

1 **DIFFERENCES IN STAKEHOLDER ABILITY IN ADDRESSING UNETHICAL**
2 **PRACTICES: INSIGHTS FROM THE SURVEYING PROFESSION**

3 Patrick Manu^{1*}, Ph.D; Kofi Agyekum², Ph.D; Abdul-Majeed Mahamadu³, Ph.D; Paul Olomolaiye³,
4 Ph.D; Emmanuel Adinyira², Ph.D.

5 ¹ School of Mechanical Aerospace and Civil Engineering, The University of Manchester, United
6 Kingdom.

7 ² Department of Construction Technology and Management, Kwame Nkrumah University of Science
8 and Technology, Kumasi, Ghana.

9 ³ Faculty of Environment and Technology, University of the West of England, Bristol, United
10 Kingdom

11 *Corresponding author email: Patrick.Manu@manchester.ac.uk

12
13 **Abstract**

14 While several measures have been suggested to address unethical practices within the built
15 environment, it remains unclear whether some stakeholders are more able to influence improvement
16 in unethical practices than others, and if so whether such phenomenon manifests similarly or
17 differently in different national contexts. This study pioneers the exploration of: whether different
18 built environment profession stakeholders (i.e. the practitioner/individual professional, the
19 practitioner's organization/company, and the professional body/association) have different abilities to
20 influence improvement (i.e. positive change) in unethical practices; and subsequently whether such
21 phenomenon manifests differently in different national contexts. The study used cross-sectional
22 surveys of built environment surveying professionals in three countries: Ghana, Nigeria and Tanzania.
23 The findings revealed that there are significant differences in the abilities of stakeholders to influence
24 improvement in unethical practices like political interference, and discrimination and nepotism. The
25 findings further revealed that differences in stakeholder ability to influence improvement in unethical
26 practices can manifest differently in different national contexts. The implication is that, in different
27 national contexts, specific stakeholders could play a leading role in efforts to address unethical
28 practices in which they are more capable of influencing improvement.

29
30 **Keywords:** ethics; questionnaire survey; surveying profession; unethical practices.

31 **Introduction**

32 While the built environment sector of no particular nation may be able to claim perfection in terms of
33 the absence of unethical practices, there are indications that the prevalence of unethical practices is
34 not uniform across countries (Transparency International, 2014).

35

36 Regardless of the disparities in the prevalence of unethical practices among market sectors, there is
37 acknowledgment that these practices in general have dire repercussions for the health of industries,
38 professions and eventually the growth of a country (see Schwab, 2013; Runde et al., 2014). Globally,
39 various estimates put the cost of corruption to be in excess of US \$1 trillion (Runde et al., 2014). For
40 the construction and property sectors, the costs resulting from unethical practices are not only in the
41 form of colossal financial losses but also often in human life (e.g. deaths resulting from the collapse of
42 structures due to sub-standard construction (CIOB, 2010). Clearly, the detrimental impact of unethical
43 practices presents a strong case for their mitigation, especially in the built environment where
44 unethical practices are pervasive.

45

46 Generally, it is recognised that unethical practices are a complex and multi-faceted problem which
47 require appropriate mitigation efforts by several stakeholders at various levels e.g. profession,
48 industry, national, regional and global. At the level of professions, the role of key stakeholders such as
49 practitioners, their firms/organisations, and professional bodies cannot be neglected. While the
50 contribution of each of these stakeholders towards addressing unethical practices is interconnected, it
51 is also reasonable to state that for some unethical practices, individual practitioners by themselves
52 may have limited influence in bringing about improvement (i.e. positive change). For such practices,
53 the firms/organisations or the professional bodies may be more able to influence improvement. The
54 notion of different industry stakeholders being able to influence improvement at varying extents runs
55 parallel to the view in risk management that some risks are more easily mitigated by some parties
56 more than others and therefore the recommended practice that risk items should be transferred to or
57 held by the party that is most capable of dealing with them (CIOB, 2010). Although this notion may

58 so hold true and perhaps be fundamental in addressing unethical professional practices in the built
59 environment, it is also important to clarify that an argument is not being made for various
60 stakeholders to be boxed into solely or exclusively focussing on addressing some particular unethical
61 practices. Rather, the notion of some stakeholders being better placed to influence improvement in
62 some unethical practices is being presented. This argument is presented from the standpoint that some
63 stakeholders could consequently act as ‘champions’ or ‘frontrunners’ to spearhead efforts to address
64 unethical practices while others continue to lend support in a unified manner.

65

66 While such an approach could be useful given the complex and multi-faceted nature of the problem of
67 unethical practices, the built environment lacks any empirical study that seeks to ascertain the
68 differences in stakeholder influences in addressing unethical practices. Such empirical inquiry is
69 necessary to provide a sound basis for guided action against unethical practices so that mitigation
70 efforts are appropriately applied. This study therefore explores whether different stakeholders of the
71 built environment surveying profession have different abilities to influence improvement (i.e. positive
72 change) in unethical practices; and whether such a phenomenon manifests differently in different
73 national contexts.

74

75 **Literature review**

76 As a term that is very difficult to define, various researchers have tried to give meaning to the word
77 ‘ethics’ by describing it in several ways. According to Mason (2009), ethics broadly describe the way
78 in which one looks at and understands life, in terms of good and bad or right and wrong. Sohail and
79 Cavill (2008, p. 730) indicated that “it is the study of what one ought to do (actions and decisions)
80 when faced with ethical dilemmas and how he/she does it, both as part of an organization and as an
81 individual”. Delbridge (2000) defined ethics in a broader way to include: a system of moral principles,
82 by which human actions and proposals may be judged good or bad, or right or wrong; the rules of
83 conduct recognized in respect of a particular class of human actions; and moral principles, as of an
84 individual. The issue of ethics continues to be topical, with particular emphasis on unethical practices

85 in the construction sector. This section is dedicated to reviewing literature on ethics and it is in two
86 parts: 1) highlighting the prevalence of unethical practices in the construction sector; and 2) various
87 forms of unethical practices in the sector.

88 *Prevalence of unethical practices in construction*

89 As a global industry, the construction industry has seen contractors and consultants operating across
90 international markets (Moodley et al., 2008). If properly harnessed, such an industry can make a
91 significant impact on the economic well-being of citizens and countries as a whole (Mukumbwa and
92 Muya, 2013). Though the construction industry has become a key driver to the economic growth of
93 many countries, it does so with numerous ethical challenges (Ho, 2011). As a matter of fact, code of
94 ethics has become increasingly important to the construction industries in most developed and
95 developing countries worldwide (Oladinrin and Ho, 2016). Oladinrin and Ho (2016) further iterated
96 that, though the code of ethics exists, it has not contributed much to the reduction in the intensity of
97 ethical problems within the industry, probably because of the domineering effect of unethical
98 practices which is restricting its progress.

99 Unethical practices have the tendency to impose negative costs at personal, group and organizational
100 levels, and an organization that is in the constant behavior of creating such negative behaviors will
101 encounter a diminishing market for its services and withdrawal of public approval (Poon and Hoxley,
102 2010). This has been the case of the global construction industry because of the inter-organizational
103 relationship that exists between the project team members (Poon and Hoxley, 2010). Researchers have
104 studied the issue of ethical behavior in the construction industry and have reported that there are clear
105 cases of unethical practices during the delivery of construction projects (May et al., 2001; Vee and
106 Skitmore, 2003; Seun et al., 2007; Adnan et al., 2012; Mukumbwa and Muya, 2013). The following
107 sections discuss examples of unethical practices in the construction sector.

