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**Government project failure in Ghana: a multidimensional approach**

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Review

## Government project failure in Ghana: a multidimensional approach

### Abstract

**Purpose** – This study assesses the extent of failure within Ghanaian government projects using multiple failure criteria.

**Design/methodology/approach** – This study used a sequential data collection approach by employing an in-depth semi-structured interview and questionnaire respectively. Based on insight from the literature review, interviews were held with participants to solicit their perceptions about the failure of Ghanaian government projects. A questionnaire was developed based on the results from the interviews in order to determine the relative importance of the various failure criteria used as the evaluation tool.

**Findings** – Six main criteria were identified and used as the assessment framework for Ghanaian government project failure. The findings indicated that Ghanaian government projects fail on all the six failure criteria; however, the extent of failure differs from criterion to criterion. The worst failure criterion is meeting the projected timescale. This is followed by cost, requirement, stakeholder satisfaction, national development and contribution to the sector where projects are implemented respectively.

**Practical implications** – From this study, government project practitioners and policy makers will be able identify the failure areas (criteria) on which to focus during government project implementation.

**Originality/value** – Though extant literature has been devoted to the success/failure criteria, attention has not been paid to comparison of the extent of failure within these criteria in government projects. Therefore, this study extends the literature in this regard as well as government project failure literature in general.

**Keywords** – Project failure, government projects, success/failure criteria

**Paper type** – Research paper

## Introduction

Project management has become an integral part of organisations (Maylor et al., 2006). This is as a result of the changing nature of managing organisations due to technological advancement, and a complex, competitive global marketplace (Maylor et al., 2006; Ramazani and Jergeas, 2015; Klein et al., 2015; Nguyen et al., 2015). Projects require huge capital outlay and this necessitates good project management practices to ensure value for money (Panayides et al., 2015). Good project management practice is important because it increases shareholder value and conveys soft and hard benefits to several stakeholders (Ahsan and Gunawan, 2010; Ngacho and Das, 2014; Yang, 2014).

However, existing literature suggests that projects are failing (Venugopal and Rao, 2011; KPMG, 2013), and this is costing companies and governments huge sums of money (Espiner, 2007; McManus and Wood-Harper, 2008). For example, a nationwide survey in New Zealand in 2010 indicated that two-thirds of organisations had experienced at least one project failure in the previous year, and that only one-third of projects had been delivered on budget, leading to a loss of approximately NZ\$15 million (KPMG, 2013). Similarly, the findings of McManus and Wood-Harper (2008) show that only one in eight information technology projects can be considered truly successful. There is also evidence that the UK wasted over US\$4 billion on failed IT projects from 2000 to 2008 (Asay, 2008). These examples indicate that occurrences of project failure are on the ascendency.

There are many project failures in developing countries (Saad et al., 2002; Liu et al., 2011; Aziz, 2013) and, in Ghanaian government projects, failure has become the norm rather than the exception (see Central Press, 2011; Daily Guide, 2011; Zoure, 2011; Ghana News Agency (GNA), 2012). In their quest for development, developing countries engage in projects such as building of roads, dams, plants, pipes, industries, theatres, e-government

1  
2  
3 services, telecommunication, and ICT, among others. These projects, which are normally  
4  
5 financed by the IMF, World Bank and tax-payers, face several setbacks such as abandonment  
6  
7 (Kumar and Best, 2007), cost deviation (Kaliba et al, 2009; Aziz, 2013), schedule deviation  
8  
9 (Sambasivan and Soon, 2007; Sweis et al, 2008; Fallahnejad, 2013; Marzouk and El-Rasas,  
10  
11 2013), scope deviation (Liu et al, 2011), and stakeholders' dissatisfaction (Ahonen and  
12  
13 Savolainen, 2010). Notwithstanding these, only a few studies of project failure have focused  
14  
15 on government projects in developing countries. Our study aims to address this by  
16  
17 investigating government project failure in a developing country, Ghana.  
18  
19

20  
21 Project failure is defined within the remit of what constitutes project failure (Lyytinen  
22  
23 and Hirschheim, 1988; Agarwal and Rathod, 2006; Ika, 2009); who evaluates the project  
24  
25 (Carvalho, 2014); the timing of the evaluation of the project in question (Heeks, 2002, 2006);  
26  
27 and the criteria used in assessing the project's performance (Klakegg, 2009; Mir and  
28  
29 Pinnington, 2014). The factors used to determine project success/failure are subject to  
30  
31 different stakeholders' perceptions of what constitutes project failure/success (Davis, 2014).  
32  
33 Consequently, it is difficult to measure the extent of project failure using clear, generally  
34  
35 accepted, well-defined criteria. Our study contributes to the literature by assessing the extent  
36  
37 of Ghanaian government project failure using a multidimensional approach.  
38  
39

40  
41 The remainder of the study is presented as follows: section two presents the research  
42  
43 context. Section three reviews the government projects and develops a theoretical framework  
44  
45 for the study. Sections four and five present the methods for the study and the results  
46  
47 respectively. Section six discusses the findings of the study, whilst section seven presents the  
48  
49 conclusions.  
50  
51

## 52 53 54 55 56 **Research context** 57 58 59 60

1  
2  
3 Public sector project failure in Ghana may be explained within three major dimensions –  
4  
5 cultural, economic and political. First, the role of culture in explaining public sector project  
6  
7 failure in Ghana may be traced to the Hofstede cultural dimensions (Hofstede, 1983).  
8  
9 Hofstede provides six (6) dimensions for culture – Power Distance; Individualism;  
10  
11 Masculinity; Uncertainty Avoidance; Long-Term Orientation and Indulgence.<sup>1</sup> Pursuant to  
12  
13 this, GLOBE puts countries into clusters based on these cultural attributes espoused by  
14  
15 Hofstede (Hoppe, 2007). Using these six dimensions, the Ghanaian cultural attributes have  
16  
17 been espoused as presented in Appendix D. In relation to power distance, the Ghanaian  
18  
19 society is hierarchical in nature – practising a master-servant relationship where the rich and  
20  
21 those in authority, especially religious and political leaders, are reverend (World Factbook,  
22  
23 2015; The Hofstede Centre, 2016). People in higher and management positions are more  
24  
25 respected and, as such, Ghanaians feel proud to be addressed by their academic and  
26  
27 professional titles. Moreover, age, experience and wealth are accorded a high level of respect,  
28  
29 with older people being viewed as ‘wise’ and given preferential treatment in most cases  
30  
31 (World Factbook, 2015; The Hofstede Centre, 2016). Consequently, political leaders and  
32  
33 project leaders could significantly influence government project failure. Further, there is a  
34  
35 very strong family bond, which serves as the primary source of identity, loyalty and  
36  
37 responsibility, and therefore the county is regarded as *feminine* in terms of the masculinity  
38  
39 dimension (The Hofstede Centre, 2016). Similarly, Ghanaian society is collectivist in terms of  
40  
41 individualism and this leads to the award of project contracts on the grounds of family and  
42  
43 clan patronage instead of ability, and this could affect project performance. There is also  
44  
45 evidence that attitude towards government work is poor and some writers attribute this to  
46  
47 cultural orientation during the colonial period. For instance, Amponsah (2010) traces  
48  
49 Ghanaian government project failure to colonial rule, when public sector work was perceived  
50  
51  
52  
53  
54  
55

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56  
57 <sup>1</sup> For further reading please refer to Hofstede, G. (1983), Cultural dimensions for project management,  
58 International Journal of Project Management, Vol.1, No.1; pp.41-48, for additional understanding of each  
59 dimension.  
60

1  
2  
3 to belonging to the 'Whiteman' and as such could be handled haphazardly. The cultural set-up  
4  
5 could have an influence on government project performance, as cross-cultural management  
6  
7 literature indicates that management concepts, models and practices are incompatible with  
8  
9 other cultural and social settings (Blunt, 1980; Hofstede, 1983; Hogberg and Adamsson,  
10  
11 1983; Adler, 1983; Hoppe, 2007).  
12

13  
14 Second, with regard to its economy, the country is at a very crucial stage of its  
15  
16 development as a result of the prospects of the oil revenues from its oil reserves (Ahadzie,  
17  
18 2009). As a result, the country was regarded as the leader in economic development in 2011,  
19  
20 with an estimated growth rate of between 13 and 20% (Economy Watch, 2011; World Bank,  
21  
22 2012), and, as such, projects have become a focal point in this development. The question as  
23  
24 to whether these projects will be successful in sustaining this growth has become an issue for  
25  
26 many Ghanaians and some commentators, because past governments have been enthused  
27  
28 about similar projects before but these projects ended in failure (Central Press, 2011; Daily  
29  
30 Guide, 2011; GNA, 2012). For instance, the pre-colonial and post-colonial eras saw many  
31  
32 state policies turned into programmes and projects through the ideology of industrialisation  
33  
34 but they were abandoned after changes in government (Jeffries, 1982). Arguably, these  
35  
36 economic developments could have an impact on government project performance.  
37  
38  
39

40  
41 Lastly, the country has witnessed political stability since 1992 and has not witnessed  
42  
43 any civil war in her history. From 1992 to date, there have been six successive free, fair and  
44  
45 transparent elections and, as a result, the country is considered as the 'eye' of Africa in  
46  
47 democracy (leading in democratic practices) by international organisations and unions such as  
48  
49 the African Union (AU), Economic Community of West African States (ECOWAS), and the  
50  
51 European Union (EU) (Agyeman-Dua, 2008; Debra, 2009; Economist Intelligence Unit,  
52  
53 2014). Even though, the country practices multi-party democracy, only two parties have won  
54  
55 in these successive elections. As a result of the multi-party democracy, government  
56  
57  
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1  
2  
3 performances in programmes and projects are often attached to the overall government  
4  
5 performance. The political standing of the country may impact on government project  
6  
7 performance. Closely related to politics is the factor of institutional bottlenecks within the  
8  
9 public administration system within the country (Amoako and Lyon, 2014), which could stifle  
10  
11 government project implementation.  
12

### 13 14 15 16 **Literature Review**

17  
18 In this study, the term government project is defined as any project undertaken or initiated by  
19  
20 the government of a country at the national or local level. Government policies are often  
21  
22 translated into programmes and projects (Goodman and Love, 1980; Bitler and Karoly, 2015).  
23  
24 Government project performance is key to every government because projects measure  
25  
26 economic growth (Alzahrani and Emsley, 2013). Moreover, programmes and/or projects  
27  
28 implemented as a result of government policies may play an important role in ameliorating  
29  
30 inter-generational persistence of economic disadvantage and reducing inequalities among  
31  
32 citizens (Currie and Rossin-Slater, 2015; Freedman and McGavock, 2015).  
33  
34  
35

36 Existing literature suggests that developed economies have major infrastructural  
37  
38 development projects in their development history (Eichengreen, 1994; Eichengreen, 1996;  
39  
40 Eichengreen and Vazquez, 1999; Alic, 2008). In fact, “project-based work has become a  
41  
42 critical component of global industrial activity” (Pinto, 2013, p.643), and, as such, projects  
43  
44 are inevitable in development. A typical example is the shift away from an agricultural-based  
45  
46 economy to a manufacturing-based economy, which has made the USA a superpower state  
47  
48 today. Chief among the projects was the introduction of state-sponsored postgraduate research  
49  
50 at the various universities to support this industrial revolution (Alic, 2008); and the recent  
51  
52 introduction of well-being policies and programmes aimed to improve the life of pregnant  
53  
54 women, young people and their families, education and work-life balance (Bitler and Karoly,  
55  
56  
57  
58  
59  
60



2015; Currie and Rossin-Slater, 2015).

