TABLE III  
DESCRIPTIVE RESULTS FOR ORGANIZATIONAL CULTURE

OCAI Dimension	Mean	St. Dev.	Max.	Min.
Clan	22.70	7.390	45.00	10.83
Adhocracy	19.23	7.416	37.50	5.67
Market	32.15	11.585	51.67	10.83
Hierarchy	25.92	6.996	48.33	12.50

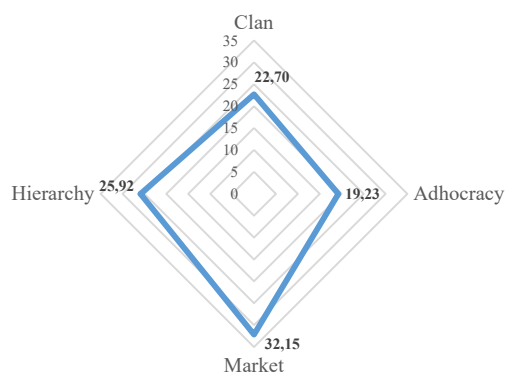


Fig. 2 Organizational Culture Profile

## 3. Causes of Disputes between Owner and Contractor

The respondents were asked to rate the frequency of disputes occurrence between the owner and the contractor by using a 5-point Likert scale ranging from 1 (Never) to 5 (Always). In order to rank the 28 listed dispute causes with respect to their frequency of occurrence, the relative importance index (RII) method is used to calculate the relative importance of each dispute cause based on the respondents' perception through applying (3):

$$RII = \frac{\sum W}{A \times N} \quad (3)$$

where:  $W$  = weighting given to each factor by the respondents (ranging from 1 to 5),  $A$  = highest weight (i.e., 5), and  $N$  = total number of respondents.

Table IV shows the descriptive results for the dispute causes where RII is calculated for each. Accordingly, the ranking is established for each dispute cause in terms of their frequency of occurrence where the top-10 ranked dispute causes were identified, as summarized in Table V. From the results, it is observed that most frequent dispute causes are owner-related where the top ranked dispute cause, as perceived by the respondents, is "excessive variations by owner" with a mean value of 4.42 and RII of 0.883. Another dispute cause "delayed payment by owner" came as the second ranked dispute cause,

which is also owner-related followed by the “unfair/biased consultant” dispute cause. The fourth ranked dispute cause is “changing market conditions”, which is considered as an external factor given the current market challenges that Egypt faces. The remaining top 10 ranked dispute causes are mostly related to the actions and behaviors of the project parties such as: lack of communication and coordination, adverse attitudes, and opportunistic behavior among project parties.

TABLE IV  
DESCRIPTIVE RESULTS FOR FREQUENCY OF DISPUTE CAUSES

Code	Description of Dispute Cause	Mean	St. Dev.	RII	Rank
D1	Excessive variations by owner	4.42	0.72	0.883	1
D2	Unbalanced risk allocation	3.47	0.83	0.693	8
D3	Delayed response by owner	3.83	0.94	0.767	6
D4	Delayed payment by owner	4.12	1.15	0.823	2
D5	Insufficient design documents	3.43	0.83	0.687	9
D6	Unforeseen site conditions	2.88	0.90	0.577	18
D7	Poor productivity on Site	2.63	0.80	0.527	25
D8	Incompetent contractor	2.57	0.81	0.513	28
D9	Subcontractors' inefficiency	2.98	0.83	0.597	13
D10	Inadequate quality standards	2.63	0.71	0.527	26
D11	Lack of communication and coordination between project participants	3.87	1.23	0.773	5
D12	Shortage in resources	3.02	0.88	0.603	12
D13	Adverse attitudes between project participants	3.82	1.25	0.763	7
D14	Interference of owner in contractor's execution	2.90	0.97	0.580	16
D15	Diverse interpretations of contract terms	2.82	0.79	0.563	21
D16	Opportunistic behavior of project parties	3.30	1.24	0.660	10
D17	Contractor's unfulfillment of contract obligations	2.70	0.94	0.540	23
D18	Inadequate project planning	2.97	1.01	0.593	14
D19	High level of design complexity	2.67	1.05	0.533	24
D20	Changing market conditions	4.08	0.94	0.817	4
D21	Contradictory and erroneous information in contract documents	2.90	0.90	0.580	17
D22	Poor documentation during contract administration	2.83	1.01	0.567	20
D23	Repetitive changes in legislation and regulations	2.78	1.07	0.557	22
D24	Poor management and site supervision	2.60	0.87	0.520	27
D25	Lack of contract awareness by the site team	2.95	0.98	0.590	15
D26	Unrealistic expectation of owner	3.17	1.11	0.633	11
D27	Unfair/biased consultant	4.12	1.11	0.823	3
D28	Wrong strategic decisions made by project leaders	2.88	0.94	0.577	19

