

# The Impact of Project Performance on the Image of the Construction Industry in Botswana

Thabo Ndadi and John Smallwood  
Nelson Mandela University, Port Elizabeth, PO Box 77000, 6031, South Africa

[john.smallwood@mandela.ac.za](mailto:john.smallwood@mandela.ac.za)

## Abstract

The construction industry is one of the largest sectors in the economy of Botswana and contributes average 6.7% of the country's gross domestic product (GDP). Botswana operates a free enterprise economic system. However, Botswana's construction industry is developing and facing the challenge of poor project implementation, resulting in negative perceptions with respect to the sector.

This study focuses on the impact of project performance on the image of the construction industry in Botswana. The quantitative method was adopted for the study and entailed the completion of a self-administered questionnaire by nine industry stakeholder groups. The questionnaire, which was pre-tested on ten industry participants included three sections, namely demographic data, and issues relative to image and industry best practice.

The salient findings include: a range of systems are important in terms of project implementation setup; environmental pollution control instruments are mostly ineffective; the construction industry is generally rated below average relative to seven aspects of project performance in the view of the public and clients, and 92.3% of 26 aspects of project performance are more than important to very important to clients.

Conclusions include: regulatory systems are inadequate; there is no instrument to assess the industry in terms of continuous performance; the negative image of the construction industry is attributed to irresponsible industry role players' behaviour; there is limited skills' capacity, and political interference accompanies project implementation.

Recommendations include: the development and implementation of an industry performance regulatory system to address, *inter alia*, the environment, and health and safety (H&S); the development of construction industry indicators; the review of labour-related legislation within the context of health and safety (H&S); development of capacity in the construction industry, and support of research and development in the construction industry by the industry.

**Keywords:** Construction, Image, Industry, Performance.

## 1. Introduction

This paper focuses on the impact of project performance on the image of the construction industry in Botswana based on the findings of a survey conducted on recent projects. Public opinion is essential a business or sector's image, therefore, the investigation endeavoured to establish the sources of negative perceptions towards the construction industry in Botswana, employing established and tested quantitative and qualitative systems. The relationship between, image, project performance and the construction industry form an integral part of the research, and the study brings attention to and creates awareness of the need to improve the image of the construction industry in Botswana. Deficient performance by contractors has delayed the completion of several government-funded projects in Botswana owing to poor construction management, which in turn resulted in cost overruns (Maruapula, 2008).

Contractors faces numerous challenges, *inter alia*, human resource development, capacity development, and lack of competitiveness among citizen firms, therefore the sectors produce non-conforming work (Palalani, 2000). However, Axson (2007) posits that best practices occur relative to industry wide quality assurance systems and appropriately managed resources.

Previous research highlights that the Botswana construction industry is facing challenges in terms of addressing the negative image as perceived by the public. Adeyemi and Masalila (2016) observe minimal improvement in the delivery of projects over the years but a more competitive environment due to an increased number of players. Smallwood (2000) in turn posits that the non-traditional project performance measures are critical in terms of the image of the sector. This research placed more emphasis on the non-traditional measures, which have generally been

ignored in the industry. To this end the study sought to determine the: importance of established systems in project implementation setup;

- effectiveness of environmental pollution control instruments; Identify the causes of the negative public perceptions, the extent of, and impact thereof on the reputation of the construction industry in Botswana;
- rating of project performance in the view of the public and clients, and
- importance of 26 aspects of project performance to clients.

## **2. Review of the literature**

### **2.1 Macro Environment**

The economy of the country is shaped by the macroeconomic environment, and the sector's share in the country's GDP indicates its importance in the economy of that country in comparison to other sectors. In Botswana, the construction sector contributes significantly to the socio-economic development of the country, and therefore its performance cannot be ignored. Fernandes (2014) observes the regional construction sectors' contribution to GDP per country - Zambia (23.1%) predominates, followed by Tanzania (8.8%), Angola (7.8%), Botswana (7.4%), Lesotho (7.5%), and South Africa (4%).

