

A STUDY OF THE EFFECT OF SCOPE CREEP ON PROJECT PERFORMANCE IN GHANA
IMMIGRATION SERVICE (GIS) CONSTRUCTION PROJECTS-

By

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degree of

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DECLARATION

I hereby declare that this submission is my own work towards the MSc. Project Management and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university or any other university, except where due acknowledgement has been made in the text.

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ABSTRACT

Every construction project has objectives it intends to achieve and these are mostly performance related. Construction projects for Ghana immigration Service, the gate keeper of Ghana is not an exception. This study was conducted to ascertain the effect of scope creep on project performance in the Ghana Immigration Service. This problem can be attributed to the ineffective definition of the scope of a project. Poor scope definition can lead to scope creep and subsequently lead to cost overruns, time overruns and other forms of construction underperformance. Bad planning where limited attention is given to the Ghana Immigration Service (GIS) projects' scope management processes and haste in starting work which has not been properly planned can cause scope creep which may lead to cost overruns. The objective of the study is to identify the causes of scope creep and its effect on the performance of GIS construction projects. A descriptive research methodology was adopted and target population was the Contractors. A structured questionnaire was designed and administered to these groups of people. A non-probability sampling method i.e. purposive sampling technique was adopted for the study. The data gathered from the field was analyzed largely using descriptive statistics and presented in tables. From the study it was discovered that contractor selection, ineffective planning and scheduling of project, Poor project management and supervision, and deficiencies in cost estimates prepared were the main causes of project scope creep. The study demonstrated that, scope creep can lead to cost overruns, schedule overruns and the overall performance of the project. The scope of a project forms part of the macro category of project success criteria as it starts at the conception stage to operating stage. Thus, project scope describes the totality of a project. It is therefore very necessary to develop strategic measures to deal with scope creep and improve the smooth execution of projects. From the study, it was realized that, the most severe cause of scope creep is the selection of an incompetent project manager. Also, the lack of change control contingency plan significantly causes scope creep. The client and his advisor must endeavor to select an appropriate project manager for the execution of the project. Also, during the pre-award phases, scope creep can be avoided if the developer and his project Management team ensure that the scope is well defined, the design is complete, a proper delivery system is selected and a suitable contracting method for the relevant construction project. Create a realistic goal that allows sufficient time for key tasks to be accomplished. Adequate selection and involvement of stakeholders are absolutely essential to the success of any project.

Keywords: Scope creep, Project management.

TABLE OF CONTENT

DECLARATION.....	II
ABSTRACT.....	III
LIST OF TABLES.....	VII
ACKNOWLEDGEMENT.....	VIII
DEDICATION.....	IX
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 BACKGROUND TO THE STUDY	1
1.6 SIGNIFICANCE OF THE STUDY	5
1.7 SCOPE OF THE STUDY.....	5
1.9 ORGANIZATION OF THE STUDY	6
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 INTRODUCTION.....	8
2.2 OVERVIEW OF THE GHANAIAN CONSTRUCTION INDUSTRY	8
2.3 PROJECT PERFORMANCE	11
2.3 PROJECT SCOPE.....	15
2.4 SCOPE CREEP.....	16
2.4.1 <i>Causes of scope creep</i>	17
2.4.2 <i>Effects of scope creep</i>	20

2.6 STRATEGIES TO ELIMINATE SCOPE CREEP	21
2.6.1 Adequate contract documentation	21
2.6.2 Selection of an appropriate project delivery method.....	21
2.6.3 Communicating potential problems at early as possible	21
2.6.4 Setting expectations correctly at the beginning of a project;	22
CHAPTER THREE	23
RESEARCH METHODOLOGY	23
3.1 INTRODUCTION.....	23
3.2 RESEARCH DESIGN	23
3.3 RESEARCH STRATEGY	24
3.4 RESEARCH APPROACH.....	24
3.6 POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE	25
3.7 ETHICAL CONSIDERATION	25
3.8 SOURCE OF DATA	26
3.9 QUESTIONNAIRE DEVELOPMENT AND ADMINISTRATION	26
3.10 DATA ANALYSIS	27
CHAPTER FOUR.....	28
DATA ANALYSIS AND DISCUSSION.....	28
4.1 INTRODUCTION.....	28
4.2 DEMOGRAPHICS	28
4.2.1 Construction type.....	28
4.2.2 Construction category.....	29
4.2.4 Level of education	30

4.3 RELIABILITY ANALYSIS	31
4.4 CAUSES OF SCOPE CREEP	31
4.5 EFFECTS OF SCOPE CREEP	33
4.6 STRATEGIES TO ELIMIANTE SCOPE CREEP	34
4.7 SUMMARY OF CHAPTER	35
CHAPTER FIVE	37
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	37
5.1 INTRODUCTION	37
5.2 SUMMARY OF FINDINGS	37
5.3 CONCLUSIONS	38
5.4 RECOMMENDATIONS	39
5.5 LIMITATIONS	39
5.4 FURTHER STUDIES	39
REFERENCES.....	40
APPENDIX.....	49

LIST OF TABLES

TABLE 2.1: CAUSES OF SCOPE CREEP	19
TABLE 4.1: CONSTRUCTION TYPE	29
TABLE 4.2: CONSTRUCTION CATEGORY	29
TABLE 4.3: YEARS OF EXPERIENCE	30
TABLE 4.4: LEVEL OF EDUCATION	30
TABLE 4.5 CAUSES OF SCOPE CREEP	32
TABLE 4.6: EFFECTS OF SCOPE CREEP	34
TABLE 4.7: STRATEGIES TO ELIMINATE SCOPE CREEP	35

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The Lord is my strength and my shield; my heart trusted in him and I and helped. (Ps 28:7)

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DEDICATION

This work is wholly dedicated to the Almighty God for giving me the strength and the direction to carry out this work successfully and to my family for their sacrifice and understanding.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The construction industry contributes immensely to the development of every country including Ghana therefore, improving the performance of the construction industry will have a ripple effect on the development of the country. Research has shown that, the performance of a construction project is tied to the concept of project success (Takim and Akintoye, 2009). For a project to be successful, it must be delivered on time, budget, and meet client's specification (Baker et al., 1974). This description of construction project success as evolved with time and numerous other researchers has added to the description of project success. For instance, Atkinson et al., (1997), added the performance of the stakeholders, evaluating their contributions and understanding their expectations as major criteria for describing project success. Furthermore, Wateridge (1998) indicated that, the benchmarks for a successful construction project is very wide and it includes coming to terms with the expectations of the stakeholder. However, one common assertion of all these researchers on project success was that, success is hard to define as the definition of project success is dependent on the perception of the stakeholder.

Many researchers in determining the success of a project focus on the construction phase as it is during this phase that the set goals like time, cost and quality become most significant. However, studies have shown that, cost performance is the most significant indication of project success (Frimpong et al., 2003; Olawale and Sun, 2010). There are numerous reasons why this assertion is regarded as accurate. Some of the reasons includes;

- (1) Cost performance gives an indication of the construction firms' profitability;

- (2) Cost performance shows the productivity of the organization at any point during the construction process (Rahman et al., 2013); and
- (3) Cost performance can always be seen in the project account and used to measure project performance.

