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The state of corporate social responsibility practice in the construction sector.

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The State of Corporate Social Responsibility in the Construction Sector

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1 The State of Corporate Social Responsibility Practice in the Construction

2 Sector

3 Abstract

4 **Purpose:** The development of corporate social responsibility (CSR) in the construction sector is slow,
5 thereby leaving many opportunities for further development. To enable operators in the construction sector
6 to effectively capitalise on the opportunities to promote the development of CSR in the sector, this study
7 employs the practice viewpoint to take the stock of CSR activities in the sector. The aim is to reveal the
8 state of CSR practice in the construction sector. The study also draws from the development of CSR in the
9 manufacturing, mining and banking sectors to inform the state of CSR practice in the construction sector.

10 **Method:** This study carries out a systematic literature review of 56 journal publications that were published
11 between the year 2000 and 2016. The deductive coding of the publications was done to identify four themes
12 of CSR research that constitute the practice view of the state of CSR in the construction sector.

13 **Findings:** The implementation of CSR is the major emphasis in the state of CSR practice in the construction
14 sector. The implementation of CSR is wrapped in the perception of operators about CSR potentials,
15 dimensions of CSR implemented, strategies for implementation and the effects of the implemented CSR
16 practices on performance. The sector characteristics and organisational structure are attributes for
17 comparing the CSR practices between the construction sector and the manufacturing, mining and banking
18 sectors.

19 **Originality/value:** This study provides a researchers' view of the state of CSR in the construction sector.
20 Additionally, the study draws from the development of corporate social responsibility in the manufacturing,
21 mining and banking sectors to inform the state of CSR practice in the construction sector.

22 **Keywords:** Corporate social responsibility, construction sector, development, review

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1. Introduction

Corporate social responsibility (CSR) is a concept that is based on the notion that in the conduct of business, there is an implied agreement between businesses and the society. Such agreement represents the expectation of the society from businesses to operate in a particular manner that protects the long term interests of the society instead of chasing after immediate profits (Cadbury, 2006). As a result, the concept of CSR is widely embraced across different sectors whose business activities generate substantial societal interests. Some of these sectors are the financial services, trade and retail and the extractive sectors. Equally, the construction sector is part of this group because its activities impacts negatively on the society.

According to Lu, Ye, Flanagan, and Ye (2015), the construction sector is not responsible, and poorly reputed in the area of social responsibility (Barthorpe, 2010). Excessive resources and energy are used in the execution of different construction activities such as the processing and transportation of raw materials, actual construction, operation and utilisation of building products (Zhao, Zhao, Davidson, & Zuo, 2012). As a result, the environment and the ecosystem are affected through these activities in the forms of excessive dusts, air pollution, carbon and greenhouse gas emissions (Barthorpe, 2010; Ozorhon, 2013; Zou & Couani, 2012). Furthermore, the nature of construction activities is labour intensive with high rate of exposure to accidents. This makes the undertaking of construction very unhealthy and unsafe for construction workers (Close & Loosemore, 2014; Jiang & Wong, 2016). For instance, the construction sector records a higher number of annual rate of fatal injuries to workers than in other sectors such as manufacturing, waste and recycling and agriculture in the UK in the year 2016 to 2017 (Health and Safety Executive, 2017). At the same time, many construction companies are still engaged in globally condemned practices such as Child labour (Jiang & Wong, 2016; Lu, et al., 2015).

Therefore, CSR is widely promoted to curtail or eliminate irresponsible practices that harm the society in the construction sector. According to Othman & Mia (2008), the construction sector is part of the societal system, and should engage in the activities that enhance the system. In the construction sector, clients are increasingly showing concern and demanding the implementation of CSR from construction companies (Close & Loosemore, 2014; Griffith, 2011; Mayr, 2015; Myers, 2005; Roberts, et al., 2009). Such concerns are often expressed in the form of organised protests to eliminate bad practices in the construction sector (Close and Loosemore, 2014). In addition, there is a growing belief among construction sector operators such as clients, contractors, developers and consultants that the implementation of CSR practices adds value to business through positive image building and branding prestige in the construction sector (Othman & Mia, 2008; Roberts, et al., 2009).

Meanwhile, there are still opportunities to promote the development of CSR in the construction sector due to many lagging issues. For instance, according to Xia et al. (2018), the contributions of CSR to ensure

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3 62 sustainable development in the construction sector is limited due to the traditional approach to construction
4 63 and the lack of appropriate regulations to drive responsible practices such as the recycling of construction
5 64 wastes. Whitewashing of CSR practices can still be found in many construction organisations. Many are
6 65 opportunistic about CSR practices (Ulutas et al., 2016). For instance, many construction organisations carry
7 66 out CSR practices for sinister objectives such as to gain financial benefits only (Upstill-Goddard et al.,
8 67 2016; Lichtenstein et al., 2013). In addition, despite the awareness of the benefits of CSR in the construction
9 68 sector (Ulutas et al., 2016), how to effectively strategise and implement CSR practices to achieve positive
10 69 outcomes is still a challenge for construction operators (Xia et al., 2018). However, to enable the operators
11 70 in the sector effectively capitalise on the opportunities for the development of CSR in the
12 71 construction sector, there is need to take the stock of CSR activities in the sector. This means to reveal the
13 72 state of CSR practice in the construction sector. Consequently, the specific areas of CSR that needs to be
14 73 improved can be revealed.

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17 74 The aim of this study is to reveal the state of CSR in the construction sector from researchers' viewpoints.
18 75 Therefore, the methodological approach in this study is the exploration of published literature using a
19 76 systematic literature review method. Recently, Lin et al. (2018) employed this approach to explore CSR in
20 77 the management field to suggest contributions for CSR in the construction sector. The difference in this
21 78 study is drawing on the development of CSR in the manufacturing, mining and banking sectors, to compare
22 79 and inform CSR practice in the construction sector. Similar to the construction sector, the provision of
23 80 services in these sectors create an element of social responsibility or irresponsibility. In addition, these
24 81 sectors have a stronger CSR performance (Handayani, Wahyudi, & Suharnomo, 2017; Selmier, 2017;
25 82 Jenkins, 2004) that can serve a basis to inform CSR in the construction sector. This study is significant for
26 83 the following reasons. The knowledge of the state of CSR practice can serve as a benchmark for future
27 84 practical and theoretical suggestions for developing CSR in the construction sector. New research areas,
28 85 and courses of action for the development of CSR in the construction sector can be identified. Drawing on
29 86 other sectors provide an inter-sectoral comparison and lessons for developing CSR in the construction
30 87 sector. In terms of structure, following this section, the next section is a review of CSR in the manufacturing,
31 88 mining and banking sectors to identify areas of CSR development. Next is the method section, followed by
32 89 the results and conclusion.

