

Project Reputation in Construction: A Process-based Perspective of Construction Practitioners in the UK

Abstract

The overall aim of this study is to elicit the perspective of practitioners (e.g. architects, civil engineers, building engineers, structural engineers and quantity surveyors) on the process-related factors influencing the project reputation of construction organisations. To achieve this aim, the study adopts a mixed methods approach which commenced with a review of extant literature in order to produce an exhaustive hypothetical list of process-related factors influencing project reputation. This review resulted in the identification of 29 process-related factors which was operationalised into a questionnaire survey. After an essential pilot study was conducted, the survey was distributed to a wide audience of construction practitioners in order to elicit their experiential opinion on process-related factors influencing project reputation of construction organisations. The responses from the survey were subjected to statistical processes, which include Reliability Analysis, Relative Importance Index (RII), Kruskal-Wallis and Multiple Regression Analysis. After establishing 25 statistically reliable process-related factors influencing project reputation via reliability analysis, the study further revealed an impressive general agreement of 88% of the process-related factors. Multiple regression analysis was subsequently conducted to unravel the key drivers influencing project reputation of construction organisations. This analysis revealed six key factors which include: *successful completion of project without adverse environmental issues; competent project manager; friendly culture generated within project; competent project participants; successful completion of project without health and safety issues and regular client consultation*. This research finding will provide a benchmark for construction organisations to develop project reputation which will invariably impact organisational reputation. In addition, the findings of this study will allow project stakeholders to prioritise 'few' critical issues that will unquestionably impact their project reputation during the implementation of the project plan.

Keywords: Project Reputation, Project Success, Project as a Product, Project as a Process.

35 **1 Introduction**

36 According to experts, firm reputation, when positive, is deemed to be an invaluable asset which is
37 recognised as one of the essential foundations on which organisational success is founded
38 (Christensen and Lodge, 2018). According to Vidaver-Cohen (2007), this foundation for success
39 emanates from the backdrop that a positive reputation can stimulate competitive advantage, reduce
40 stakeholder doubts about future organisational performance and maximise the ability to receive a
41 premium for a service. In realisation of this corporate worth of reputation, it is no surprise that
42 reputational management issues have moved from the periphery to the mainstream in
43 organisations (Ginesti *et al.*, 2018), particularly in organisations that are project-based. Extensive
44 studies on project performance such as Khan *et al.* (2013), Mir and Pinnington (2014) and Olawale
45 *et al.* (2020a) have revealed the association between project performance and reputation. In
46 particular, Khan *et al.* (2013) asserted that when a project delivers or fails to deliver the benefits
47 for which it was created, positive or negative reputation is established.

48
49 Based on the above assertion, the case of construction Project-based Organisations (PBOs) is
50 therefore unique in this sense. For example, construction PBOs are known to operate in a dynamic
51 environment where they undertake multiple unique projects which differ in size and complexity.
52 Each of these projects could impact the given construction firm's reputation positively or
53 negatively. Considering the latter, there have been many cases in the public domain of well-known
54 project organisations whose reputation was smeared, because one of their projects received severe
55 criticism from stakeholders (e.g. Charles de Gaulle Airport – Terminal 2E) (Olawale *et al.*, 2020a).
56 This indicates that one recent failure can have a lasting negative impact on the reputation of
57 construction PBOs. It is therefore crucial for construction firms to pay attention to their
58 performance on projects because their organisational longevity depends on it. However, given the
59 subjective nature of reputation, the big question is who then judges project performance or whose
60 judgement matters most? Resolving the above question is crucial, especially when the evaluation
61 of project reputation is contingent on the nature, stakeholder perspective and timing of such
62 evaluation. Thus, it is not surprising that judging project performance continues to be a concept
63 surrounded by so much ambiguity and divergent views (McLeod *et al.*, 2012).

64
65 As exemplified in Figure 1, the conceptual ambiguity of project performance is further intensified
66 by two divergent lines of thought in project management which views projects as either a product
67 or as a process (Ika, 2009; Olawale *et al.*, 2020a). These two schools of thought have a huge
68 influence on the perspective with which project performance is considered. For instance, one of

69 the major proponents of project as a product is the PRINCE2 Body of Knowledge, which focuses
70 explicitly on the final outcome/product/service intended for an identifiable stakeholder (Olawale
71 et al., 2020a). The underlying argument behind the product perspective stems from the indication
72 that projects are ultimately product-driven and as such, must be delivered in line with the key
73 qualities and specifications that will ensure its acceptance by clients (Diallo and Thullier, 2004;
74 Hyväri, 2006). On the other hand, the underlying notion behind the process perspective is
75 grounded on the explicit focus on the success of the various processes that facilitates delivery of a
76 project for an identifiable stakeholder (Zwikael and Globerson, 2006; PMBOK, 2013).

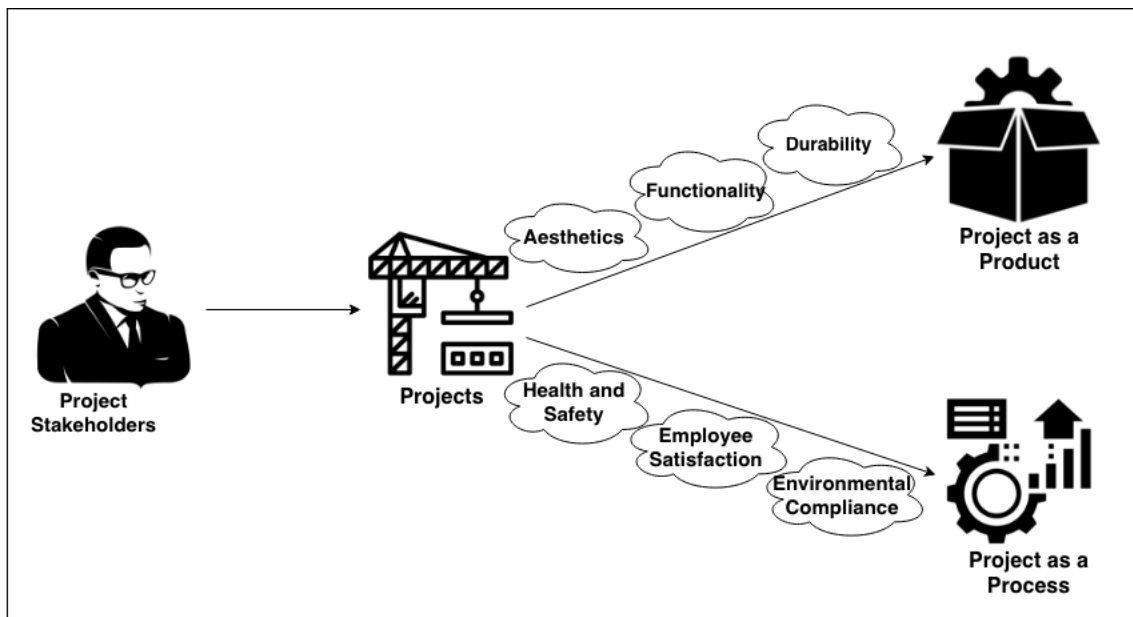
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78 Relying on the perspective of these two schools of thought, it is, therefore, pertinent to note that
79 the acceptance criteria for project performance will depend largely not only on these two project
80 management perspectives but also on the perspectives with which project stakeholders examine
81 project success. Evidences show that project investors, clients and users are usually product-
82 oriented in their perspective because they are mainly concerned about projects matching or
83 exceeding their existing or perceived quality expectations (Pinto, 1998; Baccarini, 1999). On the
84 other hand, beyond delivering the final product, practitioners are believed to be mostly concerned
85 about the success of the series of processes and the successful completion of process-related
86 milestones that ultimately result in project completion (Blomquist *et al.*, 2010). This study follows
87 the latter line of thought and seeks to examine the process-related factors influencing project
88 reputation from the perspective of construction practitioners (i.e. architects, civil engineers,
89 building engineers, structural engineers and quantity surveyors). It is on this premise that this study
90 emerges as a significant contribution to the gap in literature on project reputation by arguing that,
91 from a practical and practitioner approach, a project gains its reputation, not entirely from the
92 success of the final product (Stark, 2015), but also based on the success of various best practices,
93 techniques and approaches, all of which are process-oriented. Based on the above aim, the
94 following objectives have been identified:

- 95 1. To produce an exhaustive list of process-related factors and examine their relative
96 importance in regards to how they influence project reputation of construction
97 organisations from extant literature.
- 98 2. To evaluate the degree of perception variation of process-related factors influencing
99 project reputation among stakeholders in construction organisations.
- 100 3. To identify the key process-related drivers of project reputation for construction
101 organisations.

102 2 Project Reputation and Project Performance

103 According to Khan et al. (2013), reputation is created by the actions and results of organisations.
104 So, when an organisation delivers or fails to deliver a project/product/service, a positive or
105 negative reputation is respectively established. Based on this elucidation, Kilduff and Krackhardt
106 (1994) argue that in order to measure reputation, the organisation's past actions and performance
107 must be examined. For example, to examine the reputation of construction organisations (which
108 are typically project-based), their performance on each of their multiple projects must be examined.
109 By doing so, consistent organisations are distinguished from inconsistent organisations, high-
110 quality organisations from low-quality organisations (Rao, 1994) and top performers from
111 underperformers (Spence, 1978). However, this study argues that each project has its unique
112 reputation, which independently influences the construction organisation's reputation. This is
113 known as project reputation, which is the aggregate/combined perception of stakeholders about
114 a project's quality and functionality (fitness of use). The concept of project reputation is analogous
115 to the marketing domain where different range of products contributes to the organisational
116 reputation of the business/company as a whole.



117

118 Figure 1: *Project as a Product or as a Process* (Adapted from Olawale et al., 2020a)

119 Based on an organisation's particular project reputation, prospective clients can form some
120 expectations about an organisation's performance on potential similar projects. While the concept
121 of project reputation seems laudable, issues arise when trying to uncover whose opinions matter
122 most when judging project performance which develops project reputation, especially when such
123 evaluation is contingent on the nature, stakeholder perspective and timing of evaluation (Thomas

124 and Fernandez, 2008; Ika, 2009). These issues have led to a lack of consensus when defining
125 project performance because it is shrouded by so much complexity and ambiguity. In order to
126 understand the complexities associated with project reputation, elements contributing to the
127 ambiguity of project performance will be subsequently illuminated in this section.

128

129 **2.1 Complexities associated with project performance**

130 **2.1.1 Project Performance Criteria**

131 Project performance criteria refer to a set of principles or standards used to judge project
132 performance. While there are different principles and standards for adjudging project performance
133 (Atkinson, 1999; Chan *et al.*, 2004; Bannerman, 2008), there is no consistent principle or standard.
134 This lack of consistency is grounded on the disagreement that the criteria used to evaluate project
135 performance is dependent on stakeholders' project expectations and the extent at which those
136 criteria are fulfilled (Lim and Mohamed, 1999). Due to the multiple stakeholders involved in a
137 project, different stakeholders will hold different project performance criteria (Baccarini, 1999;
138 Olawale et al., 2020b), most of which are inherently incompatible and mutually exclusive on
139 projects. Much of these varying project performance criteria have been documented in the
140 literature. For instance, De Wit (1988) argue that the most important criteria for measuring project
141 performance is the degree to which project objectives are met. Contrastingly, authors such as
142 Nguyen *et al.* (2004), Chan *et al.* (2004) contend that project performance ought to be measured
143 against the general criterions of time, cost and quality, which is known as the "Iron Triangle"
144 (Atkinson, 1999). While the iron triangle remains the most widely discussed in the literature,
145 McLeod *et al.* (2012) argue that the iron triangle is limited in scope, thus, it ignores the interest and
146 perception of internal and external stakeholders in projects, which are crucial to the project (Jugdev
147 and Müller, 2005; Baccarini, 1999). As such, scholars like Bryde and Brown (2005) and Pinto and
148 Slevin (1998) believe that the overall satisfaction of both internal and external project stakeholders
149 is the most essential for project performance. According to these studies, since typical projects
150 often involve multiple participants, success/failure on the project will, therefore, depend on the
151 fulfilment/nonfulfillment of their expectations (stakeholder satisfaction) on the project. Other
152 commentators that align with this viewpoint include Bannerman (2008), Jugdev and Müller (2005),
153 Lim and Mohammed (1999) and Baccarini (1999). Coming from the above perspectives, it is
154 important to note that different stakeholders will hold different project performance criteria,
155 however, these criteria are inherently incompatible and mutually exclusive on projects, thus,
156 "absolute success/failure" is, therefore, not possible (Olawale et al., 2020b). In realisation of this
157 differing project performance criteria, there is the need to establish common goals at the initiation

158 stage of a project with all the stakeholders so that varying perceptions be reduced to a minimum
159 (Liu and Walker, 1998).

160

161 **2.1.2 Project Performance Perception**

162 Project performance perception can be construed as the belief or opinion that an individual or a
163 stakeholder group has about what project success entails. Project performance perception is often
164 guided by an intuitive performance criterion which project stakeholder's hold. This subsequently
165 informs the basis for which stakeholders will judge projects. Authors such as Ika (2009) and
166 Bannerman (2008) argue along this line that a typical project has a wide range of stakeholders, all
167 of whom possess their subjective perception towards project performance. Given that a typical
168 construction project often involves multiple individuals such as project sponsors, contractors, end-
169 users, insurers, architects, engineers among others; their perceptions of ideal project performance
170 will most likely differ in relation to one another. To put this into perspective, a project may be
171 deemed successful by a project sponsor based on his/her own post-project financial profit
172 realisation, while the same project may be considered a failure to a contractor because it was not a
173 profitable venture for his organisation (Olawale et al., 2020b). This effectively means that a project
174 might be considered a success for one group while it is perceived as a failure to other groups based
175 on the distinct success criteria which they possess (Baccarini, 1999; de Wit, 1998). The presence
176 of these differing project success perceptions confirms the notion of Baker *et al.* (1974) that there
177 is no "absolute success" because it is almost impossible for a project to satisfy all the stakeholders
178 involved in a project. In realisation of this varying project success perception, Liu and Walker
179 (1998) suggest the compelling need to establish common goals at the initiation stage of a project
180 with all the stakeholders so that varying perceptions be reduced to a minimum. In another
181 compelling suggestion, Boddy and Paton (2004) argue the need to conduct a stakeholder analysis
182 of project stakeholders at the beginning of a project in order to determine which stakeholders will
183 have the most influence in determining project success. As such, the project should be fine-tuned
184 towards meeting the goals set by the most important stakeholders if the project is to be a success.