Generally, the construction industry faces numerous cases of cost overruns. Angelo and Reina (2002) indicated that, cost overrun is a major problem facing both developed and developing countries like Ghana. One of the major causes of cost overruns is poor scope definition in construction projects. Project scope definition is a very significant task that requires inputs from all stakeholders to be adequately carried out at the early stage. The major aim of project scope definition is to provide adequate information that is required to identify the work to be performed in order to avoid major changes that may negatively affect project performance (Gibson et al., 2006). According to Kahkonen (1999), this information is required before deciding on whether or not to proceed with the project execution. Inefficient scope definition can lead to scope creep which indicates changes in the project scope and can affect the performance of a construction. However, it is worth knowing that, not all scope changes are necessarily scope creep. According to Nelson (2015), scope changes can be regarded as changes to the current project scope that are known and accepted by both the owner and contractor. These can be changes that are reimbursable, or changes that the contractor agrees to without compensation. Basically, both the owner and the contractor must be aware of the changes and their impact on cost, time and quality and agree to the consequences of the changes. On the other hand, scope creep can be described as an uncontrolled and unexpected changes in user expectations and requirement as the project progress (Neimat, 2005). Thus, scope creep occurs when one side is not aware of the changes, there is no agreement

by parties involved and/or there is no review or acceptance of potential impacts. These changes have potential effect on project performance.

Therefore, this study is been conducted to ascertain the effect scope creep on project performance in the Ghana Immigration Service.

1.2 STATEMENT OF THE PROBLEM

The construction industry is very crucial in the development of the country and every organization by the provision of infrastructural development (Rameezdeen, 2005). The construction industry also helps in the development of the economy as it generates revenue for the Government and creates employment for the citizens of the country. Most importantly, it plays a vital role in any development program in any country by constructing facilities. In Ghana, the construction industry provides an average of 14.8% of the Gross Domestic Product (GDP) (Ghana Statistical Service, 2015). Despite the various significance of the construction industry in Ghana, it faces a major issue of under-performance most importantly, cost overruns, time overruns and quality issues. Cost overrun does not only affect the profitability of construction projects for the contractor, it also affects the overall economy as a whole especially in public projects. In developing countries like Ghana, the problem of cost overrun is more severe where the cost overruns sometimes exceed 100% of the estimated cost of the project (Vaardini et al., 2016). Schedule overrun also affects the timely usage of a construction product which can affect the client's profit. Similar issues of cost overruns and time overruns are experienced in GIS projects.

This problem can be attributed to the ineffective definition of the scope of a project. Nelson (2015), indicated that, poor scope definition can lead to scope creep and subsequently lead to cost overruns, time overruns and other forms of construction underperformance. Bad planning where limited

attention is given to the Ghana Immigration Service (GIS) projects' scope management processes and haste in starting work which has not been properly planned can cause scope creep which may lead to cost overruns. A poorly defined scope of work must therefore be identified as a project risk in the very early stages of the project lifecycle (Oglesby, 1986). Poorly defined scope greatly affects the cost of GIS construction projects, primarily because of the uniqueness of each project and the limited resources of time and funds that can be spent on planning, executing and delivering the project.

Therefore, this study was conducted to ascertain the effect of scope creep on project performance in the Ghana Immigration Service.

1.3 AIM OF THE STUDY

The aim of this research is to explore the effect of scope creep on project performance in the Ghana Immigration Service.

1.4 OBJECTIVES OF THE STUDY

With regards to the aim of the study, three (3) objectives were established which were;

- (1) To identify the significant causes of scope creep in Ghana Immigration Service;
- (2) To identify the effect of scope creep on project performance in Ghana Immigration Service;
- (3) To identify the strategies to eliminate scope creep in Ghana Immigration Service.

1.5 RESEARCH QUESTIONS

In order to achieve a practical and credible conclusion, the research study was guided by the following questions:

- (1) What are the significant causes of scope creep in Ghana Immigration Service?
- (2) What are the effects of scope creep on project performance in Ghana Immigration Service?
- (3) What are the strategies to eliminate scope creep in Ghana Immigration Service?

1.6 SIGNIFICANCE OF THE STUDY

In USA, Britain, France and Germany, immigration matters have form basis of election and these countries have continued to reform immigration activities (Steve and Jim 2012). Even though Ghana has not reached this stage, immigration related issues is becoming a source of public agitations especially where migrants are involve in cross border crimes, human trafficking small scale mining leading to destruction of water and in business reserved for indigenes like retail trading. The public expects an efficient service rendered and quality service delivered which will have a positive effect on the nation as whole.

This study will help policy formulators in having a critical look at resources allocation to GIS. It would further help in establishing the relationship between scope, cost and time in construction projects and the performance of GIS. This will help in formulating strategies to improve performance. The study will help in effective procurement of the construction contracts and the management of these contracts. The study will also enhance the content of procurement documents for the selection of a competent contractor and that of contract documents in the management of these contracts.

This will impact positively on the performance of department responsible for the management of these projects in terms of achievement of plans and targets.

1.7 SCOPE OF THE STUDY

The study focused on building projects that have been undertaken over the last six years by Ghana Immigration service. The reason for this scope is that GIS grew significantly during this period and the projects are expected to have a higher impact on the Service around that period.

1.9 BRIEF METHODOLOGY

Only primary data was used for this study. The primary data for the study was obtained through distribution of questionnaires as well as direct personal interviews with people involved in project construction. In order to enrich the questionnaire for the research, a review of text books and journals were used to identify the various efforts that have been made in the past to evaluate and examine the effects of scope definition on cost and time schedules on construction projects. Simple statistical analysis involving tables graphs and percentages were used in analyzing the results from the questionnaire. Descriptive explanations were also employed in making the analysis more meaningful.

1.9 ORGANIZATION OF THE STUDY

The study is organized in five sections or chapters and the layout is as follows:

Chapter one (1), ‘Introduction’ introduces the study and includes the following: Background to the study, problem statement, objectives of the study, significance and justification of the study, and scope, organization of the study and brief methodology.

Chapter two (2), ‘Literature Review’ extensively reviews various literatures regarding project scope definition and its impact on construction projects, effects on cost and time of Immigration Projects and policies, roles and responsibilities of GIS, organizational structure, function of sections/unit/departments and the budgetary regimes and guidelines of the Public Sector of Ghana.

Chapter three (3), ‘Research Methodology’ discusses the methodology used for this research. It consists of the Research Design, Sampling Plan, Sample Population, Sampling method, Instrumentation, Mode of data collection, the unit of analysis and limitations.

Chapter four (4), ‘Analysis and Discussion of Findings’ presents the findings of the study.

Chapter Five (5) ‘Summary, Conclusions and Recommendations’ the final chapter and it presents a summary of major findings, conclusions and recommendations of the study.