108 *Common unethical practices in the construction industry*

109 Different professions have different reputations as far as ethical behaviors are concerned (Vee and
110 Skitmore, 2003). Unethical practices within the corporate and operational levels of the construction
111 industry have become commonplace, making the industry no stranger to the issues of ethical
112 malpractices (Oladinrin and Ho., 2014). Issues relating to construction faults and ethical malpractices

113 are often directed towards all the parties who are directly involved in the execution of such projects
114 (Adnan et al., 2012). Examples of commonly reported unethical practices in the construction industry
115 are discussed below.

116 *Fraud, Bribery and Corruption*

117 Defining corruption has always been a problem because what one perceives to be a corrupt practice
118 may not be so by another person. However, over the years, one definition that has received attention is
119 that given by Shakantu (2006, p. 43), who defined corruption as the “offering, giving, receiving or
120 soliciting of anything of value to influence the action of an official in the procurement or selection
121 process or in contract execution”. Fraud, bribery and corruption is without doubt a pervasive trait in
122 doing business, with a growing worldwide concern over a high level of corrupt activities among
123 corporate organizations of which construction is key (Arewa and Farrell, 2015). Vee and Skitmore
124 (2003, p. 119) presented fraud to indicate “deceit, trickery, sharp practice, or breach of confidence, by
125 which it is sought to gain some unfair or dishonest advantage”. The construction industry is frequently
126 noted as one of the most fraudulent and corrupt industries worldwide (Kenny, 2009). According to
127 Arewa and Farrell (2015, p. 61), corrupt practices may normally manifest in the form of “bribery,
128 embezzlement, extortion, influence peddling, unlawful gratuity, favor, commission, nepotism and
129 illegal payments”. Research on fraud, bribery and corruption has been extensively reported in
130 literature (see Vee and Skitmore, 2003; Bowen et al., 2007; Kenny, 2009; Osei-Tutu et al., 2010;
131 Ameh and Odusami, 2010; Bowen et al., 2012; Liao, 2013; Mukumbwa and Muya, 2013; Le et al.,
132 2014; Arewa and Farrell, 2015; Loosemore and Lim, 2015; Ameyaw et al., 2017).

133 *Conflict of interest*

134 Conflict of interest if pursued, could keep professionals from meeting their professional duties (Vee
135 and Skitmore, 2003). This ethical malpractice is defined to mean “a situation in which someone in a
136 position of trust, has competing professional or personal interests which could make it difficult to
137 fulfil his or her duties impartially” (Bowen et al., 2007, p. 634). Liao (2013, p. 88) also defined
138 conflict of interest to mean “any situation in which an individual or corporation is in a position to
139 exploit a professional or official capacity in some way for their personal or corporate benefit”. To the
140 engineering professionals, conflict of interest is closely related to impartiality, and it is very necessary

141 that one does not encroach upon conflicts that may bias their judgements in technical aspects of
142 reviewing a design, or in the construction of a project (Liao, 2013).

143 Clear cases of conflict of interests are presented in literature (Ameyaw et al., 2017). It is very much
144 mentioned among construction procurement (Bowen, 2007; Osei-Tutu et al., 2010), and it is defined
145 as a clash between the interest of the client organization and personal interest of an official in the
146 client organization (Ameyaw et al., 2017). Bowen et al. (2007) indicated that it is better to declare all
147 potential instances of conflicts of interests before proceeding to undertake any projects. This ethical
148 malpractice has been mentioned in the construction industry of several countries including Australia
149 (Vee and Skitmore, 2003), Zambia (Mukumbwa and Muya, 2013), Nigeria (Ameh and Odusami,
150 2010), Ghana (Osei-Tutu et al., 2010), among others.

151 *Unfair conduct*

152 According to Loosemore and Lim (2015), fairness has a close relationship with ethical concepts and
153 justice. It involves “treating people consistently, impartially and equally without favoritism,
154 discrimination or improper prejudices; not taking unfair advantage of people’s mistakes or ignorance;
155 and fully considering peoples’ rights, interests and perspectives” (Loosemore and Lim, 2015, p. 310).
156 Bowen et al. (2007) indicated that these unfair conducts may occur in competitions, contracts, staff
157 promotion/dismissal/demotion, and in business practice. According to Ameyaw et al. (2017), this
158 ethical malpractice may also be termed as ‘fronting’, and it may manifest itself when officials within
159 government agencies or client organizations create front companies to obtain construction contracts.
160 Such companies obtain unfair or illegal benefits in awarding public contracts because of the owners’
161 powerful positions in government (Ameyaw et al., 2017).

162 *Collusion*

163 Collusion is contrary to the principle of free competition because it only benefits the parties to the
164 collusive agreement at the expense of those who are not privy to the agreement (Bowen et al., 2007).
165 Ameyaw et al. (2017) indicated that collusive tendering and bid rigging are referenced alike, possibly
166 because it is a secret agreement between two or more parties engaged in a fraudulent activity. This
167 ethical malpractice though serious has not received much attention from the research community.
168 However, for those studies that have addressed this issue, it has been revealed that collusion is very

169 serious and should be addressed. Available literature has revealed that this issue is evidenced by
170 tender rigging that predominantly transpire at bid evaluation and tendering phases of project
171 developments (see Vee and Skitmore, 2003; Bowen et al., 2007; Kenny, 2009; Osei-Tutu et al., 2010;
172 Ameh and Odusami, 2010; Bowen et al., 2012; Liao, 2013; Mukumbwa and Muya, 2013; Le et al.,
173 2014; Arewa and Farrell, 2015; Loosemore and Lim, 2015; Ameyaw et al., 2017).

174 *Other unethical practices in the construction industry*

175 In addition to the commonly encountered unethical practices previously described, literature further
176 reports on other unethical practices in the construction industry such as: failure to protect public
177 health, safety and welfare; mishandling of sensitive data (e.g. revealing or discussing confidential
178 information); failure to protect the environment; improper relations with other parties (e.g. excessive
179 gifts); abuse of company resources; abuse of client resources; misrepresentation of competence; and
180 political interference (Jackson, 2004; Kang, 2009; Kang et al., 2017).

181

182 **Research methodology**

183 Aligned with the study's aim, a quantitative research strategy, particularly a survey was used. The
184 choice of this strategy is supported by its suitability for obtaining a generalized view of a phenomenon
185 (Fellows and Liu, 2008; Creswell, 2014), which in this study is stakeholders' ability to influence
186 improvement (i.e. bring about positive change) in unethical practices. Consequently, three cross-
187 sectional surveys were conducted in Ghana, Nigeria, and Tanzania. The administration of surveys in
188 the different locations was mainly to enable further exploration of the phenomenon in terms of
189 whether it could manifest differently in different national contexts.

190

191 *Survey design*

192 A questionnaire was designed for the survey and it consisted of two main sections: respondent
193 demographic information; and respondents' assessment of the extent to which different built
194 environment stakeholders (i.e. the practitioner/ individual professional, practitioner's
195 organization/company, and professional body/association) can influence improvement in unethical
196 practices.

197

198 *Section 1:* respondent demographic information. This section captured respondent demographic
199 information including: professional role; highest level of education; and professional experience.