Recent growth in emerging economies indicates that government projects are central in these achievements (Means and Schneider, 2000; Jaeger, 2003; Gichoya, 2005; Luk, 2009). For instance, emerging economies' use of Information Technology in the form of e-government in recent years to facilitate government transactions shows how essential these projects can be. It helps government(s) to use technology, especially web-based applications, to enhance access to and efficiently deliver government information and services (Brown and Brudney, 2001; Kumar and Best, 2006), and it establishes relationships between a government and its citizens, other governments, and businesses (Means and Schneider, 2000; Jaeger, 2003; Gichoya, 2005; Luk, 2009).

These projects are normally funded by governments in the form of tax payers' money, multilateral companies (Toor and Ogunlana, 2010), NGOs, public-private partnerships (Abednego and Ogunlana, 2006; Ruuskaa and Teigland, 2009), or the World Bank (Fabian and Amir, 2011). They are often geared towards enhancing the life of the general populace by improving the socio-economic well-being of its citizens (Walker and Plotnick, 2001; Ahsan and Gunawan, 2010; Haveman et al., 2015). However, literature indicates that some of these projects have failed (Walker and Plotnick, 2001; Liu et al., 2011; Havila et al., 2013; Patanakul, 2014), and failure is becoming more common with government projects (e.g. Savolainen et al., 2012). For example, in International Development (ID) projects, failure has become a rule rather than an exception (Ika et al., 2012, Hermano et al., 2013). In the case of IT projects, even the 'successful' projects run well over budget and behind schedule (Pinto, 2013).

Due to the country's good economic and political standing, the need to embark on "more effectively targeted programs to help the poor" and to improve development has become very crucial in Ghana (World Bank, 2012, p.9). This has prompted the government to

1  
2  
3 make significant efforts to undertake more developmental projects (World Bank, 2012). For  
4  
5 example, the main focus of the 2012 and 2015 budgets was to provide key infrastructure to  
6  
7 the various sectors of the economy, by stimulating public sector growth and making private  
8  
9 sector support a priority, so that jobs could be created for the Ghanaian workforce (Republic  
10  
11 of Ghana Budget, 2012, 2015). For these reasons, the 2012 budget was crafted around the  
12  
13 theme ‘Infrastructural Development for Accelerated Growth and Job Creation’.  
14  
15

16  
17 These proactive policy and regulatory interventions are backed by the World Bank, IMF  
18  
19 and other development partners such as the China Development Bank (CDB) (see Ghana  
20  
21 Republic Budget, 2012, 2015). The key infrastructure projects earmarked for implementation  
22  
23 in 2012 were mainly in Electricity, Oil and Gas, Water and Sanitation, Railways, Roads and  
24  
25 Ports, Health, Education, and Agriculture. However, reports indicate that this is not the first  
26  
27 time that such initiatives have been taken by the government (African Development Bank  
28  
29 (AfDB), 2006; World Bank Report, 2004, 2007; Klutse, 2009; Central Press, 2011; GNA,  
30  
31 2012). Other prominent initiatives include the Affordable Housing Units projects (Klutse,  
32  
33 2009; Imani, 2010; GNA, 2012; Ghanaweb, 2011), educational reform projects (Nyarko,  
34  
35 2011), National Identity Card (ID card) project (Myjoyonline, 2011), Ghana @50 projects  
36  
37 (Central Newspaper, 2012), and Ghana National Insurance Scheme (NHIS) (World Bank,  
38  
39 2007a; Mensah, 2009). However, most of these projects failed to achieve their intended  
40  
41 objectives (AfDB, 2006; World Bank, 2012). Media reports and existing literature show that  
42  
43 Ghanaian government projects have witnessed a number of failures – ranging from  
44  
45 infrastructure to services projects. This has resulted in donor apathy towards projects in  
46  
47 Ghana (World Bank Report, 2007c). The media has cited many reasons for such failures.  
48  
49 They include political, financial, corruption, culture, leadership, planning and human errors  
50  
51 (Addo, 2015; Bawumia, 2014, 2015).  
52  
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### *Project Success/Failure Criteria*

As stated in the introduction, project failure is high but what constitutes failure is subject to the criteria being used to assess the projects. Consequently, despite the extant literature on what constitutes project failure, there has been no consensus on the success/failure criteria. Impliedly, there are many ways for a project to fail and, as such, failure or success depends on the criteria used (Klakegg, 2009). However, these definitions can be categorised into two –the traditional approach, which is centred on the management of the project and the product stage. The traditional approach to defining project failure and success is centred on the project baseline, otherwise known as project constraints or what Atkinson (1999) famously terms the ‘Iron Triangle’. This definition does not view project success/failure beyond the product or delivery stage (Abednego and Ogunlana, 2006). Advocates of the traditional definition, such as Turner (1996), Kappelman et al. (2006), and El Emama and Koru (2008), argue that project success/failure should be judged on whether the project has met the set time, cost and requirement. Proponents of this definition contend that a project is said to have failed when it fails to meet one and/or all the triple constraints; however, Turner (1996) and Wateridge (1998) did not rule out further possible success/failure criteria.

Other writers argue that project failure should go beyond the traditional axiom postulated by authors such as de Wit (1988), Pinto and Slevin (1988), Turner (1996), Kappelman et al. (2006), and El Emama and Koru (2008). For example, Wideman and Shenhar (1996) document instances where projects are unable to meet baseline time, budget, and requirements, but were still considered successful. This indicates that assessing project performance on the traditional key performance indicators (KPIs) is not enough (Toor and Ogunlana, 2010). This view is ably supported by the widely cited Sydney Opera House project, which is considered as an engineering masterpiece despite taking 15 years to

1  
2  
3 complete and being 14 times over budget (Jugdev and Muller, 2005; Ika, 2009; Savolainen et  
4  
5 al., 2012).

6  
7 Recent developments in project management practices, and the awareness of the  
8  
9 existence of numerous stakeholders associated with projects, especially public or government  
10  
11 projects (Patanakul, 2014), has caused a paradigm shift from the traditional definition towards  
12  
13 a focus on the after delivery and the impact stage. Thus, in some studies (Mantel and  
14  
15 Meredith, 2002; McManus and Wood-Harper, 2008), there is a deviation from the traditional  
16  
17 definition to the stakeholder perspective. In this view, project failure or success is based on  
18  
19 stakeholder satisfaction and, as such, a successful project is one that meets stakeholders'  
20  
21 satisfaction and vice versa. However, satisfying all stakeholders associated with a particular  
22  
23 project is extremely difficult, as they may be numerous, especially in public sector projects  
24  
25 (Jensen, 2001; McManus and Wood-Harper, 2008). Nevertheless, McManus and Wood-  
26  
27 Harper (2008) argue that these stakeholders should be satisfied to a certain degree, or at least  
28  
29 the majority of them must be satisfied.  
30  
31  
32  
33

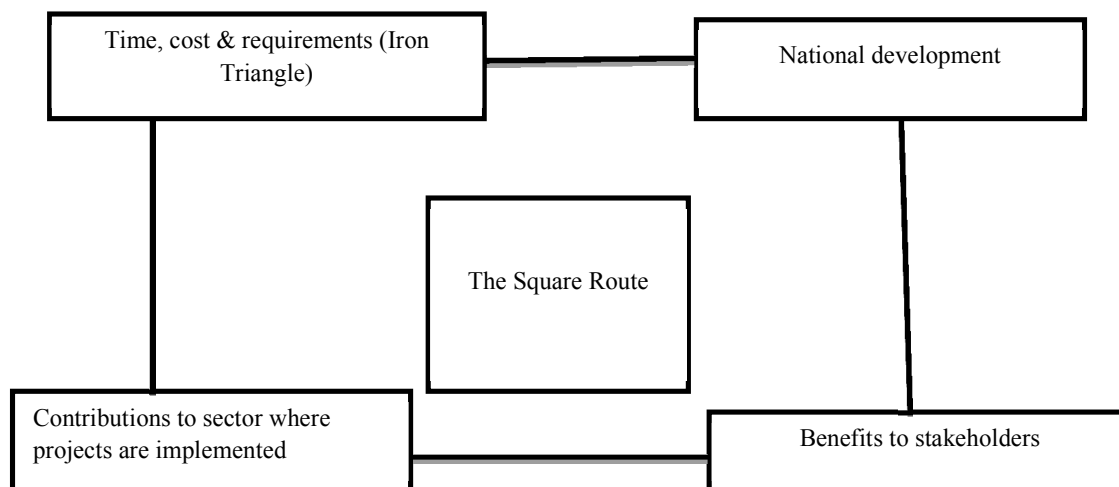
34 There is also an economic perspective to what constitutes project failure/success  
35  
36 (Mangione, 2003). Within this view, a project's failure/success is a function of its ability to  
37  
38 generate enough return on investment (ROI). Thus, a project is considered a failure if the ROI  
39  
40 is negative and successful if the ROI is positive (Mangione, 2003).  
41  
42

43 The dichotomous view<sup>2</sup> of project success/failure has caused researchers to divide the  
44  
45 success/failure definition into two parts – project management success/failure and project  
46  
47 success/failure (de Wit, 1988; Munns and Bjeirmi, 1996; Ika, 2009; Salazar-Aramayo et al.,  
48  
49 2013; Berssanti and Carvalho, 2014; Serra and Kunc, 2015). Project management failure is  
50  
51 linked to the iron triangle or the triple constraints, whilst project failure is linked to the impact  
52  
53 of the project on the client or the end users of the project's deliverables – the product phase  
54  
55

56  
57  
58 <sup>2</sup>Thus, project management phase versus product phase.  
59  
60

(Munns and Bjeirmi, 1996) – and/or the benefits that the organisation receives from the project in the long term (Muller and Jugdev, 2012; Serra and Kunc, 2015).