33 90 2. Corporate social responsibility in other sectors

34 91 According to Rogers (2017), CSR means different things in different sectors. Although, this study is
35 92 focused on the construction sector, the review in this section is to provide a succinct overview of CSR in
36 93 other sectors (Summarised in Table 1). It will also show the developments in the CSR in these sectors. CSR
37 94 in the manufacturing, mining and the banking sectors are identified. As mentioned previously, the means

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3 95 through which services are created in these sectors create an element of social responsibility (or
4 96 irresponsibility) in a similar manner to the construction sector. Both the manufacturing and the mining
5 97 sectors have disruptive production processes, while the banking transactions often involve a set of promises
6 98 exchanged between buyer and seller (or demand and supply side in construction) under conditions where it
7 99 is often difficult for buyers (or clients in construction) to evaluate these promises in the absence of full
8 100 information (Sallyanne Decker, 2004).

101 2.1 Manufacturing sector

102 Owing to the avaricious growth of manufacturing activities since the 21st century, which has resulted to
103 irreversible environmental impacts such as the greenhouse effect, CSR has become a primary management
104 approach for addressing public concerns and compliance with increasing environmental regulations
105 (Panayiotou, et al., 2009). Notably, greenhouse effect is a major environmental problem in the
106 manufacturing sector (Moowaw, 1996). For instance, the green corporate social responsibility is promoted
107 in the manufacturing sector to address the emission of wastes and pollution during production and to ensure
108 the effective utilisation of resources (Guo et al., 2015). According to Handayani, et al. (2017), CSR practices
109 such as green innovation improves environmental sustainability and social welfare of customers in the
110 manufacturing sector. Thus, many companies have responded to environmental concerns in the
111 manufacturing sector by making their products more energy and fuel efficient (Rogers, 2017).

112 There are different motivations for the adoption of CSR in the manufacturing sector. A common one is to
113 improve business efficiency and to satisfy customers (Handayani, et al., 2017; Panayiotou, et al., 2009). Li,
114 et al. (2017) reveal that CSR helps the manufacturing companies to build better reputations, gain the trust
115 of customers and investors, establish steady relationships with suppliers and employees, and enjoy
116 preferential government policies. As a consequence, manufacturing firms with higher CSR performance
117 have higher firm value and are more sustainable and competitive (Li, et al., 2017). Media attention (or
118 exposure to media) is also a motivating factor for manufacturing firms to engage in CSR. Particularly the
119 large manufacturing companies, the media is known to expose their misdeeds, and to avoid media exposure,
120 these companies are inclined to embrace good practices in the conduct of their businesses (Li, et al., 2017).
121 Consequently, many manufacturing companies are more socially active with the external stakeholders such
122 as the media to project an image of better CSR performance (Handayani et al., 2017).

123 Furthermore, the governance approach in the manufacturing value chain dictates the CSR compliance in
124 the sector. As demonstrated by Lund-Thomsen and Nadvi (2010), the vertical governance structure
125 enhances CSR compliance in the sector. In the value chain, the vertical governance promotes a centralised
126 dictation of production processes to the manufacturing companies. Additionally, many manufacturing
127 companies do engage in CSR reporting (Panayiotou, et al., 2009) to account for good CSR methods and

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3 128 practices (Tan-Mullins & Mohan, 2013). Still, more opportunities for CSR improvements exist (Li, et al.,
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5 129 2017; Nodoushani, 2013), particularly to address the issues of labour relations and employee health and
6 130 safety (Rogers, 2017).
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9 131 2.2 Mining sector

10 132 Mining is a dangerous activity that involves the extraction of raw materials from the earth (Selmier, 2017).
11 133 Mining is also capable of inducing negative effects such as entrenching existing power asymmetries in a
12 134 country, exacerbating conflicts, and impoverishing populations (Tang-Lee, 2016). Therefore in the sector,
13 135 key elements of CSR such as public engagement and/or stakeholder management are necessary to overcome
14 136 the negative effects of mining activities such as mining conflicts between the host communities and mining
15 137 companies (Tang-Lee, 2016). Where the host communities see themselves as victims, reciprocal
16 138 responsibility is often carried out (Abuya, 2006).
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22 139 Equally in this sector, legitimacy and identity of mining companies are important. Globally, mining
23 140 companies are often located outside of the mining locations, some of which are in unfamiliar territories and
24 141 remote locations with socio-political issues (Selmier, 2017). Thus, mining companies participate in
25 142 community development initiatives such as provision of basic infrastructure to identify with their host
26 143 communities and legitimise their business (Patnaik et al., 2017). Similar to the manufacturing sector, mining
27 144 companies interact with the host communities through CSR reports. In such reports, CSR activities are
28 145 framed in terms of community relations, and to identify with the community, thereby positioning their
29 146 business at the centre of heart of the community members (Jenkins, 2004). Wirth, Kulczycka, Hausner, and
30 147 Koński (2016) reveal that CSR in the mining sector in developing countries is focused on improving the
31 148 living conditions in host communities such as provision of basic infrastructure, while in developed
32 149 countries, it is focused on reducing the negative impact of mining activities. According to Wirth, et al.
33 150 (2016), the difference is due to the differences in CSR policies in both categories. Hence, a domestic
34 151 regulation for mining activities is essential in the mining sector (Andrews, 2016). Instead of acting out of
35 152 arbitrariness, such regulation provides a guideline of engagement in CSR for mining companies to identify
36 153 and implement necessary CSR practices that are beneficial to their host communities (Abuya, 2016;
37 154 Andrews, 2016).
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48 155 In the mining sector, the size of mining companies often determine how CSR is approached and practiced.
49 156 For instance, the study of Wirth, et al. (2016) among copper mining companies around the world reveals
50 157 that the large sized ones have robust CSR policies covering issues relating employee health and community
51 158 engagement strategies in place. In addition, the large companies are very transparent in their CSR practices
52 159 through regular CSR reporting. In contrast, the smaller companies are less transparent about their CSR
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3 160 goals, and they focus on engaging in ad-hoc issues, rather than developing long-term strategic relations
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5 161 (Wirth, et al., 2016).