200

201 *Section 2:* assessment of the extent to which different built environment stakeholders can influence
202 improvement in unethical practices. There are several stakeholders within the built environment and it
203 is not practicable to survey them all in a single study. As such this section focused on three important
204 stakeholders: the practitioner/ individual professional; practitioner's organization/company (i.e.
205 practitioners' employer); and the professional body/association (i.e. the national professional
206 body/association related to the practitioner's profession). The assessment of the extent to which each
207 stakeholder can influence improvement in unethical practices was done by relying on the judgement
208 of the practitioners. This approach was used because practitioners, through personal knowledge of
209 themselves, their organizations, and through their knowledge and interactions with their professional
210 association are well placed to provide credible assessment of the extent to which they, their
211 organization and professional association can influence improvement in unethical practices.
212 Consequently, this section requested built environment professionals to rate the extent to which they
213 perceive that they (personally), their organization and their national professional association can
214 influence improvement (i.e. bring about positive change) in the unethical practices. A five-point
215 Likert scale (1 = Not at all; 2 = Low; 3 = Moderate; 4 = High; 5 = Very High) was used. Drawing
216 from the review of literature, the unethical practices that were examined in the study are: failure to
217 protect public health, safety and welfare; collusion; mishandling of sensitive data (e.g. leakages);
218 production of fraudulent documents (e.g. invoices & claims); failure to protect environment; bribery;
219 improper relations with other parties (e.g. excessive gifts); abuse of company resources; abuse of
220 client resources; discrimination and nepotism; misrepresentation of competence; and political
221 interference. The questionnaire is presented in Appendix A.

222 ***Survey administration***

223 To enable exploration of the phenomenon of different built environment stakeholders having varying
224 ability to influence improvement in unethical practices, the survey was administered to built

225 environment surveying professionals (i.e. quantity surveyors, property/estate valuers, and land
226 surveyors) within three study locations. The Commonwealth Association of Surveying and Land
227 Economy (CASLE) (www.casle.org), which is an association for built environment surveying
228 professionals in the Commonwealth, holds annual conferences in conjunction with the surveying
229 professional bodies in Commonwealth countries. These conferences bring together surveying
230 professionals (usually predominantly from the country of the conference venue) to share information
231 and discuss issues that are relevant to the surveying profession. Considering the difficulty in obtaining
232 participation in built environment surveys, the CASLE conferences presented a useful platform to
233 administer the survey. A cross-sectional survey was thus administered to delegates at the CASLE
234 conferences held in Ghana, Nigeria, and Tanzania from 2015-2017. The survey yielded a total of 266
235 useable responses comprising 121 from Ghana, 86 from Nigeria, and 59 from Tanzania.

236 *Data analysis*

237 The data from the retrieved questionnaire were coded into IBM SPSS Statistic version 23 for analysis.
238 Descriptive statistical analyses (e.g. frequencies, mean and standard deviation) and inferential
239 statistical analysis - one-way analysis of variance (ANOVA) – were performed on the collected data.
240 The ANOVA was applied to the aggregated sample from the three locations (i.e. 266 responses) in
241 order to address the primary research objective of exploring whether there are differences in
242 stakeholder ability to influence improvement in unethical practices. In order to further explore
243 whether such differences could manifest differently or similarly in different national contexts, the
244 ANOVA was also applied to each country-specific sample. ANOVA was used due to its suitability for
245 assessing differences in responses for different groups (Field, 2013).

246

247 **Findings**

248 The findings of the study are presented below under three sub-headings: respondent demographic
249 information; differences in stakeholder ability to influence improvement in unethical practices; and
250 country-specific differences in stakeholder ability to influence improvement in unethical practices.

251 *Respondent demographic information*

252 The respondents were drawn from three countries (Ghana, Nigeria and Tanzania), and their combined
253 demographic information is shown in Table 1.

254

255 *[Insert Table 1]*

256 Table 1 shows that the respondents occupied various roles ranging from Land Surveyors/Geomatic
257 Engineers (40.6%), Estate Surveyors/Valuers (28.6%), and Quantity Surveyors (26.3%). The majority
258 of respondents (i.e. 85.7%) hold a bachelor's or postgraduate degree, and over half of the respondents
259 have more than 10 years of professional experience. Overall, based on the demographic information,
260 the respondents are sufficiently well placed to respond to the subject of inquiry.

261 ***Differences in stakeholder ability to influence improvement in unethical practices***

262 For each of the unethical practices examined, respondents rated the extent to which they can influence
263 improvement, the extent to which they perceive that their companies can influence improvement, and
264 the extent to which they perceive that their professional associations can influence improvement.

265 Table 2 shows the mean scores, standard deviations and standard errors of the twelve unethical
266 practices that were assessed.

267

268 From Table 2, 'company' is seen as the topmost ranked stakeholder that is able to influence
269 improvement in 11 out of the 12 unethical practices examined. Among the unethical practices are:
270 'failure to protect public health, safety and welfare' (mean score (MS) = 3.32, standard deviation (SD)
271 = 1.314); 'mishandling of sensitive data' (MS = 3.30, SD = 1.296); 'abuse of company resources'
272 (MS = 3.27, SD = 1.350); and 'bribery' (MS = 3.22, SD = 1.373). The professional association
273 emerged as the topmost stakeholder that can influence improvement in 'political interference' (MS =
274 3.34, SD = 1.373), while the individual professional did not emerge as the topmost stakeholder for
275 any of the unethical practices.

276

277 While the ranking gives an indication of the stakeholders' relative ability to influence improvements
278 in unethical practices, inferential statistical analysis is required in order to establish whether the
279 differences in stakeholder ability to influence improvement are significant. A one-way analysis of

280 variance (ANOVA) test was conducted to determine if there are any statistically significant
281 differences in the means between groups (i.e. the individual professionals, the professional's
282 companies, and the professional association) in terms of the ability to influence improvement in the
283 unethical practices. From the one-way ANOVA test, the combined sample revealed that different
284 stakeholders are perceived to have significantly different abilities to influence improvement in three
285 out of the 12 unethical practices: abuse of company resources; discrimination and nepotism; and
286 political interference (as shown by Table 3). Tukey post hoc comparisons (as shown by Table 4) was
287 further conducted to determine the differences in the stakeholders' ability to influence improvement in
288 the three unethical practices. The post hoc comparison is frequently used in conjunction with ANOVA
289 to determine which pairs of groups show statistically significant mean differences (De Vaus, 2002).
290 The Tukey's test detects a pairwise comparison with means that are significantly different from each
291 other at a 0.05 significance level (Skibniewski, 2009).

292

293 From the Tukey post hoc test, the differences in the mean scores for the various groups were
294 determined and the mean differences are shown in Table 4. The pairs of groups which showed
295 statistically significant mean differences at 0.05 significance level are shown in the superscript 'a'.
296 Table 4 further shows that the mean score of organization ability to influence improvement in the
297 'abuse of company resources' is significantly higher than that of the professional association (mean
298 difference (MD) = 0.405, $p = 0.003$). The comparison of the mean score of the individual professional
299 with that of the organization and professional association yielded no significant difference. The post
300 hoc comparison in Table 4 further reveals that the comparison of the mean score of organization
301 ability to influence improvement in 'discrimination and nepotism' is significantly higher than that of
302 the individual professional (MD = 0.347, $p = 0.022$). The comparison of the mean score of the
303 professional association with that of the organization and individual professional yielded no
304 significant differences. Finally, Table 4 shows that the mean scores of the ability of the organization
305 (MD = 0.670, $p < 0.001$) and the ability of the professional association (MD = 0.717, $p < 0.001$) to
306 influence improvement in political interference is significantly greater than that of the individual
307 professional.