### B. Correlation Analysis

As summarized in Table VI, the correlation results show that there is a significant correlation between the OCAI dimensions and the frequency of dispute causes. It is further observed that the significant correlations are all with the top-10 ranked dispute causes that were identified in the descriptive analysis. For instance, market culture is found to have significant positive correlation with four dispute causes, namely “excessive variations by owner”, “delayed payment by owner”, “lack of communication and coordination between project

participants”, and “adverse attitudes between project participants”. On the other hand, clan culture is found to have significant negative correlation with the same four dispute causes mentioned above. This observation implies that adopting clan culture may decrease the chances of having these frequent disputes, whereas adopting market culture, which is the existing dominant culture, may increase the chances of having the same frequent disputes. As for adhocracy culture, it shows significant negative correlation with two dispute causes namely, “adverse attitudes between project participants” and “changing market conditions”. There is no significant correlation found between hierarchy culture and any of the dispute causes.

TABLE V  
TOP 10 RANKED FREQUENT CAUSES OF DISPUTE

Rank	Description for causes of disputes	Code
1	Excessive variations by owner	D1
2	Delayed payment by owner	D4
3	Unfair/biased consultant	D27
4	Changing market conditions	D20
5	Lack of communication and coordination between project participants	D11
6	Delayed response by owner	D3
7	Adverse attitudes between project participants	D13
8	Unbalanced risk allocation	D2
9	Insufficient design documents	D5
10	Opportunistic behavior of project parties	D16

TABLE VI  
SIGNIFICANT CORRELATIONS BETWEEN OCAI AND DISPUTE CAUSES

OCAI Dimension	Pearson Correlation	Dispute Code	Dispute Cause
Clan	-.491**	D1	Excessive variations by owner
	-.305*	D4	Delayed payment by owner
	-.347**	D11	Lack of communication and coordination between project participants
	-.367**	D13	Adverse attitudes between project participants
Market	.475**	D1	Excessive variations by owner
	-.338**	D3	Delayed response by owner
	.326*	D4	Delayed payment by owner
	.472**	D11	Lack of communication and coordination between project participants
Adhocracy	.478**	D13	Adverse attitudes between project participants
	-.339**	D13	Adverse attitudes between project participants
	-.317*	D20	Changing market conditions

\* Correlation is significant at the 0.05 level (2-tailed).  
\*\* Correlation is significant at the 0.01 level (2-tailed).

### V. CONCLUSION

The purpose of this paper was to study the influence of organizational culture in the project-based contractors' organizations on the frequency of disputes occurrence in commercial projects that are based in Egypt. The cultural profile of the sampled organization was plotted by utilizing the OCAI tool based on the CVF theory whereby market culture was found to be the most dominant organizational culture.

Afterwards, a correlation analysis was conducted using Pearson Correlation where the correlation results showed that

the frequency of disputes tend to increase in case of the dominance of market culture, however the frequency of disputes tend to decrease in case of the dominance of clan culture. These findings suggest that the adoption of the existing cultural practices has an influence on the level of disputes occurrence in commercial projects, whereas other cultural attributes need to be more promoted in the contractor's organization (i.e., clan culture) in an aim to minimize the frequency of disputes emergence.

This paper further contributes to the initiative of CIB W112 'Culture in Construction', which targets to expand the database research of culture in construction worldwide.

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