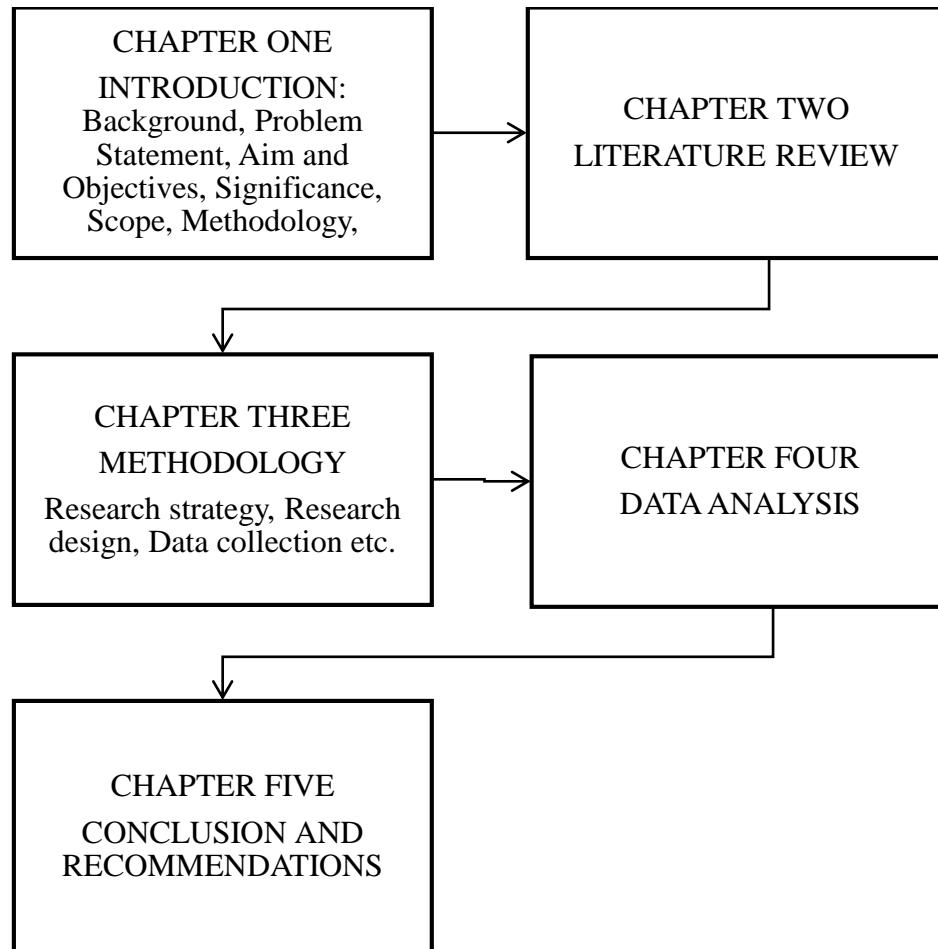


Figure 1.1: Structure of the report.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews literature pertaining to the scope definition and project performance. Literature review is a significant step in achieving the aim and objectives of a study. This review begins with a discussion of project performance followed by the concept of project scope. Subsequently, scope creep and its causes are discussed followed by the effect of scope creep on project performance. Lastly, a review is conducted on the strategies to eliminate scope creep in projects. This information aided in the development of the questionnaire to be answered by respondents at GIS.

2.2 OVERVIEW OF THE GHANAIAN CONSTRUCTION INDUSTRY

The construction industry plays a vital role in every country and Ghana is no exception. In Ghana, it contributes approximately 8.2% to the gross domestic product (GDP) (Owusu-Manu and Badu, 2011). There is a widespread culture of underperformance as majority of the major project in Ghana are awarded to very few large firms which are mostly foreign owned (Chileshe and Yirenkyi-Fiank, 2012). Ofori (2012), examined the challenges facing Ghanaian construction firms. In his research, he identified problems like the inability to secure adequate working capital, inadequate project management skills and poor workmanship as significantly affecting the progress of the Ghanaian construction industry. Badu and Owusu-Manu (2012), explained that, construction firms in Ghana find it difficult in accessing financing for projects, therefore, they normally opt for debt financing which usually is accompanied by high interest rates. Furthermore, delays in payment is a significant problem facing the Ghanaian construction industry. Adams (2008), postulated that, the delays in the payment of contractors for completed work are

very common and forms a major cause in the delays in the completion of projects in Ghana. Delays in construction projects may lead to high escalations in costs owing to high inflationary rates. It is therefore not surprising that, construction projects in Ghana recorded an average cost overrun of 60% to 180% (Kpamma and Adjei-Kumi, 2010). Also, there is a lack of commitment towards the health and safety of Ghanaian construction workers, who work in generally unsafe environments (Ankomah et al., 2010). According to Ofori-Kuragu (2013), the problems that affects the performance Ghanaian contractors includes poor access to credit, delays in payment, cumbersome payment process, bias in contract awards among others.

These problems facing the Ghanaian construction industry affects the performance of the industry especially in terms of project cost performance. However, the Ghanaian construction industry can draw useful lessons from the experiences of other countries (Ofori et al., 2012). Benchmarking against countries with better developed industry structures will provide guidance on the way forward in the struggle to achieve industry-wide organizational and project improvements in the Ghanaian construction sector.

Contractors in the Ghanaian construction industry in Ghana have been classified into four categories and classes by the ministry of works and housing, Construction projects up to \$75000 worth are handled by D4K4, projects within \$75000 -\$250000 are handled by D3K3, projects valued \$250000-\$500000 are handled by D2K2 and project valued \$500000 and beyond are handled by D1K1 (Frimpong and Kwesi, 2013). Majority of construction firms in the country are within the D4K4 and D3K3 classes (Oxford Business group, 2014). Most of the large firms in the country classified as D1K1 are foreign firms whereas the other classes are occupied by local Ghanaian businesses (Eyiah and Cook, 2003). The construction industry in Ghana is rigged with unprofessional practices even though it provides support to the economy and a means of

development socially (Asamoah and Decardi-Nelson, 2014). This has resulted in a lot of long standing and serious problems such as time and cost overrun, waste generation, striking negative impact to the surrounding environment and excessive intake of resources (Rahoim et al., 2014). Some of these delays resulting from dispute litigation and time overrun mostly result in the complete abandonment of projects (Sambas Ivan and Soon, 2007; Fugar, 2010), these delays are a major problem facing the Ghanaian construction industry (Fugar, 2010).

Contractors in the Ghanaian construction industry are categorized by the Ministry of Water Resources, Works and Housing which limits the value of works they can execute. This is shown in table 2.1.

Table 2.1: Categorization of Contractors in the Ghanaian construction industry

CATEGORY	VALUE OF WORK
D4K4	> \$75,000.00
D3K3	\$ 75,000.00 - \$ 250,000.00
D2K2	\$ 250,000.00 - \$ 500,000.00
D1K1	< \$ 500,000.00

Source: Frimpong and Kwasi, (2013)

An estimated value of over 1,600 building contractors are working in Ghana since October 2012 (Oxford Business Group, 2014). The construction industry is regarded as the spine of every economy (Rameezdeen, 2005). In Ghana, the industry creates revenue for the Government and also creates employment. Statistically, the construction industry provides an average of 10.5% of the Gross Domestic Product (GDP) and provides employment for about 6% of the Ghanaian population who are economically active (Ghana Statistical Service, 2007). According to Agyakwa-Baah, (2007), the Government of Ghana is the biggest client in our construction industry and thus

has a direct bearing on the Ghanaian economy. Also, the construction industry has a huge impact on other sectors like the manufacturing, mining, electricity and water sectors. The construction industry in Ghana has realized steady growth over recent years. According Agyakwa-Baah, (2007), the Ghanaian construction industry is regarded as one of the quickest developing sector with 7-8% average per year.

2.3 PROJECT PERFORMANCE

Project performance is synonymous to project success. A construction project is regarded as successful when it is completed on time, within budget and in accordance with the specifications (Omran et al., 2012). According Takim and Akintoye (2002), project success can also be measured based on functionality, profitability to contractor, absence of claims and court proceedings and “fitness for purpose” for occupiers. Furthermore, Atkinson et al. (1997), indicated that, a successful construction project is achieved when stakeholders meet their requirements, individually and collectively.

The success of a construction project depends largely on the quality of managerial, financial, technical and organizational performance of respective stakeholders. It also involves risk management, the business environment, economic and political stability. As the construction process is becoming more complex, a more sophisticated method is required to deal with initiating, planning, financing designing, approving, implementing and completing a project (Wang ,1994). Chan (1996), indicated that, an accurate construction planning is a key determinant in ensuring the delivery of a project on schedule and within budget.