308

309

[Insert Table 2]

310

[Insert Table 3]

311

[Insert Table 4]

312

313 ***Country-specific differences in stakeholder ability to influence improvement in unethical practices***

314 Country-specific ANOVA analysis was conducted to further explore whether the observed differences
315 in stakeholder ability to influence unethical practices manifest similarly or differently in the three
316 survey locations: Ghana, Nigeria, and Tanzania. The results are in the following sections.

317

318 *Differences in stakeholder ability to influence improvement in unethical practices (Ghana sample)*

319 The one-way ANOVA test conducted for the Ghana sample revealed that different stakeholders are
320 perceived to have significantly different abilities to influence improvement in 3 unethical practices as
321 follows: abuse of company resources; discrimination and nepotism; and political interference (as
322 shown by Table 5). The Tukey post hoc test multiple comparisons for the Ghana sample ANOVA is
323 shown in Table 6. The Tukey post hoc test revealed differences in the means for the various groups.
324 Table 6 shows that the mean score of company's ability to influence improvement in the 'abuse of
325 company resources' is significantly greater (MD = 0.719, $p < 0.001$) than that of the professional
326 association. With regards to 'discrimination and nepotism', the mean score of company's ability to
327 influence improvement is also significantly greater than that of the individual professional.
328 Concerning 'political interference', the ability of the company (MD = 0.992, $p < 0.001$) and the
329 professional association (MD = 0.688, $p = 0.001$) to influence improvement is significantly greater
330 than that of the individual professional.

331

[Insert Table 5]

332

[Insert Table 6]

333

334 *Differences in stakeholder ability to influence improvement in unethical practices (Nigeria sample)*

335 As shown by Table 7, the one-way ANOVA test conducted for the Nigeria sample revealed that
336 different stakeholders are perceived to have significantly different ability to influence improvement in
337 only one unethical practice (i.e. political interference). Table 8 which shows the Tukey post hoc test
338 multiple comparisons reveal that the mean score of the professional association's ability to influence
339 improvement in political interference is significantly greater (MD = 0.726, $p = 0.001$) than that of the
340 individual professional.

341 *[Insert Table 7]*

342 *[Insert Table 8]*

343

344 *Differences in stakeholder ability to influence improvement in unethical practices (Tanzania sample)*

345 Like the Nigeria sample, the one-way ANOVA test conducted for the Tanzania sample revealed that
346 different stakeholders are perceived to have significantly different ability to influence improvement in
347 only one unethical practice (i.e. political interference). This is shown in Table 9. The Tukey post hoc
348 test multiple comparisons (shown by Table 10) shows that the mean score of the ability of the
349 professional association to influence improvement in 'political interference' is significantly greater
350 (MD= 0.761, p -value=0.010) than that of the individual professional.

351

352 *[Insert Table 9]*

353 *[Insert Table 10]*

354

355 **Discussion**

356 *Discussion based on combined results*

357 Over the years the issue of ethics has received much attention among companies, professional
358 associations, and individual professionals (Perry et al., 2014; Joyce, 2014). The combined results of
359 the study show that, out of the three stakeholders, 'company' emerged as the topmost stakeholder that
360 is able to influence improvement (i.e. positive change) in the examined unethical practices, followed
361 by the professional association, with the individual professional having a relatively limited ability to
362 influence improvement. The results of the combined sample ANOVA also revealed significant

363 differences in stakeholder ability to influence improvement in ‘abuse of company resources’,
364 ‘discrimination and nepotism’, and ‘political interference’.

365

366 *Abuse of company resources*

367 Organizations should act to protect their assets against misuse and abuse by employees. Such assets
368 may be physical, intellectual and electronic or digital in nature. According to the Association of
369 Certified Fraud Examiners’ (ACFEs) 2016 Report to the Nations, abuse of company resources is
370 considered as the most common form of occupational fraud, and it occurs in approximately 83% of all
371 unethical cases reported. From the finding of this study, it is evident that the respondents perceive
372 organization to be more able to influence improvement in this unethical practice than the other
373 stakeholders. In most instances, client databases with personal and financial information, internal
374 documentations which detail out trade secrets, contents and technologies produced can be exposed,
375 opening the real possibility for data to be misused, either intentionally for personal gain, or
376 inadvertently. Maicibi and Yahaya (2013) and Wilks (2011) have reported this unethical practice to be
377 an issue which is of a major concern to organizations. It is a practice that is very difficult to curb,
378 especially on individual or professional association basis. There is therefore the need for a collective
379 action by an entire company to be able to control such practices. These acts of misconducts are vastly
380 reported in other industries, apart from construction, a typical example being the ICT (Kernel, 2011).
381 Since it manifests itself in different ways among different stakeholders, there is the need to identify
382 different ways to address it. It causes a huge challenge to organizational and societal development
383 (Maicibi and Yahaya, 2013), and organizations should seek to lead efforts to design and implement
384 measures to tackle the abuse of company resources by employees. In most instances, organizations
385 can put in place measures like identifying common asset misappropriation schemes (e.g. skimming,
386 billing schemes, and information theft), analytical reviews, independent checks, segregation of
387 functions and duties and access limitation and authorization controls to check the misuse of company
388 assets. However, such measures may be more likely to be effective if their design were to include
389 some level of employee involvement so that employees would take some ownership of the measures.

390 *Discrimination and nepotism*

391 Discrimination and nepotism are often seen in actions which actors may not consider as unethical
392 (Sezer, 2015). These unethical practices if encouraged in companies, among professional associations
393 and amongst individuals can cause great feelings of resentment. The findings of this study revealed
394 that the respondents perceive companies to be more able to influence improvement in discrimination
395 and nepotism than the individual professional. Nepotism is favoritism that is shown to relatives by
396 individuals in a position of authority (Pelletier and Bligh, 2008). This means that as an individual
397 professional, there is always the temptation of favoring a family member or a close ally when it comes
398 to providing a service. Such individuals if left unchecked may always prefer to fill vacancies in the
399 companies in which they work with people they are very much familiar with. In most instances,
400 companies are seen to be well positioned to have the needed structures in place to check against these
401 unethical acts. This means that, in a company where nepotism is very common, there must be clear
402 policies and practices against such acts. When organizations fail to enforce their anti-discrimination
403 and anti-nepotism policies with consistency, they expose themselves to liability. For instance, Büte
404 (2011) found that within the Turkish banking sector, nepotism had a significant negative effect on
405 intention of employees to quit the job, job satisfaction, organizational commitment, and human
406 resource management practices. Furthermore, in the Turkish Police Organization, it is reported that
407 the most essential problems encountered stem from discrimination and nepotism (Mutlu, 2000). Mutlu
408 (2000) further reported that though the police organization had its own culture, appointments,
409 promotions, and the honoring system were left in the hands of individuals who could easily be
410 manipulated by political organizations. Addressing discrimination and nepotism can be controversial
411 and difficult. In view of this, organizations should seek to design and enforce measures that would
412 address discrimination and nepotism within businesses and in cross-business interactions.
413 Organizations should not leave efforts to address discrimination and nepotism to individuals but
414 should have systems or procedures in place to help detect such practices and encourage individuals to
415 voice out acts of discrimination (Good Practice Note, 2006).