7 162 2.3 Banking sector

8 163 According to Shen, Wu, Chen, and Fang (2016), the importance of CSR in the banking sector is commonly
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10 164 exemplified in three common forms. Firstly, from the regulator and public view, engaging in CSR is a
11 165 means for the banks to compensate for the use of societal resources. The public, through bank customers
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13 166 entrust their savings and other financial investments to the banks, which are consequently used by the banks
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15 167 for other productive ventures (Sallyanne Decker, 2004). Secondly, from the managerial point of view, banks
16 168 sell different products that are at best intangible to their customers, many of whom are not financially sound
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18 169 to understand the nature of these products. Due the intangibility of many bank products, these customers
19 170 cannot sample them before subscribing (Sallyanne Decker, 2004). Thus, the banks need to demonstrate a
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21 171 lot of trustworthiness and reputation through CSR actions to attract customers (Shen, et al., 2016). Thirdly,
22 172 bank lending is critical to the growth of businesses such as gun production, blood diamond and casinos
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24 173 operation that are societally damaging. To reverse any trend in this direction requires the commitment and
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26 174 pledge of banks to desist from financing such businesses. For instance, banks can familiarise with the
27 175 financial affairs of their customers to prevent them from engaging in damaging investments (Guo, 2012).
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29 176 It could be seen that the three forms reflect a form of external influence, by both the regulators and the
30 177 public through bank customers.

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33 178 However, there is growing emphasis on the CSR that reflects the internal aspects in banks. From the
34 179 employee perspective, the argument is that the actions/values of a bank that enhances the connection to
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36 180 employees are reinforced in ethics, and deepened attention to CSR (Valentine & Godkin, 2017). According
37 181 to Mensah, Agyapong, and Nuertey (2017), actions that increase banks' perception of CSR will enhance
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39 182 employees' fit and commitment to their employer, thereby reducing any intention to quit working for the
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41 183 employer (Valentine & Godkin, 2017). Additionally, bank employees appreciate the CSR initiatives
42 184 implemented in their organisations because it helps to develop a highly regarded corporate brand in the
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44 185 society (Bravo, Buil, de Chernatony, & Martínez, 2017). This suggests that employees are very important
45 186 to the development of CSR in the banking sector. Equally, bank managers have crucial roles to play such
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47 187 as: developing and implementing appropriate ethics policies and providing leadership and bonding to
48 188 employees (Bravo, et al., 2017; Valentine & Godkin, 2017). According to Sallyanne Decker (2004), it is
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50 189 well recognised, especially among managers in the banking sector that the concept of CSR influences their
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52 190 operating environment with vital consequences for their performance and survival. For example, CSR is
53 191 highly regulated in the banking sector (Shen, et al., 2016) which affects how banks operate (Sallyanne
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192 Decker, 2004). As such, banks are conditioned to develop strategies to indicate that they consider wider
193 societal concerns that arise from their banking activities.

194 Often, banks would cooperate and partner among themselves, or with external organisations to deliver one
195 or more social responsibilities (e.g. (Ali & Rahman, 2015) as a long-term survival strategy (Shen, et al.,
196 2016). In addition, and similar to the manufacturing and mining sectors, banks would regularly engage in
197 CSR disclosure to dialogue with those that are affected by their business in the immediate societies they
198 are located (Castelo Branco & Lima Rodrigues, 2006). The implementation of CSR in banks has been very
199 beneficial. Shen, et al. (2016)'s analysis of global banks in 18 countries reveals that the financial
200 performance in banks that conduct CSR practices are much greater than those that do not. In fact, the
201 analysis of data from 194 banks in 22 countries reveals that the more CSR practices in a bank, the better
202 the financial performance (Wu, Shen, & Chen, 2017). However, differences in national cultures could
203 account for the effects of CSR on performance in the banking sector. For instance, the impact of CSR in
204 the banks in the East Asian culture of Confucianism focuses on the employee and community component
205 of CSR practices (Bouvain, Baumann, & Lundmark, 2013). In contrast, the impact is on green issues and
206 caring for the environment in the Western culture. In this culture, banks that fulfil sustainability
207 requirements experience high financial performance (Forcadell & Aracil, 2017). However, in developing
208 countries, banks perform very lowly in the environmental aspects of CSR (Hu & Scholtens, 2014). In sum,
209 the benefits of CSR to banks are not universal, mainly due to differences in national cultures.

210 Table 1: Summary of the areas of development of CSR in different sectors

CSR aspects/Sectors	Manufacturing	Mining	Banking
Community engagement		√	
Company policy		√	√
Company size		√	
CSR reporting	√	√	√
Dichotomy between developed and developing economies			√
Employee concerns			√
Environment	√		√
Governance	√		
Infrastructure provision		√	
Legitimacy and identity		√	
Long terms vs short term (Strategic CSR)			√
Managerial			√
National culture			√
Partnerships			
Performance	√		√
Regulation		√	√
Stakeholder-ship	√	√	

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212 3. Method

213 Generally, there is a lack of widely agreed definition of CSR in theory. According to Wan-Jan (2006), this
214 has contributed a lot of misunderstandings and cynicism towards the concept (Wan-Jan, 2006; Hamidu,
215 Haron and Amran, 2015). Despite this, practitioners can be seen practicing CSR, and as a result, the real
216 practice of CSR can reliably inform the concept of CSR (Wan-Jan, 2006). In line with this position, Wan-
217 Jan (2006) described CSR as both a business strategy and as an ethical necessity. Basically, as a business
218 strategy, CSR can be implemented to enhance business profitability, while as an ethical necessity, profits
219 made can be invested to care for shareholders and societal interests. Equally, studies have explored the
220 practice of CSR through the contents of CSR reports to provide an understanding of CSR (e.g. Ayuso et al.,
221 2016; Vigneau, Humphreys and Moon, 2015). Therefore, to achieve the aim of this study (to reveal the
222 state of CSR practice in the sector), we will not attempt making conceptual definitions, but to explore the
223 researchers' viewpoint of CSR in the construction sector.

224 There is a sizable amount of research on CSR in the construction sector. The research provides a reflection
225 of researchers' viewpoints on the subject. Ekung, Ujene and Ubong (2014) stated that research on CSR in
226 the construction sector had been increasing since the year 2000. Exploring published literature assures more
227 breadth since the aggregate of the research may encompass multiple contextual characteristics such as
228 location, professional differences and focus. In addition, such research are a source of secondary data which
229 had passed through a rigorous primary data collection and analysis before publication. Meanwhile, a
230 systematic approach to exploring published literature to achieve the aim of this study was preferred to
231 summarise the body of knowledge, and consequently scope out the themes of research on the subject in line
232 with the aim of the study (Mok, Shen and Yang, 2015).

