

**AN ASSESSMENT OF GHANA STATISTICAL SERVICE
INSTITUTIONAL REFORM PROGRAMME: ROLE OF THE
MULTI DONOR TRUST FUND**

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2020



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BY

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(UDS/MDS/0317/14)

**THESIS SUBMITTED TO THE DEPARTMENT OF AFRICAN AND GENERAL
STUDIES, FACULTY OF INTEGRATED DEVELOPMENT STUDIES,
UNIVERSITY FOR DEVELOPMENT STUDIES IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF MASTER OF PHILOSOPHY
DEGREE IN DEVELOPMENT STUDIES**

MARCH, 2020



Student

I hereby declare that this thesis is the result of my own original research work and that no part of it has been presented for another degree in this University or elsewhere:

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Supervisor's Declaration

I hereby declare that preparation and presentation of this thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

Supervisor's Signature: Date:

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ABSTRACT

The Ghana Statistics Development Plan was launched in November, 2008 to undertake a reform programme within the Ghana Statistical Service (GSS) in order to make it more efficient and effective in managing and coordinating the National Statistical System. As a result, a Multi Donor Trust Fund (MDTF) Grant Agreement was implemented from March 2011 to June 2013 as part of the reform programme. The present study was undertaken to assess the Ghana Statistical Service Institutional Reform Programme. A non-probability sampling technique of purposive was used in the study. A total of 138 participants out of the 153 sample drawn from the various directorates of the GSS Head Office took part in the study. Quantitative data type were mainly used for the study. The results show that majority of staff have background in statistics to perform their duties to enable GSS meet its mandate. A significant proportion of the respondents both statisticians and non-statisticians attended training programmes which did not solve any problem on the job directly. However, majority of the respondents were able to use skills acquired during training to the job. Technological innovations during the reform programme enhanced the operations of the GSS. The 2010 Population and Housing Census National and Regional Analytical Reports were published in a relatively short period of time due to adequate financial support and regular cash flow under the MDTF. The Statistical Service Act, 1985 has weaknesses and for that matter needs to be modified or repealed.

However, the Statistics Bill, 2012 could not be passed by the end of the MDTF Project or even within the Sixth Parliament period. The GSS Reform Programme was adequately communicated to staff and was successfully implemented. To maximize the benefits of training programmes for staff of the GSS, the Human Resource Directorate of the Service has to develop a training plan based on the training needs of staff to ensure that training programmes are designed to solve problems on the job. The GSS should intensify its efforts by engaging key stakeholders for the necessary support to ensure the passage of the Statistics Bill.



This work is dedicated to Mrs Eunice Pomaa Odoom, my dear wife whose love, support, understanding, endless prayers and encouragement inspired me to work relentlessly to complete this project.



“In all things we are more than conquerors through Him who loved us” Romans 8:37. My greatest appreciation goes to the Almighty God who is the giver of all good things and the sustainer of life. To Him be the Glory, Honour and Adoration for completing this thesis successfully.

I wish to express my deepest gratitude to my supervisor, Dr. Frank K. Teng-Zeng for his rich expertise, guidance, comments, suggestions and constructive criticism which enabled me to complete this thesis. A special note of appreciation also goes to all the lecturers of the Faculty of Integrated Development Studies and Department of Africa and General Studies for their contributions in one way or the other towards the achievement of this work. May the Almighty God richly bless them.

My deepest appreciation goes to the Management of the Ghana Statistical Service for their support and cooperation. I thank all heads of directorate and section of the Service for supporting me in diverse ways during the data collection which helped greatly towards the accomplishment of this work. I would also like to acknowledge the following persons: Michael Boahene, Francis Nyarkoh-Larbi, Kweku Djanie, Barnas Abugre and Osborne Deku for supporting me.

Finally, I wish to sincerely thank my wife for her understanding and invariable contributions which helped in making this dream a reality. I will forever be indebted to my mother, Madam Eunice Ofosu-Appiah for investing in my education and my late father, Mr. Emmanuel Charles Odoom for supporting my education. Special thanks also goes to other family members, course mates including Suuk Daniel Daadaamin, Ampet Kyea Manu and friends whose names I cannot mention but helped in no small ways to see me through the course. God bless them.



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AfDB	African Development Bank
AUC	African Union Commission
AIDS	Acquired Immunodeficiency Syndrome
APRM	African Peer Review Mechanism
CAPI	Computer-Assisted Personal Interview
CBS	Central Bureau of Statistics
CERDAS	Change and Reform for the Development of Statistics
CSO	Central Statistics Office
CSR	Civil Service Reform
DFID	Department for International Development
DP	Development Partner
ECA	Economic Commission for Africa
EC	European Commission
ERP	Economic Recovery Programme
Etc.	Etcetera
ESAP	Economic Structural Adjustment Programmes
FWSC	Fair Wages and Salary Commission
GIS	Geographic Information System
GoI	Government of Ireland
GSGDA	Ghana Shared Growth and Development Agenda
GSS	Ghana Statistical Service
GSDP	Ghana Statistics Development Plan
GPRS	Growth and Poverty Reduction Strategy
HIV	Human Immunodeficiency Virus
HRMIS	Human Resources Management Information System
IAS	Internal Audit System
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communication Technology
IT	Information Technology



IMF	International Monetary Fund
IP-ERS	Investment Programme for the Economic Recovery Strategy
ISS	Irish Statistical System
KNBS	Kenya National Bureau of Statistics
MDA	Ministries, Departments and Agencies
MDG	Millennium Development Goal
MDTF	Multi Donor Trust Fund
MMDA	Metropolitan, Municipal and District Assemblies
MoE	Ministry of Education
MoELR	Ministry of Employment and Labour Relations
MoFA	Ministry of Food and Agriculture
MoH	Ministry of Health
MoLNR	Ministry of Lands and Natural Resources
MoTI	Ministry of Trade and Industry
NAPSR	New Approach to Public Sector Reform
NEPAD	New Partnership for Africa Development
NIRP	National Institutional Renewal Programme
NSO	National Statistical Office
NSS	National Statistical System
PMS	Performance Management System
PNDCL	Provisional National Defense Council Law
PNDC	Provisional National Defence Council
PSIR	Public Sector Institutional Reform
RGD	Registrar General Department
RoG	Republic of Ghana
SAP	Structural Adjustment Programme
SDG	Sustainable Development Goal
SOE	State Owned Enterprise
SPSS	Statistical Package for Social Sciences
SSA	Statistics South Africa



STATCAP	Statistical Capacity Building www.udsspace.uds.edu.gh
UL	University of Ljubljana
UNECA	United Nations Economic Commission for Africa
WB	World Bank



CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

Statistics are now internationally recognized as a public good which provides the needed environment for achieving development outcomes (African Union Commission [AUC], African Development Bank [AfDB] & Economic Commission for Africa [ECA], 2010). Decisions based on statistics enable people, institutions and governments take informed decisions about policies, programmes and projects by putting the best available evidence at the centre of the policy process (Segone & Pron, 2008). The quality, frequency, timeliness and comprehensiveness of data are very essential for effective development planning, implementation and outcome (Ajakaiye, 2012).

In pursuance of evidence-based policy-making, the Irish Government empowered the country's Department of Public Expenditure and Reform to play a leading role in accelerating development of the Irish Statistical System (ISS) anchored in the wider framework of the country's reform in the public sector (Government of Ireland, [GoI], 2012). It is worth noting that despite significant resource challenges, the Central Statistics Office (CSO) in Ireland has maintained an ambitious work plan, and at the same time, managing numerous new demands and restructuring of its business processes (GoI, 2012).

In responding to challenges emerging from the changes in the external environment, the Indonesian National Statistics Agency (Statistics Indonesia) embarked on institutional reform programme from 2011 to 2016 with the objective of increasing the Agency's effectiveness and efficiency to produce and disseminate quality statistics (World Bank [WB], 2017).



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According to Akinyosoye (2008), several African countries over the years had failed to deliver the requisite statistics for evidence-based policy-making. As a result, Nigeria re-engineered their National Statistical Offices (NSOs) to address the challenges emanating from poor statistics (Akinyosoye, 2008). In view of the challenges, the National Statistical Office embarked on institutional reform with robust application of Information and Communication Technology (ICT) to facilitate data production and dissemination (Akinyosoye, 2008).

The Kenya National Bureau of Statistics (KNBS) developed the country's inception Medium-Term Strategic Plan (2003-2007) as part of the institutional reform agenda to ensure that the Central Bureau of Statistics (CBS) was adequately equipped to perform its mandate by meeting the ever increasing demand for statistics in the country (Kenya National Bureau of Statistics [KNBS], 2012). South Africa witnessed a dramatic increase in the demand for data from a broad range of stakeholders for evidence-based policy-making (Statistics South Africa [SSA], 2010). Thus, stakeholders were continuously demanding accurate, relevant and timely data for decision making (SSA, 2010). In this regard, a five-year strategic development plan (2010-2014) was developed for statistical development in South Africa (SSA, 2010).

In strengthening the production of policy-related statistics at the national and sub-national levels to monitor the achievement of initiatives like the Ghana Shared Growth and Development Agenda (GSGDA), the African Peer Review Mechanism (APRM), the Growth and Poverty Reduction Strategy (GPRS) and the Millennium Development Goals (MDGs), the Ghana Statistics Development Plan (GSDP) was developed and adopted by the Ghana Statistical Service (Ghana Statistical Service [GSS], 2011a) to cover a period of five years (2009-2013). A critical aspect of the Ghana Statistics Development Plan was to undertake a reform within the Ghana Statistical Service to make it more efficient and effective in managing



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and coordinating the National Statistical System (GSS, 2011a). As a result, a Multi Donor Trust Fund (MDTF) Grant Agreement was signed between the Republic of Ghana and the World Bank in February 2011(GSS, 2011b). It was implemented from March 2011 to June 2013 as part of the Ghana Statistical Service reform programme (GSS, 2013). The budget for the Multi Donor Trust Fund agreement (WB, 2013a) was six million, two hundred and twenty-three thousand, four hundred and thirty-five United States Dollars (US\$ 6,223,435).

As part of the implementation process of the Ghana Statistics Development Plan, the Ghana Statistical Service in collaboration with its partner data producing agencies including Ministries, Departments and Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs) sought to build institutional capacities, conduct critical data collection activities, and set up mechanisms to disseminate widely the information available within the National Statistical System (GSS, 2008a).

As required, timely, reliable, relevant and useful statistics and indicators are the products of a well-coordinated National Statistical System (NSS) that is adequately resourced and capable of delivering the range of statistics needed for policy decisions. However, the statistical system in the country, comprising the statistics units of the various Ministries, Departments and Agencies and the Ghana Statistical Service, among others, have over the years not received the requisite financial and technical support to enable them deliver on their mandate (GSS, 2008a).

In addressing the challenges facing the National Statistical System, the Multi Donor Trust Fund was designed around five components (GSS, 2011b) expatiated in chapter two of this study.

As mentioned in the Ghana Statistical Service 2011 Annual Report (GSS, 2011a), the statistical system of Ghana comprises various public sector actors. The National Statistical System consists of organizations and institutional arrangements that together produce or use statistics



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including: the Ghana Statistical Service; Ministries, Departments and Agencies; Metropolitan, Municipal and District Assemblies; Development Partners (DPs); research and training institutions; as well as suppliers and users of data. The range of statistical services and products is the collective responsibility of the constituent members of the National Statistical System (GSS, 2011a). Private generation of national statistical data is still very limited in scope.

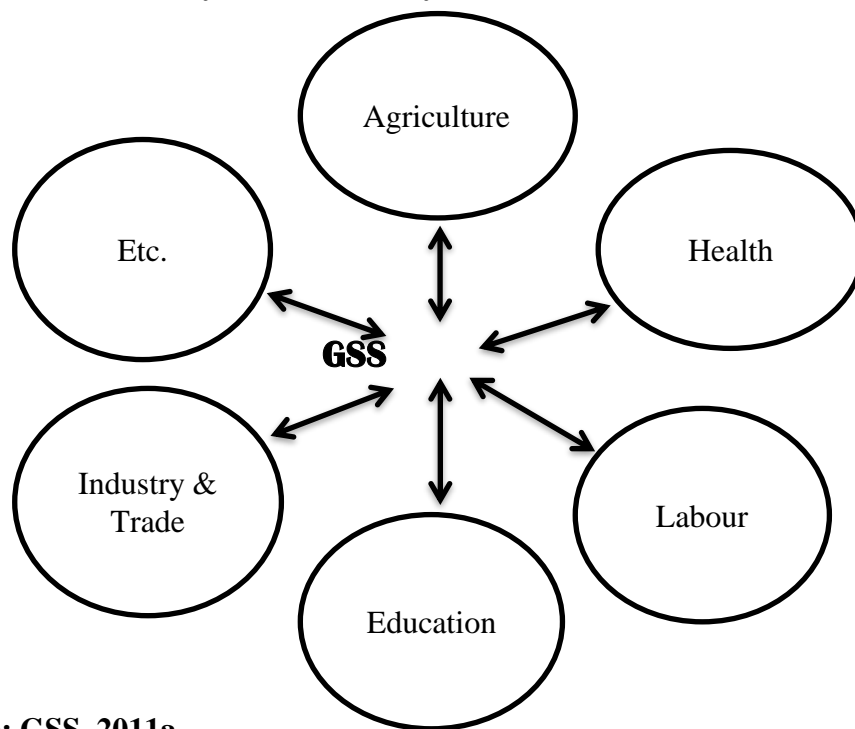
The Statistical Service Law, 1985 (PNDCL 135) mandates the Ghana Statistical Service to collect, compile, analyse, publish and disseminate official statistics in the country and coordinate the development of statistics outside the Ghana Statistical Service (GSS, 2015). There have been some remarkable statistical achievements in recent years which include the 2010 Population and Housing Census and other key household-based surveys, the re-basing of the national accounts and the quarterly publication of the national accounts (GSS, 2011a). However, some problems were experienced in implementing the Census such that press reports raised concerns over the conduct of the Census and questioned the capability of the Ghana Statistical Service (GSS, 2011a).

Outside the Ghana Statistical Service, the National Statistical System increasingly found it tough to meet the growing demand from its many users (GSS, 2008a). The production of statistics in some Ministries, Departments and Agencies has decreased over the years as a result of technical and financial constraints (GSS, 2008a). Generally, the National Statistical System is seen to be ineffectively organised and inadequately resourced as shown in figure 1.1 where the various sectors are left on their own without any coordination. Thus, the National Statistical System has been relatively weak and disconnected with most of the institutions operating on their own, except in cases where there is a project that calls for effective collaboration in its implementation (GSS, 2011a). Currently, there is very little collaboration in the production of



data in the system and this situation has created duplication of efforts and inconsistencies in the packaging and release of data (GSS, 2011a). This weak collaboration has also been plagued with poor quality data and delays in dissemination of statistics required for efficient and effective planning, monitoring and evaluation of national development programmes (GSS, 2008a). It is against this background that the Ghana Statistics Development Plan was developed by the Ghana Statistical Service as part of the measures to enhance the National Statistical System (GSS, 2008a). Thus, the Ghana Statistics Development Plan seeks to ensure sustainable development of statistics in the country (GSS, 2008a).

Figure 1.1: Current System is Partially Coordinated



Source: GSS, 2011a

In strengthening the National Statistical System, the involvement and effective coordination of all its stakeholders is key for successful implementation of the Strategic Plan (GSS, 2008a). Indeed, the Strategic Plan seeks to eliminate the problems and constraints in the National Statistical System exposed by the situation analyses which provided the necessary inputs used to develop the Strategic Plan (GSS, 2008a).



The Ghana Statistics Development Plan suggested various ways of building a functional National Statistical System which include strengthening the capacity of statistics units of the MDAs and MMDAs to enable them produce the needed statistics. The capacity building includes on the job training of statistics. Improving the capacity of staff of the Ghana Statistical Service to enable them effectively perform assigned roles in the National Statistical System such as the provision of technical back-up for the production of statistical data in the MDAs and MMDAs.