Atkinson (1999) offers a definition comprising both the traditional approach (management phase) and the after delivery (product phase). Atkinson shares the view of Wideman and Shenher (1996): that project failure should go beyond the triangle stage (time, cost, and requirement) to include the post-delivery phase in order to look at the product phase. In view of this, Atkinson (1999) adds three more ways in which projects should be assessed. This is called the *square route framework*. This framework uses the Information System (IS) as an example and argues that, apart from the ‘iron triangle’, a project should be assessed on its Information System, benefits to the organisation, and benefits to the stakeholder community. Atkinson’s (1999) *square route framework* is comprehensive and all-encompassing; it fits into this study. Thus, this study adopts the framework by replacing the IS and benefits to the organisation with sector and national development respectively. Further, we do not include the economic perspective offered by Mangione (2003) in this study, because this purely relates to the private sector, where shareholders are the focus, but this research is conducted within the government sector, which has no shareholders. Therefore, in this study, Ghanaian government project failure is assessed using the criteria outlined in the adopted framework presented in the figure below.



1  
2  
3 Fig.1 Square root framework  
4

5 Source: Author's Construct (adopted from Atkinson, 1999, p.341)  
6  
7  
8  
9  
10

## 11 **Methodology**

12  
13  
14 An initial literature review was conducted in order to paint a broader picture of project failure  
15  
16 within which the Ghanaian government project failure framework could be appreciated, and  
17  
18 to develop the theoretical framework used as an assessment tool.  
19  
20

## 21 **Population**

22  
23  
24 The empirical part of the study used a mixed-method data collection – thus, in-depth semi-  
25  
26 structured interviews and a questionnaire survey. Three sets of stakeholders were the target  
27  
28 population – the general public, contractors, and project management practitioners (PMP).  
29  
30 Specifically, the PMP and contractors were taken from the Ghana Business Directory (Ghana  
31  
32 Business Directory, 2014) (Project management services and contractors list) or were  
33  
34 members of professional associations and institutions such as the Ghana Institute of  
35  
36 Engineers, Ghana Association of Managers, Association of Building and Civil Engineering  
37  
38 Contractors of Ghana and Chartered Institute of Project Management – Ghana, whilst the  
39  
40 general public were picked using simple random sampling. Only individuals who worked in  
41  
42 these companies were targeted. Companies that appeared in more than one of these lists had  
43  
44 only one entry and the rest were eliminated. Further, only active companies were targeted.  
45  
46  
47  
48  
49  
50

## 51 **Research Approach**

52  
53  
54 The empirical part of the research used a two-stage sequential approach by employing an-  
55  
56 depth semi-structured interview and a questionnaire survey respectively.  
57  
58  
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1  
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3  
4  
5 *Stage 1 In-depth semi-structured interview*  
6

7 Exploratory data gathering in the form of an in-depth semi-structured interview was  
8  
9 conducted in order to validate the literature as well as to gather any new data within the local  
10  
11 context. An initial three (3) interviews were conducted as a pilot study – one from each  
12  
13 category of respondents. They were analysed and then all the necessary amendments were  
14  
15 made before the full interviews were conducted. By pre-testing, the researchers followed the  
16  
17 steps that Foddy (1994) recommended should be followed in order to ensure the validity and  
18  
19 reliability of a study's questions. Ten (10) participants were purposely selected from the listed  
20  
21 associations based on their knowledge, in order to provide valuable information on Ghanaian  
22  
23 government project performance using the success/failure criteria presented in the framework  
24  
25 above. Purposive sampling was adopted because the researcher wanted to gather data from  
26  
27 only those who had rich information about the subject under study. As a result of this, only  
28  
29 practitioners who work for active and well-known companies were contacted to participate in  
30  
31 the study. The number was not pre-determined at the start of the research – it was arrived at  
32  
33 when the data reached saturation point: the point at which the data has been thoroughly  
34  
35 optimised such that no new information emerges from participants (Morse, 1995, 2000; Hill  
36  
37 et al., 2005; Guest, 2006; Silverman, 2013). Further, this is in line with previous research that  
38  
39 has used interviews – a typical example is the study of female sex workers in West African  
40  
41 cities, where Guest et al. (2006) reached saturated point after interviewing 12 participants in a  
42  
43 homogenous population.  
44  
45  
46  
47  
48

49 The researchers interviewed all the participants at their homes, offices or construction  
50  
51 sites. These interviews took place between June and September 2013, and each was audio-  
52  
53 recorded and transcribed afterwards. All interviews were conducted in English (the official  
54  
55 language in Ghana); nonetheless, participants were allowed to express themselves in their  
56  
57  
58  
59  
60

1  
2  
3 local language if they wished; however, none spoke in any local language. The transcribed  
4  
5 data was analysed using thematic and content analysis with the help of Microsoft Word and  
6  
7 NVivo 10 software. Pre-determined themes in the adopted framework in Figure 1 in section  
8  
9 two were used.  
10

### 11 12 13 14 *Stage 2 Questionnaire survey*

15  
16 Using the data from the literature review and interviews, a questionnaire was developed for  
17  
18 the survey. A five-point Likert scale where 5= Least Achievement and 1= Highest  
19  
20 Achievement was used, as indicated in Appendix B. Yamane's 1967 formula was adapted to  
21  
22 determine the representative sample size for the PMPs and contractors for the questionnaire  
23  
24 (Israel, 1992). Using the formula, the 722 registered and active members in the companies (N  
25  
26 = 722) were used. This number was arrived at after auditing the associations as indicated  
27  
28 above. At an acceptable 95% level of confidence, there is a statistical z value of 2 (z = 2),  
29  
30 with an error limit of 10%. Adapting Yamane's formula, the required sample for the  
31  
32 contractors and PMPs is determined as:  
33  
34

$$35$$
$$36 \quad n = \frac{N}{1 + Ne^2} = \frac{722}{1 + 722(0.01)^2} = \frac{722}{8.22}$$
$$37$$
$$38$$
$$39 \quad n = \frac{722}{8.22} = 87$$
$$40$$
$$41$$
$$42$$

43 Where,

44 n = required response

45  $e^2$  = limit of error

46 N = sample size

47  
48  
49 This means that the lowest acceptable response must be 87 at a 95% level of confidence, with  
50  
51 the level of error at 10%. However, to strengthen the validity, the researcher distributed 300  
52  
53 questionnaires to the PMP and contractors.  
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The researchers, as part of the administered survey, received 159 responses from the individuals in the companies, as indicated in Appendix C (i), which is above Yamane's required response threshold. As a result of the sample size exceeding Yamane's estimate, the researcher adopted the formula to determine the confidence level and limit of error for the actual responses received.

$$e^2 \frac{z^2 p(1-p)}{n1} - \frac{z^2 p(1-p)}{N} = \frac{2^2 0.22(0.78)}{159} - \frac{2^2 0.22(0.78)}{722}$$

$$e^2 = \frac{4(0.2)(0.78)}{159} - \frac{4(0.2)(0.78)}{722}$$

$$e^2 = 0.00392453 - 0.0009506925$$

$$e = \sqrt{0.002974}$$

$$e = 0.0545$$

$$e = 0.055 * 100 = 5.5$$

p = actual responses as a percentage of population

N = population surveyed

e = error limit

n1 = actual responses received

The results show that a 22% response rate of the total population of 722 at a 95% confidence level has an approximately 5.5% error limit. In social science research, a 95% confidence level with an error limit of 10% is acceptable (Yin, 2009). Therefore, having a lower error margin of 5.5% increases the validity of the data.

On the other hand, the general public was selected using simple random sampling. For the sample size, due to Ghana's large population, Yamane's formula could not be used and therefore quota sampling was applied here – thus, 200 samples (20 for each of the 10 regions in Ghana) were used. Moreover, the use of 20 each for every region was to ensure regional

1  
2  
3 balance. This was to improve representation (Saunders, 2012) – it was assumed that people  
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5 from different regions might have different perceptions about the subject matter.  
6

7  
8 Like the interview, the questionnaire was piloted to improve the reliability and validity  
9  
10 of the data; this consisted of seven (7) participants – Project Management Practitioners (3),  
11  
12 Contractors (3) and General public (1). In addition, a preliminary analysis of the seven  
13  
14 questionnaires was carried out using Cronbach's alpha. Cronbach's alpha allows us to  
15  
16 measure the reliability of different variables (Legendre, 2005). It consists of estimates of how  
17  
18 much variation in the scores of different variables is attributable to chance or random errors  
19  
20 (Selltiz et al., 1976). As a general rule, a coefficient greater than or equal to 0.7 is considered  
21  
22 acceptable and a good indication of construct reliability (Nunnally, 1978). All the necessary  
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24 amendments were made to ensure that the questionnaire was clear and understandable to the  
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26 respondents.  
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29  
30 Overall, 500 questionnaires were distributed to individuals through emails and in  
31  
32 person. Initial calls and emails were made to the respective companies and individuals to  
33  
34 request their participation. Out of the 500 questionnaires sent, 270 were returned and 265  
35  
36 were fully completed and good for analysis. The full demographic is presented in Appendix C  
37  
38 (i) under *response rate*. This part of the research took place between June and December  
39  
40 2014.  
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42

43  
44 The data was analysed using statistical techniques which included Relative Importance  
45  
46 Index, Spearman Rank Correlation Coefficients, and Kendall's Coefficient of Concordance  
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48 and the Chi-square test of significance. The purpose was to statistically test the various  
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50 criteria identified in the literature, as indicated in the framework, against Ghanaian  
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52 government projects in order to know in which success/failure criteria area government  
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54 projects fail most and also to test the homogeneity of the population sampled.  
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## Results

Using the failure/success criteria outlined in Atkinson's adopted square route framework, it was found that respondents perceived that Ghanaian government projects fail on all the criteria.

### *Iron Triangle*

#### *Time*

All the respondents were in agreement that Ghanaian government projects do not meet their projected timescales and that they have witnessed a lot of time overlap. In the words of R3, for instance, Ghanaian government projects "...hardly meet their time duration and most of them don't meet their time duration, if I can remember. It's only about two or three that were finished within the stipulated time, and even these were projects funded by donor agencies. Projects which were directly funded by the government of Ghana hardly meet the time".

However, respondents were not able to give specific ratings in terms of the failure percentage. Whilst some of the respondents gave their perception of the failure rate (e.g. R1, R10), others (e.g., R2) did not attempt to rate it at all. For instance, R1 rated time overruns at 90% by saying that, "looking at time, I can assure you that about 90% of government projects are unable to meet time". However, R2 said that, "it is not easy to rate, especially because of the dynamics of the times; it will be difficult to say 50% achieve that, 20% achieve – I may not be able to say so. But I can say that quite [the] majority of government projects at least are unable to meet [their] projected time objective".