Chan and Chan (2004) described construction schedule as the duration for completing a project. The schedule of a project is normally arranged to allow the building to be used by a date determined

by the client. Time is one of the major factors that is used to measure the success of a project (Swan and Khalfan, 2007). Kog et al. (1999), identified five (5) key factors affecting schedule performance. These are frequency of meetings, amount of time project manager devotes to the project, experience of project manager, monetary incentives to designers and implementation of constructability program. Salter and Torbett (2003) stated that, the easiest and common technique of measuring project success is by measuring the cost performance. The cost of project includes the cost from inception to completion and not only the tender sum. Project cost performance usually arise from comprehensive site investigation aided in profound efficient planning which successively clarify the scope. The difference between the actual cost of project and the budgeted cost of project is called the cost variance and it is a good measure of project success (Georgy et al. 2005).

The overall cost of a construction project is affected by the contractor's ability to effectively plan resources, estimate, budget and control cost (Gyadu-Asiedu et al., 2013). According to Chua et al. (1997), cost performance is an important criterion for construction project success. However, the same can be said for construction schedule performance. Cost and time are the two major goals of construction project which receive relatively more attention than quality (Laufer and Tucker, 1987). Furthermore, they indicated that, between cost and time, formal planning effort of most construction firms has been basically focused on time planning and to a lesser extent on resource allocation and its cashflow implications. The extra focus of schedule performance may be due to the severe implications of schedule overruns on both the contractor and the client (Hulett, 1995). However, studies have shown that, cost performance is the most significant indication of project success (Frimpong et al., 2003; Olawale and Sun, 2010). It presents not only the firm's profitability but also the productivity of organizations at any point during the construction processes. Poor cost

performance of construction projects has been a prime concern for both contractors and clients. Notwithstanding the numerous cases reported, it seems that construction ranging from simplest to more complex projects have increasingly faced cost overruns. Chua et al. (1997), identified eight (8) key management factors that affect budget performance which includes organizational levels between project manager and artisan, project manager's experience, level of design completion at the start of the project, constructability program, project team workmanship rate, frequency of control meetings, frequency updates and control system budgets.

According to Serpell and Alarcon (1998), quality performance can be considered as a function of the procedures adopted during the construction process. Quality is a very significant component of sustainability and customer satisfaction. In construction projects, quality performance of contractors is considered as vital for client satisfaction. Barret (2000), described quality as the satisfaction of a whole range of performance criteria held by an interacting host of stakeholders and mediated by a range of mechanisms. A quality improvement effort will lead to higher product and service quality, which will lead to improved customer satisfaction (Trobica and Stroh, 2001). The same authors indicated that, the implementation of TQM is positively associated with homebuyer satisfaction and it is the total offering that generates the total degree of customer satisfaction. In 2001, Torbica and Stroh indicated that, the use of customer satisfaction in construction as a performance criterion is at its infancy stage.

The assessment of performance in construction generally focuses on a limited number of performance criteria related to the product. These include, completing the project on time, within budget and with required quality. According to Maloney (2002), the process of constructing a project produces neither a pure product nor a pure service but may be considered a hybrid process consisting of both product and service components. Al-Momani (2000), postulated that, the lack

of attention dedicated to client's satisfaction undoubtedly contributes to poor performance in current construction practices. He further indicated that, the occurrence of technical failures is minute compared to the client's dissatisfactions. It is possible to have dissatisfied clients even when performance criteria like time, cost have been successfully achieved (Torbica and Stroh, 2001). According to Yasamis et al. (2002), clients expect contactors to provide the highest quality in every dimension of the services they receive. Therefore, thoroughly identifying clients' hierarchy of needs is becoming even more important and even a prerequisite for success in construction industry nowadays. In a market driven society, it is common for construction stakeholders, especially those at the lower end of the supply chain, to concentrate exclusively on completing projects to the required quality standard within the minimum time and cost.

Safety is therefore seen as a secondary concern.

The lack of motivation in fostering a safety culture at both organizational and project levels has resulted in a poor safety record in general. It is therefore no surprising that, the construction industry is regarded as one of the most hazardous industries in the World (Sawacha et al., 1999). Basically, the safety on construction sites is linked with historical, economical, psychological, technical, procedural, organizational and work environment issues (Naoum et al., 1999). The establishment of safety systems, safety practice and procedures, monitoring of safety compliance, establishment of safety committees at site level, communication of safety policies to site personnel, participation of safety officers, consultation between site staff and safety officers also affect the safety performance (Wong et al., 1999). The success of a construction project depends on several factors. One of the most significant factors is the competencies of the project manager. International Project Management Association (IPMA), defined competence as knowledge,

experience and personal attitude. Knowledge and experience related to function and attitude which related to behavior (IPMA, 2002).

2.3 PROJECT SCOPE

According to PMBOK (2013), “Project Scope” refers to a project’s boundaries which determine what work will be completed during the project lifecycle. Also, it includes identifying the work that will not be included in the current round of product/service development. Project scope can also be defined as all the features and functions that are to be included in a product or service (PMI, 2000). The scope of a project forms part of the macro category of project success criteria as it starts at the conception stage to operating stage. Thus, project scope describes the totally of a project. Many researchers have indicated the significance of project scope in the achievement of project success (Collins and Baccarini (2004); Ward (1995); Kerzner (2006)) According to Muhammad et al. (2013), a major contribution to unsuccessful projects is the lack of understanding of project scope. The authors published an article on the significance of scope in project success which indicated that, project scope is a measurable criterion for ascertaining project success. Thus, project scope can be linked with the definition of project success. Stakeholders are mostly responsible for defining project scope therefore, it is very prudent to involve them at the early stages of the project (Muhammad et al., 2013). Effective communication with project stakeholders and frequent monitoring and feedback will eradicate the possibility of scope creep which affects the performance of projects.

The construction industry is a complex and critical industry. It involves a set of activities involving a lot of people over a long period. The time and cost required to complete a new development is dependent on the duration of a number of activities and the way the activities relate with each

other. The dimensions of a project are determined by the capacity of the project (features, degree of innovation and performance), and the scope of the project.

Scope has two elements, the choice of new systems and or conventional systems of completing projects. Using new methods may affect the time required to complete the project. The scope of a project has direct impact or effect on performance. According to PMBOK Guide, how a project performs with respect to the triple constraint, which include the scope is the main objective of project performance analysis. PMBOK Guide further defined project scope as the features and functions that characterize a project. A primary problem associated with project scope is the scope creep, which is the loose expansion of project scope without adjustments to time, cost and resources.

2.4 SCOPE CREEP

During the planning process, outputs are created to capture and define the work that needs to be completed. The controlling and monitoring process are concerned with managing scope creep, documenting, tracking, and approving/disapproving project changes. Finally, the closing process includes an audit of project deliverables and assesses the outcomes against the original plan. Scope is about product scope and project scope. Project scope includes business requirements, project requirements and delivery requirements. Product scope includes technological requirements, security requirements

and performance requirements. On the other hand, the term “Scope Creep” generally refers to jeopardizing scope of work by uncontrolled changes. PMI (2013), postulated that creep towards and into the project scope causing continuous, but distorted, growth of the project’s scope. It is the gradual expansion of project work without formal acceptance or acknowledgement of their associated costs, schedule impacts or other effects.

Groff and Jones (2003), described scope creep as a situation in which project goals are altered so often that the work no longer resembles the original project commitment. Furthermore, Dibble (2001), mentioned that, the context, the objectives, the function and the performance make up the scope. Scope creep is the expansion of this scope. On the other hand, Melton and Iles-Smith (2009), described scope creep as “the incremental change of scope overtime. There are a number of causes and effects of scope creep in the construction industry. These are discussed in subsequent sections.

