

Exploring Ethical Issues in the Gulf Cooperation Council Construction Industry: Comparing the Sultanate of Oman and the United Arab Emirates

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Abstract: Since the early phases of the Gulf Cooperation Council's (GCC) rapid development, media reports have frequently raised concerns about unethical practices within the construction industry. However, empirical evidence identifying the prevalence of these ethical issues remains elusive. This exploratory study addresses the gap with a focus on ethical challenges in the Sultanate of Oman and the United Arab Emirates (UAE). A survey conducted among construction professionals in both countries resulted in a total of 357 respondents. Exploratory factor analysis with Monte Carlo principal component analysis (PCA) for parallel analysis identified fraud, delayed payments, contractor misrepresentation, intimidation, tax avoidance and discrimination as significant ethical concerns. Independent samples *t*-tests revealed no statistically significant difference between the two countries, suggesting the findings to be broadly similar within the contexts of the two countries. The findings suggest that policymakers reform public procurement systems and enforce strict conflict-of-interest mechanisms. Academic institutions can contribute by developing mandatory stand-alone engineering ethics modules in undergraduate engineering courses. Similarly, professional engineering institutions should integrate ethics training into continuing professional development activities. Though exploratory in nature, the study provides an overview of the ethical challenges in the construction industries in both Oman and the UAE.

Keywords: Ethical issues, GCC, Professional ethics, Construction industry in Oman, Construction industry in UAE

INTRODUCTION

The construction industry contributes significantly to national economic development through the creation of jobs, tax revenues and capital assets (Shah and Alotaibi, 2017; Zulu and Muleya, 2019). Global construction output is expected to increase by USD8 trillion to reach USD17.5 trillion per annum by 2030 (Betts et al., 2015). However, inefficiencies in the construction sector reduce the effectiveness of investments and can lead to corruption, fraud, poor quality work, rework costs, disputes, litigation and even workplace fatalities. Gulf Cooperation Council (GCC) countries' construction activity has surged over recent decades, largely due to favourable commodity prices that

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enabled large capital investments. For example, the value of total projects awarded in 2024 reached USD264 billion, a 6% increase on the USD249 billion spent in 2023 (Middle East Economic Digest Editorial, 2025). Researchers have investigated the associated issues with rapid growth such as cost overruns and scheduling delays (Emam, Farrell and Abdelaal, 2014; Johnson and Babu, 2020; Alshihri, Al-Gahtani and Almohsen, 2022). However, unethical practices across the region's construction industry remain comparatively underrepresented in studies, perhaps because of the controversial or sensitive nature of the topic (Benstead, 2018). Contemporary research shows that countries tend to have their own distinct approach tailored to its unique contextual factors, and the GCC is no different in this regard (Dizani et al., 2024).

Concepts of ethics circle around ideas of behaviour and values, such as the perspective of Mirsky and Schaufelberger (2014) who see ethics as the practice of examining moral values in the face of day-to-day situations and doing what is right. Liu, Fellows and Ng (2004) and Abdul-Rahman, Hanid and Yap (2014) see professional ethics as essential for attaining sustained and acceptable quality standards in construction. These professional ethics are shaped over time and across cultures (Svensson and Wood, 2003). Unethical practices within the construction industry may include technical issues such as professional negligence, contractual issues such as delayed consultant responses or relational issues such as discrimination or corruption. Globally, as much as USD5 trillion could be lost annually by the year 2030 if the construction industry does not address corruption more effectively (WBEF [World Built Environment Forum], 2021). Approximately 30% of global construction investments is reported to be lost to corruption, mismanagement and industry inefficiency (Matthews, 2016). Studies suggest many ethical issues go unreported, with payment and contractual issues the most industry prevalent (Paul et al., 2021). The PricewaterhouseCoopers (PwC) annual economic crimes survey 2014 found that engineering and construction reported the highest levels of bribery and corruption (PwC, 2014), while in Slovakia, the construction industry was found to be more exposed to unethical practices than all other industry sectors (Lašáková, Remišová and Bajžíková, 2021).