185

186 **2.1.3 Project Performance Temporality**

187 In adjudging project success, it is pertinent to note that the timing of evaluation is of utmost
188 significance. According to Lanzara (1999), project success evaluation is not necessarily static and
189 may change when situations and contexts evolve. To substantiate this claim, there have been many
190 cases within the project management literature and the public domain of projects (e.g. The

191 Concorde, The Sydney Opera House) being perceived as failures at their launch but would later
192 become models for success (Ika, 2009; Olawale et al., 2020b). On the other hand, even projects
193 that were perceived as success at launch later turned out to be a colossal failure (e.g. Charles de
194 Gaulle Airport – Terminal 2E). This indicates that project success is contingent on the timing of
195 evaluation and this contributes immensely to the ambiguity surrounding the concept. As we have
196 exemplified in the above real-life case studies, projects that have been adjudged as a success today
197 can be judged a failure overnight. However, authors such as Jugdev and Müller (2005) and
198 Atkinson (1999) have suggested that projects should be subjected to multiple evaluations at
199 different points in time during the project life cycle for different purposes.

200

201 **2.2 Comprehensive List of Process-related Success Factors**

202 It is imperative to reiterate that a significant manner in which a project-based organisation can
203 enhance its reputation positively is by consistently delivering projects objectives, which typifies
204 project success. However, in the case of viewing a project under the lenses of a project as a process,
205 the project's objectives are traditionally concerned with delivering to the traditional criteria of time,
206 budget and quality (De Wit, 1988; Baccarini, 1999). However, in recent times, several researchers
207 have challenged the limiting scope of the traditional criterion and have identified other process-
208 related factors influencing project reputation. Authors such as Pinto and Slevin (1987) argue that
209 regular meetings with clients and project participants is of utmost importance when seeking to
210 achieve process success. This is particularly important because it gives both the client and the
211 project participants the opportunity to keep track of their activities. Since project as a process
212 considers the manner at which a project is managed throughout the project life-cycle, emphasis is
213 placed on the competence (Loo, 2002; Laufer *et al.*, 1996; Sanvido *et al.*, 1992) and project
214 experience of project participants/staffs (Belassi and Tukel, 1996) delivering the project. This also
215 includes the competency (knowledge of project methods) and leadership of the project manager
216 and how he/she manages the project (risk, procurement) communicate, hire project staffs etc
217 (PMBOK, 2013; Chua *et al.*, 1999; Belassi and Tukel, 1996).

218

219 This includes the delegation of responsibilities to appropriate and capable team members and
220 setting deadlines where appropriate. For example, in a construction project, the project manager
221 manages health and safety processes by identifying and upholding health and safety measures to
222 minimise threats to staffs and those affected by the work throughout the project life cycle. As
223 such, success will depend on the successful completion of project without health and safety issues
224 (Chan *et al.*, 2004; Chua *et al.*, 1999) and the successful completion of project without

225 environmental issues (Chan *et al.*, 2004; Akinsola *et al.*, 1997). This wide-ranging influence of the
 226 project manager explicates why PMBOK (2013) considers he/she as the most responsible person
 227 for project success or failure. Not only are the project participants crucial to the process success
 228 of a project, their cohesiveness on the project is also important. Due to the multiple disciplinary
 229 nature of projects, the project manager is crucial to ensuring the creation of a positive environment
 230 and a friendly culture generated within the project (Khalfan *et al.*, 2007; Wang and Noe, 2010).
 231 Furthermore, Pinto and Slevin (1987) considers top management support as being a crucial
 232 process-related success factor because it typifies the competency of the management to provide
 233 adequate resources during the lifecycle of the project. This also includes the provision of recent
 234 technological advancement of project materials required for the successful completion of the
 235 project (Chan *et al.*, 2004; Akinsola *et al.*, 1997).

236

237 *Table 1: Process-related factors capable of influencing positive project reputation from extant literature review*

S/N	Project as a process-related factors capable of influencing project reputation	Sources in Literature
1.	Meeting or exceeding client quality expectations	Geraldi, Kutsch and Turner (2011).
2.	Finishing on time	Atkinson (1999); Diallo and Thuillier (2004), Hyväri (2006).
3.	Effective management of client variation/order changes	Saram and Ahmed (2001); Jha and Iyer (2006); Kusimo <i>et al.</i> (2019).
4.	Finishing within budget	Akinsola <i>et al.</i> (1997); Chan <i>et al.</i> (2004).
5.	Conducting regular meetings and design reviews	Saram and Ahmed (2001); Jha and Iyer (2006).
6.	Successful completion of project without adverse health and safety issues	Chua <i>et al.</i> (1999); Kumaraswamy and Chan (1999); Chan <i>et al.</i> (2004).
7.	Successful completion of project without adverse environmental issues	Hubbard (1990); Akinsola <i>et al.</i> (1997); Chua <i>et al.</i> (1999); Chan <i>et al.</i> (2004).
8.	Regular client consultation	Egbu (1999); Nguyen <i>et al.</i> (2004); Toor and Ogunlana (2008).
9.	Delegation of responsibilities to appropriate project participants	Belassi and Tukel (1996); Nguyen <i>et al.</i> (2004), Jha and Iyer (2006).
10.	Amicable resolution of differences/confusion amongst project participants	Pinto and Slevin (1987); Hubbard (1990); Chan <i>et al.</i> (2004), Jha and Iyer (2006).
11.	Providing an organised means for gathering information and compiling records	Saram and Ahmed (2001); Jha and Iyer (2006).
12.	Efficient management of budget variations	Saram and Ahmed (2001); Jha and Iyer (2006).

13.	Strategic alignment of design goals with client interests	Egbu (1999); Nguyen <i>et al.</i> (2004); Ogunlana (2008).
14.	Ensuring the efficient use of materials	Minato (2003).
15.	Competent project participants	Toor and Ogunlana (2008); Mir and Pinnington (2014).
16.	Establishing and maintaining an effective organizational structure and communication channels	Saram and Ahmed (2001); Jha and Iyer (2006).
17.	Competent project manager	Toor and Ogunlana (2008); Ahadzie <i>et al.</i> (2008)
18.	Top management support	Young and Jordan (2008); Trkman (2010).
19.	Sufficient level of project experience from project participants	Walker (1995).
20.	Maintaining proper relationships with client, consultants and the subcontractor	Saram and Ahmed (2001); Jha and Iyer (2006).
21.	Commitment/motivation throughout organizational structure	Radujković (2014).
22.	Friendly culture generated within projects	Khalfan <i>et al.</i> (2007); Wang and Noe (2010).
23.	Sound expectations of staff performance and training requirements	Ismail, Doostdar and Harun (2012).
24.	Minimal disruption to local community	Belassi and Tukel (1996); Akinsola <i>et al.</i> (1997).
25.	Preparation of a quality plan in line with clients brief	Saram and Ahmed (2001); Jha and Iyer (2006).
26.	Clear and realistic design objectives	Pinto and Slevin (1987); Tukel and Rom (1995); Chua <i>et al.</i> (1999); Chan <i>et al.</i> (2004).
27.	Regular monitoring and control of quality plan implementation	Saram and Ahmed (2001); Jha and Iyer (2006).
28.	Ensuring the availability, suitability and compatibility of materials used in the design	Tukel and Rom (1995); Belassi and Tukel (1996); Minato (2003).
29.	Correct use of construction materials, methods and techniques	Sanvido <i>et al.</i> (1992); Laufer <i>et al.</i> (1996); Loo (2002).