In addition, the strategy is to decrease contradictions, inconsistencies and duplications in official statistics. It involves a conscious efforts to harmonise concepts, definitions, classification, survey methods among others. The National Statistical System has to enhance access and use of official statistics, stimulate continuity and timely production and dissemination of statistical data. The Ghana Statistics Development Plan also emphasized the need to sensitize the public on the importance of statistics, advocate and lobby for adequate resources for statistics production and dissemination within the MDAs and MMDAs.



1.2 Problem Situation

Ghana Statistical Service like many other National Statistics Offices in developing countries, continues to be challenged by a range of environmental factors that influence the extent to which it is able to meet its mandate (GSS, 2008b). The Service being one of the government's sub-vented public agencies has to compete with many other government priorities as a result of limited financial resources. Dynamic changes in the local political and socio-economic development exert pressure on the Ghana Statistical Service to produce relevant and timely statistics (GSS, 2008b). The Ghana Statistical Service is also compelled to provide capacity

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building assistance to other stakeholders to enable them perform their assigned duties effectively within the National Statistical System (GSS, 2008b). Rapid advances in technological developments present new opportunities, as well as constraints (GSS, 2008b). Unfortunately, Ghana Statistical Service has not yet taken full advantage of these opportunities because the institution has been unable to build its technical and human capacity (GSS, 2008b).

Government's commitments to international programmes such as the New Partnership for Africa Development (NEPAD), the African Peer Review Mechanism (APRM) and the Sustainable Development Goals (SDGs), have further deepened the urgency of the statistical development agenda (GSS, 2016). Other priority interventions in areas such as HIV-AIDS, unemployment, limited access to education and health, and limited resources for enterprise development, among others have increased the demand for statistical data in the country (GSS, 2008a).

Undoubtedly, fragile and inefficient National Statistical System has serious repercussions on decision making and monitoring of any development initiative and social interventions in any country. On the other hand, inadequate statistical capacity in the National Statistical System is a major hindrance to effective implementation, monitoring and evaluation of poverty reduction strategies such as the Sustainable Development Goals (GSS, 2016). Despite these challenges, the Ghana Statistical Service has not undertaken any major reform exercise prior to the implementation of the Multi Donor Trust Fund (GSS, 2015).

In the past years, several institutional and needs assessments (financed by the World Bank and other development partners, particularly DFID) have been conducted on the Ghana Statistical Service, which identified a range of critical issues affecting its ability to fulfil its mandate (GSS,



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2008a). These include: (i) an inadequate legal and policy framework for the coordination, collection, management and development of data in Ghana; (ii) deterioration in the conditions of service; (iii) the overstaffing of the Ghana Statistical Service, with a permanent work force much higher than is found in comparable African countries; (iv) a low proportion of graduate staff and a high turnover rate of academically qualified personnel; (v) inadequate performance and management systems; (vi) limited technical capacity of staff; (vii) dilapidated physical infrastructure; (viii) an under developed data programme with the development of economic statistics neglected at the expense of social (mainly household surveys) statistics; (ix) limited dissemination of statistical products; and (x) inadequate financial resources.

In view of the challenges that the Ghana Statistical Service faces in the production of statistics, the Multi Donor Trust Fund was created to strengthen the GSS statistical capacity and information systems (WB, 2013b). In the light of this, the research problem was focused on assessing the implementation of the Multi Donor Trust Fund with special reference to Ghana Statistical Service staff capacity development, adoption of technological innovation, legal and institutional reform and the production of quality and timely statistics as outlined in the programme (MDTF) components in chapter two of the study.



1.3 Main Research Question

The main research question guiding the study is: How has the implementation of the Multi Donor Trust Fund Statistical Development support programme helped to address the institutional challenges faced by the Ghana Statistical Service in the effective delivery of services?

1.3.1 Sub-Research Questions

The following sub-research questions derived from the components of the Multi Donor Trust Fund seek to assist in addressing the main research question:

1. How has the Multi Donor Trust Fund support enhanced staff capacity towards the production of statistics?
2. How has the technological innovations adopted during the implementation of the reform programme enhanced the operations of the Ghana Statistical Service?
3. What extent did the Multi Donor Trust Fund enhance the effective and efficient production of quality and timely statistics?
4. How has the legal and institutional reform programme supported under the Multi Donor Trust Fund improved the coordination of statistics in the National Statistical System?

1.4 Main Research Objective

The main research objective of the study is to assess the extent to which the implementation of the Multi Donor Trust Fund Statistical Development support programme has assisted in addressing the institutional challenges faced by the Ghana Statistical Service for effective services delivery.



1.4.1 Sub-Research Objectives

The study sub-objectives are:

1. To examine how the Multi Donor Trust Fund support enhanced staff capacity development towards the production of statistics.
2. To examine how the adoption of technological innovations enhanced the operations of the Ghana Statistical Service.

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3. To ascertain the extent to which the Multi Donor Trust Fund enhanced the production of quality and timely statistics.
4. To examine how the legal and institutional reform programme supported under the Multi Donor Trust Fund improved the coordination of statistics in the National Statistical System.

1.5 Significance of the Study

The importance of the public sector is underscored by Joshi and Carter (2015) as a very significant investment mechanism for the state, and for that matter, there is the need to improve how the public sector is managed to ensure development outcomes such as service delivery, social protection and private sector regulation. According to Ayee (2001), Civil Service Reform (CSR) in Africa is intended to bring efficiency and improved performance of the civil service thereby raising the standard of services delivered to the people and to build the needed capacity to carry out essential government functions.

Also, the increasing awareness in quantitative measures of governance, rule of law, peace building, violence and conflict and human rights at both national and international levels has created a large number of data initiatives among official and non-official data producers (United Nations Development Programme [UNDP], 2013). Thus, statistics has now become a very essential tool for national planning and development (Shangodoyin & Lasisi, 2011).

A country deprived of a feasible infrastructure for information generation, dissemination and usage is handicapped in taking the needed decision for effective planning, monitoring and evaluation of development programmes and projects (Shangodoyin & Lasisi, 2011).



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Developing countries are in real need of assistance to improve their statistical systems in order to measure their development progress, embark on effective national monitoring programmes and help guide policy (UNDP, 2013). The achievement of a robust statistical system is required to further support capacity development for basic statistics and analysis in developing countries (UNDP, 2013). It is in line with these expositions that the Ghana Statistical Service undertook the institutional reform programme underscored in the Multi Donor Trust Fund Grant Agreement (GSS, 2011b). In view of this, the research sought to find out the extent to which the implementation of the Multi Donor Trust Fund has helped to address the institutional challenges including staff capacity, technological and legal constraints in the production of quality and timely statistics by the Ghana Statistical Service.

The outcome of the study will provide relevant information to guide the production of statistics by statistical offices and units of MDAs and MMDAs. It will also increase the knowledge expected from the institutional reform programme by the Ghana Statistical Service to improve its service delivery. The research findings will provide the requisite information to the government, financiers of the Multi Donor Trust Fund, the Ghana Statistical Service and stakeholders in the National Statistical System to make informed decision in the area of public/civil service reform programme. It will finally serve as a source of reference to academics, researchers and students interested in institutional reforms in the public sector.



1.6 Limitations and Delimitations

This study seeks to assess the Ghana Statistical Service institutional reform programme implemented under the Multi Donor Trust Fund initiative with special focus on GSS staff capacity, technological development, legal programme and the production of quality and timely statistics.

The study is confined to the GSS Head Office in Accra and the findings are specific to the GSS Head Office spanning 2011 to 2013. In view of this, the results and explanations may not be applicable to other situations. Thus, the viewpoint(s) of Ghana Statistical Service staff can only be described and not fully explained. Some viewpoints may involve only a single employee or a few, and for that matter may not be representative of the general group or population. However, the findings could be used to compare with other existing change management literature that could be tested with other similar public-sector organizations in other locations.

1.7 Organization of the Study

The study is divided into five chapters. The introductory chapter constitutes the first chapter which comprises the background, the National Statistical System, problem situation, research questions and objectives. Other issues in the chapter include significance of the study, limitations and delimitations, and organization of the study.

Chapter two deals with the assessment of literatures which relate to the topic of the study. This includes conceptual and theoretical frameworks on public sector institutional reform, the use of metaphor to explain how organizations work and models and approaches to organizational change.

The third chapter mainly deals with the methods that were adopted in conducting the study comprising the research setting and institutional profile, research philosophy and design, population, sample and sampling techniques, research instruments (data collection technique), and administration of instrument and analysis of data.



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Chapter four is focused on data presentation, analysis and discussion of findings. Chapter five which is the concluding chapter, discusses the summary, conclusion and recommendations of the study.

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LITERATURE REVIEW

2.0 Introduction

This chapter deals with the assessment of literatures which relate to the topic of the study. In view of this, selected institutional reforms of National Statistical Offices were reviewed and evaluated. The literature review discusses public sector reforms in Ghana, change and change management. It also discusses key reasons for change, types of change, models and approaches to change related to the study.

In addition, Chapter Two presents the links on the theory of change and change management and discusses these in line with the research questions and objectives outlined in Chapter One.

2.1 Conceptual Issues

2.1.1 Public Sector Reforms in Ghana

The public sector is the most important government machinery for the state and improving the way it is managed is critical for efficient and effective service delivery, social protection and private sector regulation (Joshi & Carter, 2015). The public sector is conceived as the totality of services that are organised under the authority of government or the whole of the administrative structures within which the work of government is carried out (United Nations Economic Commission for Africa [UNECA], 2010).

The public sector in Ghana is very broad and complex and is defined first and foremost by constitutional provisions and other relevant acts and legislative instruments. The public sector comprises four categories of services identified under Chapter 14 (Article 190 Clause 1a-d) of



the 1992 Fourth Republican Constitution (Republic of Ghana [RoG], 1992) which include the following:

- (a) the Civil Service and thirteen other services (including the Ghana Statistical Service);
- (b) public corporations other than those set up as commercial ventures;
- (c) public services established by the constitution; and
- (d) other public services that Parliament may by law prescribe (RoG, 1992).

Over the last five decades there have been a number of reforms initiated and implemented by different Governments aimed at promoting and achieving efficient, effective and customer-orient performance in the public sector service delivery (sometimes such reforms are directed at specific departments and agencies). These initiatives included first generation reforms aimed at reducing the cost of the public sector, as well as second generation reforms that have sought to improve the quality of the public service, and to strengthen its capacity and performance (Antwi, Analoui, & Nana-Agyekum, 2008; Aryeetey & Fosu, 2005; Hutchful, 2002, Stevens & Teggemann, 2004; World Bank, 2018). These reforms include but not limited to:

- Mills-Odoi Commission on the Structure and Remuneration of the Public Service, 1967;
- Okoh Commission on the Structure and Procedures of the Civil Service, 1974;
- The Economic Recovery Programme (ERP, April 1983);
- The Structural Adjustment Programme (SAP, 1986);
- The National Institutional Renewal Programme (NIRP) was created in 1994 to provide strategic focus and co-ordination to public sector reforms;
- The Ghana Statistics Development Plan launched in November, 2008 to undertake a reform within the Ghana Statistical Service to make it more efficient and effective in managing and coordinating the National Statistical System;



- In 2010 Ghana further initiated and introduced www.udsspace.uds.edu.gh “The New Approach to Public Sector Reform (NAPSR)” which is termed a service delivery model;
- In February, 2011 the GSS Multi Donor Trust Fund Grant Agreement (Statistical Development Project) was contracted between the Republic of Ghana and the World Bank as part of the GSS Institutional Reform arrangement;
- Establishment of the Fair Wages and Salary Commission in 2007 (Single Spine Salary Structure); and
- In August, 2018 Ghana launched the National Public Sector Reform Strategy 2018-2023 (World Bank, 2018) also with focus on service delivery which covers sixteen Ministries, Departments and Agencies.

Public sector institutional reform is characterized by fundamental challenges. Thus, Public Sector Institutional Reform (PSIR) initiatives should consider politics seriously and move from ‘thinking politically’ to ‘working differently’ (Menocal, 2014). It is argued that fundamental changes to institutional features (such as staff capacity, organizational culture) take a longer time posing constraints for short term political opportunity as well as donor funding (Lange & Rueschemeyer, 2005).



According to Booth, Crook, Gyimah-Boadi, Killick, Luckham, and Boateng, (2004), previous attempts at reforming the civil service in Ghana were deemed unsuccessful due to lack of political support. Political and economic reform programmes are now redefining the role of the state, but the process often remains ad hoc in Ghana. In an attempt to provide explanations for why two decades of reform have not dealt adequately with the problems of macro-economic stability, Aryeetey and Fosu (2005) argue that the problems could be attributed to the continuing presence of institutional constraints in the mobilisation of resources and their

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allocation. Though some studies report marginal capacity improvement, the reforms did not change the prevailing organizational culture which was characterised by inertia, low motivation, and perceived corruption, nor did it improve service delivery or accountability (Kiragu, 2002; Adei & Boachie-Danquah, 2003).

Therefore, based on the above discussion, institutions are very significant in this study as the Ghana Statistical Service institutional reform is intended to create an enabling environment for improved efficiency and effectiveness in the management and coordination of the National Statistical System to ensure the production of quality and timely statistics to meet the increased demand for statistics in recent times (GSS, 2011a). It is against this background that the Multi Donor Trust Fund Grant Agreement (Ghana Statistical Development Project) was signed and implemented in support of the GSS Institutional Reform Programme (GSS, 2011b).

2.1.2 Institutional reforms of National Statistical Offices

According to the World Bank (2012), the public sector institutional reform is the art and science of making the public sector machinery work. This is achieved by deliberately changing the inter-locking structures and processes within the public sector that define how financial and physical resources and people are deployed and accounted for (World Bank, 2012). In view of this, institutional reforms of two National Statistical Offices related to the objectives of the study were reviewed and evaluated as follows:



2.1.2.1 Institutional Reform of Indonesia National Statistics Agency

The rapid decentralization process in Indonesia created a higher demand for disaggregated statistics while at the same time reducing the availability of subnational data through line ministries (WB, 2017). This had a major impact on the National Statistics Agency (Statistics

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Indonesia). Other challenges that the National Statistics Agency encountered include building capacity to capture new forms of economic activity and improving cooperation with data producers, users, and respondents (WB, 2017). Furthermore, the President of Indonesia had put Bureaucracy Reform as one of the highest priorities of his administration and called for government agencies to provide services that were ‘better, faster, and cheaper’.

In responding to the higher demand for statistics in Indonesia, the National Statistics Agency embarked on an institutional reform called “Statistical Capacity Building-Change and Reform for the Development of Statistics (STATCAP-CERDAS)” Project (WB, 2017). The project was approved in April 2011 with the objective of increasing the effectiveness and efficiency of the National Statistics Agency (Statistics Indonesia) to produce and disseminate quality statistics. The Government requested a STATCAP loan to support the reform agenda to enable the Agency to better respond to challenges arising from the changes in its external environment.

The underlying theory of change driving the STATCAP-CERDAS project was that improved people, process, and technology aspects within the National Statistics Agency would significantly increase the quality of the statistical value chain from identifying user needs to producing and disseminating statistics which in turn would contribute to strengthening evidence-based policy making and better governance (WB, 2017). The original project cost was US\$83 million, of which US\$65 million was an IBRD loan and US\$18 million was the Government’s counterpart budget.

The project became effective in July 2011. However, the STATCAP-CERDAS was restructured in April 2014 to align the scope with the Agency’s new leadership’s direction, focusing on improving the core statistical business processes and systems of the National Statistics Agency and reducing scope where progress had been made by the Agency under its



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own financing or other technical assistance (WB, 2017). Consequently, implementation of the back-office information technology systems and Human Resources Management Information System (HRMIS) and Internal Audit System (IAS) was dropped which contributed to the bulk of the partial cancellation amount (WB, 2017). Subsequently, the project (STATCAP-CERDAS) was restructured as shown in the revised components below. Therefore, financing amount was reduced accordingly to US\$47 million of IBRD loan and US\$14 million of counterpart budget, and the closing date was extended to November, 2018 (WB, 2017). The STATCAP-CERDAS improved significantly after restructuring until the project was cancelled in May 2017, because the National Statistics Agency failed to sign the contract for the integrated statistical information systems package and establish an appropriate counterpart project team for its implementation (WB, 2017).