#### *Cost*

In relation to cost or budget, all respondents agreed that there is deviation in most government projects and the deviation is mostly in terms of cost escalation. As with the time factor, most

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2  
3 of the respondents (R2, R3, R4, R6, R8, R9, R10) were reluctant to rate cost in terms of  
4  
5 percentage; however, they perceived that hardly any Ghanaian government projects meet this  
6  
7 success criteria. Nonetheless, R1 did provide a rating, by saying that, “in terms of budget I  
8  
9 can for sure tell you that about 60% are unable to meet the target budget”. Moreover, R5 rated  
10  
11 the degree of cost overruns at 35%. However, R5 was only able to speculate about this, not  
12  
13 having any specific records to confirm this claim.  
14  
15

16 The most popular reason they all cited was due to delays in payments by government  
17  
18 and government agencies responsible for payments, which meant that contractors have to wait  
19  
20 and, in waiting, price fluctuations set in – hence, cost escalation. Another reason was the  
21  
22 over-reliance on foreign donors and international financial agencies for funding of projects:  
23  
24 what is called release of funding.  
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### 29 ***Requirement***

30  
31 Apart from R4 and R8, all of the respondents perceive that Ghanaian government projects  
32  
33 sometimes do not meet the requirements. In fact, those (R4 & R8) who were silent on the  
34  
35 subject put the three failure criteria (time, cost and requirements) together and said that  
36  
37 Ghanaian government projects rarely meet these criteria.  
38  
39

40 Specifically, R1 said that, in the area of sanitation, for instance, the required  
41  
42 deliverables are not achieved in that, “sometimes, these projects do not meet the standard that  
43  
44 they want; especially, women have special needs, so if these needs are not there for them,  
45  
46 they don’t use it”. Further, R1 said that, in relation to requirements or deliverables, “about  
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48 45% do not meet it but the rest [do]”. R8 and R7, who are both contractors, said that  
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50 sometimes contractors produce shoddy work, though neither of them agreed that they had  
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52 ever done so. However, they did say that their colleagues have sometimes produced shoddy  
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3 work, and sometimes the projects do not work at all. In the area of construction, for instance,  
4  
5 both R7 and R8 said that sometimes buildings collapse before the project is completed.  
6

7 R9 perceived that, “in terms of quality – the problem is because most of the projects are  
8  
9 executed by foreigners and they don’t know our weather conditions, our culture and other  
10  
11 things that are locally known to the citizens of Ghana, and therefore do the work anyhow”.  
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### 14 15 16 ***Stakeholder Satisfaction***

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18 In relation to stakeholder satisfaction or benefits to the stakeholder, the respondents’ views  
19  
20 were similar. All of them agreed that some of the projects benefited the stakeholders whilst  
21  
22 others did not. The main reason cited for non-satisfaction was sitting projects in the wrong  
23  
24 place or embarking on projects where they are not needed – due to lack of feasibility studies  
25  
26 and inadequate consultation with the stakeholders. For instance, one respondent (R1) said  
27  
28 that, “if I should look at it from [an] ordinary man’s viewpoint, because Ghana is a  
29  
30 developing country, and most of these projects are non-existent, then you may be tempted to  
31  
32 say that stakeholders are 100% satisfied, but, from the technical point of view, you can say  
33  
34 that about 60/70% are able to meet stakeholder satisfaction targets”.  
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38 R2 also said that, “most often, the stakeholders get the benefit and therefore become  
39  
40 very satisfied with the product from the project but they don’t get it when they actually need it  
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42 most”. However, R3 perceived that the degree of benefit or satisfaction depends on the sector  
43  
44 in which the project is being executed: “ ...about 40% [of projects] are unable to meet the  
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46 expectation of the beneficiaries – for example, using market buildings, about 30% meet  
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48 satisfaction and 70% [are] unable to meet expectations of users”.  
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### 52 53 54 ***Contributions to the sector where projects are implemented***

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3 In terms of sector contribution, the response was relatively positive. The respondents agreed  
4 that Ghanaian government projects often contribute to the sector in which they are  
5 implemented. R2, for example, said that they “contribute to the sectors, thus, the main reasons  
6 why they are made; but most often; it takes a long time to get these benefits”. R3 also said  
7 that, “our activities are geared towards several sectors, some are education, economic,  
8 sanitation ...; for the education [projects], they are able to meet the needs of the beneficiaries  
9 because people have realised the importance of education” and, as such, these projects  
10 contribute to the enhancement of their educational needs.  
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21 The only negative response was that sometimes the projects are not needed or they are  
22 not implemented where they are needed, and therefore the expected contribution to that sector  
23 is not realised. In addition, if a project is abandoned, then it will fail to contribute to the  
24 sector. For instance, R9 perceived that sometimes the government will build a teacher’s  
25 bungalow but they will site it in the wrong place and thus it may not be patronised as  
26 expected.  
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### 36 *National development*

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38 Most of the respondents did not talk much about this topic. The reason was that, once they  
39 had contributed to the respective sectors as discussed above, they had automatically  
40 contributed to national development. In the words of R6, for instance, “this is the same as the  
41 contribution to [the] sector as I have already stated”. R2 also said that, once the projects have  
42 been completed, then they contribute to the development of the country. R1 specifically rated  
43 this contribution at 70%, leaving 30% as no contribution – due to the irrelevance of such  
44 projects. He cited political reasons for the existence of such irrelevant projects.  
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### 55 **Ranking Ghanaian government project failure on different criteria**

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Based on the results from the in-depth semi-structured interviews, Ghanaian government projects fail on all the success/failure criteria; however, it was not revealed which criterion performs worst in comparative terms. In order to do so, a questionnaire was developed so that participants could rank these failure criteria in order of importance (the worst failure criteria) as shown in Appendix B, under *questionnaire survey*.

The Relative Importance Index (RII) statistical technique was employed to compare how participants ranked these factors. The result is presented in Table 1 below. The Relative Importance Index (RII) was calculated using equation 1 (as outlined in Fagbenle et al., 2004):

$$RII = \frac{\sum_{i=1}^5 P_i U_i}{N(n)} \dots\dots\dots 1$$

Where,

RII = relative importance index

$P_i$  = respondent's rating of the failure of government projects

$U_i$  = frequency of respondents placing identical ranking on the failure of government projects

N = sample size, which in this case (contractors=78, PMP=81 and general public=106)

n = the highest attainable score on the failure of government project, which in this case is 5

i= 1,2,3,4, 5

The indices calculated were ranked for contractors, PMP and general public. The results of the rankings as well as the overall rankings are shown in Table 1.

Table 1: Relative Importance Index and Ranks of Ghanaian Government Project Failure

Factors	Contractor		PMP		General Public		Overall Rank
	RII	Rank	RII	Rank	RII	Rank	
Cost	0.546	2	0.486	6	0.458	5	5

Time	0.500	6	0.491	5	0.457	6	6
Requirement	0.513	4	0.551	4	0.474	4	4
Stakeholder satisfaction	0.513	4	0.583	3	0.509	2	3
Contribution to where the project is being implemented	0.556	1	0.598	1	0.506	3	1
National development	0.518	3	0.593	2	0.515	1	2

The overall rankings indicate that the worst performance criterion for Ghanaian government projects is in the area of meeting the time. Cost is the next area in which Ghanaian government projects fail the most. This is followed by requirement, stakeholder satisfaction, national development and contribution to the sectors where projects are implemented respectively.

### ***Agreement Analysis***

It is important to establish that the rankings provided by the contractors, PMP and the general public were not due to chance or some form of bias but represent the true performance of government projects.

To do so, two methods were used – Spearman Rank Correlation Coefficient and Kendall's Coefficient of Concordance ( $W$ ). Both tests are non-parametric tests, which mean the distribution does not necessarily need to be normal before they can be applied. In other words, the computation uses medians and not means; hence, they are not affected by outliers.

The Spearman rank correlation coefficients ( $\rho$ ) was calculated using equation 2 (as outlined in Fugar and Agyakwah-Baah, 2010):

$$\rho = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2 - 1)} \dots\dots\dots 2$$



Where,

$d$  = the difference between the ranks given by any two categories of respondents for an individual cause; in this case the categories are contractor, PMP and general public.

$n$  = the number of criteria/factors, which in this case is six criteria

$i = 1, 2, 3, 4, 5, 6$

The results of the computation showed a Spearman rank correlation coefficient of 0.997, 0.996 and 0.999 for contractors and PMP, contractors and general public, and PMP and general public respectively. All three coefficients are strong and positive, which shows a high agreement between the rankings of the three categories.

The pair with the highest agreement was PMP and general public, a result which is consistent with the findings of Fugar and Agyakwah-Baah (2010), who found consultants and clients to have the highest agreement on the causes of delays in building construction projects in Ghana, compared with the opinions of contractors.

It is important to use a single coefficient to establish the degree of agreement between the three categories. This is where the Kendall's Coefficient of Concordance ( $W$ ) becomes useful. Kendall's  $W$  is directly related to the Spearman rank correlation coefficient (Legendre, 2005). Kendall's  $W$  is calculated from the mean ( $\rho$ ) of the pairwise Spearman correlations ( $\rho_s$ ) using equation 3 (as outlined in Siegel & Castellan, 1988, p. 262; Zar 1999, pg.448):

$$W = \frac{(m-1)\bar{\rho} + 1}{m} \dots\dots\dots 3$$

Where,

$m$  = the number of categories of respondents, which in this case is 3

$\bar{\rho}$  = the mean of the pairwise Spearman correlations, which in this case is 0.997

The computed Kendall's  $W$  is 0.998, which shows that there exists a high degree of agreement across the categories (contractor, PMP, general public) on the Ghanaian government projects failure.

### ***Test of Significance***

It is important to establish if the extent of agreement/disagreement across the categories is statistically significant. To do so the Chi-Square test is used. First, a hypothesis is formed:

Null Hypothesis =  $H_0$  = There is disagreement in Rankings among the three categories

Alternate Hypothesis =  $H_1$  = There is agreement in Rankings among the three categories.

The Chi-Square test is also a non-parametric test used to determine if a significant difference exists among the category rankings. There is a relationship between the Chi-Square value and Kendall's  $W$  shown in equation 4 (as outlined in Frimpong et al., 2003):

$$x^2 = m(n-1)W \dots\dots\dots 4$$

Where,

$m$  = the number of categories of respondents, which in this case is 3

$n$  = the number of criteria/factors, which in this case is six criteria

$W$  = Kendall's coefficient which in this case is 0.998

The result of the computation is  $x^2 = 14.97$  and using the critical table for  $n=6$  and  $\alpha = 0.05$  (that is a 95% confidence interval), the Chi-square critical ratio =  $x_{\alpha}^{2(n-1)} = x_{0.05}^{2(5)} = 11.07$ .