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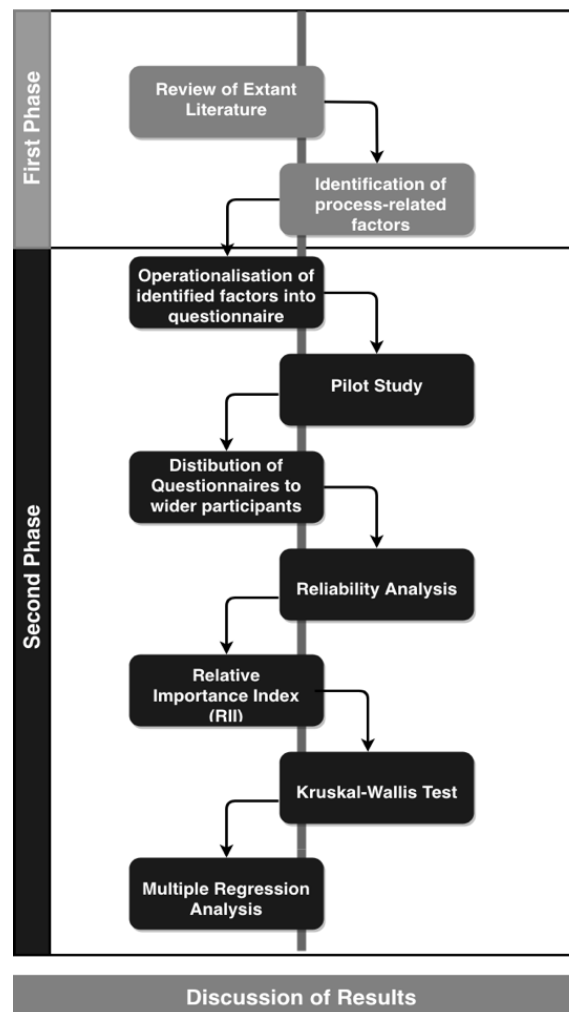
239 As depicted in Table 1, 29 process-related factors capable of influencing positive project reputation
240 were identified from extant literature. These hypothetical factors will be empirically tested to
241 determine whether they actually influence project reputation.

242

243 **3 Methodology**

244 After achieving the first objective of the study (identification of process-related factors from extant
245 literature), it was important in fulfilment of the other objectives of the study to adopt a method
246 that drives in-depth understanding as well as generalisability. Hence, the study adopted an

247 exploratory sequential mixed method design. By doing so, the study uses the results of the
 248 qualitative research – first phase (process-related factors) to develop/inform quantitative research
 249 – second phase (see methodological flow-chart of the study in Figure 2). From the resulting
 250 process-related factors identified from the qualitative study, a comprehensive quantitative study
 251 was undertaken vis-à-vis questionnaire survey, which is a research instrument that provides a cost-
 252 effective way of reaching out to large number of respondents to ensure higher generalisability of
 253 results (Creswell, 2014).



254
 255 *Figure 2: Methodological flow chart for the study*
 256

257 In developing the questionnaire, the identified list of factors was reviewed and subsequently
 258 operationalised into the design of the research instrument. The first section of the questionnaire
 259 contained descriptive data about respondents and their organisations. The next section presented
 260 the process-related factors and respondents were asked to rate each of the factor according to how
 261 they believe they influence project reputation. This was done on a five-point Likert scale of 1-5 on
 262 “importance” (where 1 = “not important”, 2 = “less important”, 3 = “important”, 4 = “more

263 important”, and 5 = “most important”). Since selection of the process-related factors was based
 264 on a review of extant literature, it was important to assess internal validity (Mir and Pinnington,
 265 2014). Hence, a pilot study was conducted to improve the internal consistency of the research
 266 instrument by validating the process-related factors and mitigating grammatical and structural
 267 errors. The questionnaire draft was piloted to three industry and two academic professionals who
 268 are vastly experienced in working and researching construction projects respectively (see Table 2
 269 for the demographics of pilot study respondents). Their input proved invaluable as they suggested
 270 a re-wording of some of the factors and a re-designing of the layout of the questionnaire to produce
 271 an unequivocal questionnaire representative of the intended sample population. The changes
 272 suggested by the pilot study participants were implemented in the design of the final draft
 273 questionnaire.

274 *Table 2: Demographics of vastly experienced pilot study respondents*

<i>Academic Scholar</i>	<i>Years of experience researching construction projects</i>
1. Professor	26 years
2. Associate Professor	21 years
<i>Industry Practitioner</i>	<i>Years of experience working on construction projects</i>
1. Estimation Manager	19 years
2. Project Manager	21 years
3. Health and Safety Manager	10 years

275
 276 On completion of the questionnaire, an introductory email, including a hyperlink to the online
 277 survey (hosted by [surveymonkey.com](https://www.surveymonkey.com)) was sent out to construction industry professional
 278 directories. This include the Royal Institute of Chartered Surveyors (RICS), Chartered Institute of
 279 Buildings (CIOB), Institution of Civil Engineers (ICE), Royal Institute of British Architects
 280 (RIBA) and the Institution of Structural Engineers (IStructE). The study adopted this random
 281 sampling technique to prevent potential bias (Gravetter and Wallnau, 2013). The aforementioned
 282 directories represented a critically sampled population of job professions of all the important
 283 stakeholders involved in construction project process which include architects, building
 284 contractors, civil engineers, structural engineers and quantity surveyors (see Table 3 for the
 285 demographics of survey respondents). A total of 196 questionnaires was distributed to respondents
 286 with complete email addresses between October 2018 and January 2019. After several follow-up

287 emails, a total of 118 questionnaires were returned out of 196 distributed. This indicated a response
 288 rate of 60.2% which was very impressive considering the demanding job roles of the sample
 289 population. According to Oyedele (2013), this percentage of return indicates that the study is
 290 suitable for analysis since any survey return rate lower than 30 to 40% might be regarded as biased
 291 and of little significance. After the removal of bad data and outliers, the total number of usable
 292 responses considered for qualitative analysis was 115. From the resulting process-related factors
 293 identified from the qualitative study, a comprehensive quantitative study was undertaken vis-à-vis
 294 questionnaire survey, which is a research instrument that provides a cost-effective way of reaching
 295 out to large number of respondents to ensure higher generalisability of results (Creswell, 2014). In
 296 drafting the questionnaire, the identified list of factors was reviewed and subsequently
 297 operationalised into the design of the research instrument. The first section of the questionnaire
 298 contained descriptive data about respondents and their organisations.

299
300

Table 3: Demographics of survey respondents

Variables	Sample size	% of Respondents
<i>Total questionnaire distributed</i>	196	100%
<i>Total of received responses</i>	118	60.2%
<i>Discarded responses</i>	3	2.5%
<i>Total number of usable responses</i>	115	97%
<i>Job roles</i>		
Architects (RIBA)	30	26.0%
Building Contractors (CIOB)	23	20%
Civil Engineers (ICE)	20	17.3%
Quantity Surveyors (RICS)	23	20%
Structural Engineers (IStructE)	19	16.5%
<i>Years of experience</i>		
0-5	4	3.4%
6-10	25	21.7%
11-15	16	13.9%
16-20	27	23.4%
21-25	24	20.8%
Above 26 years	19	16.5%

301 **4 Data analyses and findings**

302 In an effort to achieve the aim and objectives of this study, quantitative data analyses were
 303 conducted vis-à-vis statistical analyses using a popular statistical analysis software, the Statistical
 304 Package for Social Science (SPSS) version 24. These statistical analyses include reliability analysis,
 305 Relative Importance Index, Kruskal-Wallis test and Regression Modelling.