Revised Components of the STATCAP-CERDAS

This section discusses only the revised components of Indonesia Statistical Capacity Building-Change and Reform for the Development of Statistics related to the objectives of the Multi Donor Trust Fund, as reported in the World Bank Implementation Completion and Results Report (WB, 2017).



1. Component One: Improved Statistical Quality

This component is similar to component three of the Multi Donor Trust Fund under the heading “improving the quality and dissemination of statistical products”. Component one of the STATCAP-CERDAS was reduced in scope to focus on technical assistance for specific statistical product lines, analysis and design of core statistical infrastructure to enable greater statistical integration. The scope was revised based on improvements made by the National Statistics Agency and through other complementary technical assistance in the area of national

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accounts. Implementation of the STATCAP-CERDAS improved statistics accuracy with response rate to large and medium manufacturing businesses increasing from 60 percent to 69.5 percent at project cancellation, and user satisfaction increased from 43 percent to 91.7 percent, exceeding the target of 75 percent.

2. Component Two: Improved ICT Platform and Statistical Information Management Systems

Component two of the STATCAP-CERDAS is in line with component two of the Multi Donor Trust Fund which sought to upgrade information technology equipment of the Ghana Statistical Service including hardware and software. Thus, component two of the STATCAP-CERDAS was designed to strengthen the National Statistics Agency information technology strategy, enterprise architecture, information systems governance framework, standardization and centralization of information technology operations and resources, and development of integrated statistical production and dissemination systems.

In view of this development, hardware component was decoupled from the statistical IT applications package procured through the Government's counterpart budget. Consequently, time lag in the publication of annual labour force estimates improved from 150 days to 90 days, short of the target of 60 days because of the cancellation of the project before the stipulated closure timeline. Thus, further reduction in time lag was very difficult to achieve without the implementation of Computer-Assisted Personal Interview (CAPI) or electronic data collection. The National Statistics Agency's website developed during the project improved as access increased from 51,000 to 127,147 unique visitors per month (monthly average over the year). There was also an increase from 61 percent to 83.5 percent (target was 80 percent) in user satisfaction on the accessibility of the Agency's statistics.



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Despite the project cancellation, the National Statistics Agency had the requisite tools to continue its modernization agenda. However, the failed implementation of the integrated statistical information systems was a major setback towards improving the operational efficiency and statistical quality of the Agency.

3. Component Five: Project Management

A new structural unit to manage the National Statistics Agency transformation and serve as the Project Management Unit (PMU) for STATCAP-CERDAS was proposed to the Ministry for Administrative and Bureaucracy Reform and the new structure was established in July 2014. This component is within the framework of component five of the Multi Donor Trust Fund as it financed consultancy services to support project management, change management, and quality. The overall outcome rating for the project (STATCAP-CERDAS) is Unsatisfactory, largely due to the project's inability to complete implementation.

2.1.2.2 Institutional Reform of Kenya National Bureau of Statistics

The early 2000s witnessed substantial decline in Kenya's Statistical Institutions as the capacity of Kenya's National Statistical System to produce timely, high quality and relevant statistical information had deteriorated over two decades prior to the institutional reform (WB, 2016b).

Among the causes identified at the time were declines in budgetary support for the production and dissemination of statistics, inadequate professional staff at the management and technical levels, dilapidated statistical infrastructure and information and communication technology equipment and loss of relevance due to inadequate engagement with users (WB, 2016b).

The Government of Kenya also recognized the need for change to strengthen the statistical system. To this end, a five-year strategic plan for the National Statistical System was approved by Cabinet in 2003. A Statistics Bill was also enacted by Parliament and endorsed by the



President in August 2006 (WB, www.udsspace.uds.edu.gh 2016b). The new Statistical Act provided a coherent legal framework for the entire National Statistical System by setting out the roles and responsibilities of data-producing agencies. It also established the autonomy of the Kenya National Bureau of Statistics (KNBS) to focus on data production thereby bringing the risk of political interference largely under control (WB, 2016b).

Demand for statistics by the general public and government was rising as the press coverage of socioeconomic issues broadened public awareness of the value of good information for evidence-based policy-making and the monitoring of development results, including the Millennium Development Goals (WB, 2016b). The high demand for data was also triggered by the Investment Programme for the Economic Recovery Strategy (IP-ERS) adopted by government in 2004 for Wealth and Employment Creation to track performance by setting targets for public sector institutions, including state-owned enterprises.

Just as the Ghana Statistical Service Institutional reform programme was supported by the Multi Donor Trust Fund, the institutional reform of the Kenya National Bureau of Statistics was supported under the Statistical Capacity Building Programme (STATCAP) which was financed by an International Development Association (IDA) credit of US\$20.5 million equivalent (WB, 2016b). The project was implemented from 2004 to 2010. The STATCAP was a multi donor comprising a pool of resources for the support of statistical capacity building projects in 14 countries within the World Bank Regions.

The Institutional Reform of Kenya National Bureau of Statistics supported by the Statistical Capacity Building Programme was conducted under six components. However, this part

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evaluates only the components of the STATCAP related to the objectives of the study as indicated by the World Bank Independent Evaluation Group (WB, 2016b) as follows:

1. Component One: Organizational Development and Governance

This component was designed to support a comprehensive restructuring of the Kenya National Bureau of Statistics to create a modern autonomous government agency with a clear mandate and professional management and technical staff. It includes the creating of institutional capacity that is able to support the formulation and implementation of national policies, including monitoring and evaluation of the IP-ERS. The component supports the development of new legislation (Statistics Act) to improve coordination of statistical activities carried out in different Ministries, Departments, and Agencies.

As part of the evaluation process, Component One of the Statistical Capacity Building Programme is very much related to Component One of the Multi Donor Trust Fund (MDTF) in terms of issues on institutional reform and the development of a new legislation to coordinate the National Statistical System. The STATCAP led to the creation of Sector Working Groups, with membership drawn from Ministries, Departments, and Agencies with responsibility in data production and the practice of regular meetings of group members. The Sector Working Groups played a key role in helping the Ministries, Departments, and Agencies develop adequate work programs, comply with required standards and improve coordination across agencies. The practice of regular consultations and coordination through the interagency Sector Working Groups served as a channel for communications on developing work programmes, setting priorities and upholding professional standards among participating Ministries, Departments, and Agencies.



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The Statistics Act of 2006 clarified the role of the KNBS as main producer of statistics with mandates to set standards and collect, compile, analyze, publish, and disseminate official data. It also established the KNBS as an autonomous government agency responsible for coordination of the National Statistical System.

2. Component Two: Human Resource Development

Component Two of the Statistical Capacity Building Programme was developed to train staff of the KNBS and MDAs to apply new statistical standards and methodologies, including collection and analysis of official statistics and new managerial practices was very similar to Component Two of the Multi Donor Trust Fund. This component supported the creation of a new enterprise architecture within the KNBS. As a result of the STATCAP, the Bureau's budgetary allocations became better aligned with its agenda and work programmes though susceptible to the exigencies of public finance. Human resources became better aligned with the skill requirements of data production and analysis. However, a key output that was not achieved during implementation of the project includes capacity building by the Transition Support Unit through on-the-job training of relevant staff.

3. Component Three: Development of Statistical Infrastructure

Component Three of the STATCAP provided the specialized statistical infrastructure to strengthen data collection, processing, analysis, and dissemination. It supported the compilation and maintenance of a revised and updated central business register of establishments; a national master sampling frame for household-based censuses and surveys; a compendium of concepts, definitions, and methodologies for application in statistical analysis; and economic and social classifications. Component Three of the Multi Donor Trust Fund



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“improving the quality and dissemination of statistical products” aligns with this Component of the STATCAP.

As reported by the World Bank (2016b), at the end of the project much progress in data dissemination had already been made. Completed surveys supported by the project were published and made available to the public. With the help of the project, the KNBS was able to establish and maintain a statistical portal with access to a broad range of current and historical data including monthly economic indicators, quarterly gross domestic product, multiple indicator cluster survey reports, population, health, education, and business climate. Most of the stipulated sampling surveys and updating of business registers were achieved. On the other hand, data dissemination framework did not meet the goals envisaged. Survey results were mainly published in hard copy only, with some broad aggregates available online, and they were in formats that most users found difficult to handle. No microdata sets were made available in any form.

4. Component Four: Data Development

Component Four of the STATCAP financed the adaptation of internationally accepted standards and methodologies in data collection, compilation, and validation is in line with Component Four of the Multi Donor Trust Fund which supported programme of activities for the 2010 Census post enumeration activities. STATCAP under this component sought to support development of sectoral statistics, including demography, civil registration, health, education, poverty, national accounts, employment, public administration, judiciary, law and order, agriculture, tourism, and transportation. It also assisted activities aimed at raising awareness of statistical data among data users, developing a data access and dissemination policy in line with international good practice.




Implementation of the STATCAP www.udsspace.uds.edu.gh expanded the coverage of data as recommended by the International Monetary Fund with more major surveys conducted on a regular basis, including integrated survey of services, foreign investment survey and census of industrial production. A remarkable achievement of the project was that the time lag in producing national accounts statistics according to the guidelines reduced from about two years at appraisal to nine months when the project closed. Statistics on government finance and debt saw a reduction in production time through the introduction of quarterly data, which were released in three months. The delay for monetary and banking data was shortened from three to four months to one month. The delay for trade and balance of payments data was cut from twelve months to five months for annual data and to three months for monthly data.

5. Component Six: Project Management

This component like Component Five of the Multi Donor Trust Fund supported management and coordination of the project. It financed technical assistance, consultant services, operating costs, logistics, and equipment needed by the project's Transition Support Unit (TSU), which was housed on the premises of the KNBS. Overall, the project (STATCAP) was rated moderately satisfactory.

2.1.3 The Multi Donor Trust Fund



Chapter one of the study indicated that the Multi Donor Trust Fund (MDTF) Grant Agreement on the National Statistical Development Programme was signed between the Republic of Ghana and the World Bank in February 2011 with funding support from the European Union and the United Kingdom Department for International Development. The MDTF was created to support implementation of the Ghana Statistical Service Institutional Reform. Indeed, donor support to institutional reform is aimed at improving the functioning of the state through changing institutions and generating greater capacity, commitment, efficiency, integrity, and

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responsiveness to achieve poverty reduction and other developmental goals (Bunse & Fritz, 2012).

It is part of the implementation programme of the Ghana Statistics Development Plan that requires institutional reforms within the Ghana Statistical Service. It was implemented from March 2011 to June 2013. The budget for the Multi Donor Trust Fund agreement (World Bank, 2013a) was six million, two hundred and twenty-three thousand, four hundred and thirty-five United States Dollars (US\$ 6,223,435). It was implemented around five components (World Bank, 2013a) which form the basis of the research objectives. In other words, the objectives of this study stated in chapter one were derived from the components of the Multi Donor Trust Fund. The components are discussed as follows:

1. Component One: Legal and Institutional Reform

The first component was developing a comprehensive legal and institutional reform programme for the country's National Statistical System. This was to be achieved mainly through the revision of either the existing or preparation of new legal and regulatory instruments to govern the National Statistical System.

Key in the reform exercise is reorganization of the institutional structure of the Ghana Statistical Service and reform of its human resource management framework through reviewing the organizational structure of Ghana Statistical Service, developing job specifications for GSS managers and staff and a staff management information system, among others.



2. Component Two: Ghana Statistical Service Capacity Building

This aspect of the institutional reform programme was designed to improve the capacity of the Ghana Statistical Service to undertake its functions through carrying out a training needs assessment, developing and implementing a comprehensive training programme for Ghana Statistical Service Management and staff.

In addition to the GSS capacity building is upgrading of information technology equipment of the Ghana Statistical Service including hardware and software to improve the communication and internet connection between the Ghana Statistical Service and other entities of the National Statistical System, and enhancement of Geographic Information System (GIS) by assessing current practices and policies and providing hardware and software for the Geographic Information System to the Ghana Statistical Service, including the provision of relevant information technology training to the GSS staff.

3. Component Three: Improving the Quality and Dissemination of Statistical Products

Another key area of the reform exercise was improving statistical production and dissemination within the National Statistical System, including (a) reviewing the scope and quality of statistical products and services; (b) aligning the range of products and services offered with international best practices; (c) increasing the quantity and quality of products and services publicly available; and (d) supporting the development and production of a comprehensive manual on statistical standards and methods for selected thematic areas which will be disseminated across the National Statistical System, all through the provision of technical advisory services.



4. Component Four: Supporting the 2010 Census Post Enumeration Activities

The fourth component supported the carrying out a programme of activities for the 2010 Census post enumeration activities, including, (a) census data analysis, report writing and dissemination; (b) production and dissemination of analytical, thematic, and regional reports from the census; and (c) improving capacity of GSS to analyze census data, all through the provision of technical advisory services, conducting training and workshops.

Component four also supported carrying out of the 2010 Census post enumeration survey including, (a) training of field staff; (b) printing of survey manuals, questionnaires, and other forms; (c) data collection for twenty-one days in the Recipient's territory; and (d) data capturing, editing, validation and reconciliation.

5. Component Five: Project Management

Component five was developed to support the coordination, administration, procurement, financial management, monitoring and evaluation of the project through hiring financial management and procurement experts. Provision was made for technical advisory services to support the GSS perform its functions, including (a) a strategic planning and management expert; (b) an information technology applications consultant; (c) a statistics trainer; and (d) a human resource and change management expert.

2.1.3.1 Budget Allocation to Components

The original and final budget allocation to the various components shown in Table 2.1 clearly portrays in absolute figures that component two which is GSS Capacity Building had the highest final budget allocation of US\$2,723,055, followed by component four in which US\$2,248,177 was used to support the 2010 Census Post Enumeration Activities. The third



component (Improving the Quality and Dissemination of Statistical Products) on the other hand, had the least budget allocation of US\$ 372,552.

Table 2.1: Original and final budget allocation to components

Component	Original (US\$)	Final (US\$) (to be revised to tally with the original total)
1	379,651	386,240
2	1,362,992	2,723,055
3	900,383	372,552
4	2,580,689	2,248,177
5	999,720	584,338
Total	6,223,435	6,314,362

Source: GSS, 2013

2.1.3.2 Outcomes and Impacts of the Multi Donor Trust Fund

The Multi Donor Trust Fund Project had no direct impact on poverty reduction (World Bank, 2013a). However, the improvement of statistics and institutional capacity in the Ghana Statistical Service and MDAs during the implementation of the Multi Donor Trust Fund initiated the needed reforms to improve monitoring of poverty and social data (World Bank, 2013a). The Project ensured coordination, standardization and harmonization of key statistical activities of Ministries, Departments and Agencies that are used to monitor and evaluate the implementation of the government's poverty programmes (World Bank, 2013a). The key poverty-related statistical activities harmonized by the beneficiaries of the Project include education and literacy statistics, disability statistics, morbidity and fertility statistics as well as price statistics. All these statistics are critical for policymaking and expected to contribute to more efficient and targeted social assistance to alleviate poverty in the country (World Bank, 2013a). In addition, all the reports from the census provided data disaggregated by sex, improving availability of gender-disaggregated data in Ghana (World Bank, 2013a).