Unethical practices can lead to inflated project cost, poor quality work, abandoned projects, structural failure and lost opportunities for local communities (Zulu and Muleya, 2019). They may also result in dissatisfied clients, poor workmanship, low-quality infrastructure, loss of public trust (Aigbavboa, Oke and Tyali, 2016), environmental disasters and major loss of life (Delatte, 2015). Shah and Alotaibi (2017) contend that unethical behaviour within the industry has adverse effects on product quality, client and investor confidence. Conversely, case studies by Heal (2008) show how ethical conduct improves a firm's financial performance. Further studies show that businesses are better off when they behave ethically (Sommerville, 2011;

Piazolo and Förster, 2019). Preventive measures such as legal enforcement, adherence to regulations and sanctions, high levels of organisational integrity, honest construction culture, effective reporting channels, audit mechanisms and professional codes of conduct are said to be most effective (Yap et al., 2022). As Vee and Skitmore (2003) argue, when poor professional ethics are allowed to persist, even morally upright professionals will have difficulty maintaining ethical standards.

Given the negative consequences of unethical practices, researchers have investigated unethical business practices in the construction industry in both developed and developing countries including United Kingdom (UK) (Dainty et al., 2004), Australia (Brown and Loosemore, 2015; Sunindijo and Kamardeen, 2017), China (Liu, Zhao and Li, 2017), Nigeria (Paul et al., 2021), Ghana (Kuuribo et al., 2023), Malaysia (Yap et al., 2022), Brazil (Monteiro, Masiero and de Souza, 2022) and South Africa (Bowen et al., 2007; Amoah and Steyn, 2023). While anecdotal evidence suggests unethical practices within the GCC construction industry (Abdel-Razzaq, 2017), this has not been empirically determined. Anecdotal evidence may not represent wider industry behaviour and are often influenced by personal biases. Research shows that statistical evidence is viewed as more credible than anecdotal evidence (Allen and Preiss, 1997; Zebregs et al., 2015; Hornikx, 2018; Chinn and Weeks, 2021; List, 2024). The only study addressing unethical practices in the Gulf region focused on the unethical employment recruitment practices and the resulting long-term impacts on quality management within Gulf-based construction multinational corporations (MNCs) (Malit, Morrison and Alexander, 2019).

Despite the negative impacts it has on construction stakeholders, empirical research on unethical practices within the GCC construction industry remains limited. For example, payment delays by some GCC clients were identified as a major contributor to the collapse of UK construction giant Carillion (Mor et al., 2018). Unethical conduct by construction professionals is also linked to cost overruns, project delays and poor-quality construction outcomes (Mittal and Jha, 2025). Given the similarities between the Sultanate of Oman and the United Arab Emirates (UAE) in terms of cultures and legal frameworks governing their construction sectors, this study hypothesises that there will be no significant differences between the two countries in terms of construction industry unethical practices. Therefore, this pioneering study seeks to explore unethical issues within the construction industries of both Oman and UAE.

The study will seek to answer the following research questions:

1. What are the most prevalent unethical practices within the GCC construction industry?
2. Are there significant differences between Oman and the UAE in relation to unethical practices in their construction sectors?

It is hoped that the study will lay a foundation for future country-specific investigations into ethical issues in the GCC construction industry. The remainder of the paper is organised as follows: section two presents the literature review, section three outlines the methodology, section four discusses results and section five concludes the study.

LITERATURE REVIEW

The study of ethics, and the need to increase ethical awareness among individuals and corporate organisations, has grown over recent decades. This increased interest is not unconnected with the engineering failures (Roddis, 1993), corporate scandals (Monteiro, Masiero and de Souza, 2022) and various types of fraud and professional misconduct that have led to huge losses for construction stakeholders. Failure to adhere to established standards contributed to major globally known incidents such as the Hyatt Regency Hotel walkway collapse (United States [US]), the Malpasset Dam failure (France), the Vaiont Dam disaster (Italy), the collapse of Rana Plaza (Bangladesh), the Sampoong Department store collapse (Korea), Grenfell Tower fire (UK) and more recently the Wang Fuk court fire (Hong Kong) (as shown in Table 1). These incidents prompted reform actions such as improved legislation, safety, design and construction standards updates, stricter monitoring and approval mechanisms, and increased focus by professional engineering institutions on adherence to professional codes of conduct (Roddis, 1993).