The construction industry, as other sectors, remains susceptible to prevailing political, economic, and other catastrophic national events. During the advent of the COVID-19 pandemic in 2019, the Botswana construction sector recorded a decline of 4.8% in 2021. However, the Botswana government continues to invest in infrastructure development as evidenced by the 2023/2024 budget allocation of P12.73 billion infrastructure development projects (Ministry of Finance, Government of Botswana, 2023).

### **2.2 Sector comparable factors,**

An industry income status provides insight regarding the level of attraction that the industry has in terms of local and international professionals, who in turn can improve the sector. High levels of attrition in a sector are accompanied by a loss of skills capacity.

The construction sector is rated the sixth lowest paying of the thirteen sectors of the economy in Botswana with mining rated first. The average construction sector monthly remuneration is 28% of the monthly remuneration of most paying sectors and therefore, the industry is least attractive to potential new entrants and career aspirants (Statistics Botswana, 2017). Inadequate procurement systems in the construction sector create adversarial relationships among the parties involved, increasing the number of claims and disputes (Ministry of Finance and Development Planning (MFDP), Government of Botswana, 2005). Furthermore, project schedule overruns of 19 months relative to target completion dates are attributed to the procurement model. The cidb (2004) status report affirms that clients and their procurement practices are the drivers of industry behaviour, performance, and transformation.

### **2.3 What constitutes image?**

Theaker (2001) defines image as a perception that exists only in the mind of the receiver to formulate an image; the public interpret an identity in a wider context with broader frames of reference. However, Stapelberg (2002) in Debeer *et al.* (2002) suggests that when public opinion is formed, a certain image of the business is formed. Furthermore, image is affected by performance relative to both the traditional and non-traditional project performance parameters (Smallwood, 2000).

The increase in the number of project failures within the construction industry in Botswana has resulted in discontentment and dissatisfaction, not only in terms of the political leadership, but also among stakeholders. These have affected the image of the construction sector. Mselle and Manis (2000) state that the image of construction firms in Botswana is diminishing because of bad or poor project implementation. It is unfortunate that many organisations in Botswana do not sufficiently emphasise the importance of health and safety (H&S) practices. Briscoe (2004) in turn notes the increased number of accidents at work over the years in Botswana, and states that the lack of a construction sector specific H&S Act contributes to the current negative state of H&S in construction. Lattimore *et al.* (2002) accentuate that once lost, credibility is difficult to regain, individually, or collectively.

### **2.4 Project performance measures**

Previous research conducted by Smallwood (2000) discusses the traditional and non-traditional project performance measures. The traditional performance measures include cost, quality, time, and utility, while the non-traditional project performance measures include the environment, health and safety (H&S), productivity, and worker satisfaction. However, Yip (2000), citing Bishop (1981), affirms the assertion regarding the traditional project

measures, namely that "...many clients believe that construction projects are said to cost too much, take too long to complete, and are too prone to failure through non-achievement of quality and utility."

The competent project resource is integral to the success of project performance therefore Botswana government implemented several initiatives to develop the construction sector, However, the mid-term review of the Botswana National Development Plan (Ministry of Finance and Development Planning, Government of Botswana, 2013) highlights the critical shortage of skilled labour despite the country's investment in skills development. Despite this setback, the Botswana government continued to attract entry of multinational firms with the objective to build the capacity of local firms. A similar skills development approach was observed in the United Kingdom as part of the 'Construction Best Practice programme (CBP)' (Sun and Howard, 2006). Poor project performance is attributed to deficient planning, and a shortage of skilled personnel and the resultant outcome is project cost overruns, frequent scope changes, and late completion of projects.

## **2.5 Projects and the environment**

Construction industry activities adversely impact on the environment, either directly or indirectly (Chen & Li, 2006).

Consequently, project performance can be measured against the negative impact it brings to the environment. The firm that is engaged will break or build a relationship with the community it interacts with. Therefore, the image of the organisation is directly associated with the projects they undertake because of the impact thereof on the environment and neighbourhood.