233 Therefore, we employed the systematic literature review method. To ensure a rigorous review, we followed
234 the approach of Okoli and Schabram (2010) as follows. Firstly, we carried out electronic search for
235 relevant publications on "corporate social responsibility in construction" in the Google Scholar database. It
236 is a very effective database for systematic selection of literature, and publications in other databases such
237 as Springer and the ASCE database can be found in it (Morioka & de Carvalho, 2016; Sartor, Orzes, Di
238 Mauro, Ebrahimpour, & Nassimbeni, 2016). Additionally, it is particularly useful because many leading
239 construction sector journals can be sourced from it (Xiong, Skitmore, & Xia, 2015).

240 Furthermore, we focused on journal publications only, while conference publications, textbooks and policy
241 papers were left out. The reason is that journal publications are more scientifically valid than the other types
242 of publications due to the rigorous review process (Olanipekun, Chan, Xia & Ameyaw, 2017). Meanwhile,

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243 despite that research on CSR in construction has been increasing since the year 2000 (Ekung et al., 2014),
244 it is significantly later than the field of management where research on CSR started in the 1950s (Hamidu
245 et al., 2015). Therefore, to ensure more coverage and to obtain more publications as possible, we placed no
246 restriction on the scope of journals that we focused on.

247 In the process of searching through the databases, we used a collection of keywords with the aim to whittle
248 down too many publications (Piper, 2013). The main keyword is “corporate social responsibility.”
249 However, we incorporated other keywords that are similar in meaning and used interchangeably with the
250 main keyword in the construction sector context. These are corporate social performance, corporate
251 environmental performance and sustainable responsibility. Furthermore, to reflect the construction sector,
252 we used keywords that provide the context and the environment where CSR is practiced in the sector. These
253 are during the management of construction process, the construction organisations and the industry at large.
254 Therefore, in the Google Scholar database, the keywords were combined with appropriate Boolean
255 operators as follows: (“corporate social responsibility” OR “corporate social performance” OR “corporate
256 environmental responsibility” OR “sustainable responsibility”) AND (“construction management” OR
257 “construction project management” OR “construction industry” OR “construction organisations” OR
258 “construction organizations” OR “construction firms”).

259 By means of this search strategy, 300 publications were returned. After excluding duplicated publications
260 in the database, we downloaded 121 that were journal publications in Endnote. Subsequently, we examined
261 the titles and abstracts of the publications to allow us make initial judgement about suitability for inclusion
262 of publication. We observed that all but 10 of the publications contained one of the keywords in the least.
263 In the final step, we read the full texts of the remaining 111 publications to check whether they provide
264 insights into CSR practices in the construction sector, especially in construction organisations, projects and
265 the sector at large. We found that, despite that one or more of the keywords are contained in the publications,
266 55 of them (about 50%) provided no insights into the practice of CSR in the sector. Instead, these
267 publications contain wishful contents about the future of CSR in the construction sector, and were therefore
268 removed from further analysis.

269 Next, we embarked on the coding of the 56 publications that were retained through a deductive approach –
270 whereby categories are defined a priori by the research team (Sartor et al., 2016). We defined only one
271 category, which is the “aim of study” for the coding of the selected publications. Actually, other codes such
272 as unit of analysis, sample dimension and research context could be useful. However, these and others were
273 considered by the authors earlier, and used for selecting appropriate publications. We agreed that the “aim
274 of study” convey the meaning unit that provides the strongest insights to the themes in the publications. For
275 instance, the aim in Xiong, et al. (2016) is to evaluate the corporate social performance – corporate financial

276 performance relationship. In the study, the insight being conveyed is “the effect of CSR practice”, which
 277 we regarded as the meaning unit. We used this approach to identify three other themes: (1) the perception
 278 of CSR, (2) the CSR practices, and (3) the strategies for implementing CSR practices. The Table 2 reveals
 279 the results of coding process with the number of publications under different themes. The number of
 280 publications under each theme are 10, 25, 19 and 14 respectively.

281 To ensure the reliability of the coding process, we formed two independent groups to perform the coding
 282 (Ham-Baloyi and Jordan, 2016). With the themes identified, the coding of the publications under different
 283 themes was mostly consistent among the authors. However, we experienced very minimal cross-coding. To
 284 resolve them, we discussed the different judgements behind the cross-coding and were resolved through a
 285 discursive alignment of interpretations (Sartor et al., 2016).

286 Table 2: Summary of the themes of CSR research in the construction sector

Authors	Perception	CSR practices	Strategies	Effect
1 Zhao et al. (2016)	√			
2 Arruda et al. (2013)				√
3 Barnes and Croker (2013)				√
4 Barthorpe (2010)		√		
5 Bevan and Yung (2015)		√		
6 Bowen et al. (2014)		√		
7 Boyle and McGuirk (2012)		√		
8 Cambra-Fierro et al. (2013)				√
9 Close and Loosemore (2014)	√			
10 Eadie and Rafferty (2014)	√			
11 Ekung, et al. (2014)	√			
12 Glass and Dainty (2011)	√			
13 Gliedt and Hoicka (2015)		√		
14 Griffith (2011)			√	
15 Guo (2012)			√	
16 Haigh and Sutton (2012)			√	
17 Huang and Lien (2012)				√
18 Jiang and Wong (2016)		√		
19 Lassch and Yang (2011)		√		
20 Liao, Xue, Liu, and Fang (2015)				√
21 Lichtenstein et al. (2013)		√		
22 Liu, Fellows, and Tuuli (2011)				√
23 Liyanage, et al. (2016)		√		
24 Loosemore (2015)	√			
25 Loosemore (2016)	√			
26 Lu, et al. (2015)				√