2.4.1 Causes of scope creep

A number of authors have indicated that, scope creep occurs when the planning phase is not completely done (Schwalbe, 2006; Shapiro and Lorenz, 2000 and Ubani et al., 2015). Some of the researchers indicated that, if the objectives of the project are not fully defined, at the early stages of a project, then the project may exceed its budgeted cost and schedule. Similarly, if the Work Breakdown Structure (WBS) is not properly defined, it can affect the final cost of a project. Scope creep may also be caused by the poor definition of resource requirements and the lack of funding. Also, scope creep can be caused by factors that occur during the construction stage of a project. For instance, poorly documented changes to a project specification. It is very significant to acknowledge the interdependencies among the different modules as the participants of the project get new ideas about how the product should be offered. Kerzner, (2012), indicated that, scope creep may be caused by poor definition as discipline steps for project management. Also, Moneke, (2015) indicated other factors that cause scope creep like poor understanding of project requirements. The increase in scope will come as a surprise during the execution phase of a project if the client's requirements are not adequately captured in the planning phase of a project. Also, lack of change control contingency plan, lack of knowledge of the technical complexities of a project and the lack of formal communication. The complexity of a project considers the technical

issues associated with the project. Turk (2010), indicated that, scope creep may be caused by internal changes by development team. The same author identified the changes in market needs as significant cause of scope creep. The causes of scope creep are summarized in table 2.1.

Poor definition of the scope of work is a frequent cause of scope creep. The scope definition should be the owner's responsibility and sometimes the owner does not have the required experience to define it. When the contractor's price items become out of original project scope, they usually use "reservation of rights" language to allow themselves the opportunity to make future claims for additional time or money to complete the project.

Incomplete drawings and specifications are one of sources of scope creep in construction projects. Incomplete drawings and specifications result in uncertainties in the work which generally lead to remedial work prior to completion and an increase in the number of changes in the work. Increased changes in a construction project generally reduce productivity and performance, and increase the chances of scope creep.

Inadequate government policy which encourages low evaluated tenders is an important cause of scope creep as it usually leads to many problems due to inefficiency of contractors.

Design and specification errors resulting from uncoordinated civil, structural, architectural, mechanical and electrical designs does occur frequently on projects. Some contractors in Egypt rarely have sufficient time to thoroughly scrutinize the entire tender documents during the hectic process of tendering. In most

cases, the contractor may uncover only the most glaring drawing mistake at tender time and surprisingly would not find any minor or major discrepancies until the construction is underway.

Late payments by clients to contractor or any other worker can severely hinder the work progress of any project making it a source of scope creep. Delay in progress payments and final payments affect the cash flow of contractors and ultimately affect the project as a whole as many contractors are not able to continue with the execution of the project.

Table 2.1: Causes of scope creep

S/N	Causative factors of scope creep
1	Lack of definite procedure for project management
2	Lack of formal communication plan
3	Unavailability of formal risk analysis and planning process
4	Inability to manage stakeholders
5	Incompetent project manager
6	Lack of knowledge and poor understanding of product versatility and technical complexities
7	Lack of change control contingency plan
8	Force majeure
9	Poor understanding of customer's requirements prior to project scope definition
10	Internal changes by development team
11	Poor quality of Work Breakdown Structure
12	New ideas or market needs
13	Complexity of governance
14	Delays over the project life time

Source: Moneke and Echeme, (2016).

2.4.2 Effects of scope creep

The effects of scope creep will be discussed using real life case studies. In a study carried out by Sheikh and Khan (2015), on the successful completion of an underpass (tunnel and a cross-over bridge) on the Mall road in Lahore, Pakistan, special attention was paid to the definition and management of the project scope. The Secretary, communication and work clearly understood the implication of scope creep on the triple constraint: performance, cost and time. Therefore, he made sure that scope was clearly defined and there was no scope creep during the execution of the project. Thus, the occurrence of scope creep in the project would have affected the project cost and schedule and quality of delivered product.

In a similar case, a study conducted by Smith and Tucker (1984), on a large petroleum refinery plant project, they found that poor scope definition for major segments of the project had the greatest negative impacts on cost and schedule. It is therefore noteworthy that poor scope definition and management result to scope creep and for project to be successful, inherent probable causes of scope creep should be identified, evaluated and mitigated so as to provide avenue for clear scope and work definitions. Scope creep can lead to disputes among the project stakeholders as the contract conditions may not cover the definition.

Pinto and Slevin (1988), found that a clear mission or scope statement is a predictor of more than 50 percent of project success in the concept, planning and execution stages of projects. Similarly, Ashely et al. (1987), found that outstanding successful projects exhibited clear scope and work definitions. However, in case some additional features and functionalities are added to the project beyond those defined in project scope and without addressing the effects on resources, costs and time; it will mean dealing with scope creep. Scope creep affects project quality and impacts the proportion of high severity defects, which results in product

quality deterioration.

2.6 STRATEGIES TO ELIMINATE SCOPE CREEP

The following factors were identified by Nabet et al. (2006), as the strategies to curb scope creep.

These factors are discussed below;

2.6.1 Adequate contract documentation

A contract document which is adequate, accurate and consistent throughout saves construction time, facilitates the effective utilization of contractor's resources and prevents disputes due scope creep. Proper planning and careful review of project plans and specifications can substantially minimize the likelihood of scope creep and provide basis for timely resolution of any problem that may occur.

2.6.2 Selection of an appropriate project delivery method

During the pre-award phases, scope creep can be avoided if the developer and his project Management team ensure that they had four major success keys in their defensive plan against scope creep. Those keys are:

1. Well Defined Scope;
2. Complete Design;
3. A Proper Delivery System; and
4. Contracting method for the relevant construction project.

2.6.3 Communicating potential problems at early as possible

The longer a potential problem is allowed to go on the more likely it is to escalate and the less likely the matter will be resolved without a dispute. Construction projects rarely are completed without encountering some problems not anticipated or anticipated by the client, consultant or the contractor such as errors in the construction plans, site conditions differing from

what were expected and so on. As a result, giving an advance warning of a potential problem has an advantage of avoiding surprise by the other side and enables the parties at the earliest opportunity to consider solutions to avoid or minimize the impact of any potential problem.

2.6.4 Setting expectations correctly at the beginning of a project;

Create a realistic goal that allows sufficient time for key tasks to be accomplished. Adequate selection and involvement of stakeholders are absolutely essential to the success of any project. Failure to do so can quickly send your project careening, not just creeping, away from the original scope of the project. The following guidelines are very significant during stakeholder involvement:

1. Identify all of the project's stakeholders at the beginning of the project;
2. Involve the stakeholders at the earliest possible stage of the project;
3. Include the stakeholders in the information gathering as well as decision making process;
4. Obtain buy-in from the stakeholders on the project's requirements and project plan.

Other factors include proper risk allocation, establishment of a robust change management process, Selection of an appropriate project delivery method; and setting up of a dispute review board at the early stages of a project.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter discusses the strategies and steps needed to conduct this research. The methodological approaches adopted for this research aided in the achievement of the aim and objectives stipulated in the study. The aim of the research is to ascertain the effect of scope creep on project performance in the Ghana Immigration Service. In this chapter, the research design and research approach are thoroughly discussed. Furthermore, the research strategy and research method used are discussed. Also, the population, sample size and sampling technique adopted are discussed in this chapter. Thus, this chapter gives full details of the procedures utilized in this study.