2.1.4 ICT and Public Sector Reform

Component two of the Multi Donor Trust Fund sought to build the capacity of Ghana Statistical Service through the provision of training, equipment and Information Technology infrastructure (GSS, 2013). The upgrading of information technology equipment of the Ghana Statistical Service indicated in component two of the Multi Donor Trust Fund included hardware and software to improve the communication and internet connection between the Ghana Statistical Service and other entities of the National Statistical System (GSS, 2013). It is in line with this that the study examined how the adoption of technological innovations enhanced the operations of the Ghana Statistical Service. The connection between the adoption of Information and Communication Technology (ICT) innovations and public sector reform theories is key in understanding the factors that contribute towards Information and Communication Technology supported public sector reforms (Bekkers & Homburg, 2007; Madon, Sahay, & Sudan, 2007). Information and Communication Technology in the public sector is a tool which help in creating a better service delivery (Bekkers & Zouridis, 1999). It increases efficiency, transparency, and improves the coordination of public administration procedures and management (Dunleavy, Margetts, Bastow, & Tinkler, 2005; Gupta, Dasgupta, & Gupta, 2008; Heeks, 1999). In ensuring transparent and accountable governance within a framework of information rationalization, ICT is considered as a valuable support (Barca & Cordella, 2006; Barzelay, 2001; Cordella, 2007; Currie & Guah, 2007; Homburg, 2004; Hood, 1991).

The importance of ICT for the achievement of innovation, mainstreaming and coordination among government agencies cannot be overemphasized (Borins, 1997; Gruening, 2001; Hood, 1991; Kettl, 2005). The use of ICT in government institutions enhances the manner in which public offices organize and deliver services. These changes affect the nature and ways through



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which services are provided which have political and administrative consequences (Cordella & Iannacci, 2010). Thus, Information and Communication Technology reshapes the production, coordination, control, and direction processes that take place within the public sector (Fountain, 2001b).

Though the deployment of Information and Communication Technology in public sector organizations is valuable for efficiency and effectiveness, it has certain restrictions (Bannister, 2007) in terms of implementation, project management and policy (Fountain, 2001a; Heeks, 1999; Snellen & van de Donk, 1998). In spite of the restrictions, Information and Communication Technology solutions are widely adopted to enhance organization performance by reducing business expenses and streamline organizational activities by saving time and costs (Cordella, 2006; Picot, Bortenlanger, & Re Hrl, 1997).

2.1.5 Training and Public Sector Reform

Capacity development is key to a successful Public Sector Institutional Reform as it deals with the capacity of individuals, organizations and institutional frameworks (Department for International Development [DFID], 2013). Thus, capacity development in Public Sector Reform includes a procedure by which individuals and organizations acquire, improve and retain the requisite skills, knowledge, tools, equipment and other resources needed to do their jobs competently (DFID, 2013). However, the main challenge to Public Sector Institutional Reform is the capacities for implementing change at the individual, organizational and institutional levels. In this regard, DFID (2013) emphasized that training, equipment and staff are elements of organizational capacity, but institutional effectiveness also depends on how organizations and individuals interact with institutions to achieve expected results. Building



enabling environment for organizational and institutional development goes beyond state structures to society, the economy and ideology (Berman, 2013).

Training is a vital activity in all organizations with both current and future implications for the success of organizations (Bohlander, Snell, & Sherman, 2001). Component two of the Multi Donor Trust Fund sought to strengthen the capacity of the Ghana Statistical Service to perform its functions through the conduct of training needs assessment and implementation of a comprehensive training programme for GSS management and staff (GSS, 2011b). It is in this light that this study sought to examine how the Multi Donor Trust Fund enhanced staff capacity development towards the production of statistics. According to Bohlander, Snell, and Sherman (2001), training is a learning process whereby people acquire skills or knowledge to aid in the achievement of goals.

The importance of training in public sector reform cannot be overemphasized as stated by Beardwell and Holden (1997, p. 279) it is “a planned process to modify attitude, knowledge or skills behaviour through learning experience to achieve effective performance in an activity or range of activities. Its purpose in the work situation is to develop the abilities of individual and satisfy the current and future needs of the organizations”.



According to Mathis and Jackson (1994) organizations train new employees purposely to bring their Knowledge, Skills and Abilities (KSAs) up to the level required for satisfactory performance. As employees continue on the job, additional training provides opportunities for them to acquire new knowledge and skills (Armstrong, 2003). As a result of training, employees may be more effective on the job and may be able to perform other jobs in other areas or at higher levels. The goal of training therefore is to contribute to organization’s overall

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goals and as such, administrators have to keep a close eye on the organizational goals and strategies and orient training accordingly.

Armstrong (2003) emphasized on the goal of an organization's policies, processes and programmes for the delivery of learning and training to achieve its human resource development strategies by ensuring that it has the skill, knowledge and competent people required to meet its present and future needs. Though training is very essential in reform programmes in the public sector, the transfer of training in the work environment of skills acquired during training programme in the view of Laura, Bohlander, Snell and Sherman (1998) is a longstanding subject of concern to organizations since they have to ensure a better return on money spent on training.

2.1.6 Legal Framework and Public Sector Reform

The Ghana Statistical Service Institutional Reform was focused on the development of a comprehensive legal reform programme for Ghana's National Statistical System through the revision of existing and/or preparation of new legal and regulatory instruments governing the National Statistical System (GSS, 2013). In line with this, the study assessed the results of the legal reform programme supported under the Multi Donor Trust Fund towards the improvement of the coordination of statistics in the National Statistical System through the preparation of new law for the whole National Statistical System (GSS, 2013). The (International Monetary Fund [IMF], 2005) underscores the need to change laws in order to undertake most public management reforms. Thus, new or modified laws would be necessary if there are gaps in traditional public management laws (IMF, 2005). For instance, Kenya promulgated a new constitution in 2010 that has several articles with direct bearing on public sector performance, reform and transformation (Hope, 2012).



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According to Ikokwu (2009), Nigeria was among twenty-five nations that provide little or no budget information to enable the public hold the government accountable for managing their money. Okoroafor (2016) reported that the Fiscal Responsibility Act (2007) was therefore enacted to provide framework for the implementation of the public sector reforms undertaken by the government to convince the world that it was serious about improving the economic and development indices that ranked Nigeria among the poorest, most corrupt, and least developed countries. Thus, the Fiscal Responsibility Act (2007) was expected to underpin the economic growth of Nigeria by managing the nation's finances to ensure a very high standard and to revolutionize the budgeting process (The African Economy, 2006).

2.2 Theoretical Framework

2.2.1 The Use of Metaphor to Explain how Organizations Work

Notwithstanding the coordinating role that the Ghana Statistical Service plays within the National Statistical System, the Ghana Statistical Service is an organization with the legal mandate to provide statistics and indicators on a broad range of economic, social and demographic issues (GSS, 2012). The University of Ljubljana [UL] (2013 p.1) defines organization of work as “a conscious human activity linking and coordinating all the production agents to achieve the optimum result of the works work”. Thus, the University of Ljubljana definition of organization of work is in line with the mission of the Ghana Statistical Service which seeks to ensure the production and management of quality official statistics based on international standards using competent staff for evidence-based decision-making in support of national development (GSS, 2015). Also, the Ghana Statistical Service function of ensuring a harmonised system of economic and social statistics in Ghana falls within the definition of organization of work by the University of Ljubljana.



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Various assumptions and metaphors are used by people about how organizations work. Metaphors are considered useful and powerful communication devices in academic research (Itkin & Nagy, 2014). Morgan (1980) argued that metaphors create an image which provides the basis for detailed scientific research and are used to describe how organizations function in terms of organizational structures, job design and processes. In view of this, six out of the eight distinctive metaphors of Morgan (1986) which show how organizations really work are discussed within the context of the objectives of this study.

2.2.1.1 The Mechanistic Metaphor

Gareth Morgan metaphorical expression of organizations as machines portrays organizations as rational enterprises designed and structured to achieve predetermined ends. Indeed, Morgan postulates that:

Organizations are rarely established as ends in themselves. They are instruments created to achieve other ends. This is reflected in the origins of the word organizations, which derives from the Greek organon, meaning a tool or instrument. No wonder, therefore, that ideas about tasks, goals, aims, and objectives have become such fundamental organizational concepts. For tools and instruments are mechanical devices invented and developed to aid in performing some kind of goal-oriented activity. (Morgan, 1986, p. 23)



Thus, Gareth Morgan description of organizations shows mundane operations with well-defined structure, job roles, and efficient internal as well as external working relationship among the working parts of the machine (Cameron & Green, 2009). It is in this light that component one of the Multi Donor Trust Fund sought to reorganize the institutional arrangement of the Ghana Statistical Service and its human resource management framework by reviewing the organizational structure of Ghana Statistical Service, developing job

specifications for GSS Managers and a staff management information system (GSS, 2011b). www.udsspace.uds.edu.gh

As part of this working relationship, processes, standards and principles are clearly defined and expected to be adhered to. On the contrary, the mechanistic view of organizations creates the impression that managers design and run organizations as if they were machines as argued by Morgan:

Mechanistic approaches to organization often have severe limitations. In particular they (a) can create organizational forms that have great difficulty in adapting to changing circumstances; (b) can result in mindless and unquestioning bureaucracy; (c) can have unanticipated and undesirable consequences as the interests of those working in the organization take precedence over the goals the organization was designed to achieve; and (d) can have dehumanizing effects upon employees, especially those at the lower levels of the organizational hierarchy. (Morgan, 1997, p. 28)

2.2.1.2 The Organic Metaphor

Morgan (1986) as cited in Gazendam (1993) uses organism to describe how organizations function. According to Morgan, an organism is an open system which adapts to its environment. Therefore, organic metaphor is used by Morgan (1986) to illustrate how different environments suit different types of organizations due to different methods of organizing them.

Morgan (1986) unequivocally stated that adaptation of organizations to the environment is key to success. Thus, Morgan (1986) is emphatic about how organizations like organisms are opened to their environment as their very survival depend on how they properly relate to their environment. It is in pursuance of this objective that the Ghana Statistics Development Plan (GSDP) was initiated to ensure an all-inclusive and sustainable development of statistics in the country (GSS, 2008a).



2.2.1.3 The Brain Metaphor

The features of the brain are used to describe the way and manner organizations operate (Carlsen & Gjersvik, 1997). The underlying concept behind the brain metaphor is information processing. It is against this background that component one of the Multi Donor Trust Fund among others, sought to develop a staff management information system. Morgan (1986, p. 81) postulates that

Organizations are information systems. They are communications systems. And they are decision-making systems. In mechanistic organizations these systems are highly routinized. And in matrix and organic organizations they are more ad hoc and free flowing. We can thus go a long way toward understanding organizations and the variety of organizational forms in practice, by focusing on their information-processing characteristics.

In the view of Wilson (2000) since organic systems work on interdependencies, communication and decision making will be better networked. The Ghana Statistical Service, in furtherance of this objective, organised regular staff durbar to update staff on the reform. The durbar was also used as a platform to receive feedback from staff on the reform which informed Management decision and policy making (GSS, 2013). The holding of staff durbars as indicated support Morgan (1986, p.86-87) which stipulates that systems must be able to perform the following four key principles in order to respond to the environment and take appropriate action:

First, that systems must have the capacity to sense, monitor, and scan significant aspects of their environment. Second, that they must be able to relate this information to the operating norm that guide system behaviour. Third, that they must be able to detect significant deviations from these norms. And fourth, that they must be able to initiate corrective action when discrepancies are detected

2.2.1.4 The Political Metaphor

Organizations as political systems recognize the vital role that power plays, competing interests and conflict are predominant in organizations (Cameron & Green, 2009). The political



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metaphor focuses on human behaviours in organizations in terms of "interests, conflict and power" (Morgan, 1986, p. 148). Interest is an intricate set of predispositions embracing goals, values, desires, expectations, and other orientations and inclinations that lead a person to act in one direction rather than another (Morgan, 1986). The unitary approach focuses on achieving established goals and objectives (Wilson, 2000), hence the development and implementation of five components of the Multi Donor Trust Fund as part of the GSS Institutional Reform Programme to achieve desired results (GSS, 2011b).

2.2.1.6 The Psychic Prison Metaphor

Organizations and technology can be viewed as psychic phenomena created and sustained by conscious and unconscious mental processes (Carlsen & Gjersvik, 1997). Thus, various psychoanalytic theories and findings are presented to illustrate how "organizations can become trapped by unconscious processes that lend organizations a hidden significance" (Morgan, 1986, p. 200). Several examples have been provided of organizations that have failed to survive because they did not change their old ways of doing things (Wilson, 2000). These organizations found themselves ensnared in a favored way of thinking because that thinking heralded success in the past (Wilson, 2000). An example of this is the American automobile industry, which continued to manufacture and design big cars and focus on different kinds of ways to fuel engines, whereas the Japanese people spent time designing smaller and more economical cars that captured the market. It is in this regard that poor quality data and delays in statistics dissemination required for efficient planning, monitoring and evaluation of national development programmes (GSS, 2008a) subsequently resulted in developing the Ghana Statistics Development Plan by the Ghana Statistical Service as part of the measures to enhance statistics production in the National Statistical System (GSS, 2008a) to meet the growing demand for statistics.



In responding to Wilson (2000), on how organizations have failed to survive because they did not change their old ways of doing things, the Kenya National Bureau of Statistics embarked on institutional reform when the capacity of Kenya's National Statistical System to produce timely, high quality and relevant statistical information deteriorated over two decades prior to the institutional reform (WB, 2016b). Among the causes identified at the time were decline in budgetary support for the production and dissemination of statistics, inadequate professional staff at the management and technical levels, dilapidated statistical infrastructure and information and communication technology equipment and loss of relevance due to inadequate engagement with users greatly influenced the reform (WB, 2016b).

2.2.1.7 The Flux and Transformation Metaphor

Organizations are in a constant state of flux, including permanence and change (Carsen & Gjersvik, 1997). Organizations as flux and transformation indicate complexity, chaos and inconsistency (Cameron & Green, 2009). This view of organizational life sees the organization as part of the environment, rather than as distinct from it (Cameron & Green, 2009). Thus, the organization is just an aspect of the ebb and flow of the whole environment, with a capacity to self-organize, change and self-renew in line with a desire to have a certain identity (Cameron & Green, 2009). This metaphor sheds light on how change happens in a turbulent world and that managers can shape progress, but can neither control nor come out with system operations in a comprehensive way (Cameron & Green, 2009). It is worth noting that any form of action that anyone or any organization or any system sets in motion, there will be implications, changes, effects, movement, and such within the system (Morgan, 1986). Organizations evolve along with their environments (Morgan, 1986). Therefore, strengthening the National Statistical System involves the effective coordination of all its stakeholders comprising data



users and suppliers, statistics www.udsspace.uds.edu.gh producers, training and research institutions, local and international organizations, and development partners (GSS, 2008a).

Indeed, organizations evolve along with their environments (Morgan, 1986) is supported by the fact that the rapid decentralization process in Indonesia created a higher demand for disaggregated statistics while at the same time reducing the availability of subnational data through line ministries (WB, 2017). This had a major impact on the National Statistics Agency (Statistics Indonesia) compelling the Agency to build capacity to capture new forms of economic activity and improving cooperation with data producers, users, and respondents (WB, 2017).

The flux and transformation metaphor explains why the Government of Kenya recognizing the need for change to strengthen the national statistical system ensured the development of a five-year strategic plan for the National Statistical System (WB, 2016b). This is buttressed by the enactment of a new Statistical Act which provided a coherent legal framework for the entire National Statistical System by setting out the roles and responsibilities of data-producing agencies. It also established the autonomous of the Kenya National Bureau of Statistics (KNBS) to focus on data production thereby bringing the risk of political interference largely under control (WB, 2016b).

2.2.2 Organizational Change Approaches

The world is experiencing swift technological development, growing knowledge workforce and a shift towards accepted work practices making change an ever-present feature of organizational life (Burnes, 2004). However, while many organizations appreciate the need for change, as many as 70% of the change programmes do not achieve their intended outcomes



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(Balogun and Hailey, 2004). Some key approaches to organizational change related to the objectives of the study are briefly discussed below.