416

417 *Political interference*

418 The findings of the study show that the professional association and company are perceived as being
419 more able to influence improvement in political interference than the individual professional. Politics
420 plays a key role in the procurement of construction projects. This is because several large projects
421 undertaken in different countries are government sponsored projects. This therefore creates the needed
422 room for governments to politically interfere in such projects (Mukumbwa and Muya, 2013). Political
423 interference in unethical practices within the construction industry is greatly seen in what is termed
424 ‘fronting’ (Bowen et al., 2007; de Jong et al., 2009; Ameyaw et al., 2017). According to Ameyaw et
425 al. (2017, p. 3), ‘fronting occurs when officials within government agencies or client organizations
426 create front companies to obtain construction contracts’. de Jong et al. (2009) iterated that such
427 companies obtain unfair benefits in awarding public contracts because of the owners’ powerful
428 positions in government. In Ghana for instance, Ameyaw et al. (2017) revealed that high political
429 connections were used to enhance secrecy in the award of public contracts. Ameyaw et al. (2017)
430 further indicated that individuals did not report corrupt practices because of the fear of dismissal (or
431 other occupational penalties) that may be imposed by their employers on them. There is also the fear
432 that if such an unethical practice is conducted by an official with high political influence, the whistle
433 blower may not be well protected, leaving him and the family exposed to danger in the future. The
434 inference drawn from this finding is that professional bodies and organizations may be more capable
435 of influencing improvements in political interference than the individual practitioner because the
436 individual practitioner could more easily become a victim or target of political
437 victimization/persecution. Hence, professional bodies and organizations could champion efforts to
438 tackle political interference within the industry.

439 *Discussion of results on country specific basis*

440 On country-specific basis, the ANOVA revealed some differences as well as similarity in the findings.
441 For all the three samples the professional association is perceived as being more able to influence
442 improvement in ‘political interference’ than the individual professional. However, within the Ghana
443 sample only, organization is also perceived as being more able to influence improvement in ‘political
444 interference’ than the individual professional. Furthermore, within the Ghana sample only, significant

445 differences emerged regarding stakeholder ability to influence improvement in ‘abuse of company
446 resources’ and ‘discrimination and nepotism’.

447 According to Christie et al. (2003), responses to questions of an ethical nature from any particular
448 group of individuals from any country are a function of multiple constructs. It is worth noting that
449 such differences are possible and may stem from the differences in culture, organizational behaviors
450 or dynamics across the countries, among others. Several studies have shown that ethical behavior
451 varies cross-culturally (Arnold et al., 2007). For instance, Ahmed et al. (2003) found that while there
452 was a basic agreement on ethical business practices, differences were present in respondents’
453 tolerance to damages caused by a particular unethical behavior. Jackson (2000) believed that the
454 structure of ethical judgements varied by countries, and so conducted a study to prove this. The
455 findings of his study revealed that managers’ ethical judgements were influenced by country specific
456 cultural differences. In the light of organizational dynamics, Kuntz et al. (2013) indicated that the
457 extent to which an organization exhibits ethical capability is contingent upon the interplay of
458 competencies and behaviors of incumbents, the organizational infrastructure, and the ethical stance of
459 organizational leaders. It is therefore very likely that across countries, individuals and organizations
460 may share different ethical principles. Vitell and Hidalgo (2006, p. 31) therefore suggested that “as
461 businesses have globally expanded, the study of ethics has become increasingly important due to the
462 different cultural/country specific environments in which global businesses operate on a daily basis”.
463 Hence, as countries differ greatly in terms of their levels of economic development, legal-political
464 systems, cultural standards, and expectations concerning business conduct, decision makers who
465 operate in other countries and negotiate with the business people from such countries should take into
466 consideration the ethical stance of such individuals and their businesses in order to learn to trade
467 cautiously (Vitell and Hidalgo, 2006).

468 In summary, the empirical realities revealed by the country-specific analyses demonstrate that the
469 phenomenon regarding differences in stakeholder ability to influence improvement in unethical
470 practices can indeed manifest similarly as well as differently across different countries. More
471 importantly, what that implies is that measures designed to tackle unethical practices need to also
472 consider local contextual issues within a particular country rather than simply adopting or ‘borrowing’

473 measures from other contexts which may eventually not be effective. Nonetheless, within the confines
474 of this study, across the three study locations, the professional association could be a better champion
475 for spearheading efforts to address political interference within the surveying profession.

476

477 **Conclusions**

478 The built environment is notorious for the prevalence of unethical practices and while concerted effort
479 by all stakeholders is needed to address such practices, some stakeholders within the sector may be
480 more capable to lead change or influence improvement. This study has examined: whether different
481 built environment profession stakeholders, particularly the surveying professional, the professional's
482 company, and the professional association, have different abilities to influence improvement in
483 unethical practices; and whether such phenomenon manifests differently in different national contexts.
484 The results from the study demonstrate that for some unethical practices there are significant
485 differences in the ability of stakeholders to influence improvement. Such unethical practices are
486 'abuse of company resources', 'discrimination and nepotism', and 'political interference'. The results
487 also show that the differences in stakeholder ability to influence improvement can manifest similarly
488 and differently in different national contexts. The results hold significant practical implications in the
489 sense that stakeholders that are more able to influence improvement in an unethical practice should
490 spearhead efforts aimed at addressing those unethical practices. Within the specific context of the
491 three study locations, professional bodies could spearhead efforts to address political interference
492 within the surveying profession or more broadly within the built environment sector in those
493 locations. As shown from this study that differences in stakeholder ability to influence improvement
494 in unethical practices can manifest differently in different national contexts, it is imperative that
495 further studies of this nature are undertaken in other countries in order to understand what pertains in
496 each specific country. It is based on such studies that tailored efforts to address unethical practices can
497 be designed and implemented within a country. Such studies could also eventually inform the
498 development of a tool to assist companies and professionals to navigate ethical issues in different
499 countries.

500 Additionally, a limitation of this study is that it was restricted to built environment surveying
501 professionals within three countries. Further studies involving other built environment professions
502 could yield additional empirical realities to broaden understanding of various stakeholders' ability to
503 address unethical practices within the construction sector.

504

505 **Acknowledgement**

506 Appreciation is extended to the Commonwealth Association of Surveying and Land Economy for the
507 assistance given in data collection.

508

509 **References**

510 Adnan, H., Hashim, N., Yusuwan, N.M., and Ahmad, N. (2012). "Ethical issues in the construction
511 industry: Contractor's perspective." *Procedia Soc. Behav. Sci.*, 35, 719-727.

512 Ahmed, M., Cheung, K., and Wichenseher, J. (2003). "Business students' perception of ethics and
513 moral judgment: A cross-cultural study." *J. Bus. Ethics*, 43(1/2), 89-102.

514 Ameh, O.J., and Odusami, K.T. (2010). "Professionals' ambivalence toward ethics in the Nigerian
515 construction industry." *J. Prof. Issues Eng. Educ. Pract.*, 136 (1), 9-15.

516 Ameyaw, E., Parn, E., Chan, A.P.C., Owusu-Manu, D., Edwards, D.J., and Darko, A. (2017).
517 "Corrupt practices in the construction industry: Survey of Ghanaian Experience." *J. Manage.*
518 *Eng.*, 33 (6), 1-11.

519 Arewa, A.O., and Farrell, P. (2015). "The culture of construction organizations: the epitome of
520 institutionalized corruption." *Const. Econ. Build.*, 15 (3), 59-71.

521 Arnold, D.F., Bernardi, R.A., Neidermeyer, P.E., and Schmee, J. (2007). "The effect of country and
522 culture on perceptions of appropriate ethical actions prescribed by codes of conduct: A Western
523 European perspective among Accountants." *J. Bus. Ethics*, 70(4), 327-340.