### ***Decision Rule***

Since the computed Chi-Square value ( $x^2 = 14.97$ ) is higher than the Chi-Square critical ratio ( $x_{0.05}^{2(5)} = 11.07$ ), we reject the null hypothesis ( $H_0$ ) and conclude that there is a high degree of

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3 agreement among the three categories on the performance (failure) of Ghanaian government  
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5 projects.  
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## 10 11 **Discussion**

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13 This section discusses the extent of project failure in Ghanaian government projects adopting  
14 the square route framework proposed by Atkinson (1999) – this includes the following  
15 criteria: time, cost and requirement (iron triangle); contribution to the sector in which the  
16 project is implemented; stakeholder satisfaction; and national development. In relation to the  
17 above criteria, all respondents agreed that Ghanaian government projects fail; however, the  
18 extent of failure differs from criterion to criterion. This is discussed below in descending  
19 order.  
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### 32 **Iron Triangle Criteria**

#### 33 *Time*

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35 All the respondents were in agreement that Ghanaian government projects do not meet their  
36 projected timescales and that they have witnessed a lot of time overlap. Thus, rarely do  
37 Ghanaian government projects achieve their anticipated time duration. Some participants  
38 rated time duration failure at 90% whilst others rated it at 50%. This suggests that there is no  
39 consensus on the extent of failure in terms of not meeting the stipulated time duration.  
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47 This finding is in agreement with earlier researchers such as Sambasivan and Soon  
48 (2007), Sweis et al. (2008), Kaliba et al. (2009), Ahsan and Gunawan (2010), Kaliba et al.  
49 (2009) and Liu et al. (2011), who have concluded that schedule deviation is common in  
50 project management in developing countries. However, these previous studies were conducted  
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3 in specific industries and/or specific projects (cases), whilst this study looks at government  
4 projects in general.  
5

6  
7 Further, these delays in completion of Ghanaian government projects could also be  
8 traced to institutional bottlenecks within the Ghanaian public administration set up; which  
9 Amoako and Lyon (2014) found that it stifles public management activities. Similarly, this  
10 could also be linked to cultural orientation; inherited from the colonial era, where government  
11 work is perceived as belonging to the Whiteman and as such should be handled haphazardly.  
12 This also confirms a common statement in Ghana which is interpreted as “we hold  
13 government’s work, we don’t carry it on our head”, which literally means do not give your  
14 100 per cent to the government’s work, after all, it not your property (Amponsah, 2010). The  
15 implication is that government officials do not pay attention to government projects during  
16 implementation, hence, time overlap.  
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### 32 *Cost*

33 In relation to cost, all respondents agreed that there is deviation in most government projects  
34 and the deviation is mostly cost escalation. As with time, most of the respondents were  
35 reluctant to rate cost in terms of percentage; however, they perceived that Ghanaian  
36 government projects hardly ever meet this success/failure criterion. This was ranked number  
37 five (5), as shown in Table 1 – thus, it is the second worst-performing criterion in Ghanaian  
38 government project failure.  
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47 This finding supports a prior study conducted by Cheng (2014) into construction  
48 projects, which asserted that cost overrun is a common problem in the industry. Further,  
49 Kaliba et al. (2009), Ahsan and Gunawan (2010), and Aziz (2013) have all found cost  
50 deviation in projects in developing countries. Similarly, Pinto (2014) has asserted that cost  
51 deviation in project management has become a norm in organisations. Based on these prior  
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3 studies' findings, it can be said that this finding is not surprising. The difference between the  
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5 prior studies and this research is that they were conducted only in a specific industry whilst  
6  
7 this study is looking at government projects in general; therefore, this finding can be applied  
8  
9 to different industries within the government sector. Moreover, cost escalation can be viewed  
10  
11 from a government perspective from the findings of this research – this research finding  
12  
13 provides a unique dimension to the project management literature.  
14  
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### 16 17 18 *Requirement* 19

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21 It was found that some Ghanaian government projects do not meet deliverables or  
22  
23 requirements. This problem was ranked fourth. The study revealed that shoddy work is often  
24  
25 produced in some circumstances, especially in projects that are directly awarded by Ghanaian  
26  
27 government officials. Thus, the quantity and quality of the deliverables are sometimes  
28  
29 compromised due to corruption or failure to follow the right procedure. It was found that, due  
30  
31 to lack of supervision by government consultants and regulatory bodies such as quality  
32  
33 control officers, contractors ended up using the wrong products when carrying out projects.  
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35 The study revealed that this is often found in the construction sector, where the performing  
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37 organisations have to submit samples of their materials for testing, but they often fail to do so.  
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39 Further, the study found that consultants are unable to supervise and monitor project  
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41 standardisation, and this result in substandard work.  
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46 This finding is in consistent with Amponsah's study which traced Ghanaian  
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48 government project failure to colonial rule, when public sector work was perceived to  
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50 belonging to the 'Whiteman' and as such could be handled haphazardly (Amponsah, 2010).  
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52 The suggestion is that government officials who are supposed to monitor projects to ensure  
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54 that they are up to the required standards are fail to do so, hence, poor product.  
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### Stakeholder satisfaction

In relation to stakeholder satisfaction or benefits to the stakeholder, all respondents perceived that Ghanaian government projects partly meet stakeholders' satisfaction; and this was ranked third by the questionnaire participants. The consensus was that some of the projects benefited the stakeholders whilst others did not. Further, the study revealed that the satisfaction level ranges from 30-70%. The interviewees cited implementing projects at the wrong places or where they are not needed as the main reason for such non-beneficial outcomes. They further perceived that sometimes the deliverables are sub-standard, and therefore they are unable to be used, and so people become dissatisfied with the products of such projects.

This finding confirms Ahonen and Savolainen's (2010) study, which concluded that, in one project, some stakeholders might be satisfied whilst others might not – depending on who is measuring satisfaction and the criteria being used to measure the project's performance. Even though Ahonen and Savolainen's research studied International Development (ID) projects, there is some degree of similarity with this study, as both are related to government projects: Ahonen and Savolainen (2010) concentrated on specific government projects whilst this study focuses on government projects in general. Further, both studies are in developing countries.

Similarly, Lyytinen and Hirschheim (1988), Agarwal and Rathod (2006), Ika (2009) and Carvalho (2014) have all concluded that different stakeholders might have different opinions on the success and/or failure of a project. Therefore, this finding is not surprising, as prior studies have proven that stakeholders often do not agree on their level of satisfaction.

### National development

Most of the respondents did not talk much about this topic. This was because, once they had contributed to the discussion of the respective sectors, they had automatically contributed to

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3 national development. For example, some interviewees argued that, once the projects have  
4 been completed, then they have contributed to the development of the country. It was found  
5 that about 70% of Ghanaian government projects contribute to national development, leaving  
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10 30% as non-contributory – this is due to the irrelevance of such projects.

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12 Further, it was revealed that the reason for this irrelevance is directly linked to politics.  
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14 Most politicians make campaign promises and then they have to fulfil such promises, even if  
15  
16 the projects to which they relate are not needed for national development.  
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18  
19 This finding is in agreement with earlier studies such as Eichengreen (1994),  
20  
21 Eichengreen (1996), Eichengreen and Vazquez (1999), Alic (2008) and Alzahrani and Emsley  
22  
23 (2013), that points out that projects are central to nations' development. The implication is  
24  
25 that Ghanaian government projects failure in the area of national development would impact  
26  
27 on the citizens.  
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### 32 **Sector contribution (contributions to sector where projects are implemented)**

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34 In terms of sector contribution, the response was relatively positive, as it was ranked first by  
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36 respondents. The respondents agreed that Ghanaian government projects often contribute to  
37  
38 the sector in which they are implemented, simply because that is the main reason why they  
39  
40 are implemented. The only negative issue was that, sometimes, the projects are not needed. In  
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42 addition, if a project is abandoned, then it will fail to contribute to the sector.  
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### 47 **Conclusions and Implications**

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49 We assessed the extent of government project failure using six success/failure criteria as the  
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51 evaluation framework. Project management practitioners, contractors and the general public  
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53 were interviewed to solicit their perceptions of the extent of Ghanaian government project  
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55 failure. The findings showed that government projects fail on all six criteria; however, the  
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3 extent of failure depends on the criterion used. It was found that the worst performance  
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5 criterion is meeting the projected time, followed by cost, deliverables, stakeholders'  
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7 satisfaction, contribution to national development and contribution to the sector where the  
8  
9 project is implemented respectively. A further comparison of their perceptions of these failure  
10  
11 areas (criteria) found that the three sets of participants were in agreement on the rankings  
12  
13 presented.  
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16 We found that, even though projects fail on all the six criteria used for the assessment,  
17  
18 the criteria where projects fail most is within the management of the projects and not the  
19  
20 product phase of the project. The implication is that project executors and policy makers need  
21  
22 to be more proactive in the management of projects. Meeting the projected time was the  
23  
24 number one area where projects fail most – we realised that rarely do projects meet their  
25  
26 timescale, and it was estimated that over 90% of such projects experience time overrun. We  
27  
28 further found that projects experience cost overrun. The implication is that cost estimators  
29  
30 need to ensure that proper budgeting is carried out before the start of a project. With regard to  
31  
32 requirement, it was found that shoddy work is sometimes produced by contractors and that  
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34 some of the projects do not meet requirement.  
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38 In addition, it was found that, even though projects fail at the product phase  
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40 (stakeholders' satisfaction, contribution to national development and contribution to the sector  
41  
42 where the project is implemented); the extent of failure is minimal compared to the  
43  
44 management phase. In the areas of contribution to sectors where projects are implemented and  
45  
46 national development, the extent of failure is very minimal, as that is the main reason for  
47  
48 project implementation. What accounts for such failure is when projects have been  
49  
50 abandoned. Moreover, within the stakeholder satisfaction, the extent of failure was not severe  
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52 as compared to cost, time, requirement/deliverable, but it was also not as moderate as  
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3 contribution to national development and contribution to the sector where the project is  
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5 implemented.  
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7 Many reasons were cited for Ghanaian government project failure – they include  
8 political interference, delays in payment, culture, funding, poor planning, corruption, and  
9 political patronage. These factors are linked directly or indirectly to cultural and political  
10 orientation within the Ghanaian society. However, since the focus of this study was not on  
11 these factors, further research would be needed to look into the full details relating to these  
12 factors.  
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20 Thus, our overarching conclusion is that Ghanaian government projects fail on all the  
21 failure criteria used in the assessment framework, but areas of failure have relative  
22 importance.  
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FOR PEER  
Review



## APPENDIX

## (A) IN-DEPTH SEMI-STRUCTURED INTERVIEW

## (i) Interview question guide

**Ghanaian government projects performance**

1. How would you assess or evaluate Ghanaian government projects achieve the following targets: time, budget and requirements?
2. How would you evaluate government project performance in terms of its benefits to stakeholders such as the general public, contractors etc?
3. How would you evaluate Ghanaian government projects' contribution to the sectors in which they are implemented and national development?