2.2.2.1 Kurt Lewin's Three-step Model

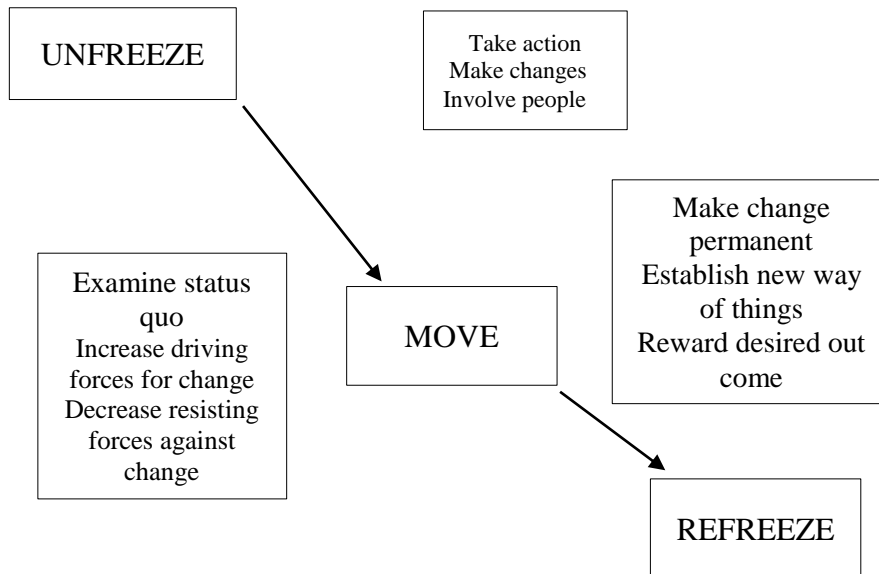
Lewin (1951) as cited in Cameron and Green (2009) used organism metaphor to articulate organizational change. According to him organization has driving and resisting forces in any change situation. For change to happen in any given situation, Lewin's argument is that the driving forces must outweigh the resisting forces. Thus, if the plan of a manager is to speed up the change process then the driving forces must be augmented or the resisting forces decreased. Lewin proposes that organizational change in any given situation should have three steps as shown in Figure 2.1 below. The first step involves unfreezing the current state of doing things by defining the current state and having in mind the end state. As part of the process to unfreeze the current state of doing things, the Ghana Statistical Service undertook a foundational and orientation training for all staff at the inception of the institutional reform programme (World Bank, 2013a). In addition, training in leadership and project management was organised for senior management (World Bank, 2013a).



The second step is about moving to a new state through participation and involvement. In this regard, the Multi Donor Trust Fund Project delivered a series of training sessions, and over 95% of the total staff strength of GSS benefited from one training activity or the other under the Project (World Bank, 2013a). The third step focuses on refreezing and stabilizing the new state of doing things by setting policy, rewarding success and establishing new standards. To this end, the Multi Donor Trust Fund supported the preparation of a new organizational structure (approved by the Ghana Statistical Service Governing Board and Public Services Commission) to enhance the operations of the Ghana Statistical Service. Other documents that

were developed and approved in addition to the organizational structure were Scheme of Service, a new Performance Management System (PMS), and a new Human Resources Change Management and Industrial Relations Manual (World Bank, 2013a).

Figure 2.1: Lewin's three-step model



Source: Lewin 1951 as cited in Cameron and Green (2009)

2.2.2.2 Bullock and Batten Change Model

Bullock and Batten (1985) emphasized that organizational change begins with exploration, planning, action and ends with integration. They expatiated the notion that organizational change should be planned in phases like project management and should begin with exploration which comprises authenticating the need for change and acquiring any specific resources (such as expertise) needed for the change to go forward. According to Bullock and Batten (1985), planning is an activity involving key decision makers and technical experts. Thus, a diagnosis is done and actions are sequenced in a change plan. The plan is approved by management before moving into the action phase. Actions are undertaken according to the plan with feedback mechanisms which allow some re-planning if things go off track. The final integration phase is started once the change plan has been fully actioned. Integration involves aligning the



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change with other areas in the organisation, and formalizing them with known mechanisms such as procedures, rewards and company updates. This kind of approach is within the framework of the machine metaphor of organizations. The model assumes that change can be defined and moved towards in a planned way (Cameron & Green, 2009). This approach implies that the organisational change is a technical problem that can be solved with a definable technical solution. The Multi Donor Trust Fund adopted Bullock and Batten (1985) change model through monthly project report reviews and meetings as well as periodic Implementation Support Missions which evaluated progress of implementation as well as challenges and offered suggestions to improve implementation (World Bank, 2013a). The missions assisted in resolving implementation bottlenecks and subsequently hastened implementation (World Bank, 2013a).

2.2.2.3 Nadler and Tushman, Congruence Model

The congruence model takes a different approach to the factors influencing the success of the change process (Nadler & Tushman, 1997). The model regards organisations as sets of interrelating sub-systems with the capacity to scan and sense changes in the external environment. Thus, the organization is a system that draws inputs from both internal and external sources (strategy, resources, and environment) and transforms them into outputs (activities, behaviour and performance of the system at three levels: individual, group and total). In the view of Cameron and Green (2009), the Congruence Model draws on the sociotechnical view of organizations that looks at managerial, strategic, technical and social aspects of organizations based on the assumption that everything relies on everything else. Thus, the different elements of the total system have to be aligned to achieve high performance as a whole system. Therefore, the higher the congruence the higher the performance. The model suggests that change can be effectively managed by attending to all four components



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(managerial, strategic, technical and social aspects of organizations), not just one or two components. It is against this background that the Multi Donor Trust Fund of the Ghana Statistical Service was designed and implemented in five different components (WB, 2016a); while the Statistical Capacity Building-Change and Reform for the Development of Statistics Project by the National Statistics Agency of Indonesia implemented five components; and the Statistical Capacity Building Programme of the Kenya National Bureau of Statistics was implemented in six components (WB, 2016b).

On the contrary, whenever alignment work is not done effectively, the organization will return to the old way of doing things and change will fail. The failure of change means that actors or forces emerge from the system due to lack of congruence. In the event of lack of congruence, energy builds in the system in the form of resistance, control and power. Resistance comes from the fear of the unknown or a need for things to remain stable. A change imposed from the outside can be unsettling for individuals as it decreases their sense of independence. Resistance can be reduced through participation in future plans, and by increasing the anxiety about doing nothing (increasing the felt for change). Control issues result from normal structures and processes being in flux. The change process may therefore need to be managed in a different way. For instance, employing a transition manager. Power problems arise when there is a threat that power might be taken away from any currently powerful group or individual. This effect can be reduced through building a powerful coalition to take the change forward (Nadler & Tushman, 1997). Similarly, the STATCAP-CERDAS implemented by the National Statistics Agency of Indonesia right at the inception suffered implementation challenges until a new management was put in place leading to restructuring of the project (WB, 2017). Subsequently, the project improved significantly after restructuring until it was cancelled in May 2017, because the National Statistics Agency failed to sign the contract for the integrated statistical



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information systems package and establish an appropriate counterpart project team for its implementation (WB, 2017).

2.2.3 Managing Organizational Change

The management of change in organizations is very key and requires a lot of considerations. In view of this, philosophy of change looks at organisational change as structured set of assumptions, premises and beliefs about the way change works in organisations. Philosophies of change are important because they reveal the deep suppositions made about organisations and how change operates within and around them (Graetz & Smith, 2010). Therefore, philosophies of change related to the objectives of the study are discussed as follows.

2.2.3.1 The Rational Philosophy

The rational philosophy believes that change must be planned since organizations are purposeful and adaptive (Van de Ven & Poole, 1995; Kezar 2000). Thus, change occurs because senior managers and other change agents deem it necessary. Similarly, the Ghana Statistics Development Plan (GSDP) which covered a period of five years (2009-2013) was purposefully developed and adopted by the Ghana Statistical Service (GSS, 2011a). This

buttresses the point that the process for change is rational and has evolutionary and life cycle approaches with managers as the pivotal instigators of change (Carnall, 1995). According to Child (1972), managers have ultimate control of their organizations and for that matter events outside the organization are exogenous and that successful change is firmly in the hands of managers. Therefore, whenever change goes on well is because managers were insightful and prescient, but when change goes badly it is because something happened that could never have been foreseen



2.2.3.2 The Biological Philosophy

Scholars have used biology in various ways as a metaphor to illustrate organizational change (Witt, 2004). Hannan and Freeman (1977) pioneered the use of biology under the terminology of population ecology with focus on incremental change within industries rather than individual organizations. Population ecologists (McKelvey & Aldrich, 1983) in the course of time had a biological outlook of industrial behaviour with the view that change occurs due to a natural selection where industries gradually evolve to match the constraints of their environmental context. However, there is a distinction between the concept of natural selection on one hand and the developmental life cycle of individual organizations on the other hand. Life cycle theory (Kezar, 2000; Van de Ven & Poole, 1995) explains change in organizations from start-up to divestment. Birth, growth, maturity, decline and death are all natural parts of an organisation's development (Levy & Merry, 1986). The life cycle philosophy subtly advocates that change is imminent and progressive, hence the implementation of the Multi Donor Trust Fund Grant Agreement as part of the Ghana Statistical Service reform arrangement (GSS, 2011b).

2.2.3.3 The Resource Philosophy

According to the resource-dependence theory, organizations do not have all the resources it needs in a competitive environment (Pfeffer & Salancik, 1978). Accessibility and control of resources is very critical for the survival and prosperity of organizations (Pfeffer & Salancik, 1978). In this light, successful organizations in the course of time are those that are able to acquire, develop and deploy scarce resources and skills (Connor, 2002). It is within this context that the Multi Donor Trust Fund Grant Agreement was signed between the Republic of Ghana and the World Bank in February 2011 which injected US\$ 6,314,362 into the operations of the Ghana Statistical Service as shown by the components of the MDTF (GSS, 2011b).



The resource philosophy standpoint is that organizational change begins by identifying needed resources, where these resources can be obtained and assessed in terms of criticality and scarcity. The resource philosophy perspective of organizational change is centered on the strategic capabilities of the organization, rather than external influences of the environment. In this sense, the major limitation to an organization's success is its management of resources. The stimulus for change emanates principally from within, as organizations seek the resources they require.

2.2.3.4 The Contingency Philosophy

The Contingency Philosophy asserts that organizational performance depends on issues such as the organization's environment, adoption of technology, strategy, structure, systems, style or culture (Pfeffer, 1982). However, variables such as inertia, inflexibility, resource immobility and industry pressure make it difficult to determine what causes higher or lower performance. This explicates the reasons for which researchers have noted different levels of organizational performance reflecting the degree of fitness (Van de Ven & Poole, 1995). Contingency philosophy advocates that in the long-term, managers in competitive markets are forced to adjust their practices and their organization's configurations to be congruent with efficiency demands (McLoughlin & Clark, 1988). It is in line with this challenge that the National Statistics Agency of Indonesia embarked on building capacity to capture new forms of economic activity and improving cooperation with data producers, users, and respondents (WB, 2017). Furthermore, the President of Indonesia call for Bureaucracy Reform for government agencies to provide services that were 'better, faster, and cheaper' (WB, 2017) is within the context of the Contingency Philosophy.



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Indeed, the Contingency Philosophy sees change in organisations from a behavioural perspective where managers take decisions based on specific circumstances, focusing on relevant actions needed to be taken with appropriate interventions. The best actions to initiate change hinges on the phrase ‘it depends’ and the utmost way of action is one that is fundamentally situational, matched to the needs of the circumstances. For instance, introducing change in the military might be typically autocratic, whereas change in a small business might typically be consultative, there could be times when the reverse is the most effective solution.

2.2.3.5 The Systems Philosophy

The systems philosophy emerged from ‘systems thinking’ which metamorphosed to general systems theory developed originally from viewing organizations as complex machines (Kuhn, 1974). It transformed later to open systems, and currently as bodies capable of self-organization (Gharajedaghi, 1999). The systems philosophy goes beyond the causal views of management and the integral parts of organisations. It was developed to acknowledge the importance of holistic analysis of organisations rather than focusing on their compartments (Graetz & Smith, 2010). Thus, organisations were seen as the totality of their parts rather than as a collection of reduced units (Graetz & Smith, 2010). The underpinning fact about change in organisations for systems theorists is to have in mind that any imposed change has numerous and even multiplied effects across an organisation. As a result, in order for change management to be successful, it must be introduced across the range of organisational units and sub-systems.

Systems theorists on the other hand, view organisations as rational and non-political entities and for change to occur effectively, it should have a systemic approach prescribing steps and linear solutions. Thus, change should have a whole and unified approach to ensure continuous improvement of all aspects of an organization’s operations. In this light, when change is



effectively linked together can lead to high performance (www.udsspace.uds.edu.gh (Australian Manufacturing Council, 1994).

It is argued that when organisations operate or function as systems with interrelated parts that affect each other and depend absolutely on the whole to function properly (Hatch, 1997), then organisational change can be effective only when interventions are made throughout the entire system. It is in realization of this point that the five components of the MDTF were developed as part of Government's efforts to hasten the goals of economic development and poverty reduction through quality statistical information for monitoring and assessment of development programmes (World Bank, 2013a).

Related to the systems philosophy is the National Statistical System which includes Ghana Statistical Service; Ministries, Departments and Agencies; Metropolitan, Municipal and District Assemblies; Development Partners; research and training institutions; and suppliers and users of data (GSS, 2008a). Therefore, the Ghana Statistics Development Plan was developed by the GSS as part of the measures to enhance the National Statistical System (GSS, 2008a) to ensure sustainable development of statistics in the country (GSS, 2008a).



2.2.3.6 The Institutional Philosophy

Organisational change is stimulated by pressures coming from the wider institutional context such as new regulatory, financial or legal conditions (DiMaggio & Powell, 1983, 1991). In this regard, the Ghana Statistics Development Plan was prepared within the framework of the Strategy for the Harmonization of Statistics in Africa as part of the measures to address the identified weaknesses within the African Statistical System (AUC, AfDB & ECA, 2010). This affirms Graetz & Smith (2010) that change is a means of shifting industrial landscape which

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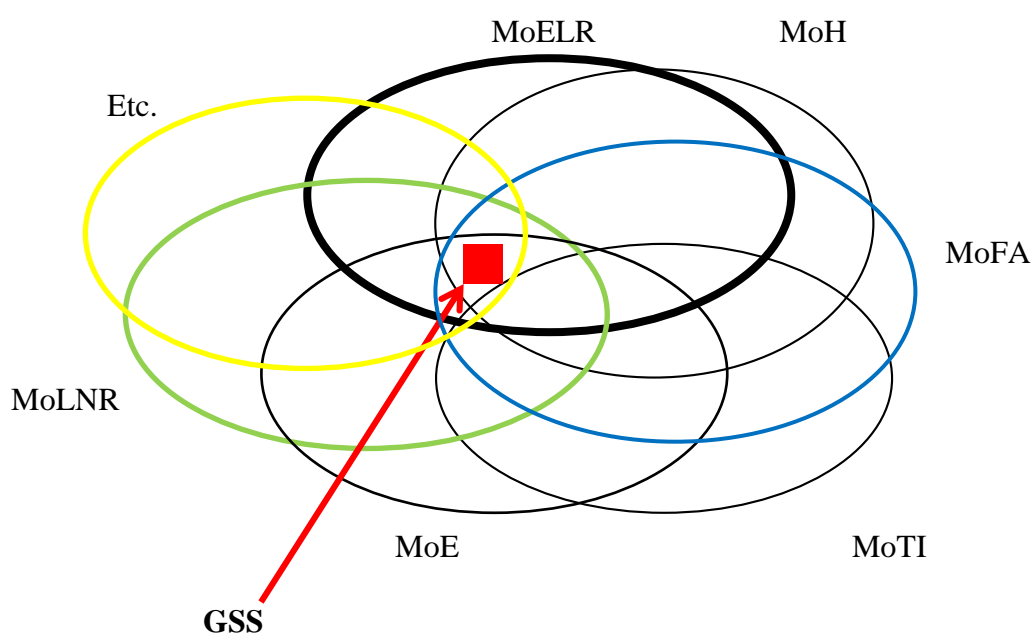
makes it possible for organisations to succeed because they are structured to be able to accommodate the environmental as well as the industrial pressures to which they are compelled to respond.