524 Association of Certified Fraud Examiners (2016). "Report to the Nations on Occupational Fraud and
525 Abuse." (<http://www.acfe.com/rtnn2016/docs/2016-report-to-the-nations>) (Nov. 6, 2018).

526 Bowen, P.A., Edwards, P.J., and Cattell, K. (2012). "Corruption in the South African Construction
527 industry: A thematic analysis of verbatim comments from survey participants." *Constr.*
528 *Manage. Econ.*, 30 (10), 885-901.

529 Bowen, P.A., Akintoye, A., Pearl, R., and Edwards, P.J. (2007). "Ethical behavior in the South
530 African Construction Industry." *Constr. Manage. Econ.*, 25 (6), 631-648.

531 Büte, M. (2011). "The effects of nepotism and favoritism on employee behaviors and human resource
532 practices: A research on Turkish Public Banks." *Todaie's Rev. Pub. Admin.*, 5(1), 185-208.

533 Christie, P., Ik-Whan, J., Kwon, G., Stoeberl, P., and Baumhart, R. (2003). "A cross-cultural
534 comparison of ethical attitudes of business managers." *J. Bus. Ethics*, 46(3), 263-287.

535 CIOB (2010). "Code of Practice for Project Management for Construction and Development." 4th edn.
536 Oxford: Wiley-Blackwell.

537 Creswell, J. (2014). "Research design: Qualitative, quantitative and mixed methods approach." 4th ed.,
538 Los Angeles (CA): Sage Publications.

539 Delbridge, A. (2000). "Macquarie Dictionary." Macquarie Point, N.S.W.

540 de Jong, M., Henry, W.P., and Stansbury, N. (2009). "Eliminating corruption in our
541 engineering/construction industry." *Leadersh. Manage. Eng.*, 9(3), 105-111.

542 De Vaus, D. (2002). "Analysing social science data—50 key problems in data analysis." SAGE
543 Publications: Thousand Oaks, CA, USA.

544 Fellows, R., and Liu, A. (2008). "Research methods for construction." 3rd ed. Chichester: Blackwell
545 Publishing.

546 Field, A. (2013). "Discovering statistics using IBM SPSS statistic." 4th ed. Los Angeles (CA): Sage
547 Publications.

548 Good Practice Note (2006). "Non-discrimination and equal opportunity."
549 (<http://www.ifc.org/enviropublications>) (Oct. 17, 2018).

550 Ho, C.M.F. (2011). "Ethics management for the construction industry: A review of ethical decision-
551 making literature." *Eng. Constr. Archit. Manage.*, 18 (5), 516-537.

552 Jackson, B. (2004). "The perceptions of experienced construction practitioners regarding ethical
553 transgressions in the construction industry." *Int. J. Constr. Educ. Res.*, 1(2), 1-10.

554 Jackson, T. (2000). "Making ethic judgements: A cross-cultural management study." *Asia Pac. J.*
555 *Manage.*, 17(3), 443-472.

556 Joyce, P. (2014). "The culture of ethics that the public sector needs."
557 (<http://www.governing.com/columns/smart-mgmt/col-cultureethics>) (Aug. 20, 2018).

558 Kang, B.G., Long, K., Zhang, C., and Hao, J.L. (2017). "Comparative study on the ethical perceptions
559 of contractors and designers in the China construction industry." *IOP Conf. Series, Materials*
560 *Science and Engineering*, 291, 1-7.

561 Kang, B.G. (2009). "Principles and practices of construction ethics management: With a comparative
562 study between the UK and Korea." VDM Verlag Müller Publishing, Germany.

563 Kenny, C. (2009). "Transport Construction, corruption and developing countries." *Transp. Rev.*, 29
564 (1), 21-41.

565 Kernel (2011). "Stop misuse of organizational resources through Spyware tools."
566 (<http://www.presseexposure.org>) (Oct. 17, 2018).

567 Kuntz, J.R.C., Kuntz, J.R., Elenkov, D., and Nabirukhina, A. (2013). "Characterising ethical cases: A
568 cross-cultural investigation of individual differences, organizational climate, and leadership on
569 ethical decision-making." *J. Bus. Ethics*, 113(2), 317-331.

570 Le, Y., Shan, M., Chan, A.P.C., and Hu, Y. (2014). "Investigating the causal relationships between
571 causes of and vulnerabilities to corruption in the Chinese public construction sector." *J. Constr.*
572 *Eng. Manage.*, 140 (9), 1-11.

573 Liao, S.S.C. (2013). "Enhancing ethics and the competitive environment by accounting for conflict of
574 interest in project procurement." *Leadersh. Manage. Eng.*, 13 (2), 86-95.

575 Loosemore, M., and Lim, B. (2015). "Inter-organizational unfairness in the construction industry."
576 *Constr. Manage. Econ.*, 33 (4), 310-326.

577 Maicibi, N.A., and Yahaya, S.A. (2013). "Criminal and unethical behaviors in organizations: misuse
578 of assets and false or misleading advertising." *Global J. Hum. Soc. Sc. Pol. Sci.*, 13 (1), 1-11.

579 Mason, J. (2009). "Ethics in the construction industry: the prospects for a single professional code."
580 *Int. J. Law Built Environ*, 1 (3), 194-204.

581 May, D., Wilson, O., and Skitmore, M. (2001). "Bid cutting: An empirical study of practice in South-
582 East Queensland." *Eng. Constr. Archit. Manage.*, 8 (4), 250-256.

583 Moodley, K., Smith, N., and Preece, C.N. (2008). "Stakeholder matrix for ethical relationships in the
584 construction industry." *Constr. Manage. Econ.*, 26 (6), 625-632.

585 Mukumbwa, B., and Muya, M. (2013). "Ethics in the construction industry in Zambia." *Int. J. Constr.*
586 *Manage.*, 13 (2), 43-65.

587 Mutlu, K. (2000). "Problems of nepotism and favoritism in the police organization in Turkey." *Pol.*
588 *Int. J. Pol. Strat. Manage.*, 23(3), 381-389.

589 Oladinrin, O.T., and Ho, C.M.F (2016). "Critical enablers for codes of ethics implementation in
590 construction organizations." *J. Manage. Eng.*, 32 (1), 1-10.

591 Oladinrin, O.T., and Ho, C.M.F (2014). "Strategies for improving codes of ethics implementation in
592 construction organizations." *Proj. Manage. J.*, 45 (5), 15-26.

593 Osei-Tutu, E., Badu, E., and Owusu-Manu, D. (2010). "Exploring corruption practices in public
594 procurement of infrastructure projects in Ghana." *Int. J. Manage. Proj. Bus.*, 3 (2), 236-256.

595 Pelletier, K.L., and Bligh, M.C. (2008). "The aftermath of organizational corruption: Employee
596 attributions and emotional reactions." *J. Bus. Ethics*, 80(4), 823-844.

597 Perry, J.L., de Graaf, G., van der Wal, Z., and van Montfort, C. (2014). "Returning to Our Roots:
598 Good Government Evolves to Good Governance." *Pub. Admin. Rev.* 74 (1), 27 – 28

599 Poon, J., and Hoxley, M. (2010). "Use of moral theory to analyse the ethical codes of built
600 environment professional organizations: A case study of the Royal Institution of Chartered
601 Surveyors." *Int. J. Law Built Environ.*, 2 (3), 260-275.