## **2.5 Contractor health and safety**

No workplace can consider itself immune to potential traumatic events and the construction firm's H&S policy needs to encapsulate a policy on how to deal with work-related traumatic incidents. Rowlinson (2004) postulates that the "...construction industry has a distressingly poor safety record, in absolute terms or alongside other industries."

The fact that the construction industry is gender biased towards males, and the environment is nomadic, this is the group mostly exposed to illness. Haupt *et al.* (2005) points out that many men in construction are obliged to leave home and travel long distances to find work and once they have found work, frequently seek out young women and teenage girls for sex and intimacy. It is this perception that portrays the construction industry image negatively whereupon families would not want their spouses associated with such morally compromised conduct.

## **2.6 Sector productivity**

Productivity is defined as the effective and efficient utilisation of resources for increased production value and quality of goods and services (Botswana National Productivity Centre, 2007). Vision 2016 (Government of Botswana, 1997) refers to lower labour productivity in many sectors. While institutional reforms are seen as an absolute solution, the problems remain evident and Bennett (2003) concurs that labour productivity in the construction industry is a major concern among all segments, especially owners and contractors.

## **2.7 Shortage of skilled project personnel**

Toor and Ofori (2008) recognise that the construction industry faces several technical, social, financial, political, and cultural challenges. Therefore, there is a need to equip the professionals with hard (technical) as well as soft (management and leadership) skills. The Botswana government through the Nation Vision 2016 invested in skills development, however these strategic gains continue to be reversed by the emergence of the national HIV and AIDS pandemic (Ministry of Finance and Development Planning, 2006). The sector work environment influences its capability as observed by Castaneda *et al.* (2005) that decreased real wages, the transient nature of construction, the poor industry image, lack of training, and lack of worker-oriented career path as factors that contribute to the industry's skill gap. Statistics Botswana (2016) states that the construction sector in Botswana continues to show a decline in the number of work permit holders as evidenced by a 66% decline from 2009 to 2014. However, the advent of the COVID-19 pandemic posed serious threat to gains the country had attained.

## **2.8 Contractor industrial relations**

De Beer (2002) posits that staff are responsible for protecting the good name of the business, which is supported by Labuschagne (2002) that employees' welfare is critical to ensure that they in turn have an interest in the welfare of the business. Wellington (2010) affirms that there is a need to invest in the people that deliver the project.

Public perceptions still fault the construction industry as a breeding ground of most illnesses compared to other sectors. This is observed by Haupt *et al.* (2005) that due to mobility and the migrant nature of the construction industry, it is the third hardest hit by the HIV and AIDS pandemic in South Africa. The way construction site activities evolve

with people of different cultural backgrounds results in conflict and violence till such time that work groups learn to understand each other in a work environment (Briscoe, 2004).

## **2.9 The behaviour of contractors**

Contractors have contributed in some way to the failure of projects. Ganaway (2006) affirms that construction is inherently a risky business. Hopkins (2015) in turn asserts that projects should be delivered within the traditional project performance measures of cost, quality, and time parameters. Fifkins (2004) also posits that image is based on people's knowledge and experience, which may be good, bad, or indifferent, therefore favourable image must be earned.

The ethical conduct of an individual, group or society results in several benefits, some intangible and ultimately can benefit business in terms of profitability and enhanced organisational reputation with embedded trust thus giving growth opportunities. Unethical conduct exposes the firm to risk of being blacklisted either officially or informally. It becomes difficult for a firm to regain its reputation or trustworthiness once it has crossed the ethical line (Werner, 2007). Negative contractor behaviour in Botswana is noted by Ssegawa *et al.* (2005), that contractors in higher grading categories embezzle project funds resulting in delayed project delivery or abandoned projects.

## **2.10 Corruption**

According to Omotoye (2020), corruption in Botswana's construction industry is not a new phenomenon. It is evident from previous research conducted by Phiri (2010), that corruption through bribery influences project awarding. The construction industry in Botswana is therefore susceptible to corruption as observed by Maruapula (2008) that "...corruption is rampant in project implementation in Botswana." Serite (2018) states that "...Botswana Housing Corporation (BHC) officials are colluding with Chinese construction contractors in the award of lucrative tenders, while local companies are side-lined in almost 90 percent of projects." Kologwe (2013) concurs that BHC favours Chinese firms, while the BHC accuses locals of selling tenders to Chinese companies. It is this background that the cost and impact of corruption on the global construction industry can be viewed from a buyer or seller perspective.