Table 1. Loss of lives in engineering failures

Year	Disaster	Deaths	Injuries	Country
1981	Hyatt Regency Hotel	114	216	United States (US)
1995	Sampoong Supermarket	502	937	South Korea
2013	Rana Plaza Bangladesh	1,134	2,500	Bangladesh
2017	Grenfell Tower Fire	72	70	United Kingdom (UK)
2025	Wang Fuk Court Fire	151	79	Hong Kong
Total		4,394	3,802	

Source: Al Issai et al. (2024)

The disasters listed in Table 1 are largely attributed to engineering negligence, greed, professional errors and poor decision-making. Many engineers involved in the projects were punished legally, suspended or lost their licenses (Delatte, 2015). Lessons learned from researching past incidents such as those mentioned include random inspections, stronger reporting and regulatory systems and continuing professional development to raise awareness of ethical issues (Paul et al., 2021). However, specific cases such as Grenfell

Towers where residents raised warnings for several years and were ignored (MacLeod, 2018) or in the case of Sampoong supermarket collapse, which exposed bribery and corruption (Dyrud, 2011), illustrate the difficulty to resolve systemic problems. In contrast, the positive ethical conduct of firms has been shown to contribute to improved profitability (Heal, 2008; Brulhart, Gherra and Quelin, 2019) and improve employee commitment to company goals (Bahadori et al., 2021).

Cost pressures, inadequate sanctions and toothless ethics systems have been shown to be a major cause of many of the unethical behaviours occurring within the construction industry (Liu, Zhao and Li, 2017). In Australia, contributing factors boosting unethical conduct include high goal visibility, permissive attitudes, supportive subjective norms and low risk of being caught (Brown and Loosemore, 2015). Recent research shows that compliance requirements, especially those related to the environment, can have a positive effect on a company's financial performance (Brulhart, Gherra and Quelin, 2019; Vu and Dang, 2021), although research evidence from New Zealand and Australia did not find that connection (Loosemore and Lim, 2017). Another study found that increasing employees' ethical awareness resulted in increased employee performance regardless of demographic characteristics (Hussain et al., 2021). Public sector projects appear particularly susceptible to unethical practices, as a small number of public officials actively solicit bribes or manipulate the tender process (Bowen, Edwards and Cattell, 2012). Although all stakeholders can contribute to unethical practices, contractors are often identified as primary offenders (Vee and Skitmore, 2003; Bowen et al., 2007). Some evidence shows that clients, contractors and subcontractors profit from unethical behaviour, while society and blue-collar workers bear the negative impacts (Vee and Skitmore, 2003; Lohne and Drevland, 2019). In contrast, additional studies found elsewhere that subcontractors and suppliers suffer more (Loosemore and Lim, 2015).

A study of ethical issues in Ghana revealed rampant negligence, bribery, fraud, corruption and contract inflation among construction professionals (Kuuribo et al., 2023). Other unethical behaviours included sexual harassment, bullying, intimidation and racial discrimination which appear to be a growing concern within the industry (Sunindijo and Kamardeen, 2017). In one study in the UK, 59% of respondents reported intimidation and bullying in the workplace and 22% reported sexual harassment (Nawrockyi et al., 2014). An *Engineering News-Record* survey in the US reported that 66% of respondents faced sexual harassment or gender discrimination (Rubin et al., 2018). Threats of violence is another industry concern. In 2019, about 20,870 American workers experienced trauma from non-fatal workplace violence (National Institute for Occupational Safety and Health, 2021).