602 Runde, D.F., Hameed, S., and Magpile, J. (2014). "The costs of corruption."
603 (http://csis.org/files/publication/140204_Hameed_CostsOfCorruption_Web.pdf) (Jul. 30,
604 2015).

605 Schwab, K. (2013). "The Global competitiveness report 2013-2014."
606 (http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf) (Jul. 30,
607 2015).

608 Sezer, O., Gino, F., and Bazerman, M.H. (2015). "Ethical blind spots: explaining unintentional ethical
609 behavior." *Cur. Opin. Psych.*, 6, 77-81.

610 Shakantu, W. (2006). "Corruption in the construction industry: forms, susceptibility and possible
611 solutions." *J. South African Inst. Civ. Eng.*, 14 (7), pp. 43-44.

612 Skibniewski, M.J., and Ghosh, S. (2009). "Determination of key performance indicators with
613 enterprise resource planning systems in engineering construction firms." *J. Constr.*
614 *Eng. Manage.*, 135, 965-978.

615 Sohail, M., and Cavill, S. (2008). "Accountability to prevent corruption in construction projects." *J.*
616 *Constr. Eng. Manage.*, 134 (9), 729-738.

617 Suen, H., Cheung, S.O., and Mondejar, R. (2007). "Managing ethical behavior in construction
618 organizations in Asia: How do the teachings of Confucianism, Taoism and Buddhism and
619 Globalization influence ethics management?" *Int. J. Proj. Manage.*, 25, 257-265.

620 Transparency International (2014). "Bribe payers index 2011."
621 (http://files.transparency.org/content/download/98/395/2011_BPI_EN.pdf) (Jul. 30, 2015).

622 Transparency International (2014). "Corruption perceptions index 2014."
623 (http://files.transparency.org/content/download/1856/12434/file/2014_CPIBrochure_EN.pdf)
624 (Jul. 30, 2015).

625 Vee, C., and Skitmore, C. (2003). "Professional ethics in the construction industry." *Eng, Constr.*
626 *Archit. Manage.*, 10 (2), 117-127.

627 Vitell, S.J., and Hidalgo, E.R. (2006). "The impact of corporate ethical values and enforcement of
628 ethical codes on the perceived importance of ethics in business: A comparison of U.S. and
629 Spanish Managers." *J. Bus. Ethics*, Vol. 64(1), pp. 31-43.

630 Wilks, D.C. (2011). "Attitudes towards unethical behaviors in organizational settings: an empirical
631 study." *Ethics Prog. Quart.*, 2(2), 9-22.

632 **Table 1.** Respondent demographic information (N=266)

Demographic information	Frequency	Percent
<i>Role</i>		
Estate Surveyor/Valuer	76	28.6
Quantity Surveyor	70	26.3
Land Surveyor/Geomatic Engineer	108	40.6
Other e.g. cartographer	6	2.3
Non-response	6	2.3
<i>Education</i>		
Pre-degree education (i.e. basic education, secondary education, diploma and higher national diploma)	32	12.0
Bachelor's degree	112	42.1
Postgraduate degree (i.e. masters' degree and doctorate degree)	116	43.6
Non-response	6	2.3
<i>Professional Experience</i>		
0-10 years	116	43.6
11-20 years	78	29.3
Over 20 years	69	25.9
Non-response	3	1.1

633

634

635

636

637

638

639

640

641

642

643

644

645

646

Table 2. Stakeholder ability to influence improvement in unethical practices

Unethical Practice	Stakeholder	N	Mean Score (MS)	Std. Deviation (SD)	Std. Error (SE)	Rank by mean score
Failure to Protect Public Health, Safety and Welfare	Individual Professional	266	3.15	1.286	0.079	3
	company	266	3.32	1.314	0.081	1
	Professional association	266	3.30	1.327	0.081	2
Collusion	Individual Professional	266	3.04	1.444	0.089	3
	Company	266	3.09	1.301	0.080	1
	Professional association	266	3.08	1.316	0.081	2
Mishandling of Sensitive Data (e.g. Leakages)	Individual Professional	266	3.19	1.514	0.093	2
	Company	266	3.30	1.296	0.079	1
	Professional association	266	3.08	1.343	0.082	3
Production of Fraudulent Documents (e.g. invoices & claims)	Individual Professional	266	2.95	1.688	0.104	2
	Company	266	3.06	1.474	0.090	1
	Professional association	266	2.87	1.516	0.093	3
Failure to Protect Environment	Individual Professional	266	3.00	1.373	0.084	3
	Company	266	3.18	1.221	0.075	1
	Professional association	266	3.09	1.323	0.081	2
Bribery	Individual Professional	266	3.05	1.687	0.103	2
	Company	266	3.22	1.373	0.084	1
	Professional association	266	3.03	1.432	0.088	3
Improper Relations with Other Parties (e.g. Excessive gifts)	Individual Professional	266	2.97	1.467	0.090	2
	Company	266	3.04	1.280	0.078	1
	Professional association	266	2.94	1.306	0.080	3
Abuse of Company Resources	Individual Professional	266	3.09	1.598	0.098	2
	Company	266	3.27	1.350	0.083	1
	Professional association	266	2.87	1.324	0.081	3
Abuse of Client Resources	Individual Professional	266	2.94	1.626	0.100	2

	Company	266	3.08	1.397	0.086	1
	Professional association	266	2.89	1.424	0.087	3
Discrimination and Nepotism	Individual Professional	266	2.88	1.626	0.100	3
	Company	266	3.22	1.451	0.089	1
	Professional association	266	3.04	1.433	0.088	2
Misrepresentation of Competence	Individual Professional	266	2.97	1.538	0.094	3
	Company	266	3.21	1.354	0.083	1
	Professional association	266	3.16	1.457	0.089	2
Political Interference	Individual Professional	266	2.62	1.447	0.089	3
	Company	266	3.29	1.377	0.084	2
	Professional association	266	3.34	1.373	0.084	1

Note: Scale: 1 = not at all; 2 = low; 3 = moderate; 4 = high; 5 = very high.

648

649

650

651

652

653

654

655
656

Table 3. One-way ANOVA test for stakeholders' ability to influence improvement in unethical practice

Unethical practice	Comparison	Sum of Squares	df	Mean Square	F	Sig.
Abuse of company resources	Between Groups	21.844	2	10.922	6.104 ^a	0.002
	Within Groups	1624.119	527	2.043		
	Total	1645.963	529			
Discrimination and nepotism	Between Groups	16.007	2	8.004	3.403 ^a	0.030
	Within Groups	1802.439	528	2.267		
	Total	1818.446	530			
Political interference	Between Groups	85.573	2	42.787	21.848	0.034
	Within Groups	1556.942	795	1.958		
	Total	1642.515	797			

Note: ^a Welch's F is used due to significant difference in group variances

657
658

Table 4. Tukey post hoc test multiple comparisons table for stakeholders' ability to influence improvement in unethical practice