# **3. Research**

## **3.1 Research Method and Sample Stratum**

The quantitative method was adopted for the primary study because it enabled the research to reveal the multi-faceted project implementation process, in that it examines a situation as it is, and it does not involve changing or modifying the situation under investigation, as it focuses on observed behaviour. The research was initiated by observation of the salient aspects that negatively shape or describe a construction site and the neighbourhood environment. Thereafter, a self-administered questionnaire was circulated to obtain empirical data relative to completed projects within the last ten years and on-going projects selected randomly. The questionnaire was categorised in three (3) sections, Section 1 Biographical, Section 2-Demographic data, and Section 3-Industry best practice perceptions.

The sample strata involved an array of construction industry stakeholders ranging from financial institutions, government agencies, private practitioners, developers, project managers and academic institutions.

120 questionnaires were circulated and 101 were completed and returned, which equates to a response rate of 84.2%, which is deemed an acceptable response rate.

## **3.2 Results**

Table 1 indicates the importance of established systems in project implementation setup in terms of percentage responses to a scale of 1 (not important) to 5 (very important), and mean scores (MSs) ranging from 1.00 and 5.00.

It is notable that 5 / 7 (71.4%) MSs are > 3.00, which indicates that in general the respondents view the established systems as more than important as opposed to less than important as in the case of MSs ≤ 3.00. The existence of structured systems would influence performance and subsequently, impact on the image of the sector.

Communication plan ranked first has a MS > 4.20 ≤ 5.00, which indicates that it is between more than important to very important / very important. A clear communication plan is critical to realise project success.

Construction site management, public relations function, and site managers' roles on construction sites have MSs > 3.40 ≤ 4.20, which indicates that they are between important to more than important / more than important. Configuration of company policies to work sites has a MS > 2.60 ≤ 3.40, which indicates that it is between less than important to important / important and is ranked fifth. Need to outsource the public relations function, and alignment of project management training to public relations have MSs > 1.80 ≤ 2.60, which indicates that they are between not important to less than important / less than important.

**Table 1.** Importance of established systems in project implementation setup.

Established system	Response (%)						MS	Rank
	Un- sure	Not.....Very						
		1	2	3	4	5		
Communication plan	2.0	2.0	2.0	4.1	18.4	71.4	4.48	1
Construction site management	2.0	4.1	6.1	8.2	28.6	51.0	4.10	2
Public relations function	4.1	4.1	2.0	18.3	22.4	51.0	4.08	3
Site managers' roles on construction sites	6.1	4.1	4.1	14.3	51.0	20.4	3.61	4
Configuration of company policies to work sites	4.1	6.1	8.2	14.3	20.4	30.6	3.04	5
Need to outsource the public relations function	14.3	14.3	22.4	24.5	14.3	10.2	2.40	6
Alignment of project management training to public relations	10.4	1.2	16.3	28.6	18.4	4.1	2.24	7

Table 2 indicates the effectiveness of six environmental pollution control instruments in terms of percentage responses to a scale of never to always, and MSs ranging between 1.00 to 5.00. It is notable that, 4 / 6 (66.7%) of the MSs are below the midpoint of 3.00, which indicates that in general respondents perceive the existing controls to be not effectively implemented at their organisations.

Contractors' do not implement EMPs, and construction activities pollute the environment regularly to often / often as their MSs are  $> 3.40 \leq 4.20$ .

Enforcement and compliance to statutory requirements, and the impact of construction work on the environment occur seldom to regularly / regularly as their MSs are  $> 2.60 \leq 3.40$ .

Effectiveness of consultation tools, and contractors' attitude towards waste disposal at sites, occur between never to seldom / seldom, as their MSs are  $> 1.80 \leq 2.60$ .