3.2 RESEARCH DESIGN

According to Spencer-Oatey (1993), the research design stipulates the procedures employed to answer the research questions. Research design basically discusses what is going on and why it is going on. This gives rise to the two (2) types of research design namely; descriptive research design and explanatory research design.

The descriptive research design discusses what is going on. It comprises of a methodical and accurate description of facts and characteristics of a given population. On the other hand, the explanatory research design discusses why it is going on (De-Vaus, 2001). This includes the development of causal explanations which relies on the fact that, one theory is affected by other factors.

For the purpose of this study, the descriptive research design was adopted. This study wants to ascertain the effect of scope creep on project performance in the Ghana Immigration Service.

Therefore, the descriptive research design is most suitable for this study as a vivid description of the effects of scope creep was provided.

3.3 RESEARCH STRATEGY

The research strategy adopted for this study is purely quantitative. Bryman (2004), indicated that, the quantitative research is concerned with the measurement and collection and analysis of data. Quantitative research normally deals with numerical data. However, Agbodjah (2008), indicated that, the nature of quantitative research strategy in terms of its epistemological and ontological features makes it more than a mere presentation of numbers. The quantitative research strategy can also be described as a situation where the researcher employs a post-positivist claim in an investigation to develop knowledge and explore relationships among variables in terms of hypothesis or research questions, postulating objectivity as a hallmark requiring validity, reliability and exclusion of bias (Creswell, 2003). The quantitative research strategy best fits for this study as it mainly involves providing answers to questions relating to what, how much, how many etc., which involves measurement (Bryman, 2004).

3.4 RESEARCH APPROACH

Creswell (2013), defined a research approach as the procedures adopted for a research from the stage of general assumption to the stage of data interpretation. There are basically two forms of research approach. These are the deductive research approach and the inductive research approach. The deductive research approach concentrates on what is known already. They include existing theories or ideas about a concept through identification and testing of a theory through observation to confirm the theory (Ofori-Kuragu, 2013). The deductive research approach involves a top-down approach in the formulation of the theory and testing of hypothesis with no influence from the researcher.

On the other hand, the inductive research approach is basically adopted in theory building. Theory building begins with the study of specific instances of issues through the identification and development of patterns from the analysis of data gathered (Ofori-Kuragu, 2013). The inductive research approach adopted the down-up approach where the study concentrates on specific issues to the broad generalization of specific situation. In most situations, the qualitative research strategy is employed for such studies.

3.6 POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE

Data collection is a very important aspect of a social research. It aids the researcher to make inferences by comparing the opinion of the respondents to that of literature. This section discusses the data collection process by introducing the population of the study, the sample size and the sampling technique.

The population for this study is construction firms who have worked with the Ghana Immigration service since 2012. The reason for this scope is that GIS grew significantly during this period and the projects are expected to have a higher impact on the Service around that period. From the data collected from GIS, thirty-one (31) different construction firms have worked for GIS since 2012. The census survey was used for this study. With the census survey, all the members of the population were contacted for information. Therefore, thirty-one (31) questionnaires were distributed and all the thirty-one (31) were retrieved.

3.7 ETHICAL CONSIDERATION

Ethical considerations are very important in the execution of any research. The following ethical considerations were deemed useful in this study.

1. High degree of respect for the dignity of the research participants;
2. Protection of privacy and confidentiality; and

3. Full consent should be sort from research participants.

3.8 SOURCE OF DATA

There are two (2) basic forms of data namely; primary data and secondary data. Hox and Boeije (2005), described primary data as the data collected for a specific research problem. Primary data are collated by the researcher as such data may not be available. Therefore, the collection of primary data implies that, new data are added to existing store of social knowledge that are made available for use to the general research community. Hox and Boeije, (2005) indicated that, when collected data (primary data) are reused by other researchers, it is then called secondary data. These data may be used for the description of contemporary and historical attributes comparative research or replication of an original research, reanalysis; research design and methodological advancement and teaching and learning. For the purpose of this research, only primary data was utilized.

3.9 QUESTIONNAIRE DEVELOPMENT AND ADMINISTRATION

Questionnaire is a very important tool in the collection of data from research participants. For the purpose of this study, a structured questionnaire with two (2) sections were used in the collection of data from the respondents.

The first section of the questionnaire concentrated on the background of the respondents. In the section A, the respondents were asked to indicate the type of construction they are involved in, their category in the construction industry, their years of experience and their highest level of education.

The section B was based on the objectives of the research. The respondents were asked to indicate the significance of the causes of scope creep in GIS. They were to rate the factors using the five-point Likert scale of 1 = Not significant, 2 = Slightly significant, 3 = Moderate, 4 = Significant and 5 = Very significant. The second question in section B focused on the objective two of the

study. In this section, the respondents were asked to indicate the severity of the effects of scope creep using the five-point Likert scale of 1 = Not severe; 2 = Slightly severe; 3 = Moderate; 4 = Severe; 5 = Very severe. Finally, the third question concentrated on the objective three (3) of the study. It was designed to indicate the significance of the strategies to eliminate scope creep in GIS. The respondents did the rating using the five-point Likert scale of 1 = Not significant, 2 = Slightly significant, 3 = Moderate, 4 = Significant and 5 = Very significant.

With this questionnaire, it was self-administered to all the respondents in as the census survey was utilized. In all, thirty-one (31) questionnaires were administered all were retrieved.

3.10 DATA ANALYSIS

Prior to the data analysis, the questionnaires were checked for completeness. From the check, two (2) of the questionnaires were rejected because some of the questions were not answered. Therefore, twenty-nine (29) questionnaires qualified to be analyzed. The answers to the questions were coded in the Statistical Package for Social Science (SPSS) version 20 and analyzed using frequencies and the Relative Significance Index (RSI) formula. The RSI formula is given by:

$$RSI = \frac{\sum W}{A \times N}$$

Where; **W** = **weightings**

A = **highest rating**

N = **sample size**

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

This chapter analyze and discuss data collected from the respondents. Twenty-nine (29) questionnaires were analyzed in order to aid in the achievement of the aim of the study. The analysis began with the background of the respondents. This was analyzed using frequencies. From there, the various objectives of the study was analyzed using the Relative Importance Index (RII). The outline of this chapter includes the demographics, causes of scope creep, effects of scope creep, strategies to eliminate scope creep and the chapter summary.

4.2 DEMOGRAPHICS

This section analyzed the background of the respondents. The respondents were asked to indicate the construction type they are involved in, their contractor category, their years of experience and level of education. Their responses are discussed in subsequent sections.

4.2.1 Construction type

The respondents were asked to indicate the type of construction they are involved in. The options included whether they were involved in building construction or civil construction. From table 4.1, it can be seen that, nineteen (19) of the respondents were into building construction whiles ten (10) of the respondents were into civil construction.

Table 4.1: Construction type

Variable	Frequency	Percentages
Building	19	65.52
Civil	10	34.48
Total	29	100.00

Source: Field survey, (2018).

4.2.2 Construction category

The respondents were also asked to indicate their construction category with the options being DIK1/A1B1, D2K2/A2B2, D3K3/A3B3 and D4K4/A4B4. From table 4.2, it can be seen that, three (3) of the respondents were D1K1/A1B1, eighteen (18) of the respondents were D2K2/A2B2, eight (8) respondents were D3K3/A3B3 and none of the respondent was D4K4/A4B4.