Unethical practice	Stakeholder (I)	Stakeholder (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
Abuse of company resources	Individual Professional	Company	-0.181	0.124	0.309	-0.47	0.11	
		Professional body	0.223	0.124	0.170	-0.07	0.51	
	Company	Individual Professional	0.181	0.124	0.309	-0.11	0.47	
		Professional body	0.405 ^a	0.124	0.003	0.11	0.70	
	Professional association	Individual Professional	-0.223	0.124	0.170	-0.51	0.07	
		Company	-0.405 ^a	0.124	0.003	-0.70	-0.11	
	Discrimination and nepotism	Individual Professional	Company	-0.347 ^a	0.131	0.022	-0.65	-0.04
			Professional body	-0.161	0.131	0.432	-0.47	0.15
Company		Individual Professional	0.347 ^a	0.131	0.022	0.04	0.65	
		Professional body	0.185	0.131	0.332	-0.12	0.49	
Professional association		Individual Professional	0.161	0.131	0.432	-0.15	0.47	
		Company	-0.185	0.131	0.332	-0.49	0.12	
Political interference		Individual Professional	Company	-0.670 ^a	0.121	0.000	-0.96	-0.39
			Professional body	-0.717 ^a	0.121	0.000	-1.00	-0.43
	Company	Individual Professional	0.670 ^a	0.121	0.000	0.39	0.96	
		Professional body	-0.046	0.121	0.923	-0.33	0.24	
	Professional association	Individual Professional	0.717 ^a	0.121	0.000	0.43	1.00	
		Company	0.046	0.121	0.923	-0.24	0.33	

Note: ^a The mean difference is significant at the 0.05 level

661 **Table 5.** One-way ANOVA test for stakeholders' ability to influence improvement in unethical
 662 practice (Ghana sample)

Unethical practice	Comparison	Sum of Squares	df	Mean Square	F	Sig.
Abuse of company resources	Between Groups	31.335	2	15.668	9.727 ^a	0.000
	Within Groups	669.885	238	1.861		
	Total	701.221	240			
Discrimination and nepotism	Between Groups	17.915	2	8.957	4.032 ^a	0.019
	Within Groups	826.137	239	2.295		
	Total	844.051	241			
Political interference	Between Groups	62.483	2	31.242	15.409	0.000
	Within Groups	729.892	360	2.027		
	Total	792.375	362			

Note: ^a Welch's F is used due to significant difference in group variances

Table 6. Tukey post hoc test multiple comparisons table for stakeholders' ability to influence improvement in unethical practice (Ghana sample)

Unethical practice	Stakeholder (I)	Stakeholder (J)	Mean Difference, (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Abuse of company resources	Individual Professional	Company	-0.339	0.175	0.131	-0.75	0.07
		Professional association	0.380	0.175	0.078	-0.03	0.79
	Company	Individual Professional	0.339	0.175	0.131	-0.07	0.75
		Professional association	0.719 ^a	0.175	0.000	0.31	1.13
	Professional association	Individual Professional	-0.380	0.175	0.078	-0.79	0.03
		Company	-0.719 ^a	0.175	0.000	-1.13	-0.31
Discrimination and nepotism	Individual Professional	Company	-0.521 ^a	0.195	0.021	-0.98	-0.06
		Professional association	-0.123	0.195	0.802	-0.58	0.34
	Company	Individual Professional	0.521 ^a	0.195	0.021	0.06	0.98
		Professional association	0.397	0.195	0.104	-0.06	0.86
	Professional association	Individual Professional	0.123	0.195	0.802	-0.34	0.58
		Company	-0.397	0.195	0.104	-0.86	0.06
Political interference	Individual Professional	Company	-0.992 ^a	0.183	0.000	-1.42	-0.56
		Professional association	-.688 ^a	0.183	0.001	-1.12	-0.26
	Company	Individual Professional	0.992 ^a	0.183	0.000	0.56	1.42
		Professional association	0.304	0.183	0.223	-0.13	0.73
	Professional association	Individual Professional	0.688 ^a	0.183	0.001	0.26	1.12
		Company	-0.304	0.183	0.223	-0.73	0.13

Note: ^aThe mean difference is significant at the 0.05 level.

667 **Table 7.** One-way ANOVA test for stakeholders' ability to influence improvement in unethical
 668 practice (Nigeria Sample)

Unethical practice	Comparison	Sum of Squares	df	Mean Square	F	Sig.
Political interference	Between Groups	23.046	2	11.523	6.314	0.002
	Within Groups	465.394	255	1.825		
	Total	488.439	257			

669

670 **Table 8.** Tukey post hoc test multiple comparisons table for stakeholders' ability to influence
 671 improvement in unethical practice (Nigeria sample)

Unethical practice	Stakeholder (I)	Stakeholder (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Political interference	Individual	Company	-0.283	0.206	0.357	-0.77	0.20
		Professional association	-0.726 ^a	0.206	0.001	-1.21	-0.24
	Company	Individual	0.283	0.206	0.357	-0.20	0.77
		Professional association	-0.443	0.206	0.082	-0.93	0.04
	Professional association	Individual	0.726 ^a	0.206	0.001	0.24	1.21
		Company	0.443	0.206	0.082	-0.04	0.93

Note: ^aThe mean difference is significant at the 0.05 level.

672

673

674 **Table 9.** One-way ANOVA test for stakeholders' ability to influence improvement in unethical
 675 practice (Tanzania sample)

Unethical practice	Comparison	Sum of Squares	df	Mean Square	F	Sig.
Political interference	Between Groups	18.601	2	9.301	4.736	0.010
	Within Groups	341.694	174	1.964		
	Total	360.295	176			

676

677

678

679 **Table 10.** Tukey post hoc test multiple comparisons table for stakeholders' ability to influence
 680 improvement in unethical practice (Tanzania sample)

Unethical practice	Stakeholder (I)	Stakeholder (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Political interference	Individual Professional	Company	-0.576	0.258	0.068	-1.19	0.03
		Professional association	-0.761 ^a	0.258	0.010	-1.37	-0.15
	Company	Individual Professional	0.576	0.258	0.068	-0.03	1.19
		Professional association	-0.185	0.258	0.754	-0.79	0.42
	Professional association	Individual Professional	0.761 ^a	0.258	0.010	0.15	1.37
		Company	0.185	0.258	0.754	-0.42	0.79

Note: ^aThe mean difference is significant at the 0.05 level.

681

682

683

Section 1: Please provide the following background Information. *Please tick the most appropriate box*

Professional Role	<input type="checkbox"/> Estate Surveyor/Valuer <input type="checkbox"/> Quantity Surveyor <input type="checkbox"/> Land Surveyor/Geomatic engineer <input type="checkbox"/> Other, specify: _____
Highest level of Education	<input type="checkbox"/> Basic education <input type="checkbox"/> Secondary education <input type="checkbox"/> Diploma <input type="checkbox"/> Higher national diploma <input type="checkbox"/> Bachelor's Degree <input type="checkbox"/> Master's Degree <input type="checkbox"/> Doctorate Degree
Length of Professional Experience (years)	<input type="checkbox"/> 0-10 <input type="checkbox"/> 11-20 <input type="checkbox"/> 21-30 <input type="checkbox"/> 31-40 <input type="checkbox"/> Over 40

685

Section 2: Please rate the extent to which *you feel, you (individual professional), your organization and your affiliated national surveying professional body* can influence improvement (i.e. bring about positive change) in the following practices. Rate using the following scale:

1 = Not at all; 2 = Low; 3 = Moderate; 4 = High; 5 = Very High

	Professional					Organisation					Professional Body				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Failure to Protect Public Health, Safety and Welfare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mishandling of Sensitive Data (e.g. Leakages)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production of Fraudulent Documents (e.g. invoices & claims)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Failure to Protect Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bribery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improper Relations with Other Parties (e.g. Excessive gifts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abuse of Company Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abuse of Client Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discrimination and Nepotism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misrepresentation of Competence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Political Interference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

686

687