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4	27	Mayr (2015)		√
5	28	Morton et al. (2011)		√
6	29	Myers (2005)	√	
7	30	Newell and Lin Lee (2012)		√
8	31	Othman (2009)	√	
9				
10	32	Othman and Abdellatif (2011)		√
11	33	Othman and Mia (2008)		√
12	34	Petrovic-Lazarevic (2008)		√
13	35	Petrovic-Lazarevic (2010)		√
14				
15	36	Pillania, Wuttke, and Vilks (2014)	√	
16	37	Pivo (2008)	√	
17	38	Pivo and Group (2008)		√
18	39	Rapson et al. (2007)	√	
19				
20	40	Roberts and Kimmet (2009)	√	
21	41	Roberts and Kriese (2009)	√	
22	42	Roberts, et al. (2007)	√	
23	43	Roberts, et al. (2009)		√
24				
25	44	Sardinha, Reijnders, and Antunes (2011)		√
26	45	Shen, Tam, Tam, and Ji (2010)	√	
27	46	Tan-Mullins and Mohan (2013)		√
28	47	Tsai, Yang, Chang, and Lee (2014)	√	
29				
30	48	Upstill-Goddard et al. (2016)		√
31	49	Wang, Toppinen, and Juslin (2014)	√	
32	50	Wilson et al. (2011)		√
33	51	Wu et al. (2015)	√	
34				
35	52	Xiong, et al. (2016)		√
36	53	Yam (2013);	√	
37		Yam Lee Hong, Ismail, and Soo Yin		
38	54	(2008)	√	
39	55	Zhao, et al. (2012)		√
40	56	Zhu, et al. (2011)	√	
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288 4. Results

289 4.1 Distribution of publications in journals

290 The 56 publications are contained in 30 different journals. This is a large spread that indicates a growing
 291 research area. The journals are categorised into construction related, sustainability related and business
 292 related journals. Expectedly, the highest number of publications were published in construction related
 293 journals (64.3%), followed by sustainability (21.4%) and business (14.3%) related journals.

4.2 Distribution of publications in years

As shown in the Figure 1, the publications spanned a period of 12 years (2005-2016). Although the starting period of the search scheme was the year 2000, the first journal publication was produced in the year 2005. This is a much later time when compared to the 1950s when research on CSR in the field of management started. With the exception of 2006, no year has publication less than 2. In 2011, the number of publications reached the highest (9 number). Afterwards, the number of publications was consistent at an average of 6.4 publications between the years 2012-2016.

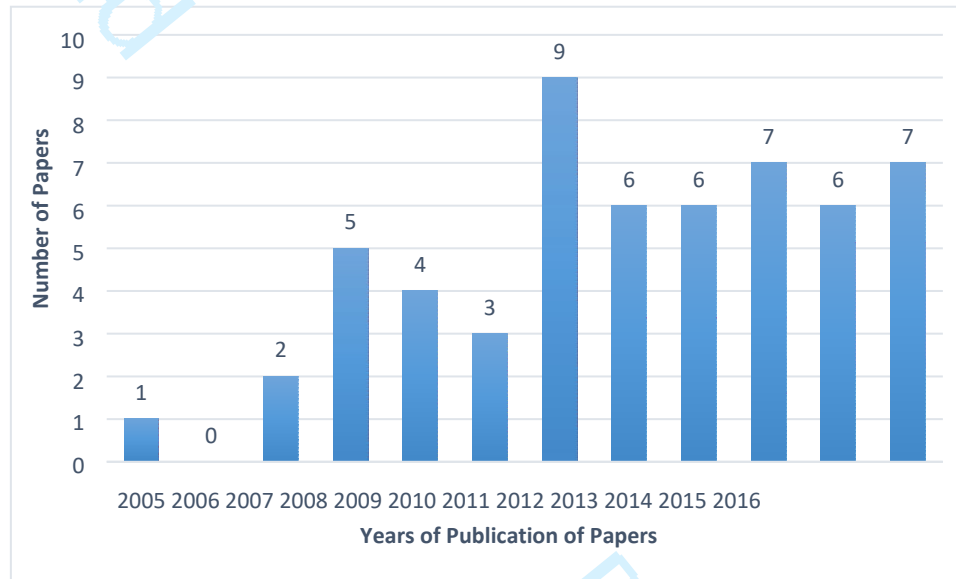


Figure 1. Distribution of papers in years

4.3. The themes of CSR research in the construction sector

As mentioned previously, the four themes that reveal the state of CSR practice in the construction sector are illustrated in Table 2. They are: perception of CSR, CSR practices, strategies for implementing CSR and effect of CSR practices, and are described in the following section.

4.3.1 The perception of CSR

This theme reveals how CSR is perceived among the operators in the construction sector. There are two diverse perceptions of CSR in the sector. The first one is that CSR is acceptable and should be implemented in the construction sector. This perception was pervasive in the early 2000s when CSR began gaining prominence in the construction sector. Being a new concept during the period, many operators in the sector such as property developers were open to the idea of CSR in construction organisations. For instance, property developers in Malaysia opine that CSR should be implemented as part of contributions to sustainable development (Hong, Ismail and Yin, 2008). Particularly, the large construction companies want to be judged on the basis of their contributions to the society and the environment (Myers, 2005).

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3 316 However, in construction organisations, this perception was only held prior to actual implementation of
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5 317 CSR practices. The perception is different when one or more CSR practices are implemented. The
6 318 construction professionals in the organisations think that the undertaking of CSR is not a primary
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8 319 responsibility that concerns them. They believe that participating in the implementation of CSR practices
9 320 is very burdensome, costly and time-consuming exercise (Close & Loosemore, 2014). The negative
10 321 perception of CSR is attributed to the problems encountered by construction operators owing to the
11 322 characteristics of the construction sector which is inimical to the effective CSR implementation. The sector
12 323 is fragmented (Ekung, et al., 2014; Loosemore, 2015; Yam Lee Hong, et al., 2008) in terms of its diverse
13 324 processes and the related professions, which in turn affects any transition towards socially
14 325 responsible practices (Loosemore, 2016; Myers, 2005). Equally, many trade organisations such as the
15 326 contractors and the supervision firms exist in the sector (Wu, et al., 2015; Zhao, et al., 2016). These
16 327 organisations have different organisational processes and aspirations, which contribute to the differences in
17 328 perceptions about CSR in the sector. These characteristics are existential and may not easily change (or be
18 329 changed) to accommodate CSR development.