Table 4.2: Construction category

Variable	Frequency	Percentages
D1K1/A1B1	3	10.34
D2K2/A2B2	18	62.07
D3K3/A3B3	8	27.59
D4K4/A4B4	0	0.00
Total	29	100.00

Source: Field survey, (2018)

4.2.3 Years of experience

Furthermore, the respondents were asked to indicate their number of years of experience. This aided the researcher in ascertaining the depth of the respondent's knowledge in the subject matter

thereby giving an indication of the reliability of the responses. From table 4.3, it can be realized that, majority of the respondents were having 6-10 years of experience.

Table 4.3: Years of experience

Variable	Frequency	Percentages
Below 5 years	4	13.79
6-10 years	17	58.62
11-15 years	5	17.24
16-20 years	2	6.90
Above 20 years	1	3.45
Total	29	100.00

Source: Field survey, (2018)

4.2.4 Level of education

The respondents were asked to indicate their highest level of education. Similarly, with their level of experience, their educational level gives an indication of how their level of knowledge of the subject matter. From table 4.4, it can be realized that, nineteen (19) of the respondents had Bsc whiles ten (10) of the respondents were postgraduates. None of the respondents had an HND degree.

Table 4.4: Level of education

Variable	Frequency	Percentages
HND	0	0.00
BSC	19	65.52
Postgraduate	10	34.48
Total	29	100.00

Source: Field survey, (2018)

4.3 RELIABILITY ANALYSIS

The reliability of the opinion given by the respondents was examined using the Cronbach's alpha test. Reliability can be simply described as the correlation of test with itself (Tavakol and Dennick, 2011). The Cronbach's alpha measures the internal consistency of variables based on the opinion of the respondents expressed as a number between 0 and 1 (Tavakol and Dennick, 2011). The same authors described internal consistency as the extent to which all variables measure the same construct. The Cronbach's alpha for this survey was 0.768. Researchers have reported on acceptable values of Cronbach's alpha ranging from 0.700 to 0.950 (Nunnally and Bernstein, 1994; Bland and Altman, 1997; DeVellis, 2003). Tavakol and Dennick (2011), indicated that, a low alpha value may signify poor correlation between variables and must be revised or discarded. On the other hand, if alpha value is too high, it may signify redundancy of some variables therefore, Tavakol and Dennick (2011), suggested a maximum alpha value of 0.900. Hence, the Cronbach Alpha of 0.768 for this survey was regarded as satisfactory.

4.4 CAUSES OF SCOPE CREEP

As part of achieving the first objective, literature was reviewed on the causes of scope creep. This aided in the development of a question that required that, the respondents indicate the significance of the causes of scope creep in GIS. They were to rate the factors using the five-point Likert scale of 1 = Not significant, 2 = Slightly significant, 3 = Moderate, 4 = Significant and 5 = Very significant.

From their responses, incompetent project manager was ranked first with RII value of 0.821. This was followed by lack of change control contingency with RII value of 0.802. The third ranked factor was delays over the project life time with RII value 0.798.

Selecting an incompetent project manager for the works is a significant cause of scope creep as indicated by the respondents. An incompetent project manager will find it very difficult to effectively manage the scope of the project. Furthermore, other management processes that aids in the effective control of the scope of the project will be lacking in his arsenal. This may lead to the occurrence of scope creep in the project. Also, if the project team has a poor change management and control, it will be difficult to effectively manage the scope of the project and consequently lead to scope creep. Unexpected delays in the lifespan of the project which may arise from the client or consultant may eventually lead to scope creep. A major cause of delay is late payments by clients. Late payments by clients to contractor can hinder the progress of the work making it a source of scope creep. Over a long period of time, projects may take new forms and shape.

Table 4.5 Causes of scope creep

DESCRIPTION	RII	RANK
Incompetent project manager	0.821	1 ST
Lack of change control contingency plan	0.802	2 ND
Delays over the project life time	0.798	3 RD
Poor understanding of customer's requirements prior to project scope definition	0.780	4 TH
Lack of knowledge of technical complexities	0.768	5 TH
Inability to manage stakeholders	0.684	6 TH
Lack of definite procedure for project management	0.672	7 TH

Unavailability of formal risk analysis and planning process	0.670	8 TH
Internal changes by development team	0.667	9 TH
Lack of formal communication plan	0.645	10 TH
New ideas or market needs	0.620	11 TH
Complexity of governance	0.600	12 TH
Poor quality of Work Breakdown Structure	0.592	13 TH
Force majeure	0.588	14 TH

Source: Field survey, (2018)

4.5 EFFECTS OF SCOPE CREEP

As part of achieving the second objective, literature was reviewed on the effects of scope creep. This aided in the development of a question that required that, the respondents indicate the severity of the effects of scope creep using the five-point Likert scale of 1 = Not severe; 2 = Slightly severe; 3 = Moderate; 4 = Severe; 5 = Very severe.

From they response, construction cost overrun was ranked first with RII value of 0.768. This was followed by delays in project delivery which was ranked second with RII value of 0.732. Disputes among stakeholders was ranked third with RII value of 0.700.

(6) acknowledged that, scope creep can lead to both cost overruns and delays in project delivery. A perfect case described by (7) also shown, scope creep can be a perfect source of dispute among stakeholders. Additional features added to the scope of a project without addressing issues of resources, cost and time may create misunderstandings among the stakeholders of a project.

Table 4.6: Effects of scope creep

DESCRIPTION	RII	RANK
Construction cost overruns	0.768	1 ST
Delays in project delivery	0.732	2 ND
Disputes among stakeholders	0.700	3 RD
Affects contractor's reputation	0.666	4 TH
Poor quality of project delivery	0.643	5 TH
Loss of customer goodwill	0.620	6 TH

Source: Field survey, (2018)

4.6 STRATEGIES TO ELIMIANTE SCOPE CREEP

As part of achieving the third objective, literature was reviewed on the strategies to eliminate scope creep. This aided in the development of a question that required that, the respondents indicate the significance of the strategies to eliminate scope creep in GIS. The respondents did the rating using the five-point Likert scale of 1 = Not significant, 2 = Slightly significant, 3 = Moderate, 4 = Significant and 5 = Very significant. From their responses, selection of a competent contractor and consultant was ranked first with RII value of 0.724. This was followed by the establishment of a robust change management process with RII value of 0.708. The last ranked factor was setting expectations correctly at the beginning of a project with RII value of 0.680.

At the beginning of a construction project, it is crucial to establish realistic goals that allows sufficient time for key tasks to be accomplished. At this stage, it is very crucial to involve stakeholders and failure to do so can lead to the project creeping away from its original scope.

Table 4.7: Strategies to eliminate scope creep

DESCRIPTION	RII	RANK
Selection of competent consultants and contractors;	0.724	1 ST
Establishment of a robust change management process	0.708	2 ND
Setting expectations correctly at the beginning of a project;	0.680	3 RD
Selection of an appropriate project delivery method	0.676	4 TH
Communicating potential problems at early as possible	0.642	5 TH
Proper risk allocation;	0.612	6 TH
Adequate contract documentation;	0.582	7 TH
Setting up of a dispute review board at the early stages of a project	0.578	8 TH

Source: Field survey, (2018)

4.7 SUMMARY OF CHAPTER

The aim of this research is to ascertain the effect of scope creep on project performance in the Ghana Immigration Service. With this aim three (3) objectives were set. An extensive literature review was conducted based on the objectives which lead to the development of a structured questionnaires. The questionnaire was distributed to thirty-one (31) respondents. However, twenty-nine (29) questionnaires qualified to be used for the analysis. With the first objective, incompetent project manager was ranked first with RII value of 0.821. This was followed by lack of change control contingency with RII value of 0.802. The third ranked factor was delays over the project life time with RII value 0.798. With the second objective, construction cost overrun was ranked first with RII value of 0.768. This was followed by delays in project delivery which was ranked second with RII value of 0.732. Disputes among stakeholders was ranked third with

RII value of 0.700. With the last objective, selection of a competent contractor and consultant was ranked first with RII value of 0.724. This was followed by the establishment of a robust change management process with RII value of 0.708. The last ranked factor was setting expectations correctly at the beginning of a project with RII value of 0.680.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter concludes the execution of the entire study by providing a summary of findings, conclusion and making recommendations. The aim of this research is to ascertain the effect of scope creep on project performance in the Ghana Immigration Service. With this aim three (3) objectives were set which were to identify the significant causes of scope creep in Ghana Immigration Service, to identify the effect of scope creep on project performance in Ghana Immigration Service and to identify the strategies to eliminate scope creep in Ghana Immigration Service. An extensive literature review was conducted based on the objectives which led to the development of a structured questionnaires. The questionnaire was distributed to thirty-one (31) respondents. However, twenty-nine (29) questionnaires qualified to be used for the analysis. The data was analyzed using RII. The findings are summarized below.