## (ii) Table 1. Category of Personnel Engaged

Respondents Category	Number	Type of Engagement
Project Management practitioners	6	In-depth Semi-structured Interview
Contractors	2	In-depth Semi-structured Interview
General Public	2	In-depth Semi-structured Interview
<b>Total</b>	<b>10</b>	

## (iii) Table 2. Interview Respondent's Profile

Respondents	Age	Education	Years of Experience in Current position	Work Experience In Project Management	Overall Work Experience	Industry	Sector
R1(Administrator)	33	Masters	5	8	8	Healthcare	Public
R2 (Consultant & Lecturer)	46	PhD/ Professional	15	15	21	General	Public & Private
R3 (Architect)	37	BA/PgD/ Professional	4	10	10	General	Public
R4 (Structural Engineer)	40	BA/ Professional	4	14	14	General	Public

R5 (Quantity Surveyor)	39	BA/ Professional	15	15	15	General	Public
R6 (Physical & Works Director)	55	Masters/ Professional	1	32	32	Education	Public
R7 (Finance & Administrative Director)	27	Masters	4	15	15	Constructio n	Public
R8 (Director)	45	A-Level	7	7	25	Constructio n	Public & private
R9 (Teacher & Business Woman)	38	Diploma	10	-	10	Education & Retail	Public & Private
R10 (Banker)	31	BA	5	-	7	Banking	Public

Or Peer Review

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**(B) QUESTIONNAIRE SURVEY**

**GHANA GOVERNMENT PROJECT PERFORMANCE**

How do you rank the achievement of Ghanaian government projects goals in relation to the following; with 5 being the least achievement and 1 the highest achievement?

	1	2	3	4	5	don't know
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Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stakeholder satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contribution to the where the project is being implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**(C) QUESTIONNAIRE RESULTS*****RESPONSE RATE***

Table (iv) Percentage of questionnaire distribution and their responses

Description	Contractors and PMP		General public	Total
Questionnaires distributed	300		200	500
	Contractors	PMP		
Number of respondents	78	81	106	265
Percentage of responses	53		53	53

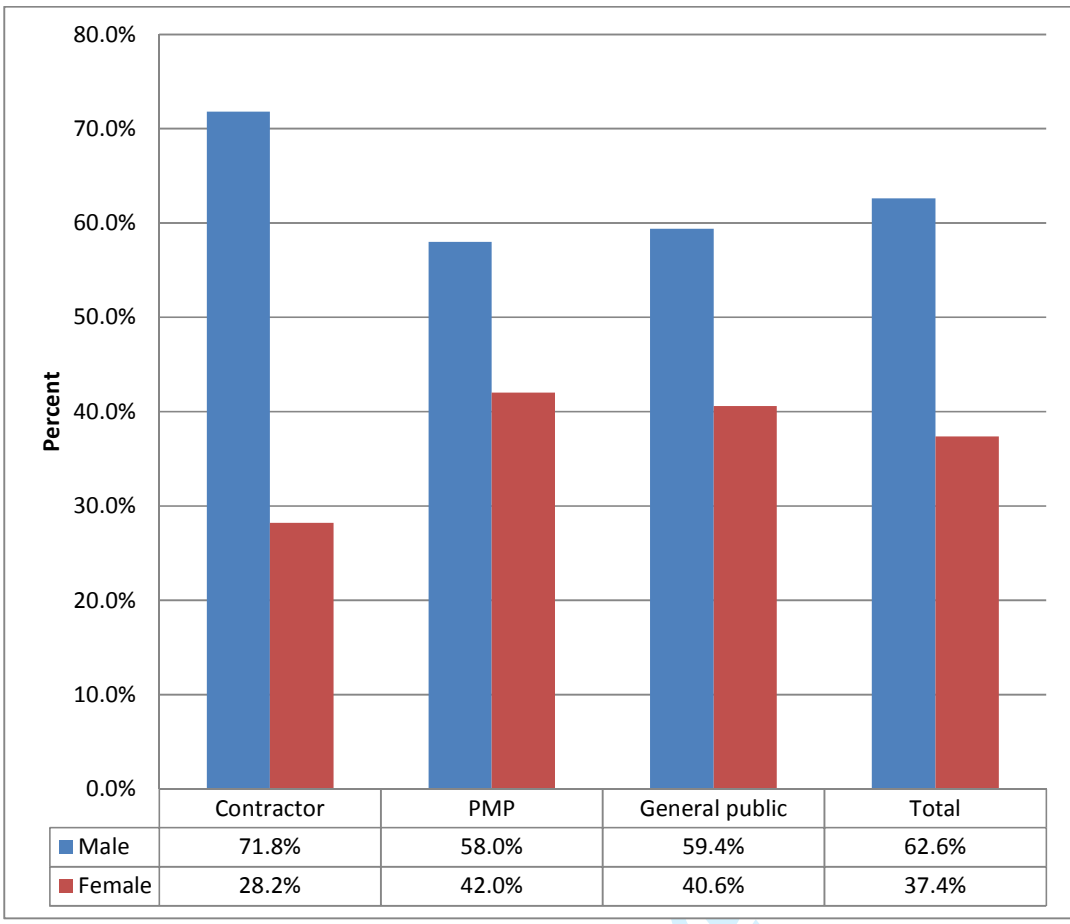
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**Personal Information of Respondents**