The institutional philosophy essentially looks at how external forces are able to compel organisations into particular patterns and structures (Meyer & Rowan, 2006). Thus, the institutional theory is very important in explaining the way and manner in which social, economic and legal pressures influence organisational structures and practices (Graetz & Smith, 2010). It is worth noting that organisations capacity to adapt to the external pressures contribute in no small way in determining their survival and prosperity. It is in this context that the Government of Ghana requested assistance from the World Bank and other Donors to strengthen the Ghanaian Statistical System, starting with the GSS (World Bank, 2013a). Therefore, this research is anchored within the institutional theory and philosophy of change. Since it is against this background of thinking that the Ghana Statistics Development Plan was launched in November, 2008 to undertake a reform within the Ghana Statistical Service to make it more efficient and effective in managing and coordinating the National Statistical System (GSS, 2011a). Indeed, the National Statistical System is seen to be ineffectively organized and inadequately resourced as shown in figure 1.1 in chapter one of the study where the various sectors are left on their own without any coordination. In fact, the National Statistical System has been relatively weak and fragmented with most of the institutions operating on their own, unless there is a project that requires collaboration to ensure effective implementation (GSS, 2011a).

Consequently, the weak collaboration has led to poor quality data and delays in dissemination of statistics required for efficient planning, monitoring and evaluation of national development

programmes (GSS, 2008a). The www.udsspace.uds.edu.gh institutional philosophy therefore provides the requisite theoretical framework in strengthening the National Statistical System through the involvement and effective coordination of all its stakeholders comprising data users and suppliers, statistics producers, training and research institutions, local and international organizations, and development partners as shown in Figure 2.2 for successful implementation of the Ghana Statistics Development Plan (GSS, 2008a).

Figure 2.2: Fully Coordinated System with Sectorial Linkages



Source: GSS, 2011a

Note: GSS= Ghana Statistical Service; MoE= Ministry of Education; MoELR= Ministry of Employment and Labour Relations; MoFA= Ministry of Food and Agriculture; MoH= Ministry of Health; MoLNR= Ministry of Lands and Natural Resources; MoTI= Ministry of Trade and Industry; Etc.=Etcetera

2.3 Summary of the Chapter

The chapter discussed public sector reforms in Ghana and institutional reforms of national statistical offices. The use of metaphor to explain how organizations work, organizational

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change approaches and managing organizational change were also discussed. The literature conceived public sector as the totality of services organised under the authority of government (UNECA, 2010). Thus, public sector is the most important government machinery for the state and improving the way it is managed is critical for efficient and effective service delivery, social protection and private sector regulation (Joshi & Carter, 2015). Donor support to institutional reform is aimed at improving the state performance through changing institutions and generating greater capacity, commitment, efficiency, integrity, and responsiveness to achieve poverty reduction and other developmental goals (Bunse & Fritz, 2012).

According to the literature, major challenge to Public Sector Institutional Reform is the capacities for implementing change at the individual, organizational and institutional levels. Aryeetey and Fosu (2005) attributed the failure of Public Sector Institutional Reform to the continuing presence of institutional constraints in the mobilization of resources and their allocation.

Morgan (1986) is emphatic that organizations like organisms are opened to their environment as their very survival depend on how they properly relate to their environment. In line with this, organizations were unable to survive because they did not change their old ways of doing things (Wilson, 2000). These organizations found themselves ensnared in a favored way of thinking because that thinking heralded success in the past (Wilson, 2000). According to the resource-dependence theory, organizations lack the essential resources it needs in a competitive environment (Pfeffer & Salancik, 1978). Possession of resources is very critical for the survival and prosperity of organizations (Pfeffer & Salancik, 1978). In this light, successful organizations in the course of time are those that are able to acquire, develop and deploy scarce resources and skills (Connor, 2002).



The institutional philosophy offered a critical look at how external forces are able to force organizations into particular patterns and structures (Meyer & Rowan, 2006). The theory is very important as it explained the way and manner that social, economic and legal pressures influence organizational structures and practices (Graetz & Smith, 2010). To this end, the ability of organizations to adapt to the external pressures contribute largely in determining their survival and prosperity. In conclusion, the research is anchored within the institutional theory and philosophy of change which form the framework of the Ghana Statistical Service reform programme which was designed to make the Service more efficient and effective in managing and coordinating the National Statistical System (GSS, 2011a).




METHODOLOGY AND INSTITUTIONAL PROFILE

3.0 Introduction

This chapter deals with the methods that were adopted in conducting the study and is organized as follows; research setting and institutional profile, research philosophy and design, population, sample and sampling technique, research instrument (data collection technique), administration of instrument and analysis of data.

3.1 Research Setting and Institutional Profile

The research setting for the study was the head office of the Ghana Statistical Service in Accra, Greater Accra Region. Ghana Statistical Service was established in 1985 as an autonomous public service institution by PNDC Law 135. This Law was passed to replace the Statistical Act of 1961 (Act 37) that established the Central Bureau of Statistics in 1963 (GSS, 2015). However, it begun from the setup of the Office of the Government Statistician in the colonial era in 1948.



The Ghana Statistical Service was established to provide an efficient and user-responsive statistical products and services to cater for the increasing demand for statistics on social, economic and demographic issues covering government business and the population (GSS, 2015). The Ghana Statistical Service also has the added function of coordinating the development and maintenance of the National Statistical System to ensure the collection, analysis and dissemination of integrated, reliable and timely official statistical information (GSS, 2015).

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The Vision of Ghana Statistical Service is “To be the trusted provider of Statistical Services for good governance” (GSS, 2015). The Mission Statement is that “Ghana Statistical Service exists to lead the efficient production and management of quality official statistics based on international standards using competent staff for evidence-based decision-making in support of national development” (GSS, 2015). To achieve high performance levels, the Ghana Statistical Service strives to ensure in its operations “professionalism, integrity, relevance and accountability” as its Core Values (GSS, 2015).

Ghana Statistical Service has the following as its core functions (GSS, 2015): Promote the efficient and effective use of statistics through research activities in all fields of application of statistics; ensure that the Service collects and compiles socio-economic data in Ghana and presents them to relevant government agencies requiring such information; advise government on issues relating to statistical information; collect, compile, analyse, abstract and publish statistical information; conduct statistical surveys, including any census in Ghana; and organise a coordinated scheme of economic and social statistics in Ghana.

As shown in the organizational structure in Figure 3.1, the Ghana Statistical Service is governed by a Board which reports to the Office of the President. The head of the Ghana Statistical Service is the Government Statistician who reports to the GSS Governing Board. The Government Statistician is assisted by two Deputy Government Statisticians. The Ghana Statistical Service has 10 directorates with 32 sections as a result of the restructuring exercise. The ten regional offices which are headed by Regional Statisticians are under a directorate at the head office.

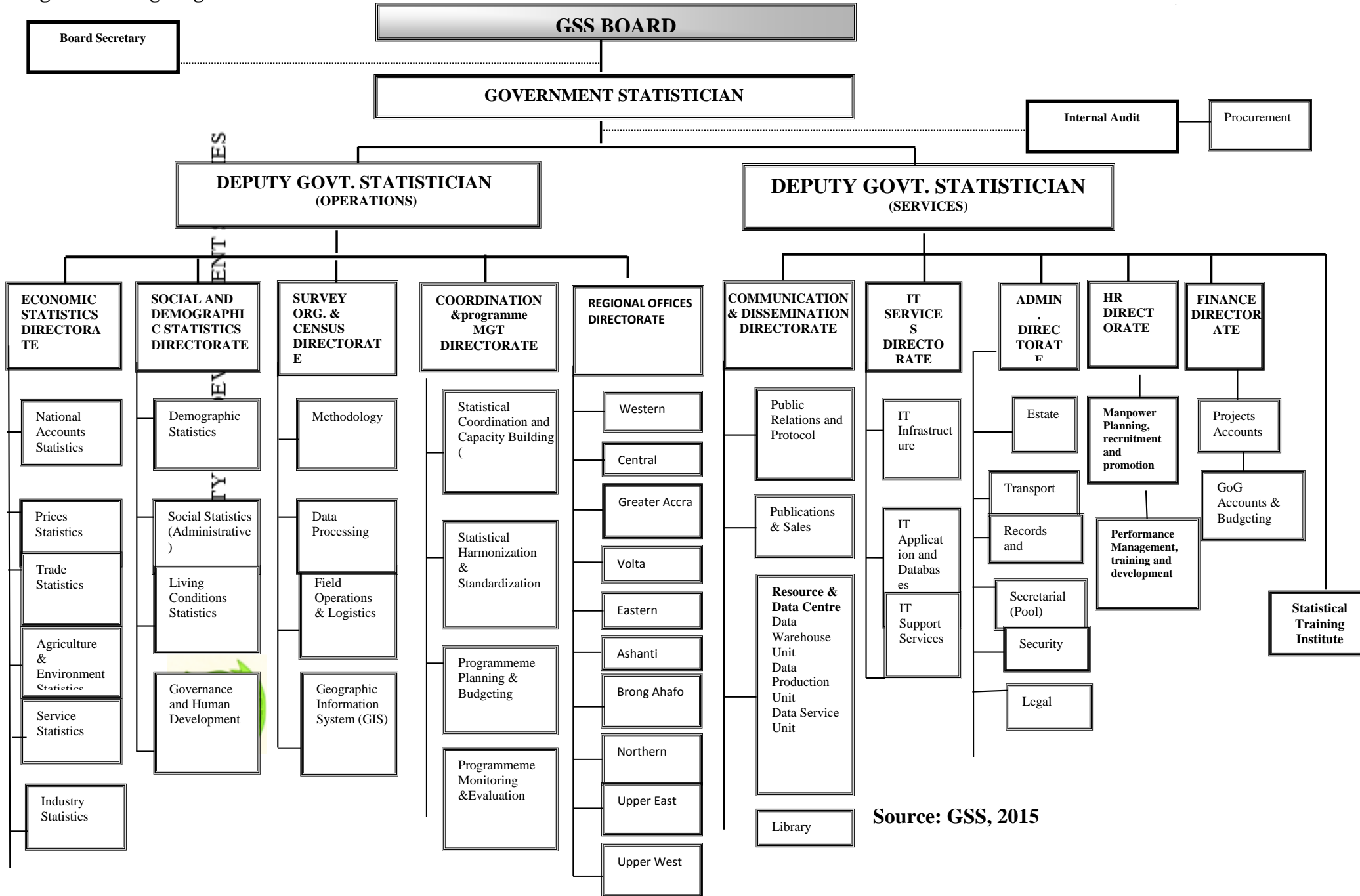


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A non-probability sampling technique of purposive was used in the study to select the Ghana Statistical Service. “In purposive sampling, people or other units are chosen, as the name implies, for a particular purpose” (Leedy & Ormrod, 2005, p. 206). To this end, the Ghana Statistical Service was chosen for this study in view of its core function of ensuring efficient and effective production and management of quality official statistics including censuses and surveys, based on international standards using competent staff for evidence-based decision-making in support of national development (GSS, 2015). Again, the Ghana Statistics Development Plan led to an institutional reform within the Ghana Statistical Service to make it more efficient and effective in managing and coordinating the National Statistical System (GSS, 2011a). Therefore, the researcher deemed it appropriate to choose the Ghana Statistical Service for this study to assess the Service Institutional Reform Programme supported by the Multi Donor Trust Fund. Thus, the choice of GSS for the study is supported by Sproull (2002, p. 119) definition of purposive sampling as “a nonrandom sampling method in which the sample is arbitrarily selected because characteristics which they possess are deemed important for the research”.



Figure 3.1: Organogram for the Ghana Statistical Service



Source: GSS, 2015

3.2 Research Philosophy

The study adopts the positivist research philosophy which combines quantitative and qualitative evaluation of phenomenon.

The positivist paradigm asserts that real events can be observed empirically and explained with logical analysis. The criterion for evaluating the validity of a scientific theory is whether our knowledge claims (i.e., theory-based predictions) are consistent with the information we are able to obtain using our senses. Positivist research methodology (methodological individualism) emphasizes micro-level experimentation in a lab-like environment that eliminates the complexity of the external world (e.g., social, psychological, and economic linkages between unemployment, and crime or suicide etc.). Policies are then prescribed based on conclusions derived via the “scientific method” (Descartes (1998)).

Positivism as technique of enquiry seeks to give immense cognitive prestige to Social Sciences, and does that to convince its adherents that sociology too could be a science and follow the scientific methodological principles of empirical observation, deductive reasoning, and formulation of laws or universal generalizations.

3.3 Research Design

According to Panneerselvam (2007), research design aims to describe, analyze methods and throw light on how a research problem is logically investigated. The current study used a cross-sectional survey design to investigate the extent to which implementation of the



Multi Donor Trust Fund has helped to address the institutional challenges including staff capacity, technological and legal constraints in the production of quality and timely statistics by the Ghana Statistical Service.

The study used cross-sectional survey as it provides a snapshot of the outcome and the characteristics associated with it at a specific point in time (Verma, 2015). Also, in cross-sectional survey, groups identified for the study are purposely selected based upon existing differences in the sample rather than seeking random sampling (Verma, 2015). It is against this background that the researcher chose purposive sampling method to select 153 respondents taking into consideration, the duration of implementation of the Multi Donor Trust Fund from March 2011 to June 2013 (GSS, 2013) as well as the selection criteria in 3.5.1.

3.4 Population

The Ghana Statistical Service had a total work force of 340 employees on the payroll at the time of the study. The GSS employees (work force) at the head office as shown in Table 3.1 were made up of 223 including top management (comprising the Government Statistician and a Deputy Government Statistician), heads of directorate (directors), sectional heads (middle level managers), supervisors and support staff. The remaining 117 staff were distributed across all regional offices in the country. Table 3.1 further shows the directorate breakdown, population and sample distributions.



3.4.1 Sample and Sampling Techniques

Table 3.1: Population and Sample Distribution of the Study

Directorate	Population Distribution	Sample Distribution	Number of Participants
Economic Statistics	30	29	27
Social and Demographic	19	18	17
Survey Organization and Census	19	18	16
Coordination and Programme Management	16	15	14
Regional Offices	4	4	4
Communication and Dissemination	16	16	14
Information Technology Services	14	9	6
Administration	77	22	21
Human Resource	9	7	6
Finance	19	15	13
Totals	223	153	138

Source: Field Survey, 2017

A sample is a subset of the population in question and consists of a selection of members from the particular population (Sekaram, 2007). The sample frame for this research as shown in Table 3.1 was the establishment list of all the 223 workers of Ghana Statistical Service at the head office as at the end of December 2017. A sample size of 153 was selected for the study as shown in the selection criteria (3.5.1).





Gay and Airasian (2003) as cited in Leedy and Ormrod (2005) offered very useful procedures for selecting a sample size which were used to guide this study. According to Leedy and Ormrod (2005, p. 207) “for small populations (with fewer than 100 people or other units), there is little point in sampling. Survey the entire population. If the population size is around 500, 50% of the population should be sampled”. In furtherance of the purposive sampling technique (Leedy & Ormrod, 2005, p. 206) and guidelines (Leedy & Ormrod, 2005, p. 207) adopted for the study, the researcher became aware of the sample size of 153 respondents drawn from the various directorates of the Service. In view of this, it was deemed prudent to use questionnaire to collect data on the 153 respondents to save time and cost and to make the data collected comparable within the dataset.