Other ethical issues that have become prevalent within the construction industry include religious discrimination (Messarra, 2014), racial discrimination (Sunindijo and Kamardeen, 2017), bid rigging and bid shopping (Ameyaw et al., 2017) and financial misrepresentation such as overstating or understating of revenues (PwC, 2014). While overstatement is done to create a false positive image for investors and shareholders, understating revenues are often used to reduce tax burdens. For example, investigations revealed that Carillion had been borrowing to pay shareholder dividends, thereby creating a false impression of profit and financial stability (Mor et al., 2018). Tax evasion and avoidance also make an appearance. Research found that age, gender, education and marital status influence perception of the legality of tax evasion (James et al., 2019). Ironically, it is major accounting firms who design and promote elaborate tax avoidance schemes under the guise of financial planning (Sikka and Willmott, 2013).

UK construction firms are estimated to lose over GBP1.8 billion annually due to invoice frauds (WBEF, 2021). The most frequently encountered types of corruption include kickbacks, bribery, collusion and tender rigging, conflicts of interest and fraud (Ameyaw et al., 2017). Three stages of construction are thought to be most susceptible to unethical practices, namely, project execution, pre-qualification and tender stages (Owusu et al., 2020), although Lohne et al. (2017) found that the design stage was more ethically challenging. Examination of the Odebrecht bribery scandal illustrates the sheer scale of the issue. Projects in which bribes were a feature saw average cost increases of 70.8%, in comparison to 5.6% for projects with no bribes (Campos et al., 2021). Skills shortages, absence of deterrents and poor ethical standards have also been linked to corrupt practices within the industry (Bowen, Edwards and Cattell, 2012). Fighting corruption in the sector is therefore essential for long-term sustainability in construction (WBEF, 2021) and requires committed action from all stakeholders (Orlova and Boichev, 2017).

Poor quality work is another aspect of unethical practice within the construction industry. However, while consequences can be delayed, they can also be harsh. The original contractor involved in the collapsed Wickens Holding Building in Ashford (UK) was held liable 26 years later for the deaths of four workers who died during the collapse (Hollis, 2006). Table 2 summarises the ethical issues identified in the literature.

Table 2. Summary of ethical issues

No.	Ethical Issue	Source
1	Bid rigging	Shah and Alotaibi (2017); Ogbu and Asuquo (2018)
2	Bid shopping	Loosemore and Lim (2015); Shah and Alotaibi (2017)
3	Bribery	Vee and Skitmore (2003); Shah and Alotaibi (2017); Zulu and Muleya (2019); Kuoribo et al. (2023)
4	Client delay of payment	Bowen et al. (2007); Shah and Alotaibi (2017)
5	Collusive tendering	Vee and Skitmore (2003); Ogbu and Asuquo (2018)
6	Confidentiality and proprietary breach	Vee and Skitmore (2003); Bowen et al. (2007)
7	Conflict of interest	Vee and Skitmore (2003); Shah and Alotaibi (2017); Ameyaw et al. (2017)
8	Contactors falsification of experience and qualification	Vee and Skitmore (2003); Adnan et al. (2012); Ogbu and Asuquo (2018)
9	Contract inflation	Shah and Alotaibi (2017); Kuoribo et al. (2023)
10	Contractor gifts to consultant	Bowen et al. (2007); Shah and Alotaibi (2017)
11	Contractor overstatement of capacity	Vee and Skitmore (2003); Adnan et al. (2012); Ogbu and Asuquo (2018)
12	Corruption	Zulu and Muleya (2019); Kuoribo et al. (2023)
13	Cutting corners (poor quality work)	Vee and Skitmore (2003); Abdul-Rahman, Hanid and Yap (2014)
14	Delayed response from consultants	Vee and Skitmore (2003)
15	Fraud	Vee and Skitmore (2003); WBEF (2021); Kuoribo et al. (2023)
16	Intimidation	Sunindijo and Kamardeen (2017); Regis et al. (2019); Adolphus et al. (2020)
17	Lack of safety/poor safety	Vee and Skitmore (2003); Adnan et al. (2012)
18	Late and short-payment	Adnan et al. (2012); Loosemore and Lim (2015)
19	Professional negligence	Vee and Skitmore (2003); Shah and Alotaibi (2017); Kuoribo et al. (2023)
20	Overstatement of revenues	PwC (2014)