5.2 SUMMARY OF FINDINGS

With the first objective, the respondents were asked to indicate the significance of the causes of scope creep in GIS. They were to rate the factors using the five-point Likert scale of 1 = Not significant, 2 = Slightly significant, 3 = Moderate, 4 = Significant and 5 = Very significant. From the analysis, incompetent project manager was ranked as the most significant cause of scope creep with RII value of 0.821. This was followed by lack of change control contingency with RII value of 0.802. The third ranked factor was delays over the project life time with RII value 0.798.

With the second objective, the respondents were asked to indicate the severity of the effects of scope creep using the five-point Likert scale of 1 = Not severe; 2 = Slightly severe; 3 = Moderate; 4 = Severe; 5 = Very severe. From the analysis, construction cost overrun was ranked as the most

severe effect of scope creep with RII value of 0.768. This was followed by delays in project delivery which was ranked second with RII value of 0.732. Disputes among stakeholders was ranked third with RII value of 0.700.

With the last objective, the respondents were asked to indicate the significance of the strategies to eliminate scope creep in GIS. The respondents did the rating using the five-point Likert scale of 1 = Not significant, 2 = Slightly significant, 3 = Moderate, 4 = Significant and 5 = Very significant. From the analysis, selection of a competent contractor and consultant was ranked as the most significant strategy with RII value of 0.724. This was followed by the establishment of a robust change management process with RII value of 0.708. The last ranked factor was setting expectations correctly at the beginning of a project with RII value of 0.680.

5.3 CONCLUSIONS

The study demonstrated that, scope creep can lead to cost overruns, schedule overruns and the overall performance of the project. The scope of a project forms part of the macro category of project success criteria as it starts at the conception stage to operating stage. Thus, project scope describes the totality of a project. Many researchers have indicated the significance of project scope in the achievement of project success. The success of a construction project depends largely on the quality of managerial, financial, technical and organizational performance of respective stakeholders. It also involves risk management, the business environment, economic and political stability. As the construction process is becoming more complex, a more sophisticated method is required to deal with initiating, planning, financing designing, approving, implementing and completing a project. It is therefore very necessary to develop strategic measures to deal with scope creep and improve the smooth execution of projects. From the study, it was realized that, the most severe cause of scope creep is the selection of an incompetent project manager. Also, the lack of

change control contingency plan significantly causes scope creep. From these findings, recommendations were made as described in the next section.

5.4 RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made;

The client and his advisor must endeavor to select an appropriate project manager for the execution of the project.

Also, during the pre-award phases, scope creep can be avoided if the developer and his project Management team ensure that the scope is well defined, the design is complete, a proper delivery system is selected and a suitable contracting method for the relevant construction project.

Create a realistic goal that allows sufficient time for key tasks to be accomplished. Adequate selection and involvement of stakeholders are absolutely essential to the success of any project. Failure to do so can quickly send your project careening, not just creeping, away from the original scope of the project.

5.5 LIMITATIONS

The following are the limitations of the study;

1. This study was limited to the Ghana Immigration Service (GIS) construction projects.
2. The study was limited to construction firms who have worked with the Ghana Immigration Service (GIS) since 2012.

5.4 FURTHER STUDIES

There is an open avenue to quantify the impact of scope creep on project performance criteria (cost, time, quality) using the multiple regression analysis

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APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY COLLEGE OF ART AND BUILT ENVIRONMENT DEPARTMENT OF BUILDING TECHNOLOGY

SURVEY QUESTIONNAIRE

TOPIC: “A STUDY OF THE EFFECT OF SCOPE CREEP ON PROJECT PERFORMANCE IN GHANA IMMIGRATION SERVICE (GIS) CONSTRUCTION PROJECTS”

SECTION A

RESPONDENT'S PROFILE

1. Please indicate the type of construction your company is involved in.

☐ Building construction

☐ Civil construction

Other; Please specify

2. Please indicate your category in the Construction industry?

☐ D1K1/A1B1

☐ D2K2/A2B2

☐ D3K3/A3B3

☐ D4K4/A4B4

Other; Please specify

3. Please indicate your years of experience in your profession?

☐ Below 5 years

☐ 6-10 years

☐ 11-15 years

☐ 16-20 years

☐ Above 20 years

4. What is your highest level of education?

☐ HND

☐ BSc

☐ Post Graduate

Other; Please specify.....

SECTION B

OBJECTIVE ONE: CAUSES OF SCOPE CREEP

1. Please indicate the **SIGNIFICANCE** of the following causes of scope creep in GIS using the scale below:

1 = Not significant 2 = Slightly significant 3 = Moderate 4 = Significant 5 = Very significant

Variables	1	2	3	4	5
Lack of definite procedure for project management					
Lack of formal communication plan					
Unavailability of formal risk analysis and planning process					
Inability to manage stakeholders					
Incompetent project manager					
Lack of knowledge of technical complexities					
Lack of change control contingency plan					
Force majeure					
Poor understanding of customer's requirements prior to project scope definition					
Internal changes by development team					
Poor quality of Work Breakdown Structure					
New ideas or market needs					
Complexity of governance					
Delays over the project life time					
<i>If other, please specify</i>					

OBJECTIVE TWO: EFFECTS OF SCOPE CREEP

The following are the various effects of scope creep;

Please indicate the **SEVERENESS** of these variables on construction project performance in GIS.

Please use the response scale below:

1 = Not severe 2 = Slightly severe 3 = Moderate 4 = Severe 5 = Very severe

No.	Variables	1	2	3	4	5
1	Delays in project delivery					
2	Construction cost overruns					
3	Disputes among stakeholders					
4	Poor quality of project delivery					
5	Loss of customer goodwill					
6	Affects contractor's reputation					
	<i>If other, please specify</i>					

OBJECTIVE THREE: STRATEGIES TO ELIMINATE SCOPE CREEP

Please indicate the **SIGNIFICANCE** of the following strategies to eliminate scope creep on GIS.

Please use the response scale below:

1 = Not significant 2 = Slightly significant 3 = Moderate 4 = Significant 5 = Very significant

No.	Variables	1	2	3	4	5
1	Setting expectations correctly at the beginning of a project;					
2	Adequate contract documentation;					
3	Proper risk allocation;					
4	Communicating potential problems at early as possible;					
5	Establishment of a robust change management process;					
6	Selection of competent consultants and contractors;					
7	Selection of an appropriate project delivery method;					
8	Setting up of a dispute review board at the early stages of a project.					
	<i>If other, please specify</i>					