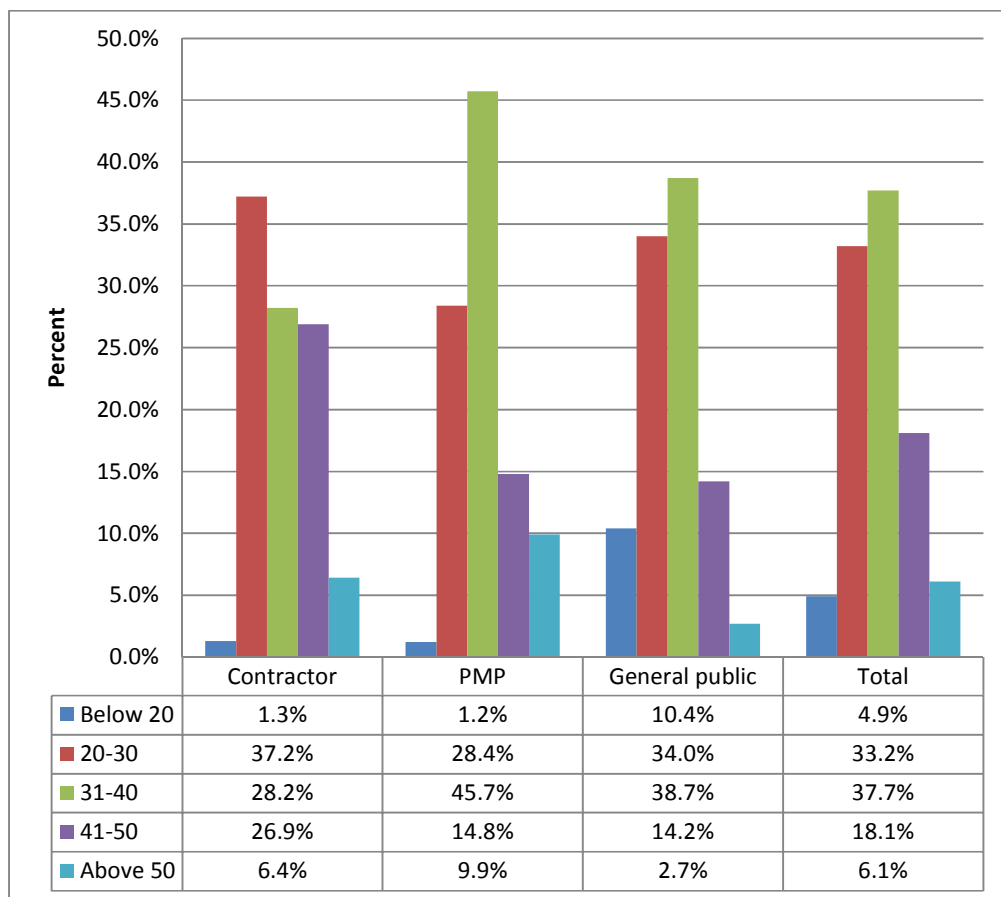
**Gender of respondents**

Figure (ii) Gender of respondents with regard to stakeholders



**Age group of respondents**

Figure (iii) Age group of respondents

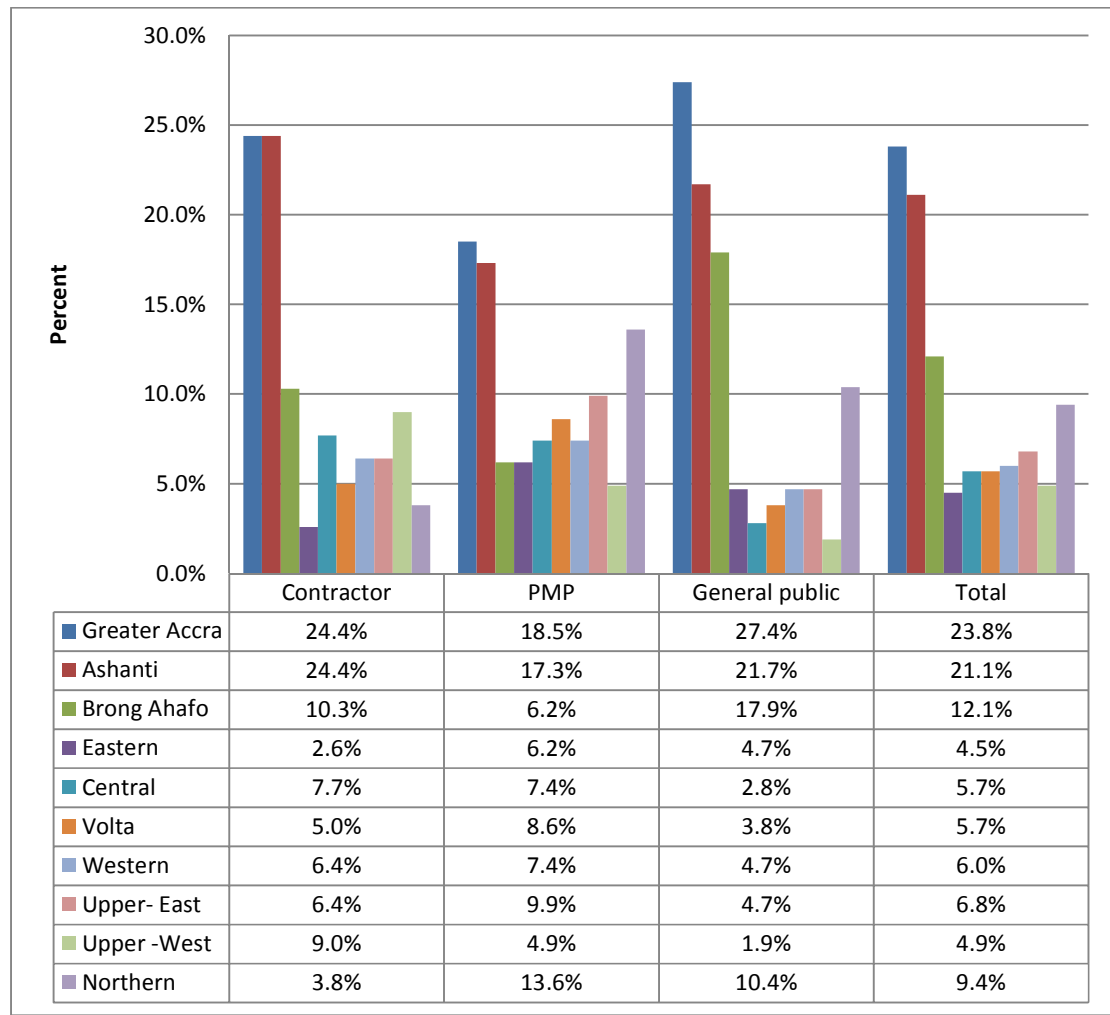


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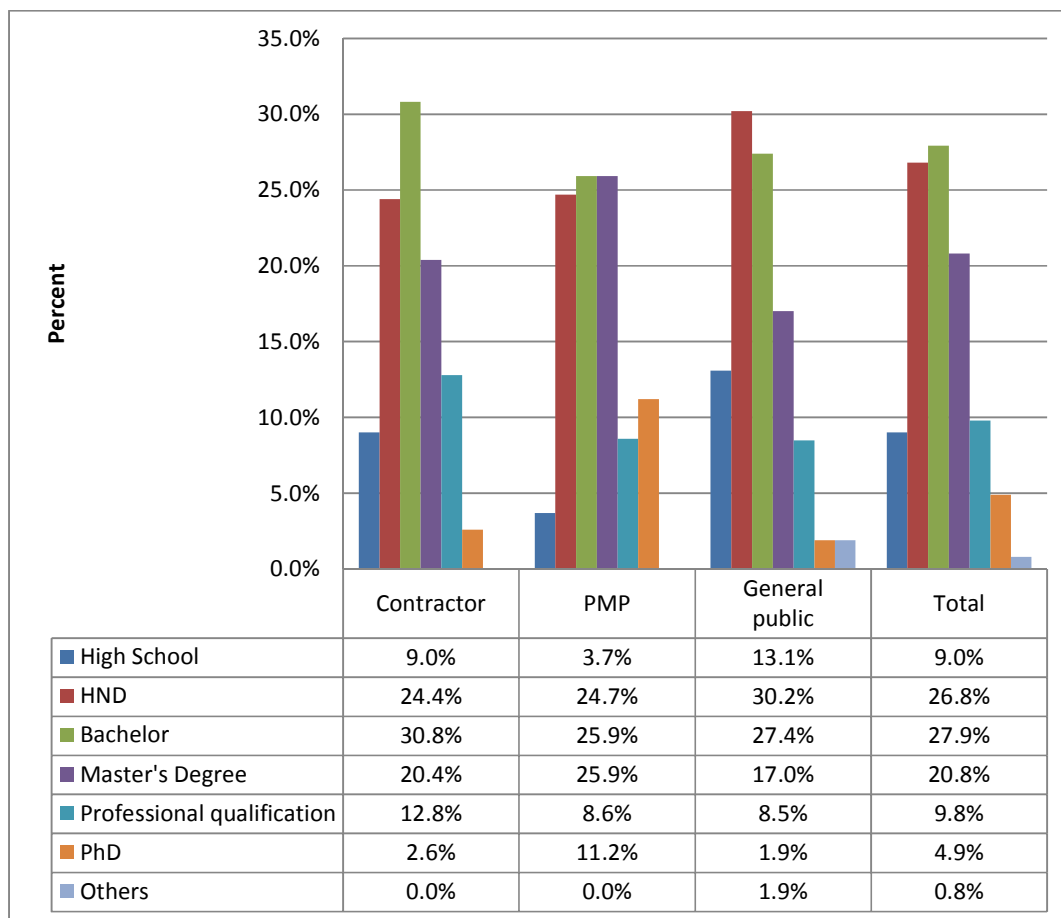
**Regional location of respondents**

Figure (iv) Regional location of respondents



**Educational level of respondents**

Figure (v) Educational level of respondents



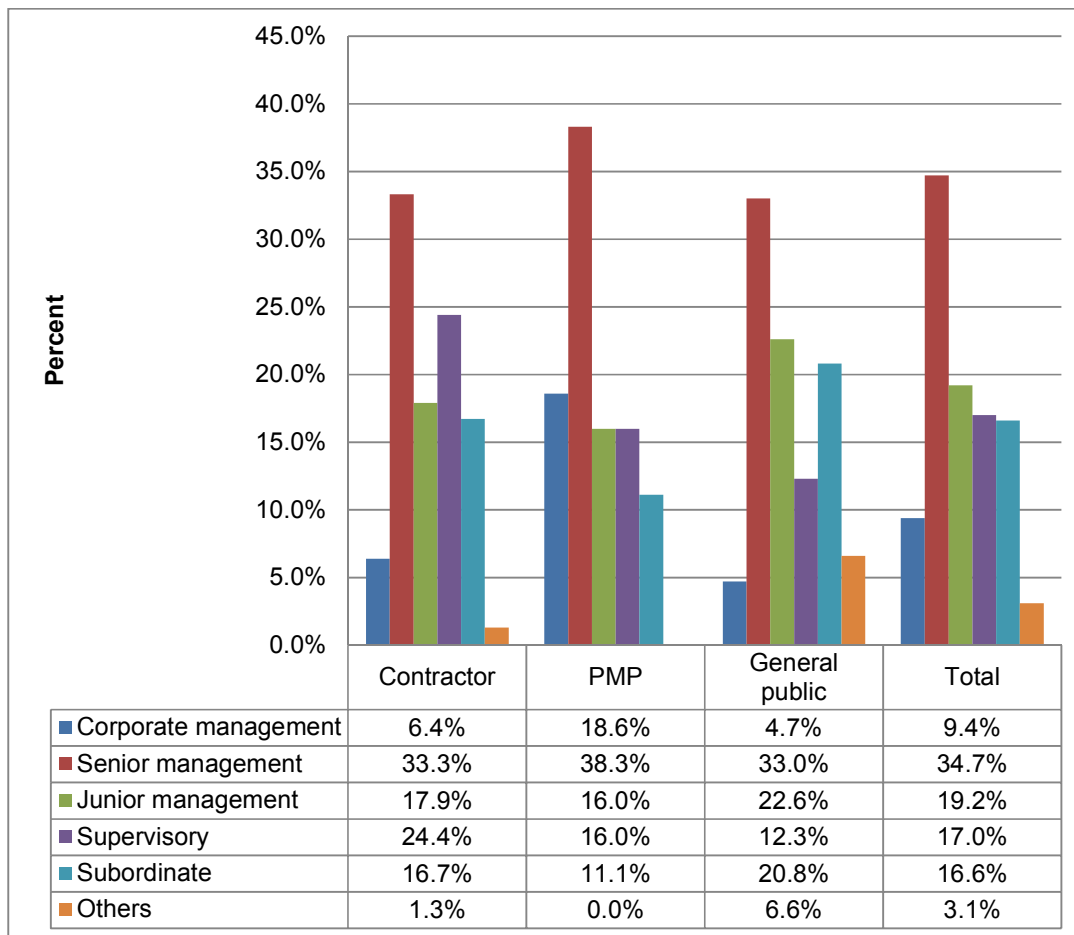
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Professional Information of Respondents

Position of respondents

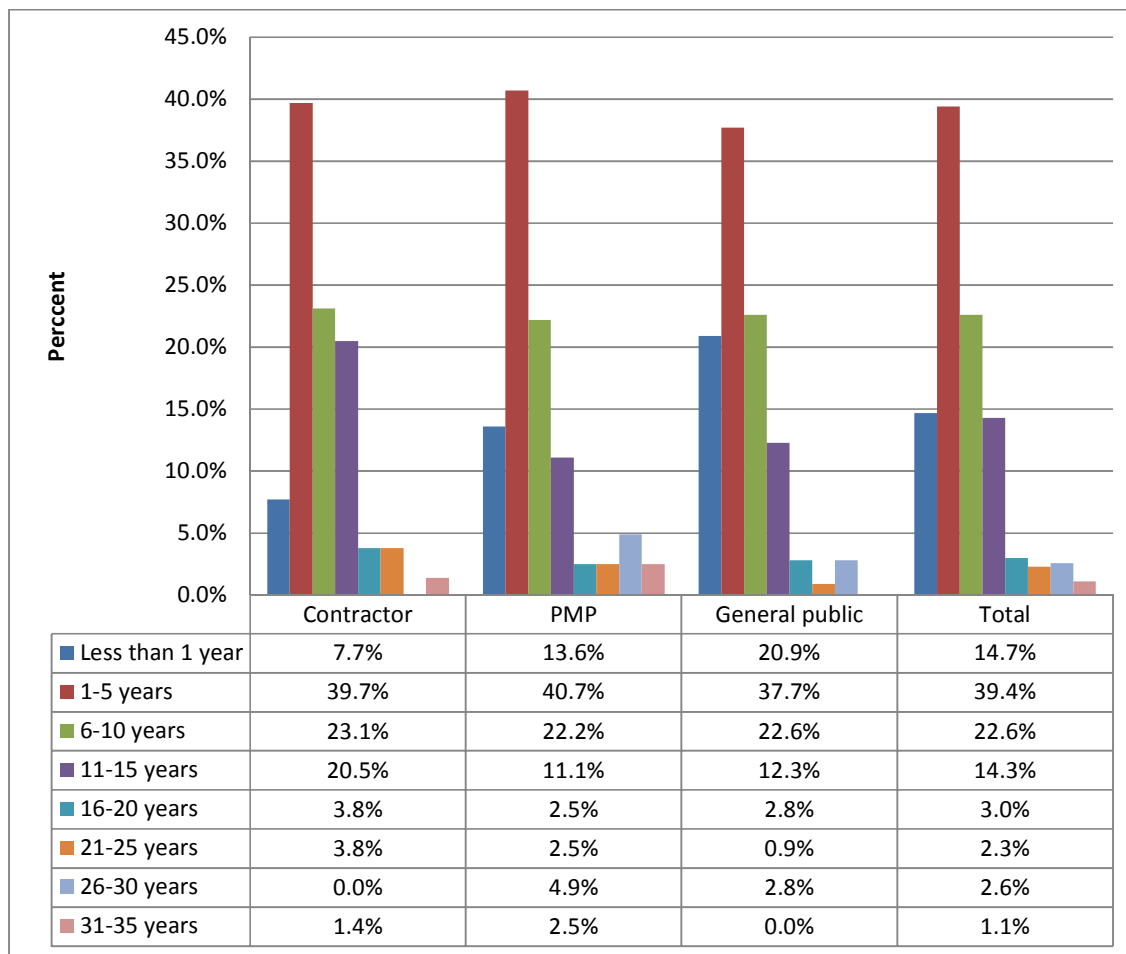
Figure (vi) Position of respondents with regard to stakeholders



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**Years of experience in current position**