(Continued on next page)

Table 2. *Continued*

No.	Ethical Issue	Source
21	Racial discrimination	Dainty et al. (2004); Ruggs et al. (2013); Messarra (2014); Sunindijo and Kamardeen (2017); Adolphus et al. (2020)
22	Religious discrimination	Mathenge (2012); Ruggs et al. (2013); Messarra (2014)
23	Sexual harassment	Sunindijo and Kamardeen (2017); Regis et al. (2019)
24	Tax avoiding transactions	Sikka and Willmott (2013); Ravenda et al. (2021)
25	Threat of violence	Zulu and Muleya (2019); Adolphus et al. (2020)
26	Understatement of revenues to avoid tax	PwC (2014)
27	Unfair conduct	Vee and Skitmore (2003); Lohne et al. (2017)
28	Unfair treatment at final account	Adnan et al. (2012)
29	Use of poor quality of material	Vee and Skitmore (2003); Bowen et al. (2007); Adnan et al. (2012); Abdul-Rahman, Hanid and Yap (2014)
30	Violation of environmental ethics	Vee and Skitmore (2003); Brulhart, Gherra and Quelin (2019)

Resolving these issues necessitates the introduction and reinforcement of professional ethics at the early stages of career development. The academic institutions where future engineers are trained will play a central role (Scott, 2003). Increased ethical awareness through continuing professional development has also been suggested as an alleviating strategy (Piazolo and Förster, 2019; Paul et al., 2021). However, ethical training for engineers remains a gap in many university programmes (Ponce-Correa, Ospina-Ospina and Correa-Gutierrez, 2022). Professional ethics should be made a compulsory module for engineering students and should be taught by staff with chartered membership status in a recognised professional engineering institution (Sethy, 2015).

METHODOLOGY

A literature review was undertaken to understand the current state of ethics research within the GCC construction industry. McGinn's validated (2003) questionnaire was adapted for this study focusing on practising construction professionals only. For the purposes of this study, a professional has been defined as someone possessing specialist knowledge and autonomy of service provision to their clients (Watts et al., 2021).

Experienced construction professionals within Oman and the UAE were the target respondents for this study. The questionnaire integrated 30 ethical issues identified from the literature (as shown in Table 2). The participants were asked if they had faced any ethical issues in their work, if they knew any peers who had also faced ethical situations and what ethical issues were most common in the countries where they practiced. Due to the limited studies relating to ethics in the GCC, this study adopted an exploratory approach. Participants indicated their country of origin to investigate potential differences between citizens and expatriates who constitute about 40% of Oman's population and 87% of the UAE's (Gulf Research Centre, 2022).

A combination of three sampling approaches was used: stratified, snowball and convenience. Stratified sampling was applied to exclude site operatives from the sampling frame. Snowball and convenience sampling approaches were employed to increase access to otherwise difficult to reach construction professionals (Noy, 2008; Brown and Loosemore, 2015). Survey research in the Middle East suffers from several previously documented challenges which include mistrust of external researchers, biases in language, nationality, gender and low survey response rates (Gengler, Le and Howell, 2019). For example, after administering 2,991 surveys, only 315 responses were received in one study on the use of academic social networks by researchers (Elsayed, 2016). Furthermore, negative views about survey reliability and intentions increase under-reporting among Arab respondents (Gengler et al., 2021). To get relevant data, researchers build personal networks, making snowball and convenience sampling important go-to techniques in the region. The Statistical Package for the Social Sciences (SPSS) version 29 (IBM Corp., Armonk, NY, US) was used to analyse the data.