306 4.1 Reliability Analysis

307 According to Santos (1999), reliability analysis determines the internal consistency or average
308 correlation of constructs in the results of a questionnaire survey. As such, this study subjects the
309 responses of the questionnaire survey to reliability analysis in a bid to determine the internal
310 consistency of the constructs as well as the suitability of the data for analysis. This is in line with
311 the recommendation of social scientists (Field, 2009). Hence, Cronbach's alpha (α) coefficient of
312 reliability was calculated for the process-related factors using Eq. (1).

$$\alpha = \frac{N^2 \overline{COV}}{\sum_{i=1}^N S_i^2 + \sum_{i=1}^N COV_i} \quad (1)$$

313 Based on the above equation, N represents the total number of factors, COV is the average
314 covariance between factors, and S_i^2 and COV_i are the variance and covariance of factor ' i '
315 respectively. Field (2009) suggests that the higher the outcome of the Cronbach alpha reliability
316 coefficient, the greater the internal consistency of the data. This is exemplified in the ranges from
317 0 to 1, where $a < 0.5$ is unacceptable, $0.6 > a \geq 0.5$ is poor, $0.7 > a \geq 0.6$ is questionable, $0.8 > a$
318 ≥ 0.7 is acceptable, $0.9 > a \geq 0.8$ is good and $a \geq 0.9$ is excellent. Using SPSS version 24, the
319 overall Cronbach's alpha coefficient for this study was 0.903 (see below Table 4 for results of the
320 statistical test), which is above the acceptable 0.7 recommended by Pallant (2013) and Streiner
321 (2003). To confirm whether all the process-related factors were truly contributing to the internal
322 consistency of the data, "Cronbach's alpha if item deleted" was examined. The rule that drives the
323 examination of "Cronbach alpha if item deleted" is that any criterion not contributing to the
324 internal consistency of a data will have a higher reliability coefficient (Field, 2005). In the case of
325 this study, item(s) that holds a Cronbach alpha above 0.903 indicates that such item is not truly
326 contributing to the internal consistency of the data. On this basis, four (PRF12, PRF13, PRF24
327 and PRF27) out of the 29 process-related factors had a value above 0.903. These process-related
328 factors were deemed unreliable and subsequently deleted from further analyses.

329

330 4.2 Relative Importance Index (RII)

331 After establishing a statistically reliable list of process-related factors, it was essential for this study
332 to examine the top process-related factors influencing project reputation. In examining this
333 premise, two descriptive statistics were considered for this study, this includes descriptive mean
334 testing and Relative Importance Index (RII). The study swayed in favour of RII because descriptive
335 mean testing ranks only the mean of each factor and does not reflect any relationship between
336 factors (Iyer and Jha, 2005; Kumaraswamy and Chan, 1998). In addition, RII was chosen over

337 descriptive mean testing because it can statistically differentiate two or more factors which have
338 the same variance by examining the distribution of the importance weighting of such factors
339 (Kumaraswamy and Chan, 1998). Hence, the RII derived to indicate the importance of each
340 'process-related factor' was computed using Eq. (2).

$$RII = \frac{\sum_{i=1}^N W_i}{(A * N)} \quad (2)$$

341 Based on the above equation, RII represents the Relative Importance Index; W signifies the
342 importance weighting, (i.e. ranking from 1 to 5) given to each factor by the respondents; A is the
343 highest possible weight (5) that the factors could have and; N is the total number of respondents
344 (115). The higher the RII, the more important the factor, the more it influences project reputation.
345 In a seemingly problematic case where the RII score were the same for two or more factors, rank
346 distinction was achieved by examining the distribution of the importance weighting of such factors
347 (Kumaraswamy and Chan, 1998). For example, when comparing two factors which had the same
348 RII score, if more respondents had ranked one of the factors as "very important" (rank of 5) than
349 the other factor(s), then the former was assigned the higher rank. Based on the result of the RII
350 as shown in Table 4, the top five process-related factors influencing project reputation are:

- 351 1. PRF – 1 exceeding client quality expectations.
- 352 2. PRF – 2 finishing on time.
- 353 3. PRF – 15 competent project participants.
- 354 4. PRF – 17 competent project manager.
- 355 5. PRF – 4 finishing within budget.

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358 4.3 Kruskal-Wallis Test

359 After examining the reliability and the RII of the questionnaire survey, it became essential for this
360 study to examine whether the process-related factors were perceived similarly or differently by the
361 respondents according to their job roles of being architects, building contractors, civil engineers,
362 quantity surveyors and structural engineers. This was achieved through Kruskal-Wallis test which
363 is a non-parametric test used to determine the significant statistical difference between more than
364 two independent groups of respondents (Field, 2009). This test was measured in line with the
365 recommendation of Field (2009) that at 95% confidence level, any p-value below 0.05 indicates a
366 significant difference while a p-value above indicates a non-significant difference among the
367 groups of respondents. After the test was carried out, the result showed that the respondents

368 disagreed in their perception of three (PRF 11, PRF 20 and PRF 22) of the process-related factors.
369 These include “*provision of organized means for gathering information and compiling records*”, “*good*
370 *compatibility between the team members*” and “*friendly culture generated within projects*” respectively. Despite
371 this lack of total convergence, it can be construed that there was a general agreement as 88% of
372 the listed process-related factors were agreed upon by the respondents irrespective of their
373 different job roles. This variance implied that the entire data was very much valid and was
374 subsequently retained in a bid to develop a regression model to identify the most important drivers
375 of project reputation, based on the perspective of the sampled construction industry practitioners.
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Table 4: Process-related factors and associated statistical results

S/N	Process-related factors	Reliability Analysis ^a		Relative Importance Index Ranking		Kruskal-Wallis Test	
		Corrected Item: Total Correlation	Cronbach's Alpha if Item Deleted	RII Score	RII Overall Ranking	Chi-square	Sig. ^d
PRF – 1	Exceeding client quality expectations	0.301	0.902	0.90163934	1	8.767	0.067
PRF – 2	Finishing on time	0.35	0.901	0.90163934	2	5.622	0.254
PRF – 3	Effective management of client variation/order changes	0.606	0.897	0.84262295	8	14.2	0.053
PRF – 4	Finishing within budget	0.539	0.898	0.8557377	5	5.292	0.185
PRF – 5	Efficient management of budget variations	0.745	0.894	0.80983607	11	14.58	0.06
PRF – 6	Successful completion of project without adverse health and safety issues	0.422	0.900	0.85245902	6	14.611	0.06
PRF – 7	Successful completion of project without adverse environmental issues	0.586	0.897	0.79344262	14	7.083	0.083
PRF – 8	Regular client consultation	0.411	0.901	0.7704918	17	12.261	0.116
PRF – 9	Delegation of responsibilities to appropriate team members	0.328	0.902	0.79016393	15	5.235	0.264
PRF – 10	Amicable resolution of differences/confusion amongst team members	0.411	0.901	0.74754098	19	8.029	0.091
PRF – 11	Provision of organized means for gathering information and compiling records ^c	0.543	0.898	0.74754098	18	17.969	0.01
PRF – 12	Conducting regular meetings and design reviews ^b	0.133	0.905	×	×	×	×
PRF – 13	Strategic alignment of design goals with client interests ^b	0.229	0.904	×	×	×	×
PRF – 14	High level of interpersonal skill from the team	0.387	0.901	0.72459016	21	5.017	0.286