Leedy and Ormrod (2005, p. 206) emphasized that “purposive sampling may be very appropriate for certain research problems. However, the researcher should always provide a rationale explaining why he or she selected the particular sample of participants”. In view of this, the 153 respondents were selected taking into consideration, duration of the implementation of the Multi Donor Trust Fund from March 2011 to June 2013 (GSS, 2013). Therefore, respondents who were not working with the Ghana Statistical Service during the Multi Donor Trust Fund were not included in the research. Thus, respondents were selected based on the criteria indicated under subsection 3.5.1 of the study below. Also, purposive method was used in the study to find out the extent to which the Multi Donor Trust Fund has addressed the staff capacity, technological and legal constraints in the production of quality and timely statistics by the Ghana Statistical Service.

3.5 Participants

A total of 138 respondents out of the 153 sample drawn from the various Directorates of the GSS Head Office as shown in Table 3.1 participated in the study. Fifteen participants (representing 9.8%) out of the 153 sample size for the study were engaged in field work by the Ghana Statistical Service during the period for administering of questionnaires and for this reason did not participate in the study. This is in line with Israel (2009) that for a population size of 250, a sample size of 154 is recommended for 95% confidence level and $\pm 5\%$ precision.

3.5.1 Selection Criteria

Inclusion Criteria

- Worked with the Ghana Statistical Service for at least six years and above (this period includes the implementation of the Multi Donor Trust Fund)
- Hold the rank of Assistant Statistician or its equivalent grade which is the minimum professional grade
- Present on the day of data collection and willing to participate

Exclusion Criteria

- Worked with the Ghana Statistical Service for less than six years (this period does not include the implementation of the Multi Donor Trust Fund)
- Hold a rank below Assistant Statistician or its equivalent grade
- Absent from work on the day of data collection
- Not willing to participate



3.6 Data Collection

3.6.1 Source of Data

The researcher used both primary and secondary sources of data. The primary source of data was the questionnaire. The secondary source of information was obtained from the Ghana Statistical Service Library, the establishment list, the internet, annual reports, and strategic plans, among others.

3.6.2. Data Collection Methods and Instrument

Quantitative data type were mainly used for the study and were extracted from the questionnaire (set of data) which was used as the main instrument for data collection. The questionnaire was mainly closed-ended with a few open-ended questions structured to reflect the objectives of the study. The open-ended questions were introduced to offer respondents the opportunity to give in-depth information on the issues generated from the objectives of the study which were coded to extract the data for further analysis.

The questionnaire had two main parts; the first part was on the demographic data of respondents and the nominal scale was used to ask questions on sex, age and qualifications of respondents in the study. The second part was the psycho graphical data or the research objectives. Most of the questions in this part of the questionnaire were designed using Likert scale strategy, which measures respondents' attitude by asking the extent to which they agree or disagree with the issues at stake.



3.7 Reliability and Validity of Instrument

The researcher ensured that the instrument developed was reliable. This was done by ensuring that the instrument clearly defined concepts and constructs used to frame the items that highlight the concept or constructs used. Reliability was also determined by pre-testing the questionnaire to ascertain the dependability and the consistency of the items in the questionnaire. The pre-test was carried out in the GSS Greater Accra Regional Office which was not part of the research setting for the study. Ten respondents (6 males and 4 females) participated in the pre-test exercise based on the inclusion and exclusion criteria spelt out under subsection 3.5.1. The respondents filled the questionnaires and were told to note any difficulty they encountered while filling. They were told to ask for further clarifications should the need arise.

Observation from the Pre-test

From the pre-test, it was observed that respondents needed to be reminded of instructions for each sub-section of the questionnaire. To address this problem in the main study, instructions and choices were carefully explained to the respondents. Some respondents asked for meaning of some words in the questionnaire and the researcher explained to them.

It was observed that some of the items in the questionnaire were not consistent and fully understood by respondents. To address this in the main study, some of the questions were modified and additional questions were constructed to fill in the gaps and address the inconsistencies.



3.8 Data Analysis

The data collected was statistically analyzed using the IBM Statistical Package for Social Sciences Software (SPSS) version 20.0. Representation like tables was used to ensure easy and quick interpretation of data. Responses were expressed in percentages, mean and standard deviation. Data from the completed questionnaires were checked for consistency. Items were grouped base on the responses given by the respondents and were coded for easy usage of the IBM Statistical Package for Social Sciences (SPSS).

Data generated with the use of the open-ended questions (in the questionnaire) gave in-depth information on the issues at stake. Thus, responses from the open-ended questions were grouped into themes and coded. Responses corresponding to the various themes were recorded accordingly and were used to generate tables for further analysis in the study.

3.9 Ethical Consideration

Carrying out research requires not only the know-how and diligence, but also frankness and integrity. This is done to recognize and protect the right of human subjects. To render the study ethical, the right of self-determination, anonymity, confidentiality and informed consent were observed. Respondents were told the purpose of the study, the procedure that would be used to collect the data, and were assured that there were no potential risks or cost involved. Scientific sincerity is regarded as a very important ethical responsibility when conducting research. Therefore the researcher took the following ethical consideration in the process of collecting the data for the study. The respondents for the study were allowed to participate voluntarily in the research without being persuaded. The reason for the observance of this is that if they are not allowed to participate out of their



own volition they might give false information that would mar the objectives of the research. Respondents of the study were told the objectives of the study, the possible implication and effect of the research. As a result of this, the information given was based purely on informed consent. The confidentiality of the study was paramount and observed by the researcher. The data collected were managed and used in such a way that the identity of the respondents was protected and that no information is directly traced to or associated with any individual respondent. All references were duly acknowledged to prevent plagiarism.



CHAPTER FOUR

ANALYSIS AND DISCUSSIONS OF RESULTS

4.0 Introduction

The study sought to assess the Ghana Statistical Service institutional reform programme and the role of the Multi Donor Trust Fund in the reform programme. In view of this, the study specifically examined how the Multi Donor Trust Fund enhanced staff capacity towards the production of statistics, ascertained the extent that the Multi Donor Trust Fund enhanced the production of quality and timely statistics, examined how the technological innovations adopted during the implementation of the programme enhanced the operations of the Ghana Statistical Service and assessed the extent to which the legal reform programme supported by the Multi Donor Trust Fund improved the coordination of statistics in the National Statistical System. The chapter further presents the analysis and interpretation of the responses from questionnaires administered for the study and discusses the findings.

4.1 Data Presentation and Analysis

Responses to major questions are presented in tabular form. Further explanations are offered to avoid ambiguities for clearer understanding.

4.1.1 Demographic Characteristics of Respondents

The major socio demographic variables discussed include sex, age, level of education, years worked with the Ghana Statistical Service and profession of respondents. The results are shown in Table 4.1



Table 4.1: Summary of Demographic Characteristics of Sampled Respondents

Variable	Category	Frequency (N=138)	Percentage (%)
Sex	Male	96	70
	Female	42	30
Age group	20-29 years	2	1
	30-39 years	28	20
	40-49 years	56	41
	≥ 50 years	52	38
Level of Education	WASSCE	-	-
	Undergraduate	-	-
	First degree	34	25
	Postgraduate/Masters	104	75
Number of years worked with GSS	6-10 years	16	12
	11-15 years	48	35
	16-20 years	28	20
	Above 20 years	46	33
Type of profession	Statistician	80	58
	Statistician (GIS)	12	9
	Non-Statistician (IT)	6	4
	Non-Statistician (HR, Finance, Administration)	40	29



Source: Field Survey, 2017

Data from Table 4.1 above indicate that, ninety-six of respondents representing 70% are males while forty-two of the respondents constituting 30% are females. This shows that a higher number of male respondents took part in the exercise than the females. Majority of the respondents are of the age group between 40-49 years constituting 41%, followed by 50 years or more representing

38%. This revelation shows that a significant proportion (38%) of staff at the Ghana Statistical Service head office is close to retirement. The least number of respondents is between 20-29 years representing one percent. The results show that 99% of the respondents who were available when the Multi Donor Trust Fund initiatives were undertaken were thirty years and above.

Table 4.1 further reveals that one hundred and four of the respondents have obtained Postgraduate/Masters Degree certificates representing 75%. Thirty-four respondents have obtained first degree certificates representing 25%. None of the respondents possessed either WASSCE/SHS certificate or a certificate below first degree which shows that majority of the core staff at the Head Office of the Ghana Statistical Service have postgraduate certificates. The reform programme of the Ghana Statistical Service made Masters' Degree the minimum entry requirement for employment into the Service (GSS, 2014). Thus, staff without Masters' Degree were motivated and sponsored to upgrade themselves (GSS, 2014). This policy of the Service seems to be yielding results and explains the reason why such a significant proportion (75%) of professional staff in the head office have postgraduate certificates.

The results in the Table also show that forty-eight of the respondents have worked with Ghana Statistical Service between 11-15 years constituting 35%, followed by forty-six respondents who have worked with Ghana Statistical Service for more than 20 years representing 33%. Twenty-eight of the respondents representing 20% have worked with Ghana Statistical Service between 16-20 years. Only sixteen respondents representing 12% have worked with the Ghana Statistical Service between 6-10 years. This indicates that all the respondents were available during the implementation of the Multi Donor Trust Fund.



Furthermore, Table 4.1 presents the professional area of the respondents. In all, eighty respondents are statisticians representing 58%. Twelve respondents representing nine percent are statisticians with background in Geographic Information System. Forty of the respondents accounting for 29% are non-statisticians with background in Human Resource, Finance and Administration while six respondents constituting four percent are non-statisticians with background in Information Technology. These results show that majority of the respondents (67%) have background in statistics. This is as a result of the fact that the Ghana Statistical Service is established mainly for statistics production and more staff with statistics background are needed to be able to achieve its mandate.

4.1.2 Staff level of awareness of specific Multi Donor Trust Fund initiatives

Level of respondents' awareness of specific Multi Donor Trust Fund component implemented by the Ghana Statistical Service is shown in Table 4.2. This was measured using four items presented on 4-point scale (4-very much aware to 1-not aware). High scores (3 and above) indicate higher level respondents' awareness while low scores (2 and below) indicate lower level of awareness.



Table 4.2: Level of awareness of specific MDTF initiatives

Variable	N	Mean	SD
It built GSS staff capacity towards the production of statistics	138	3.3623	0.73825
It upgraded GSS Information Technology to enhance its operations	138	3.3333	0.73825
It enhanced the production of timely and quality statistics	138	3.2174	0.74225
It initiated development of a legal reform programme for the country's National Statistical System	138	3.0580	0.93409

Source: Field Survey, 2017

Note: 4= Very Much Aware; 3= Aware; 2= Somehow Aware; 1= Not Aware; SD = Standard Deviation

The table further shows the means scores and standard deviation obtained by the respondents on the level of awareness of any specific Multi Donor Trust Fund component implemented by the Ghana Statistical Service. Standard deviation is a number used to tell how measurements for a group are spread out from the mean (average). A low standard deviation means that most of the numbers are very close to the average. A high standard deviation means that the numbers are spread out (Opoku, 2006). The low standard deviations in Table 4.2 indicate that the survey

participants level of awareness of the specific Multi Donor Trust Fund initiatives were about the same. This may be so because knowledge of the initiatives was mostly discussed at staff durbars, and therefore nobody had any seriously varied level of awareness from what everybody, in terms of knowledge and understanding of the initiatives.



The results indicate that the respondents' awareness ranged from 3.3623 to 3.0580. Among the 4 items, "It built GSS staff capacity towards the production of statistics" had the highest mean score of 3.3623 with SD of 0.73825. This was followed by "It upgraded GSS Information Technology to enhance its operations" with a mean score of 3.3333 and SD of 0.73825. "It enhanced the production of timely and quality statistics" and "It initiated development of a legal reform programme for the country's National Statistical System" recorded mean scores of 3.2174 (SD 0.74225) and 3.0580 (SD 0.93409) respectively. As depicted in Table 4.2, all the means scores are above 3 showing that majority of the respondents reported that they were aware or very much aware of the specific Multi Donor Trust Fund initiatives implemented by the Ghana Statistical Service.

4.1.3 Staff Capacity Development Initiative

One of the critical components of the Multi Donor Trust Fund programme was to help build Ghana Statistical Service staff capacity thereby improve their job performance (World Bank, 2013a). Therefore, the study sought to examine whether respondents were aware of such an initiative, whether they ever participated in any training programme and the extent that the training programme they attended was able to meet their expectations. The results are presented

below.



Table 4.3: Respondents level of awareness of implementation of a comprehensive training programme under the MDTF

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	52	65	9	75	3	50	34	85	98	71
Somehow	12	15	2	17	1	17	2	5	17	12
No	16	20	1	8	2	33	4	10	23	17
Total	80	100	12	100	6	100	40	100	138	100

Source: Field Survey, 2017

Table 4.3 shows respondents' level of awareness of implementation of a comprehensive training programme under the Multi Donor Trust Fund. From the Table, ninety-eight respondents comprising all professions representing 71% were aware of the implementation of a comprehensive training programme under the Multi Donor Trust Fund to enhance staff capacity. Twelve percent were somehow aware and 17% were not aware of any comprehensive training programme. The results indicate that majority (83%) of the respondents were aware of the implementation of a comprehensive training programme under the Multi Donor Trust Fund.



Table 4.4: Training programme attended by respondents with the support of the MDTF to enhance their performance

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	70	88	9	75	5	83	34	85	118	86
No	10	12	3	25	1	17	6	15	20	14
Total	80	100	12	100	6	100	40	100	138	100

Source: Field Survey, 2017

Table 4.4 reports on training programme attended by respondents in terms of their professional background with the support of the Multi Donor Trust Fund to enhance their performance on the job. As shown in the table, seventy out of the eighty respondents who are statisticians representing 88% attended training programme supported by the Multi Donor Trust Fund. This result is further supported by the Ghana Statistical Development Project Report (World Bank, 2013a) that Ghana Statistical Service employees had training in Census and Survey data analysis. Nine out of twelve respondents who are statisticians assigned to Geographic Information System (GIS) representing 75% attended training programme supported by the Multi Donor Trust Fund is buttressed by the fact that staff of the Geographic Information System Unit attended specialized training programme in GIS supported by the Multi Donor Trust Fund (World Bank, 2013a).

The Ghana Statistical Development Project Report (World Bank, 2013a) attested that ICT training was organised for Ghana Statistical Service IT staff by the end of June 2013 is in line



with the result in Table 4.4 that five out of six respondents constituting 83% who are non-statisticians assigned to Information Technology were trained during the implementation of the Multi Donor Trust Fund. The same pattern is shown with regard to non-statistician respondents assigned to Human Resource, Finance and Administration in which 34 out of 40 representing 85% attended training programmes.

As stated in Table 4.4, majority of the respondents (all professions) representing 86% ever attended a training programme or a course supported by the Multi Donor Trust Fund to enhance their performance on the job. This is in line with the Project Implementation Completion Report that at least 95% of the total staff strength benefited from one training or the other under the Multi Donor Trust Fund (GSS, 2013). It supports the view of Armstrong (2003) that when employees continue on the job, additional training is required to enable them acquire new knowledge and skills. However, 14% of the respondents (20 professionals) never attended a training programme or a course supported by the Multi Donor Trust Fund shows that a significant number of staff did not have additional training to enhance their performance on the job as compared to five percent indicated in the Project Implementation Completion Report (GSS, 2013).



Table 4.5: Extent to which training programme attended by respondents was related to their job

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	60	86	8	89	4	80	26	76	98	83
Somehow	8	11	1	11	1	20	6	18	16	14
No	2	3	0	0	0	0	2	6	4	3
Total	70	100	9	100	5	100	34	100	118	100

Source: Field Survey, 2017

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Table 4.5 shows the extent to which the Multi Donor Trust Fund supported training programmes attended by respondents (by profession) was related to their job. As shown in the table, sixty out of the seventy respondents who are statisticians representing 86% said training programmes they attended was related to their job, while three percent said it did not relate to their job. Eight out of nine respondents who are statisticians assigned to Geographic Information System representing 89% attended training programme related to their job. Four out of five respondents constituting 80% who are non-statisticians assigned to Information Technology said the training they attended was related to their job. With regard to non-statistician respondents assigned to Human Resource, Finance and Administration, thirty-two out of thirty-four representing 94% attended training programme related to their job, while six percent said it did not relate to their job.