A reliability test was conducted on the data; this test of internal consistency assessment seeks to determine if the items in the survey are all measuring the same underlying construct. Cronbach's alpha, one of the most used indicators of internal consistency, was used to determine whether the items measured the same underlying construct (Pallant, 2020). The higher the value, the greater the confidence that the instrument is internally consistent (Salkind, 2014). Cronbach's alpha values should be above 0.7 (preferably above 0.8) to be considered reliable with higher values indicating greater reliability (Salkind, 2014; Pallant, 2020). The assumption of normality was checked because many statistical procedures' validity depends on this assumption (Ghasemi and Zahediasl, 2012). The normality test returned a statistically significant value for both Kolmogorov-Smirnov and Shapiro-Wilk tests (sig-0.001) indicating the data violates normality assumptions, resulting in the use of non-parametric statistical procedures (Pallant, 2020).

Given that most categorical variables comprised two or more independent groups, the Mann-Whitney U test and the Kruskal-Wallis H test were used to examine statistically significant differences across job country, qualifications, years of experience, professional affiliation, gender and sector. The Mann-Whitney U test compares two independent groups on a continuous variable (Green and Salkind, 2014), whereas the Kruskal-Wallis H test compares three or more groups (Pallant, 2020). Factor analysis was used to identify and group variables under a smaller number of factors. Factor analysis reduces large numbers of overlapping measured variables to a much smaller set of factors (Green and Salkind, 2014). Verification of data set suitability for factor analysis was conducted using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, which must be above 0.6 and the Bartlett's test of sphericity (BTS), which must be significant (p -value < 0.05) (Pallant, 2020).

Use of Kaiser's criterion results in the retention of too many factors (Sheytanova, 2015; Pallant, 2020). A comparable study analysed the three most popular methods of extraction (Kaiser's criterion, acceleration factor and parallel analysis) and found that parallel analysis is overall the most accurate (Sheytanova, 2015). Therefore, using the Monte Carlo principal component analysis (PCA) for parallel analysis software (Watkins, 2000), random eigenvalues are generated using the characteristics of the data including number of respondents and number of variables. The SPSS eigenvalues are then compared with those from the Monte Carlo PCA for parallel analysis, where if the SPSS value is larger than the criterion value from the Monte Carlo PCA for parallel analysis, the factor is retained; if it is less, the factor is rejected and this approach has been shown to be more accurate (Pallant, 2020).

RESULTS AND DISCUSSION

A total of 357 responses were received from the online survey; 193 responses were from professionals based in Oman and 164 from the UAE. The higher number of Omani responses may have been influenced by the convenience sampling approach as all the authors are Oman-based. Only 41 respondents (11.49%) were female, while 216 (88.51%) of the respondents were male, a reflection of wider industry trends (US Department of Commerce, 2024).

About 55.7% of the respondents were private sector employees, with 44.3% employed in the public sector. In terms of qualifications, 99.2% of respondents held at least a bachelor's degree. About 60.5% of respondents were early-career professionals with a year to five years industry experience, while 39.5% had over five years. The profile of the respondents shows that they are experienced and qualified enough to provide reliable responses. A breakdown of the respondents' characteristics by country is shown in Table 3.

Table 3. Respondents' characteristics by country

Country	Oman	UAE
Number of respondents	193	164
Public/Private sector ratio (%)	51.3/48.7	36.0/64.0
Male/Female ratio (%)	78.8/21.2	100.0/–
Academic qualification: Bachelor of Science/Other (%)	98.4/1.6	100.0/–
More than five years of experience/ Less than five years of experience (%)	53.9/46.1	22.6/77.4

Data reliability was excellent with a Cronbach's alpha of 0.958 (George and Mallery, 2003). Approximately 76.8% of respondents indicated facing an ethical situation in the course of their work, while 56.3% of respondents reported knowing a colleague who had been faced with an ethical situation at work. Around 45.7% of respondents report being deterred from acting ethically by their employer. Another 44.5% of respondents indicated an employer had asked them to act unethically in the interest of their organisation.