25 330 4.3.2 The CSR practices

26 331 As pointed above, the perception of construction operators after the actual implementation of CSR is
27 332 negative. Nevertheless, evidences reveal the CSR practices in the construction sector which can be
28 333 categorised into the environmental, social and economic dimensions. The environmental dimension is
29 334 aimed at reducing the environmental footprint of construction activities. Examples of the CSR practices in
30 335 this dimension are energy upgrading in buildings (Gliedt and Hoicka (2015), use of renewable materials
31 336 for building (Wang, Toppinen, and Juslin, 2014), employing low carbon emitting construction methods and
32 337 CO2 emission reduction strategies during construction (Boyle & McGuirk, 2012; Tsai, Yang, Chang, &
33 338 Lee, 2014). The social dimension are the CSR practices that are very fundamental (Zhu, Zhao, & Sarkis,
34 339 2011), often intangible (Lichtenstein, Badu, Owusu-Manu, John Edwards, and Holt (2013) and in the forms
35 340 of values or social contribution to stakeholders, communities and other benefactors within and outside of
36 341 the sector. Examples of the social dimension of CSR practices are the provision of financial donations and
37 342 awards, sponsorships, training and disaster relief expertise, and employee engagements and supports. It
38 343 may also be the establishment of good relationships and rapport between contractors and the communities
39 344 where their construction sites are located (Lassch and Yang, 2011).

40 345 The economic dimension is often implemented in combination with the two other dimensions, such as
41 346 investing in energy efficient features (environmental dimension) to save energy cost for the building users
42 347 (economic dimension), while also reducing the environmental footprint of the building (environmental
43 348 dimension) (Gliedt & Hoicka, 2015). Therefore, the implementation of the economic dimension of CSR

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3 349 practices is annexed with the social and economic dimensions in the construction sector. Consequently, the
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5 350 implementation of CSR in the construction sector involves multiple dimensions. For instance, among
6 351 responsible property developers in US, CSR practices include location, building and people dimensions
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8 352 (Roberts & Kriese, 2009), while among apartment developers in China, they include environmental and
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10 353 social dimensions (Zhu, et al., 2011). Among the construction companies in Ghana, their CSR practices
11 354 include the social, infrastructural and environmental dimensions (Lichtenstein, et al., 2013), while in both
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13 355 UK and Turkey, they include the ethical and social dimensions (Liyanage, Ulutaş Duman, Giritli, &
14 356 McDermott, 2016). Given the potential for the implementation of multiple dimensions of CSR at the same
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16 357 time, achieving a balanced implementation is necessary to ensure a comprehensive implementation, or
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18 358 prevent the preference of one dimension over another (Lichtenstein et al., 2013, Liyanage et al., 2016).
19 359 However, to ensure a balanced implementation of CSR dimensions in construction organisations, factors
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21 360 such as the changing characteristics of countries, company scales, and the activity types and areas need to
22 361 be taken into consideration (Bevan and Yung, 2015; Zhu et al., 2011).

24 362 4.3.3 The strategies for implementing CSR

25 363 As mentioned previously, the perception of CSR among construction operators, especially after the actual
26 364 implementation of one or more CSR practices is negative. Equally, at the strategic level, barriers such as
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28 365 the adversarial working relationships of the different professional disciplines (Othman and Abdellatif,
29 366 2011), cultural and linguistic differences (Tan-Mullins and Mohan, 2013) and heavily bureaucratic
30 367 governance structures (Petrovic-Lazarevic, 2008) hinder the effective implementation of CSR practices.
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32 368 Thus, strategically implementing CSR practices is very important to ensure success. There are a few
33 369 observed strategies that can be employed for the successful implementation of CSR practices. One of the
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35 370 strategies is partnership among different operators in the construction sector for the provision of one or
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37 371 more social good(s) (Othman & Abdellatif, 2011). It could be in the form of exchanging of ideas that
38 372 reduces the environmental footprint of projects. Therefore, not only will that be a social good, it is also an
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40 373 environmental good through a reduced environmental impact of projects.

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44 374 Often, partnership as a strategy extends beyond the construction sector whereby construction operators'
45 375 partner with external organisations such as donor or relief based organisations. This is common in the
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47 376 situations of disasters or emergencies. According to Haigh and Sutton (2012) this form of partnership
48 377 operates by initially focusing on providing philanthropic support to victims, and thereafter, gravitates to
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50 378 supporting the longer term business objectives of the partners. Therefore, partnership is both a strategy for
51 379 implementing CSR practices and propagating business interests. However, for partnership to work as a
52 380 strategy for implementing CSR practices, it requires trust, transparency and open communication among
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54 381 the partners (Haigh & Sutton, 2012). Furthermore, it is often the case in construction organisations to

382 incorporate CSR practices into the business vision and mission of construction companies. Commonly, it
383 involves the use of integrated management systems (IMS) to actualise this strategy, and the advantage is
384 that CSR practices can be cascaded throughout the organisation and reflected in all project activities
385 (Griffith, 2011).

386 Frameworks are also employed, such as that of Othman and Mia (2008) for the integration of CSR practices
387 into the corporate mission and vision in the South African Quantity Surveying firms. Frameworks have
388 proven to be more useful in the smaller firms. According to Mayr (2015), the use of frameworks provides
389 a procedural guidance to entrepreneurs and owner-managers in the small firms to implement CSR practices
390 in both short and medium terms. The strategies for implementing CSR practices cannot be effected without
391 the sanctioning of the top management in construction organisations. The management is responsible for
392 devising the strategies. It commits resources and trade priorities to effect the strategies (Cambra-Fierro,
393 Wilson, Polo-Redondo, Fuster-Mur, & Lopez-Perez, 2013) and also drives the strategies and determines
394 how to actualise them (Morton, Goodwin, Kellond, Close, & Collins, 2011; Tan-Mullins & Mohan, 2013).
395 In addition, employees look up to the managerial guidance to key into the strategies (Haigh & Sutton, 2012;
396 Mayr, 2015). Meanwhile, the managerial input represents a top-down approach to CSR implementation
397 (Mayr, 2015). In contrast, the bottom-up approach involves operational level operators such as employees
398 in the construction organisations or sites. For instance, through the transformative social work approach,
399 construction workers have been educating and organising themselves into collective groups to mobilise the
400 grassroot power to enforce the implementation of social responsibilities that pertain to their own welfare
401 within construction companies (Guo, 2012). However, the bottom-up approach requires an external support
402 particularly from the non-governmental organisations to be more effective in the construction sector (Guo,
403 2012; Tan-Mullins & Mohan, 2013).