**Table 2:** Effectiveness of environmental pollution control instruments.

Aspect	Response (%)						MS	Rank
	Unsure	Never	Seldom	Regularly	Often	Always		
Contractors do not implement EMPs	8.1	0.0	6.1	14.3	44.9	26.5	3.67	1
Construction activities pollute the environment	2.0	4.1	12.2	36.7	22.4	24.5	3.51	2
Enforcement and compliance to statutory requirements	6.1	8.1	14.3	36.7	22.4	10.2	2.87	3
The impact of construction work on the environment	6.1	12.2	22.4	28.6	20.4	10.2	2.75	4
Effectiveness of consultation tools	28.6	6.1	18.4	24.5	8.2	14.3	2.20	5
Contractors' attitude towards waste disposal at sites	0.0	6.1	12.2	42.9	20.4	18.4	2.16	6

Table 3 presents the rating of project performance relative to seven aspects in the view of the public and clients according to respondents in terms of percentage responses to a scale of very poor to very good, and MSs ranging between 1.00 to 5.00. It is notable that only 3 / 7 (42.9%) of the MSs are  $> 3.00$ , which indicates the rating is above average, as opposed to below average as in the case of MSs  $\leq 3.00$ .

Given that the MS of poor financial planning and management is  $> 3.40 \leq 4.20$ , the rating is between average to good / good.

The MSs of 5 / 7 (71.4%) aspects are  $> 2.60 \leq 3.40$ , which indicates the rating is between poor to average / average - political leadership attitude towards project, contractors' behaviour relative to project resources, effectiveness of procurement systems, construction disputes' publicity, and productivity levels in the construction sector. Except construction disputes' publicity, these aspects all affect efficiency and contractors' performance on projects, and thus their image. The MS of contractors' performance on projects is  $> 1.80 \leq 2.60$ , which indicates the rating is between very poor to poor / poor.

**Table 3: Rating of project performance in the view of the public and clients.**

Aspect	Response (%)							Rank
	Unsure	Very poor	Poor	Average	Good	Very good	MS	
Poor financial planning and management	2.0	4.1	4.1	20.4	22.4	46.9	3.97	1
Political leadership attitude towards projects	6.1	8.2	16.3	20.4	26.5	22.4	3.20	2
Contractors' behaviour relative to project resources	6.1	2.0	16.3	40.8	24.5	10.2	3.06	3
Effectiveness of procurement systems	4.1	8.2	16.3	44.9	18.4	8.2	2.97	4
Construction disputes' publicity	10.2	6.1	22.4	30.6	20.4	10.2	2.89	5
Productivity levels in the construction sector	12.2	14.3	14.3	24.5	24.5	10.2	2.65	6
Contractors' performance on projects	2.0	34.7	22.4	26.5	8.2	6.1	2.22	7

Table 4 indicates the respondents' perceived importance of 26 aspects of project performance to clients in terms of percentage responses to a scale of not important to very important, and MSs ranging between 1.00 to 5.00. It is notable that 24 / 26 (92.3 %) of the MSs are > 3.00, which indicates that in general the aspects are perceived to be more than important as opposed, to less than important, as in the case of MSs ≤ 3.00.

The top six ranked project performance aspects are quality, time performance, workers' skills, communication, and project administration performance, and health (occupational), which all have MSs > 4.20 ≤ 5.00 (more than important to very important / very important). Quality, which is ranked first, predominates, and is a major performance consideration in project implementation. The latter is followed by time and workers' skills ranked joint second. However, these aspects are related to the top three, and are followed closely by communication, project administration performance, and health (occupational).