The majority of respondents, 84.3%, agreed ethical awareness was the most important non-technical aspect of responsible professional practice. About 60.7% of the respondents agree that current students were likely to encounter significant ethical issues in the construction industry. This is consistent with earlier assertion by Scott (2003) and Mellon, Kolb and Beauchamp (2021) that student should be taught using real life examples from the field. Learning from major failures is essential in linking theory with practice (Iglesias-Mendoza et al., 2021). About 62.5% of the respondents indicated that ethical issues in engineering were taught during their studies. However, only 42.3% of respondents took ethics as a core module while 47.0% took ethics as an elective module in the university.

Differences Among Groups

The Mann-Whitney U tests revealed no statistically significant differences based on job, country, (asympt. sig. = 0.360) or gender of respondents (asympt. sig. = 0.173). The gender analysis result was expected given that only 11.49% of respondents were female. This is consistent with Richter and Murariu's (2018) findings indicating that gender did not affect ethical perceptions. However, James et al. (2019) reported that females tended to be more ethically aware than males.

Statistically significant differences were observed between the public and private sector (asympt. sig. = 0.003) respondents. There has been an expectation for public officials to adhere to higher ethical standards than

private sector employees (Dwivedi and Kernaghan, 1983; Mle, 2012). This is consistent with earlier studies including Hawkins, Gravier and Powley (2011) and Heres and Lasthuizen (2012). While controversies surrounding behaviours of senior public figures can be found in the public sector (Ehrich, Cranston and Kimber, 2004), Wheeler and Brady (1998) found no differences in their study.

The Kruskal–Wallis H test found no statistically significant differences based on academic qualifications (asyp. sig. = 0.110), consistent with the findings of Richter and Murariu’s (2018) global survey but contrary to the findings of Sommerville (2011) and James et al. (2019), who found that academic qualification impacts respondents’ perceptions on ethics. Statistically significant differences were found based on profession (asyp. sig. = 0.001) and respondents’ years of industry experience (asyp. sig. = 0.002) as shown in Table 4. Differences based on profession are consistent with findings by Fan, Ho and Ng (2001), who attributed differences to university training, post-graduation professional development and professional memberships. Differences based on years of industry experience were consistent with findings by Sommerville (2011) and Lašáková, Remišová and Bajžíková (2021).

Table 4. Kruskal-Wallis and Mann-Whitney U test results

Mann-Whitney U Test		
Categorical Variables	Test Statistics	Asymp. Sig (2-Sided)
Oman vs. UAE	16,713.500	0.360
Sector	18,587.000	0.003
Gender	7,324.500	0.173
Kruskal-Wallis H Test		
Categorical Variables	Test Statistics	Asymp. Sig (2-Sided)
Profession	26.808	0.001
Qualifications	6.035	0.110
Years of experience	17.309	0.002

Exploratory Factor Analysis

Exploratory factor analysis was conducted on the data. The results of the KMO measure of sampling adequacy and BTS are reported in Table 5. For all cases, the KMO value exceeded 0.70 while the BTS was statistically significant ($p = 0.001$), indicating good factorability. The exploratory factor analysis returned 6 factors for the overall sample ($n = 357$), 7 factors for the Oman group ($n = 193$) and 6 factors for the UAE group ($n = 164$).

Table 5. Factor analysis with Monte Carlo PCA confirmation

Respondent Category	KMO	BTS (Sig.)	Variable	% of Variance Explained	Eigenvalue from PCA	Monte Carlo Parallel Analysis	Remark
All (6 factors) <i>n</i> = 357	0.767	0.000	Fraud	75.81	12.976	1.583	Accept
			Delayed payments		3.426	1.502	Accept
			Misrepresentation by contractors		2.196	1.448	Accept
			Intimidation		1.528	1.390	Accept
			Tax avoidance		1.427	1.346	Accept
			Discrimination		1.190	1.299	Reject
Oman (7 factors) <i>n</i> = 193	0.716	0.000	Fraud	74.42	12.768	1.832	Accept
			Tax avoidance		2.607	1.693	Accept
			Misrepresentation by contractors		1.831	1.604	Accept
			Discrimination		1.442	1.528	Reject
			Delayed payments		1.339	1.463	Reject
			Intimidation		1.254	1.400	Reject
			Poor quality work		1.086	1.340	Reject