404 4.3.4 The effect of CSR practices

405 With the implementation of CSR practices, the beneficial outcomes can be observed in the construction
406 sector. According to Pivo and Group (2008), the implementation of CSR practices has beneficial outcomes.
407 The outcomes include improved image and business reputation (Huang & Lien, 2012). Operationally,
408 clients view construction organisations as responsible in their business conduct, and therefore they increase
409 their patronage, which leads to high performance for the companies, especially in terms of profits (Huang
410 & Lien, 2012; Roberts, Jones, Hillier, Comfort, & Clarke-Hill, 2009). According to Cambra-Fierro, et al.
411 (2013), the good thing is that construction clients are particularly responsive to CSR commitments in
412 construction organisations, by making more patronage that increases the financial and non-financial
413 performances in the organisations.

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3 414 However, CSR commitments must neither be reactionary nor opportunistic. Reactionary in the sense of
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5 415 taking responsible actions after a problem has occurred, and opportunism in the sense of laying claim to
6 416 responsible practices that are not genuine or untrue. Construction clients have been shown to desist from
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8 417 patronising construction companies whose CSR practices are either reactionary or opportunistic (Cambrá-
9 418 Fierro et al., 2013). Notably, as the implementation of CSR practices lead to beneficial outcomes, so also
10 419 can these outcomes influence CSR practices in construction organisations. It is regarded as a nexus
11 420 relationship between CSR practices and the performance of construction organisations. As demonstrated
12 421 by Xiong, et al. (2016), the CSR practices tailored towards clients and suppliers increased the financial
13 422 performance of construction companies in China, while also improvements in the financial performance of
14 423 the companies increased their environmental responsibility. The study also found a similar relationship
15 424 between profitability and overall CSR practices in the companies. In this regard, the challenge in
16 425 construction organisations is how to effectively evaluate CSR performance.

17 426 With the exception of Wu et al. (2015)'s indicators, the indicators for evaluating CSR performance are
18 427 lacking in the construction sector are lacking (Zhao, et al., 2012). Wu et al. (2015)'s indicators are less
19 428 useful because there are no weightings to different CSR interests and perspectives. Furthermore, the CSR
20 429 indicators in the globally recognised disclosure standards such as the ISO 26000 do not adequately reflect
21 430 the CSR issues in the construction sector (Jiang & Wong, 2016; Lu, et al., 2015; Petrovic-Lazarevic, 2010;
22 431 Upstill-Goddard, Glass, Dainty, & Nicholson, 2016). Thus, they are less useful for evaluating the CSR
23 432 performance of construction companies. Therefore, the challenge of evaluating CSR performance in the
24 433 construction sector remains due to lack of indicators for evaluation. It remains a research issue in the
25 434 construction sector (Zhao, et al., 2012).

35 435 5. Discussion of findings: State of CSR Practice in the Construction Sector

36 436 It could be seen that the four themes of CSR research about the state of CSR in the construction sector was
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38 437 obtained. The four themes are the: perception of CSR, CSR practices, strategies for implementing CSR and
39 438 effect of CSR practices. The differences between the state of the art of CSR in the construction sector and
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41 439 the manufacturing, mining and banking sectors are also discussed. The summary is presented in Table 3.

42 440 The first theme about the perception of CSR revealed that construction operators view and regard the
43 441 implementation of CSR in a negative manner. Often, this is due to the characteristic nature of the
44 442 construction sector such as the extremely diverse professions and processes which hamper transitions
45 443 towards responsible practices in the sector (See Loosemore, 2016). Many professional disciplines such as
46 444 Architects, Engineers, Quantity Surveyors and Builders who are engaged in different construction
47 445 organisations are responsible for construction process. These disciplines tend to exhibit different
48 446 organisational cultures and promote different professional interests that hampers cooperation. Construction

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3 447 processes such as designing, constructing and commissioning are many thereby making it difficult to create
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5 448 a harmonised front. To eliminate negative perception and promote CSR in the construction sector may thus
6 449 require the transformation of the construction sector disciplines, processes and operations to be more open
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8 450 and susceptible to responsible construction practices. Already, the sector is increasingly embracing
9 451 sustainable building practices and responsible sourcing of construction materials to eliminate the
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11 452 environmental footprint of building construction and operation (Zhang et al., 2019; Glass, 2011).
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13 453 Construction contracting can also be reviewed to include social responsibility performance a one of the
14 454 basis for contractor and vendors selection in the construction sector (Xia et al., 2018).

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16 455 Meanwhile, despite the negative perception of CSR among construction operators, the second theme reveals
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18 456 that there are three dimensions of CSR practices implemented in the construction sector including the
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20 457 environmental, social and economic dimensions. The dimensions of CSR are implemented in strategic
21 458 manner in construction companies. The third theme reveals that strategies such as partnership among
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23 459 multiple organisations to deliver social goods is common. The use of strategies ensure that the right CSR
24 460 is implemented (Othman and Abdellatif, 2011; Mayr, 2015). In addition, it ensures the implementation of
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26 461 a CSR practice for a longer term (Kraft & Hage, 1990). Meanwhile, Xia et al. (2018) stated that CSR
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28 462 practices in the construction sector are implemented for a short time. Henceforth, the use of strategy is
29 463 suggested to ensure a longer term implementation of CSR in construction companies. Finally, the fourth
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31 464 theme reveals that a proactive implementation of CSR practices is beneficial to construction companies.
32 465 However, evaluating the performance of CSR in construction companies remains problematic due to lack
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34 466 of indicators for the evaluation.

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36 467 The characteristic of the construction sector in terms of extreme diversity in the professions and processes
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38 468 seems to influence the negative view of CSR among construction operators. This is not so in the mining
39 469 and banking sectors. For instance, mining activities are characteristically capable of causing conflicts, thus
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41 470 the pervasive social responsible actions in the mining sector are public engagements and stakeholder
42 471 managements to stem the effects of conflicts among parties, especially in the host communities (Tang-Lee,
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44 472 2016). Similarly, banking service is characteristically customer-centred, and thus, CSR in the banking
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46 473 sector is focused on developing banking employees to provide quality service to customers (Valentine &
47 474 Godin, 2017, Shen et al., 2016). Therefore, the employees play important role in the development of CSR
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49 475 in the sector (see (Mensah, et al., 2017; Valentine & Godkin, 2017)). It could be seen that the sector
50 476 characteristics determine the nature of social responsibilities implemented in these sectors. Consequently,
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52 477 the social responsibilities implemented promote the businesses of mining and banking. This is also true in
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54 478 the mining and construction sectors. Implementing CSR practices to improve performance in the
55 479 manufacturing and banking companies (Handayani, et al., 2017; Wu, et al., 2017) is common practice in

480 construction companies as well (Huang and Lien, 2012). Lesson learnt is that sector characteristics
 481 determine the CSR practices to be implemented in order to enhance business performance across the
 482 sectors.