The aspects ranked seventh to twenty-third have MSs > 3.40 ≤ 4.20, which indicate they are between important to more than important / more than important. Plant and equipment condition with a MS of 4.20 is ranked seventh, followed by site enclosure with a MS of 4.18 ranked eighth. Thereafter, cost saving / remaining within budget is ranked ninth with a MS of 4.06, marginally ahead of material wastage on site ranked tenth, procurement systems ranked joint eleventh with worker attire (MSs = 3.97), followed by facilities (change rooms, toilets, etc.), and site offices, which are ranked joint thirteenth, followed by own environment consciousness (MS = 3.93). These in turn are followed by industrial relations, relations with site neighbours, and storage ranked joint sixteenth (MSs = 3.87). Project signage is ranked nineteenth with a MS of 3.85, followed by image improvement and public relations ranked twentieth and twenty first respectively, housekeeping, and sales related consideration / post project service.

Reduction of liability risk / Safety (occupational), site management, and middle management have MSs > 2.60 ≤ 3.40, which indicates they are between less than important to important / important.

**Table 4: Importance of 26 aspects of project performance to clients.**

Aspect	Response (%)						MS	Rank
	Unsure	Not important	Less than important	Important	More than important	Very important		
Quality	2.0	4.1	0.0	2.0	8.2	83.7	5.00	1
Time performance	2.0	0.0	0.0	8.2	16.3	73.5	4.48	2=
Worker skills	2.0	0.0	0.0	6.1	28.6	63.3	4.48	2=
Communication	2.0	2.0	6.1	4.1	28.6	61.2	4.46	4
Project administration	2.0	0.0	0.0	14.3	30.6	53.1	4.30	5
Health (occupational)	2.0	0.0	4.1	16.3	18.4	59.2	4.26	6
Plant & equipment condition	2.0	0.0	0.0	10.2	38.8	46.9	4.20	7
Site enclosure	2.0	0.0	6.1	8.2	36.7	46.9	4.18	8
Cost savings / Remaining within budget	2.0	4.1	4.1	16.3	22.4	51	4.06	9
Material waste	2.0	2.0	4.1	20.4	28.6	42.9	4.00	10
Procurement system	6.1	2.0	2.0	16.3	24.5	48.9	3.97	11=
Worker attire	2.0	2.0	6.1	16.3	32.7	40.8	3.97	11=
Facilities (change rooms, toilets, etc.)	2.0	0.0	6.1	24.5	26.5	40.8	3.95	13=

Site offices	2.0	0.0	4.1	12.2	44.9	36.7	3.95	13=
Own environment consciousness	4.1	2.0	6.1	14.2	30.6	42.9	3.93	15
Industrial relations	4.1	0.0	2.0	26.5	32.6	34.7	3.87	16=
Relations with site neighbours	4.1	2.0	4.1	20.4	30.6	38.8	3.87	16=
Storage	4.1	0.0	6.1	18.4	36.7	34.7	3.87	16=
Project signage	4.1	6.1	2.0	16.3	30.6	40.8	3.85	19
Image improvement	4.1	2.0	6.1	16.3	44.9	26.5	3.76	20
Public relations	2.0	0.0	10.2	26.5	20.4	36.7	3.65	21
House keeping	4.1	2.0	12.2	22.4	28.6	30.6	3.61	22
Sales related consideration / Post project service	6.1	0.0	4.2	30.6	40.8	18.4	3.44	23
Reduction of liability risk / Safety (occupational)	2.0	0.0	4.1	10.2	20.4	42.9	3.34	24
Site management	9.1	8.2	10.1	27.3	15.1	27.3	2.91	25
Middle management	8.4	10.0	18.2	33.1	17.8	12.5	2.82	26

#### 4. Discussion

The importance of seven established systems in project implementation setup highlights the importance of site management, which is responsible for managing the physical construction process and activities, including the respective resources. Construction projects occur in the built environment and therefore, are visible to the public and subject to scrutiny by a range of stakeholders. The importance of communication plan highlights the relevance of keeping the respective internal and external publics informed, which in turn impacts on image. The public relations function is responsible for public relations, keeping the internal and external publics informed, and therefore impacts and is consequently a major contributor to and exerts influence on image. However, given that projects occur in the built environment, the public relations function cannot solely be a centralised function, and site management should be conscious and mindful of their capacity to optimise public relations and impact positively on image. Company policies impact on both the internal and external publics and should first exist, and then address the necessary project parameters such as the environment, H&S, and quality, and resources, and be appropriate, as policy informs the culture, commitment, and approach of an organisation relative to the parameters and resources.