(Continued on next page)

Table 5. Continued

Respondent Category	KMO	BTS (Sig.)	Variable	% of Variance Explained	Eigenvalue from PCA	Monte Carlo Parallel Analysis	Remark
UAE (6 factors) <i>n</i> = 164	0.712	0.000	Fraud	96.56%	14.988	1.901	Accept
			Discrimination		6.302	1.760	Accept
			Delayed payment		3.466	1.668	Accept
			Tax avoidance		1.790	1.589	Accept
			Collusive tendering/bid rigging		1.327	1.523	Reject
			Misrepresentation by contractors		1.094	1.444	Reject

As stated earlier, SPSS factor analysis has a tendency to overestimate the number of factors (Sheytanova, 2015), requiring the use of Monte Carlo PCA for parallel analysis to determine the ideal number of factors (Pallant, 2020, p. 191). From this exercise, five factors were accepted from the overall dataset, three were accepted for the Oman group and four for the UAE group. A common thread across all three categories was fraud and tax avoidance. A recent Global Investigation Review report affirms that procurement fraud and conflicts of interest represent a significant area of concern for corporate governance in the GCC (Millington and Dondelinger, 2025). Tax avoidance has also emerged as a critical ethical issue across the GCC as competition and new taxation systems impact profitability. Delayed payments from clients, already recognised as a global ethical issue, have been revealed as particularly significant in the UAE. These findings suggest that governments and regional policymakers should reassess potential reforms to reduce these practices. Millington and Dondelinger (2025) contend that organisations should implement robust procurement policies, conduct enhanced due diligence on key vendors, oversee regular audits of vendor relationships, enforce strict conflict-of-interest disclosures and establish anonymous reporting mechanisms for whistleblowers to mitigate likely risks.

LIMITATIONS OF THE STUDY

One limitation of the study is the reliance on non-probability sampling approaches (convenience and snowball) which presents challenges for results generalisation. The findings should be interpreted within this context.

CONCLUSION

The construction industry plays a vital role in national economies and, like other sectors, has ongoing challenges. Unethical practices by major stakeholders are increasing and have become a cause for concern. Prior to this study, no known investigation of ethical issues within the GCC construction industry had been undertaken, nor were any country-specific studies located. As a precursor to determining effective strategies for mitigating unethical practices in the GCC construction sector, this study sought to identify the most prevalent ethical issues in the construction sectors of Oman and the UAE and whether significant differences existed between the two neighbours.

Using a structured questionnaire survey administered to professionals in both countries, the study found that fraud and tax avoidance were the most prevalent ethical issues overall. Other important issues include delayed payments, misrepresentation of capacity by contractors, intimidation and discrimination. In Oman, fraud, tax avoidance and misrepresentation of

capacity by contractors were the most common, while in the UAE, fraud, discrimination, delayed payments and tax avoidance were the predominant ethical issues. While anecdotal evidence of unethical practices in the GCC construction industry exists, stakeholders have not been provided with empirical evidence of the types and prevalence of the issues. It is noteworthy that many respondents indicated facing ethical situations in practice.

These findings should encourage reforms by governments, senior management, professional engineering institutions and higher education institutions. The findings should inspire policymakers to strengthen procurement reforms and whistleblowing protection. Many higher education institutions in the region lack stand-alone ethics modules in their engineering programmes, thereby creating a gap in the ethical training of potential engineers. Where professional ethics modules are offered, they are often optional for the students rather than mandatory. As part of the solution, higher education institutions in the region should consider making professional ethics modules mandatory for engineering students (Sethy, 2015).

It is important to note that the findings from this study cannot be generalised to other regions or other countries due to the non-probability sampling approach adopted. Therefore, the results should be interpreted within the context of the two countries' construction professionals who took part in the study.

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