PRF – 15	Competent project participants	0.572	0.898	0.90163934	3	5.433	0.246
PRF – 16	Creating a positive group environment	0.663	0.895	0.80655738	13	7.968	0.057
PRF – 17	Competent project manager	0.62	0.897	0.87213115	4	8.959	0.062
PRF – 18	Top Management support	0.738	0.894	0.83606557	9	8.135	0.087
PRF – 19	High level of knowledge of the construction methods available	0.652	0.896	0.84918033	7	7.692	0.104
PRF – 20	Good compatibility between the team members ^c	0.565	0.898	0.83278689	10	11.503	0.021
PRF – 21	Commitment/motivation throughout organizational structure	0.451	0.900	0.80655738	12	9.952	0.071
PRF – 22	Friendly culture generated within project ^c	0.617	0.896	0.72131148	24	10.43	0.034
PRF – 23	Sound expectations of staff performance and training requirements	0.564	0.898	0.7704918	16	6.058	0.195
PRF – 24	Minimal disruption to local community ^b	0.148	0.904	×	×	×	×
PRF – 25	Preparation of a quality plan in with the clients brief	0.33	0.902	0.72459016	22	7.909	0.095
PRF – 26	Clear and realistic design objectives	0.486	0.899	0.72459016	23	9.499	0.064
PRF – 27	Regular monitoring and control of quality plan implementation ^b	0.232	0.904	×	×	×	×
PRF – 28	Ensuring the availability, suitability and compatibility of materials used in the design	0.41	0.901	0.68852459	25	5.845	0.203
PRF – 29	Correct use of construction materials, methods and techniques	0.372	0.901	0.72786885	20	6.151	0.105
<p>^aOverall Cronbach's alpha is 0.903.</p> <p>^bFactor deleted from the list before RII and Kruskal-Wallis Test based on Cronbach Alpha if item deleted.</p> <p>^cItem perceived differently by respondents.</p> <p>^dSignificant at 95% confidence interval = 0.05.</p>							

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386

387 4.4 Multiple Regression Modelling

388 Following the identification of the reliable, top-ranked process-related factors and the examination
389 of the differences in perception of respondents based on their job roles, the study proceeded to
390 unravel the key drivers influencing project reputation. To achieve this objective, the study
391 conducted a linear regression model based on the hypothetical assumption that one or more
392 process-related factors (independent variable) will hugely correlate with the response variable
393 (dependent variable) – project reputation. This is in line with previous studies such as Oyedele
394 (2010), Oyedele (2013), Owolabi et al. (2020) who have used a regression model to the key drivers
395 of key project-related constructs. As indicated in the questionnaire design, section two of the
396 questionnaire measured the response/dependent variable by asking respondents to indicate the
397 extent at which they believe each process-related factor influences project reputation. They
398 achieved this by measuring each of the factors based on importance (where 1 = “not important”,
399 2 = “less important”, 3 = “important”, 4 = “more important”, and 5 = “most important”). A
400 typical mathematical formula for a regression model is calculated using Eq. (3).

401

402

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_i X_i + \epsilon \quad (3)$$

403

404

405 In this study, Y represents the dependent variable (Project Reputation – PR); B_0 is the ever-
406 constant intercept term, B_1, B_2, B_3, B_4 represents the coefficient of the first (PRF1), second
407 (PRF2), third (PRF3) and fourth (PRF4) factor respectively; while B_i is the coefficient of the I
408 factor PRF, while ϵ is the mean-zero random error term (the difference between the predicted and
409 actual value of the BCCR for the i th respondents. Based on these exemplifications, the regression
410 model for this study is calculated as:

411

$$PR = \beta_0 + \beta_1 PRF_1 + \beta_2 PRF_2 + \beta_3 PRF_3 + \beta_4 PRF_4 + \dots + \beta_i PRF_i + \epsilon \quad (4)$$

412

413 Using SPSS version 24, a step-wise model was executed on the data. Table 5 presents the summary
414 of the multiple regression model that contains six possible models and their respective predictors.
415 The third column of Table 5 indicates R Square (R^2), which is often referred to as the coefficient
416 of multiple determination for multiple regression. As a rule of thumb, the coefficient of R^2 usually
417 ranges between 0 and 100% or 0 and 1, and the higher the value, the better the model fits the

418 observed data. While examining Table 5, it can be observed that, Model 6 shows the highest R^2
419 value of 0.615, which is also 61.5%. In essence, this indicates that this particular model is capable
420 of predicting 61.5% of the variability in the dependent variable. On this basis, the model is
421 therefore the most suitable for predicting the development of project reputation within the
422 available dataset.

423

424 To confirm the model's (Model 6) fitness and accuracy, criteria such as Adjusted R^2 , Standard
425 Error of Estimate, Durbin-Watson test, and the Significance Level of the F Statistics in column 4,
426 5, 9 and 10 were explored respectively. According to Field (2009), the Adjusted R^2 is a measure of
427 the fitness of the selected model beyond the available data, which should be equal or close to the
428 R^2 values. As depicted in Table 5, there was a difference in the R^2 and the adjusted R^2 value (0.615
429 to 0.572/61.5% to 57.2%). This difference signifies a loss in predictive power of the model,
430 however, the difference is considered to be very small (5.3% variance). As such, this still indicates
431 that the model has a good cross-validity. Additionally, to explore whether the relationship between
432 the explanatory variables and the outcome was perfect (less error by being closer to zero), a
433 Standard Error of Estimate was investigated. While investigating Table 5, the model with the
434 Standard Error value closest to zero was Model 6 with a value of 0.648, which confirms the
435 predictive power of the model. Furthermore, a Durbin-Watson statistics test was examined to
436 show whether the predicted observations showed uncorrelated and independent errors as
437 suggested by Engle and Yoo (1987). As a rule of thumb for this test, Hill and Flack (1987)
438 recommended that while the value for these correlations vary between 0 and 4, a value of 2
439 indicates uncorrelated residuals, which indicates a good model. In accordance with this rule, the
440 study indicated a Durbin-Watson test value of 2.329 as shown in Table 5. This indicates the
441 absence of autocorrelation which implies that the model was good. Lastly, in order to confirm
442 whether the model perfectly fits the examined dataset, the study examined ANOVA's Significance
443 Level of the F Statistics. When examining this test, it is recommended that at 95% interval, the
444 value of the model should be less than 0.05. Table 6 confirms the fitness of Model 6 with a value
445 of 0.00. After confirming the predictive accuracy and the fitness of the model, the study proceeded
446 to identify the key factors predicting the development of project reputation. Based on the results
447 of the multiple regression analysis, Model 6 as typified in Table 6 indicates that there are six best
448 factors that are necessary for developing project reputation, out of the 25 reliable process-related
449 factors. These six best factors are therefore regarded as the critical success factors influencing the
450 development of project reputation.

451
452

Table 5: Multiple Regression Model Summary

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate	Change Statistics		Sig. F Change	Durbin-Watson	F	Sig.
					R ² Change	F Change				
1	.619a	.384	.373	.78479	.384	36.716	.000	2.329	36.716	0.00 ^b
2	.673b	.453	.435	.74539	.070	7.402	.009		24.051	0.00 ^c
3	.707c	.500	.473	.71930	.046	5.284	.025		18.979	0.00 ^d
4	.737d	.543	.511	.69329	.044	5.357	.024		16.662	0.00 ^e
5	.759e	.576	.538	.67409	.033	4.236	.044		14.947	0.00 ^f
6	.784f	.615	.572	.64813	.039	5.493	.023		14.389	0.00 ^g

453 **Dependent Variable: Developing Project Reputation**

- 454 a. Predictors: (Constant), PRF7.
 455 b. Predictors: (Constant), PRF7, PRF17.
 456 c. Predictors: (Constant), PRF7, PRF17, PRF22
 457 d. Predictors: (Constant), PRF7, PRF17, PRF22, PRF15.
 458 e. Predictors: (Constant), PRF7, PRF17, PRF22, PRF15, PRF6.
 459 f. Predictors: (Constant), PRF7, PRF17, PRF22, PRF15, PRF6, PRF8.