The effectiveness of six environmental pollution control instruments highlights the importance of EMPs, consideration of the environment, compliance with statutory requirements, the impact of construction work on the environment, and behaviour relative to managing waste, including the generation thereof. The behaviour of contractors, including actions and interventions, impacts on both the internal and external publics, and therefore, image.

The rating of seven aspects of project implementation highlights the role of a range of aspects in project performance, and therefore image. These aspects require a multi-stakeholder approach and contributions to projects, as ultimately the industry's image, not just that of projects is impacted. Political leadership with respect to the industry, not just projects, is imperative, and requires interventions to enhance performance, and subsequently the image. Procurements systems should be appropriate, including conditions of contracts, and contract administration should be optimum on the part of the respective stakeholders to optimise performance and mitigate disputes, which in turn will contribute to optimising the image of the industry. Contractor productivity and performance relative to the project parameters are obviously critical in terms of meeting clients' requirements, and thus optimising the image of contractors and that of the industry.

The importance of 26 aspects of project performance to clients further highlights the multi-dimensional nature of aspects and interventions relative to the image of contractors and the industry. The reality is that all stakeholders contribute to performance on projects commencing with Stage 1 'project initiation and briefing'. Clients' and designers' decisions and interventions impact on the design, procurement, and construction processes, in addition to contractors' decisions and interventions impact during procurement and construction. Therefore, all project systems and plans should be multistakeholder in nature.

#### 5. Conclusions

In conclusion, the negative image of the construction industry is attributed to irresponsible industry role players' behaviour. However, limited skills capacity coupled with political interference in the implementation of projects is a problem in the construction industry. While some projects, by their nature, attract political influence, this should not extend to project planning, and implementation.

Regarding best practices, there is no instrument to adequately regulate the industry in terms of continuous performance, thus identifying defaulters and barring them from any practice. The existing controls are only based on initial evaluation and contractor upgrades, but no performance evaluation is based on best practices. The inception of

a regulatory institution such as the Engineering Registration Board only becomes a tool when there is clear ethical violation of the code of ethics that regulates registered members.

The construction industry lacks an established performance regulatory system in line with other sectors; hence role players still observe the construction industry as a sector where stakeholder management is not vital to the success of projects. In conclusion, relative to the statement of the problem, the impact of project performance on the image of the construction industry in Botswana is influenced by a lack of accountability from both role players, and industry stakeholders. Despite the research findings relative to the perceived impact of environmental control and compliance, the Botswana government is part of the global world and has ratified international obligations with respect to sustainable development. Twenty-first century construction industry managers are therefore required to be socially responsible for the sector's action and possible environmental impact.

Ineffective regulation of industry operators and a lack of skilled project managers remain a critical skills' gap area to ensure successful projects.

The respondents' level of education and authority on projects provide confidence in terms of the validity of the findings.

## **6. Recommendations**

The results and findings relative to the behaviour of the role players point to a need for a structured integrity restoration process from both the regulator and the operators. The need for a paradigm shift to change the curricula to develop a team of new construction managers who will perceive the construction industry as commercial sectors of the economy as opposed to the current view that the sector is not progressive. The construction industry operators need to become customer oriented, and to achieve a positive image of the construction industry, the sector requires a continuous development programme. A further consideration is to incorporate environmental concerns into all stages of project planning and design to avoid or minimise negative impacts and realise the potential benefits.

There is a need to review the 'Factories Act CAP 44: 01 of 1979' to factor in the current industry challenges. Given the ineffectiveness of the Act, despite other established controls, there is a need to have a specific sector Act to regulate the safety, health, and environmental operations in the construction industry. The construction industry in Botswana needs to embrace the culture of capacity building within the sector, and support research and development of the industry. Furthermore, studies or research can be undertaken with respect to the assessment of ethical disparities between the construction industry, and other commercial aligned entities or the effectiveness of the construction industry regulatory systems in Botswana.

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