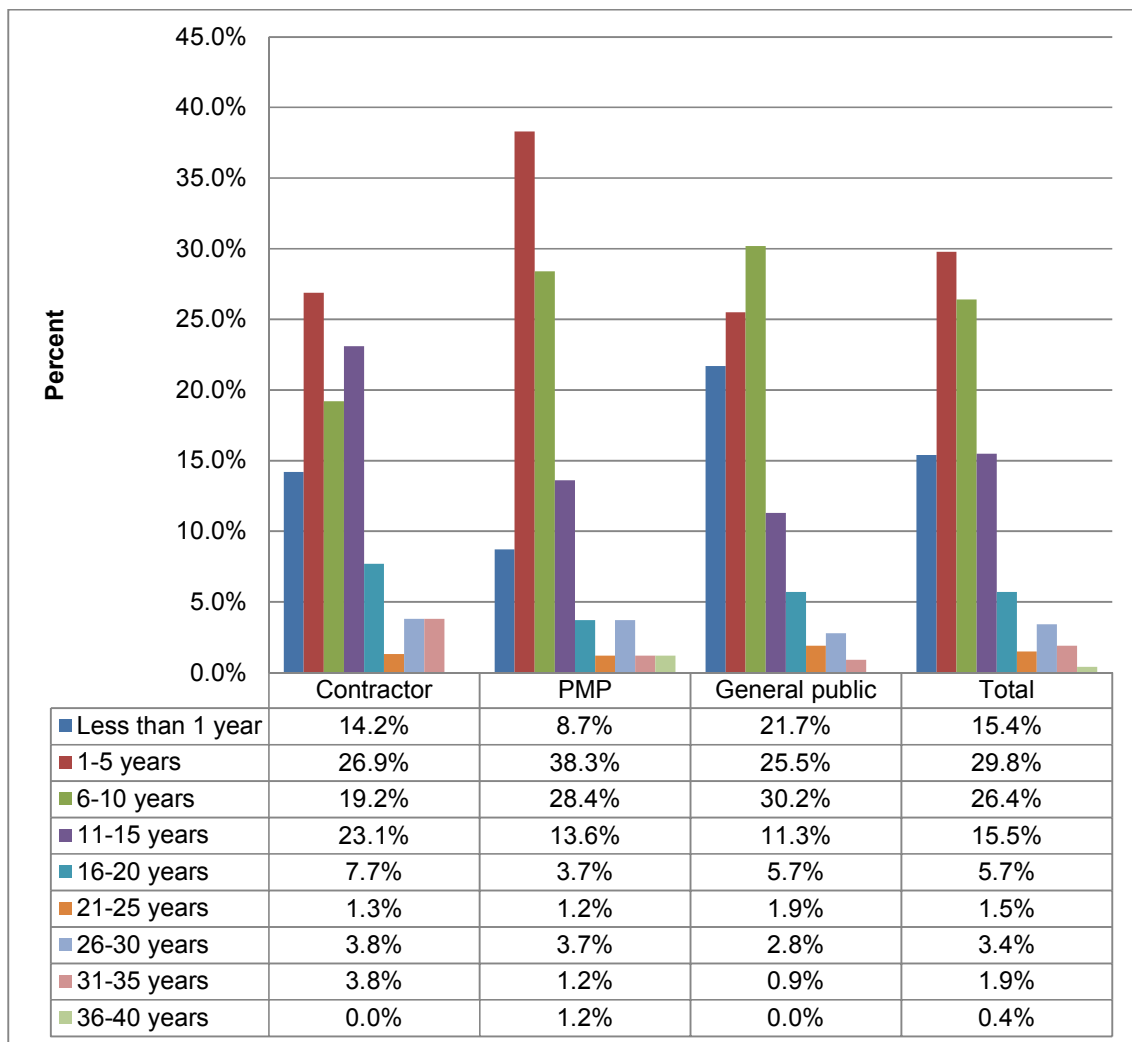
Figure (vii) Years of experience in current position



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### Years of experience in general

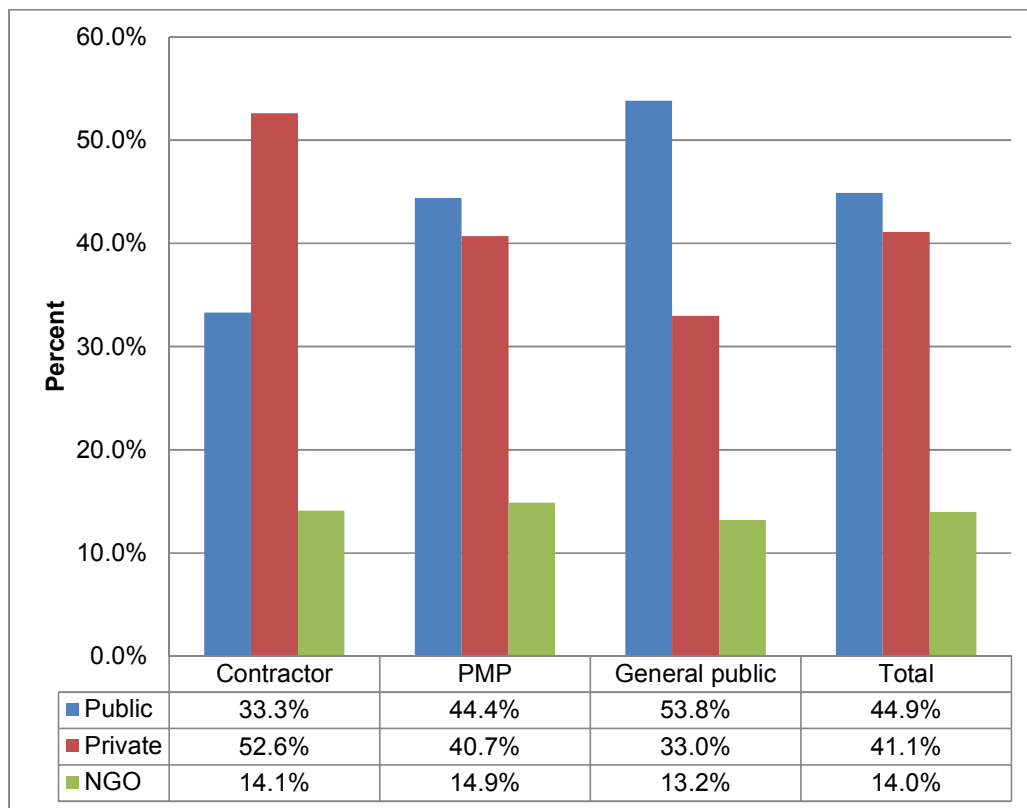
Figure (viii) Years of experience in general



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**Sector of respondents**

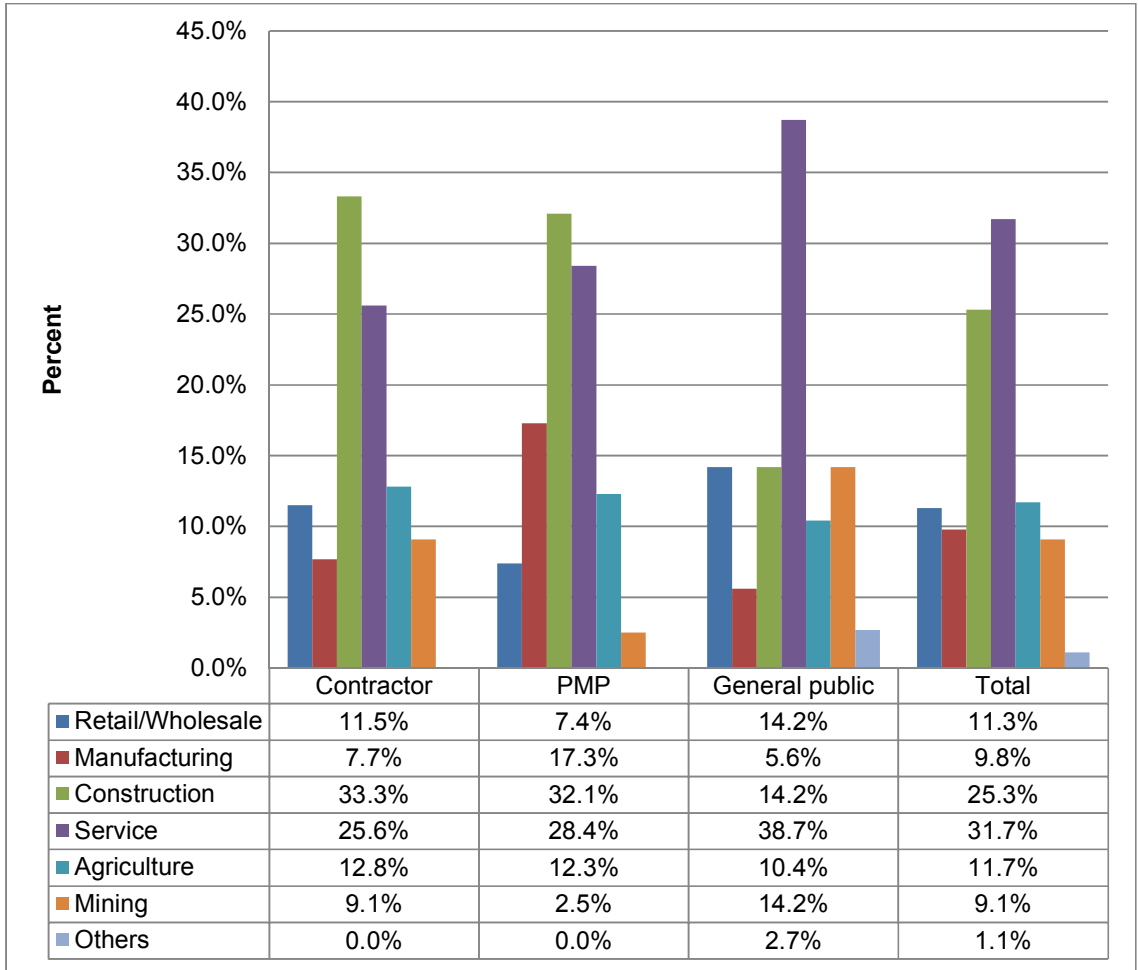
Figure (ix) Sector of respondents



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Figure (x) Industry of respondents with regard to stakeholders



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**(D) Ghanaian Cultural dimension****Table (v) Hofstede 6-D Model**

<b>Cultural dimensions</b>	<b>Scores (%)</b>	<b>Ghanaian cultural attributes</b>
Power Distance	80	Acceptance of hierarchical order in society and organisations
Individualism	15	Collectivist society
Masculinity	40	Relatively feminine society
Uncertainty Avoidance	65	Prefer to avoid uncertainty
Long Term Orientation	4	Great respect for traditions, a relatively small propensity to save for the future, and a focus on achieving quick results
Indulgence	72	Willingness to realise their impulses Desire to enjoy life and having fun Places a higher degree of importance on leisure time, act as they please and spend money as they wish

Source: The Hofstede Centre (2016)

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