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Table 6: Multiple Regression Model Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
Constant (Dependent variable)	3.77	.632		5.975	.019		
PRF – 7 Successful completion of project without adverse environmental issues.	.431	.105	.498	4.108	.000	.486	2.059
PRF – 17 Competent project manager	-.291	.111	-.240	-2.636	.003	.858	1.166
PRF – 22 Friendly culture generated within project	.277	.102	.331	2.724	.008	.484	2.067
PRF – 15 Competent project participants	-.313	.104	-.282	-3.003	.011	.807	1.239
PRF – 6 Successful completion of project without adverse health and safety issues	-.285	.095	-.287	-2.989	.019	.775	1.291
PRF – 8 Regular client consultation	.274	.117	.243	2.344	.023	.663	1.509

463 **Dependent Variable: Developing Project Reputation**

464 These factors include:

- 465 1. PRF – 7 successful completion of project without adverse environmental issues.
 - 466 2. PRF – 17 competent project manager.
 - 467 3. PRF – 22 friendly culture generated within project.
 - 468 4. PRF – 15 competent project participants.
 - 469 5. PRF – 6 successful completion of project without adverse health and safety issues.
 - 470 6. PRF – 8 regular client consultation.
- 471

472 After these factors were established, the study proceeded to check for the significance of the six
473 factors using the t-test significance value for each factor, as well as the collinearity statistics as
474 shown in Table 6 above. A good rule of thumb is that any factor showing a significance level of
475 0.05, is considered to be making significant contribution to the model (Field, 2009). In other words,
476 the closer the value to 0, the higher the significance. From the result of the multiple regression
477 model, as evidenced in column 6 of Table 6, PRF – 7 successful completion of project without
478 adverse environmental issues shows the highest significance value at 0.00, while PRF – 8 regular
479 client consultation shows the least significance at 0.023. To check the presence of multicollinearity
480 among the factors, which could weaken the model, the variance inflation factor (VIF) and the
481 tolerance statistics was examined under collinearity statistics. When evaluating this test, the
482 yardstick is that the VIF should not be more than 5 and the tolerance statistics associated with the
483 VIF should not be less than 0.2. Based on this yardstick, all the VIF statistics are between 1.1 and
484 2.0, which is less than 5, while all the tolerance statistics are above 0.2. This is reliably indicated in
485 column 7 and 8 in Table 6. These results therefore confirm the absence of multicollinearity among
486 the factors. Consequently, with values from unstandardized coefficient as shown in Table 6 above,
487 the optimum regression model for the study (statistical correlation between project reputation and
488 its associated process-related factors) is therefore computed as:

$$PR = 3.77 + 0.431 (PRF7) - 0.291 (PRF17) + 0.277 (PRF22) - 0.313 (PRF15) - 0.285 (PRF6) + 0.274 (PRF8) + \epsilon_1 \quad (4)$$

489 5 Discussion of results

490 5.1 Successful completion of project without adverse environmental issues

491 Based on the results exemplified in Table 6, *successful completion of project without adverse environmental*
492 *issues* was considered as the most important driver of project reputation for construction
493 organisations. This is rightly so because, in the light of recent global sustainability agenda,

494 construction organisations have come under severe criticism because they consume the most
495 portion of natural resources and also generate the highest portion of landfill waste (Ajayi *et al.*,
496 2017; Gbadamosi et al., 2019). Sapuay (2016) argues that when these landfill wastes (construction
497 materials' packaging, equipment parts) are improperly managed, they can cause irreparable and
498 irreversible adverse impact on the environment. To this effect, negative project reputation will be
499 established when the health and welfare of populaces such as site workers and residents in the
500 vicinity of the construction's site are affected. To prevent this occurrence and the negative
501 reputation that will ascribe to it, construction organisations must be environmentally compliant
502 when delivering projects because judging project performance now transcends merely meeting
503 project objectives and client satisfaction. Being environmentally compliant on a construction site
504 could be in the form of site management functions such as strict adherence to project drawings,
505 ensuring fewer or no design changes during the construction process, provision of waste skips for
506 specific materials and maximisation of on-site reuse of materials (Ajayi *et al.*, 2017). As such,
507 completing a project without adverse environmental issues will develop the project reputation of
508 construction organisations.

509

510 **5.2 Competent project manager**

511 The second most important driver of project reputation for construction organisations is a
512 *competent project manager* (see Table 6). This result corroborates studies such as Hyväri (2006), Lechler
513 and Dvir (2010) that a competent project manager is crucial when seeking optimum project
514 delivery. Ahadzie et al. (2008) argues that a project manager is a person who is effectively in charge
515 of the project and has sufficient authority, personality, and reputation to ensure that everything
516 that needs to be done for the benefit of the project is done. By exemplifying traits such as
517 leadership, decision-making, team building, a competent project manager is able to steer a project
518 towards positive project reputation by developing mitigating plans to overcome inevitable
519 difficulties. The importance of a competent project manager is echoed by a
520 PriceWaterhouseCoopers (2014) survey which revealed that higher-performing projects are
521 significantly more likely to be staffed with competent project managers. Similarly, Dulaimi (2005)
522 and Munns and Bjeirmi (1996) argue that with a competent project manager at the helm of a
523 project, there is high likelihood of successful completion of the project. Evidently, this process-
524 related factor is quite important for construction organisations because project performance
525 practically lies in the hands of the project manager because he/she will employ competent
526 subcontractors, project participants and motivate them towards meeting project objective and
527 goals (Toor and Ogunlana, 2008).

528

529 **5.3 Friendly culture generated within project**

530 Further evidences from Table 6 suggest that *friendly culture generated within projects* was considered as
531 the third most important driver of project reputation for construction organisations. Owing to the
532 multiplicity of project participants involved in a construction project, Khalfan *et al.* (2007) argues
533 that project performance is contingent on their maintained rapport throughout the project life-
534 cycle. For instance, Finlay and Mitchell (1994) argue that a friendly culture within a project
535 environment can be beneficial for the project because it can promote good working condition that
536 will enable project participants to discharge their responsibilities appropriately. Furthermore, Foss
537 (2007) contends that a friendly culture can foster knowledge sharing among project participants
538 which can ultimately boost the job-competence of each participant, thereby having an
539 advantageous effect on project performance. By doing so, Wang and Noe (2010) notes that project
540 participants can share task information, solve problems and resolve confusions quickly. This
541 would, in turn, create a collaborative and mutual work environment, open to constructive criticism
542 which would lead to better communication and reduced conflict (Rego *et al.*, 2007). Evidently,
543 “*friendly culture generated within project*” is a key driver of project reputation for construction
544 organisations because it can propagate a good working environment while the absence of it can
545 cause discord among project participants which may lead to project termination/failure.