483 Similarities do exist in the CSR practices in the construction sector and the other sectors. The role of the
 484 top managers in construction companies is very crucial to devising and effecting CSR strategies (Cambra-
 485 Fierro et al., 2013) as much as in the banks (Sallyanne Decker, 2004), while CSR practices are implemented
 486 in both the construction and mining sectors by incorporating them into company mission and vision
 487 (Griffith, 2011; Wirth, et al., 2016). The structure of the organisation is therefore of importance to the
 488 implementation of CSR practices. It suggests that those in the top hierarchy are very crucial to the
 489 implementation of CSR practices. In addition, CSR practices are better implemented if embedded as
 490 organisational plans.

491 Table 3: Differences and similarities between the state of the art of CSR in the construction sector and the
 492 manufacturing, mining and banking sectors

Attributes	Comparison across construction, manufacturing, mining and banking sectors	Lessons learnt
Sector characteristics	<ul style="list-style-type: none"> • Construction sector: Extreme diversity in the professions and processes seems to influence the negative view of CSR among construction operators • Mining sector: Conflict-proneness of mining activities stimulates peace-building efforts through public engagement and stakeholder management among interested parties • Banking sector: Customer-focus in the banks promotes employee training and development to provide excellent customer care services 	Lesson learnt is that sector characteristics determine the CSR practices to be implemented in order to enhance business performance

Organisational structure	<ul style="list-style-type: none"> • Top managers' support is crucial to the implementation of CSR practices across sectors • Embedding CSR practices in organisational plans across sectors 	<p>Lesson learnt is that an organisational structure in place with clear definition of position and authority is necessary to support CSR implementation in organisations.</p> <p>In addition, CSR practices are better implemented when embedded as part of organisational plans (mission and vision)</p>
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494 6. Conclusion

495 The development of CSR in the construction sector is slow, thereby leaving many opportunities for further
 496 development. However, to enable the operators in the sector effectively capitalise on the opportunities for
 497 the development of CSR in the construction sector, this study employs the researchers' viewpoints to take
 498 the stock of CSR activities in the sector. This reveals the state of CSR practice in the construction sector.
 499 Furthermore, the study draws from the development of corporate social responsibility in the manufacturing,
 500 mining and banking sectors to inform the state of CSR practice in the construction sector. Therefore, the
 501 conclusion of the study regarding the state of CSR practice in the construction sector are as follows.

- 502 1. The implementation of CSR is the major emphasis in the state of CSR practice in the construction
 503 sector. This signifies the attempt to put CSR into action in the organisations and projects in the
 504 construction sector. The implementation of CSR is wrapped in the perception of operators about
 505 CSR potentials, dimensions of CSR implemented, strategies for implementation and the effects of
 506 the implemented CSR practices on performance.
- 507 2. The sector characteristics and organisational structure are attributes for comparing the CSR
 508 practices between the construction sector and the manufacturing, mining and banking sectors. The
 509 sector characteristics encompass the manner in which a sector operates. The organisation structure
 510 is the arrangement of people and operatives according to the associated responsibilities and
 511 authority.
- 512 3. CSR practices in the mining and banking sectors provide important lessons for CSR practices in
 513 the construction sector. One lesson is that sector characteristics determine the CSR practices to be

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3 514 implemented in order to enhance business performance. The second lesson is that an organisational
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5 515 structure in place with clear definition of position and authority is necessary to support CSR
6 516 implementation in organisations.
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10 518 Based on the conclusion, the study provides the following recommendation

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12 519 • According to the state of CSR, the CSR's emphasis on implementation suggests an increasing
13 520 attempt at the actual implementation of CSR practices in the organisations and projects in the
14 521 construction sector. To sustain this tempo, there is need for strong optimism about the usefulness
15 522 of CSR practices, and the success of implementation. The managers and employees in different
16 523 construction organisations and projects need to be committed to CSR practices to demonstrate
17 524 optimism. Furthermore, to ensure that the three dimensions of CSR practices are implemented at
18 525 the same time without leaving anyone out, construction organisations should be strategic by
19 526 partnering among one another to deliver social goods.
20 527 • Currently, there is no standard manner for comparing CSR practices between the construction
21 528 sector and the manufacturing, mining and banking sectors. Henceforth, the sector characteristics
22 529 and organisational structure attributes can be used to benchmark and compare CSR practices in the
23 530 construction and the other sectors
24 531 • The sector characteristics and organisational structure attributes are contexts where CSR is
25 532 implemented. In addition, these attributes aid successful (or otherwise) CSR implementation.
26 533 Therefore, the context should be strongly considered in the implementation of CSR. In the
27 534 construction sector, the context is the diverse professions and processes. To successfully implement
28 535 CSR in this sector, it is either to build a unified operators to remove the elements of diversity, or to
29 536 exploit the individual strength of the different operators for successful implementation of CSR.
30 537 • This study relied on the researchers' viewpoints to reveal the state of CSR in the construction sector.
31 538 Therefore, only previous studies published in academic journals were used as source of
32 539 information. To empirically confirm the findings in this study, the practitioner viewpoint of the
33 540 state of CSR in the construction sector should be investigated. Insights for such investigation can
34 541 be drawn from this study. Firstly, the state of CSR should be investigated across a wide range of
35 542 construction organisations and projects. Secondly, cross-sectoral study of the state of CSR between
36 543 the construction and other sectors should be investigated. Both the sector characteristics and
37 544 organisational structure should be included as bases for comparison.
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54 545 Globally, one crucial goal in the construction sector is to eliminate the negative impact of design and
55 546 construction activities, and to increase social impact of construction through value-addition to clients,
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547 strong community relations, physical development and job creation in the rural areas. CSR can be deployed
 548 as a strategy to achieve this goal. For instance, National regulations can be put in place to compel
 549 construction companies to provide low-scale social amenities in the host communities of their projects. In
 550 addition, an evidence of past CSR practice can be included as basis for construction companies to tender
 551 for new contracts. This study has revealed unique insights, particularly regarding the implementation of
 552 CSR in the construction sector in terms of sector characteristics and organisational structure. Therefore, it
 553 is a sector guide and an organisational template for implementing CSR. This is one step closer to closer to
 554 the goal of a socially impacting construction sector.

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