546

547 **5.4 Competent project participants**

548 Going further, results in Table 6 show that the fourth most important driver of project reputation
549 for construction organisations is *competent project participants*. This result buttresses the indication of
550 previous research studies such as Skulmoski and Hartman (2010) and Loo (2002) that ensuring all
551 project participants are competent is vital when executing a project because they are the main
552 catalyst of project performance. While noting this, it is pertinent to note that a project in its entirety
553 is too complicated for one participant to accomplish individually, rather, a combination of
554 participants is needed for effective project delivery. As such, it is essential to ensure that all project
555 participants are competent, because if a project participant is not job-competent, the project is
556 likely to be delayed and will not meet its project objectives. In addition to being job-competent,
557 project participants should also be interpersonally-competent because it will foster good working
558 condition which will ultimately propel them to discharge their duties appropriately (Finlay and
559 Mitchell, 1994). Owing to an array of project participants from different backgrounds, there is
560 bound to be a clash of ideas/interests. However, it takes a competent project team to exploit this
561 cross-cultural environment to their advantage to foster cross-cultural ideas which will further

562 innovation. As such, a competent team will be able to make integrative decisions to identify the
563 requirements of complex projects, overcome project obstacles, successfully meet objectives, and
564 surpass client expectations with greater pace (Laufer *et al.*, 1996).

565

566 **5.5 Successful completion of project without adverse health and safety** 567 **issues**

568 Evidence from the study reveals that the fifth most important driver of project reputation for
569 construction organisations is *successful completion of project without adverse health and safety issues* (see
570 Table 6). According to research studies such as Aminbakhsh *et al.* (2013) and Reyes *et al.* (2014)
571 and Ajayi *et al.* (2018), the construction industry is bedevilled with health and safety risks because
572 of its complex, dynamic and unique scenery where uncertainties are prevalent. For instance, the
573 UK Health and Safety Executive reports that 555,000 workplace injuries were sustained by onsite
574 construction workers, while 144 workers were killed (HSE, 2018). As a result of incessant
575 workplace injuries/deaths, HSE (2018) reports that 30.7 million working days were lost in
576 2017/18. However, it is pertinent to note that workplace injuries/deaths do not only affect
577 employee's quality of life; it also damages the employer's (construction organisation) productivity,
578 finances and reputation. This consequence is exemplified in the case of the explosion at Deepwater
579 Horizon which was found to be as a result of vaguely established health and safety rules. The
580 disaster at Deepwater Horizon not only cost BP almost \$45 billion, but resulted in the plummeting
581 of their share prices as a result of the negative reputation of the disaster. As such, completing a
582 project without adverse health and safety issues is a desirable eventuality that will develop the
583 project reputation of construction organisations.

584

585 **5.6 Regular client consultation**

586 Finally, the sixth most important driver of project reputation for construction organisation is *regular*
587 *client consultation*. The theme of regular consultation among project participants on construction
588 projects has been stressed in most research studies as being vital to project performance (Toor and
589 Ogunlana, 2008; Nguyen *et al.*, 2004; Chua *et al.*, 1999). According to Toor and Ogunlana (2008),
590 regular consultation is indispensable between clients and project stakeholders such as contractors,
591 subcontractors, consultants and designers. This relationship is particularly imperative because the
592 client, who is usually the owner of the project knows his/her expectations of the ideal
593 product/project/service. As such, contracted project stakeholders must aim to deliver the project
594 to the client's satisfaction because it is one of the prerequisites for judging project performance.
595 Hence, project stakeholders should be in permanent consultation with the client throughout the

596 project lifecycle to discuss unforeseen needs, issues, problems and mutually liaise to make project
597 changes. According to Toor and Ogunlana (2008) regular client consultation is exceptionally useful
598 because it can help eliminate misunderstandings between the client and other project stakeholders
599 and reduce non-productive efforts.

600

601 **6 Implications for practice**

602

603 Evidence suggests that the construction industry is a unique and complex scenery where working
604 conditions are different from the business, information technology and production industry.
605 Characteristics such as the custom-made nature of projects, involvement of many stakeholders
606 and varying procurement systems make construction projects unique. Furthermore, the industry
607 is overwhelmed by numerous constraint-criteria which include meeting time, budget, specifications
608 client satisfaction, health and safety rules and environmental compliance rules. As such, to a large
609 extent, the construction industry is incomparable to other industries such as IT or production
610 (Toor and Ogunlana, 2008). In view of the above-mentioned ambiguities, there is probability that
611 there will be more differences than similarities between the identified process-related drivers of
612 project reputation on construction projects and projects in other industries. While this somewhat
613 lack of transferability has been established, the identified process-related drivers of project
614 reputation have far-reaching strategic implications for most construction organisations at
615 organisational and individual levels. At an organisational level, the study suggest that construction
616 organisations top echelon executives can leverage on the findings of this study to adopt strategic
617 positions on projects before they commence. This could be the identification of impending
618 developmental needs in terms of being up to date with the latest health and safety rules and
619 environmentally-friendly techniques. This would allow them to prioritize critical issues that will
620 unquestionably impact their project reputation during the implementation of the project plan. At
621 an individual level, project managers will find the findings of this study valuable when seeking to
622 achieve positive project reputation. As part of the findings of the study, competent project
623 participants are the catalyst for project performance. Therefore, project managers must not
624 concede to any form of nepotism, favouritism or cronyism when seeking to employ project
625 participants because only competent project participants deliver projects effectively. This includes
626 awarding bids to the right designer/contractor and employing competent participants.

627

628

629 **7 Conclusion and Recommendations**

630

631 This study emerged from the backdrop of the existence of two divergent lines of thought in project
632 management which views projects as either a product or as a process. In line with this distinction,
633 this study aligns with the process perspective by maintaining that project management is not
634 entirely about the final output/product, but the success of various best practices, techniques and
635 approaches, all of which are process-oriented. Using a mixed methods approach, the study sought
636 to examine the key process-related drivers of project reputation of construction organisations from
637 the perspective of UK construction practitioners which include architects, civil engineers, building
638 engineers, structural engineers and quantity surveyors. This resulted in the identification of six key
639 process-related drivers of project reputation for construction organisations. They include:
640 successful completion of project without adverse environmental issues; competent project
641 manager; friendly culture generated within project; competent project participants; successful
642 completion of project without health and safety issues and regular client consultation.

643

644 The findings from this study provides the basis for a set of practical recommendations on how
645 construction organisations can use their project's process to develop, improve and sustain their
646 reputation. The target group for these recommendations are project investors, clients and senior
647 management (i.e. project manager) who are responsible for making key decisions regarding a
648 project's process lifecycle. As a project goes beyond the delivery of the final output/product, the
649 abovementioned target groups are implored to: (1) have a construction environmental plan that
650 adheres to environmental legislations by outlining how projects will avoid or mitigate effects of
651 the construction project on the surrounding area. (2) award bids to the right designer/contractor
652 and employ competent project participants free from nepotism, favouritism or cronyism. (3) leave
653 no stone unturned by ensuring that health and safety issues are identified and appropriate
654 mitigation strategies are identified, controlled and reviewed throughout the project's life cycle.

655

656 Notwithstanding the contribution of this study, it is pertinent to note that this research was
657 conducted in the UK by exploring the experiential opinion of UK construction industry
658 practitioners. Hence, findings from the study should only be considered valid in this particular
659 context. Future research should consider exploring others countries to ascertain whether there is
660 a concord or discord among the identified drivers of project reputation. Another line of inquiry
661 that future research may focus on is to expand the comprehensive list of process-related factors
662 influencing project reputation.

663

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