Table 4.5 further revealed that majority of the respondents (all professions), one hundred and fourteen out of one hundred and eighteen representing 97% who attended a training programme said it related to their work, while four respondents representing three percent said the training programme they attended did not relate to their work. This supports the notion of Beardwell and Holden (1997) that training in public sector reform is a strategy to modify attitude, knowledge or skills behaviour acquired as a result of learning experience to achieve effective performance in an activity or range of activities to satisfy the current and future needs of the organizations.

Table 4.6: Respondents with problems on the job prior to training programme

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	6	9	2	22	3	60	2	6	13	11
Somehow	50	71	7	78	0	0	14	41	71	60
No	14	20	0	0	2	40	18	53	34	29
Total	70	100	9	100	5	100	34	100	118	100

Source: Field Survey, 2017



Table 4.6 shows respondents (by profession) with problems on the job prior to training programme. As shown in the table, fifty-six out of seventy respondents who are statisticians representing 80% had problems on the job prior to training programme they attended. All nine respondents who are statisticians assigned to Geographic Information System representing 100% had problems on the job prior to training programme. Three out of five non-statistician respondents constituting 60% assigned to Information Technology said they had problems on the

job prior to training programme. In the case of non-statistician respondents assigned to Human Resource, Finance and Administration, sixteen out of thirty-four representing 47% said they had problems on the job prior to their training programmes, while 53% said they had no problem prior to the training programmes.

As presented in Table 4.6, majority of the respondents (all professions) representing 71% were having problems on the job before they attended a training programme, while 29% were having no problems on the job before they attended training programmes.

Table 4.7: Extent to which problems on the job were solved after attending training programme

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Completely	6	11	2	22	3	100	2	13	13	15
Somehow	32	57	7	78	0	0	2	13	41	49
Did not solve any problem	18	32	0	0	0	0	12	74	30	36
Total	56	100	9	100	3	100	16	100	84	100

Source: Field Survey, 2017

Table 4.7 shows the extent to which problems faced on the job by respondents (professions) were solved after attending the training programmes. The table indicates that thirty-eight out of fifty-six respondents who are statisticians representing 68% said training programme(s) they attended to some extent solved problems they had on the job prior to training. However, 32% said it did



not solve any problem on the job. This is very significant as the core function of the Ghana Statistical Service is statistics production. All nine respondents who are statisticians assigned to Geographic Information System representing 100% said problems on the job were solved after training programme. The outcome confirms the Ghana Statistical Development Project Report (World Bank, 2013a) that the Geographic Information System Unit was fully equipped and staff attended specialized training programme which contributed extensively in solving their problems on the job. All three non-statistician respondents constituting 100% assigned to Information Technology said problems on the job were completely solved after training programme. The result supports the Ghana Statistical Development Project Report (World Bank, 2013a) and the World Bank Independent Evaluation Group Report (World Bank, 2016) that ICT training was organised for Ghana Statistical Service IT staff by the end of June 2013.

On the other hand, twelve out of sixteen non-statistician respondents representing 74% assigned to Human Resource, Finance and Administration said problems on the job prior to training programme were not solved after training, while 26% answered in the affirmative. The result clearly shows that the Multi Donor Trust Fund paid attention to training programmes that were directly related to statistics production which is the core function of the Ghana Statistical Service.



Thus, training programme purposefully organised to address the training needs of respondents assigned to Human Resource, Finance and Administration was not mentioned in the Ghana Statistical Development Project Report (World Bank, 2013a).

Table 4.7, further revealed that majority of the respondents (all professions) representing 64% said training programmes they attended solved problems on the job as opposed to 36% who said

it did not solve any problem on the job directly. The proportion (36%) of respondents (all professions) who said training did not solve any problem on the job is very significant and is reinforced by the World Bank Independent Evaluation Group Report that training programme designed on needs assessment in the Ghana Statistical Service were not met (World Bank, 2016). This outcome of the MDTF Project is inconsistent with the proposition of Martins and Jackson (1994) that the main reason that organizations train employees is to bring their Knowledge, Skills and Abilities (KSAs) up to the level required for satisfactory performance. The critical question here is not the inconsistency, but whether the training programmes were properly identified and attended by staff based on their training needs assessment as capacity development of individuals is key to a successful Public Sector Institutional Reform (DFID, 2013). In a related development, as a result of the STATCAP, human resources of the Kenya National Bureau of Statistics became better aligned with the skill requirements of data production and analysis. However, a key output that was not achieved during implementation of the project include capacity building by the Transition Support Unit through on-the-job training of relevant staff (WB, 2016b).



Table 4.8: Type of training attended by respondents

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
In-house at GSS	36	51	1	11	4	80	24	71	65	55
Overseas/ Outside the country	14	20	2	22	0	0	0	0	16	14
In the country	20	29	6	67	1	20	10	29	37	31
Total	70	100	9	100	5	100	34	100	118	100

Source: Field Survey, 2017

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Table 4.8 shows the type of training attended by respondents (professions). As shown in the table, thirty-six out of seventy respondents who are statisticians representing 51% said they had in-house training at Ghana Statistical Service, while fourteen respondents representing 20% had training outside the country. Two out of nine respondents who are statisticians assigned to Geographic Information System representing 22% had training outside the country, while six respondents representing 67% had training in the country. Four out of five non-statistician respondents constituting 80% assigned to Information Technology said they had in-house training at Ghana Statistical Service, while the only one respondent representing 20% had training in the country showing that none of the respondents assigned to Information Technology was trained outside the country. The same pattern is shown with regard to respondents assigned to Human Resource, Finance and Administration where all 71% had in-house training at Ghana Statistical Service and 29% had training in the country, while none of them had training outside the country.



From Table 4.8, majority of the respondents (65 professions) representing 55% said they had in-house training at Ghana Statistical Service is supported by the Ghana Statistical Development Project Report (World Bank, 2013a) that on-the-job training programmes were organised for staff as part of consultancy services. Sixteen respondents constituting 14% attended training programme outside the country, while thirty-seven respondents representing 31% attended training programmes in the country outside the premises of Ghana Statistical Service. The result shows that majority (86%) of the respondents (all professions) attended training programmes in the country (both in-house at GSS and other locations in the country). The proportion (14%) of GSS staff who were trained outside the country is significant and is within the framework of the Institutional Theory and Philosophy of Change which stipulates that change is stimulated by pressures in the wider institutional context (DiMaggio and Powell, 1983, 1991). It also supports Morgan (1986) that organizations like organisms have to be opened to their environment as their very survival depend on how they properly relate to their environment.



Table 4.9: Respondents ability to apply skills acquired at training to the job

Responses	Professions									
	Statistician		Statistician (GIS)		Non-Statistician (IT)		Non-Statistician (HR, Finance & Admin)		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	42	60	7	78	5	100	28	82	82	70
No	2	3	0	0	0	0	2	6	4	3
Partially	22	31	2	22	0	0	4	12	28	24
Do not know	4	6	0	0	0	0	0	0	4	3
Total	70	100	9		5	100	34	100	118	100

Source: Field Survey, 2017

Table 4.9 shows respondents (professions) ability to apply skills acquired at training to the job. As shown in the table, majority (sixty-four out of seventy) of the respondents who are statisticians representing 91% were able to apply skills acquired at training to the job, while only two respondents representing three percent were not able to apply skills acquired at training. All nine respondents who are statisticians assigned to Geographic Information System representing 100% were able to apply skills acquired at training to the job. The result supports the project report that staff of the Geographic Information System Unit were able to use the knowledge acquired at the specialised training they attended (GSS, 2013).



The report further revealed that equipment and software which were provided under the project to produce Census Atlas enabled the Geographic Information System Unit to provide GIS services to stakeholders including MDAs and international organizations (GSS, 2013). Thus, Ministries, Departments and Agencies have access to the Geographic Information

System in the Ghana Statistical Service (World Bank, 2013a). This is reinforced by the World Bank Independent Evaluation Group Report on the MDTF project that improvements in the Geographic Information System helped improve the quality of the 2010 Census Atlas and has been used by international researchers (World Bank, 2016). All five respondents constituting 100% assigned to Information Technology were able to apply skills acquired at training to the Job. This outcome confirmed the Ghana Statistical Development Project Report (World Bank, 2013a) that ICT training was organised for Ghana Statistical Service staff which supported the installation and management of internet, email and intranet facilities at the GSS Head Office and expanded to cover the regional offices as well. The same pattern is shown with regard to respondents assigned to Human Resource, Finance and Administration where 94% of the respondents (32 out of 34) were able to apply skills acquired at training to the job, while six percent of respondents (2) were not able to apply skills acquired at training to the job.

The outcome in Table 4.9 further shows that majority (94%) of the respondents (110 out of 118) were in one way or the other able to apply acquired skills at training to the job. This is in line with the argument of Laura, Bohlander, Snell and Sherman (1998) that the transfer of skills acquired during training in the work environment is a longstanding subject of concern to organizations since they have to ensure a better return on money spent on training.



4.1.4 Upgrading of GSS Information Technology

The world is experiencing swift technological development, growing knowledge workforce and a shift towards accepted work practices making change an ever-present feature of organizational life (Burnes, 2004). In view of this, component two of the Multi Donor Trust

Fund was intended to upgrade the information technology equipment of the Ghana Statistical Service including hardware and software to improve the communication and internet connectivity between the Ghana Statistical Service and other entities of the National Statistical System (GSS, 2011b). Therefore, the study sought to examine how the adoption of technological innovations enhanced the work of the Ghana Statistical Service (GSS, 2011b). The results are presented below.

Table 4.10: Respondents perception on how the upgrading of GSS Information Technology enhanced the production of statistics

Responses	Frequency	Percentage (%)
Yes	132	96
No	6	4
Total	138	100

Source: Field Survey, 2017

Table 4.10 shows respondents perception on how the upgrading of the Ghana Statistical Service Information Technology enhanced the production of statistics. As presented in the Table, one hundred and thirty-two of the respondents constituting 96% said the upgrading of Ghana Statistical Service Information Technology (both hardware and software) under the Multi Donor Trust Fund enhanced the production of statistics and only six respondents representing four percent said it did not enhance the production of statistics. The proportion (96%) of respondents saying emphatically that the upgrading of Ghana Statistical Service Information Technology under the Multi Donor Trust Fund enhanced the production of statistics is very significant as it affirms the assertion of Bekkers and Zouridis (1999) that



information technology in the public sector acts like a tool which help in creating new and better service delivery.

Table 4.11 attempts to find out how the upgrading of information technology (IT) under the Multi Donor Trust Fund enhanced the operations of Ghana Statistical Service. To achieve this objective a 7-item five-point scale ranging from 5(strongly agree) to 1(strongly disagree) was used to measure the respondents' agreement with the extent to which the upgrading of information technology (IT) under the Multi Donor Trust Fund enhanced the operations of Ghana Statistical Service. High scores above 3 indicated higher level respondents' agreement that the upgrading of information technology (IT) under the Multi Donor Trust Fund enhanced the operations of Ghana Statistical Service while low scores below 3 indicated otherwise. The outcome of the analysis presented in Table 4.11 shows the mean scores and standard deviation obtained by the respondents.



Table 4.11: How the upgrading of IT enhanced the operations of GSS

Contributions of IT to GSS operations	N	Mean	SD
IT improved communication and internet connection within the GSS	138	4.2464	0.82667
IT enhanced GSS Communication and Coordination of statistical activities within the NSS	138	3.8261	0.95071
IT contributed in reducing the time lag between the end of GSS survey field data collection, production and dissemination of reports	138	3.9710	0.80093
IT improved dissemination of GSS survey and census reports	138	4.1014	0.87370
IT improved the quality of GSS products and service	138	4.0435	0.91116
IT reduced time spent by GSS staff on their work	138	4.0145	0.94356
IT enhanced innovation, efficiency and effectiveness on the job of staff	138	3.8551	1.02914

Source: Field Survey, 2017

Note: 5= Strongly agree; 4= Agree; 3= Do not know; 2= Disagree; 1= Strongly disagree; SD = Standard Deviation



Table 4.11 shows that the mean scores obtained by the respondents ranged from 4.2464 to 3.8261. This indicates that the respondents scored high on all the 5 items. The mean scores show that majority of the respondents endorsed strongly agree and agree to all the seven items with few endorsing do not know to strongly disagree. As shown in the table, the highest scored item in which the respondents recorded mean score above 4 is “Information Technology improved communication and internet connection within the GSS”. This is supported by the

Ghana Statistical Development Project Report (World Bank, 2013a) that internet and email systems were installed and activated at GSS Head Office and were extended to the regional offices thereby improving communication both within and outside the GSS. The second highest scored item in which the respondents recorded mean score above 4 is “Information Technology improved dissemination of GSS survey and census reports” is confirmed by the fact that the Post Enumeration Survey and Census reports were made available on the Ghana Statistical Service Website (World Bank, 2013a). The third highest scored item which recorded mean score above 4 is “Information Technology improved the quality of GSS products and services” is demonstrated by the information technology skills used by the Geographic Information System Unit to produce Census Atlas from the 2010 Census (World Bank, 2013a).

The fourth highest scored item with mean score above 4 in Table 4.11 which is “IT reduced time spent by GSS staff on their work” is related to the item “IT contributed in reducing the time lag between the end of GSS survey field data collection, production and dissemination of reports”. In these instances, as a result of the 2010 Population and Housing Census Data Processing and the Scanning Technology adopted, the National and Regional Reports of the 2010 Census were released in June 2013 (World Bank, 2013a) compared to the 2000 Census in which the National (GSS, 2005a) and Regional Reports were released in 2005 (GSS, 2005b).

Information Technology reducing time lag between the end of GSS survey field data collection, production and dissemination of reports as shown in Table 4.11 is supported by



the STATCAP-CERDAS of the National Statistics Agency of Indonesia. Component two of the STATCAP-CERDAS was designed to strengthen the National Statistics Agency information technology (WB, 2017). As a result, time lag in the publication of annual labour force estimates improved from 150 days to 90 days (WB, 2017). The National Statistics Agency's website developed during the project improved as access increased from 51,000 to 127,147 visitors per month (WB, 2017). There was also an increase from 61 percent to 83.5 percent (target was 80 percent) in user satisfaction on the accessibility of the Agency's statistics (WB, 2017).

Indeed, the upgrading of information technology (IT) under the Multi Donor Trust Fund enhanced the operations of Ghana Statistical Service. Thus, the results support the Ghana Statistical Development Project Implementation Completion Report (GSS, 2013) which indicated that the provision of various types of equipment such as computers, scanners, photocopiers, and printers under the project facilitated the work of Ghana Statistical Service. The report further said that the computers were used to generate the tables during the census data analysis and reports preparation (GSS, 2013). Furthermore, installation of Local and Wide Area Network (LAN and WAN) connectivity and the deployment of Microsoft Technologies during the implementation of the Multi Donor Trust Fund improved communication and internet connection within the Ghana Statistical Service and enhanced GSS Communication and Coordination of statistical activities within the National Statistical System (GSS, 2013). The World Bank (2013a) reported that it was difficult to evaluate the impact of the Local and Wide Area Network within the last three to six months of the Project implementation period since installation was completed in the second quarter of 2013 when



the Project was ending. The Ghana Statistical Service (2013) and the World Bank (2013a) reports are supported by the highest scored item in Table 4.11 which recorded a mean score of 4.2464 (SD - 0.82667) “IT improved communication and internet connection within the GSS”.

On the whole, the result in Table 4.11 is supported by the Institutional Theory and Philosophy of Change which emphasizes that change is a means of shifting industrial landscape which makes it possible for organizations to succeed because they are structured to be able to accommodate the environmental forces to which they are compelled to respond (Graetz and Smith, 2010).

The results are also enforced by the view of Fountain (2001b) that information technology redesigns the production, coordination, control and direction processes that take place within the public sector. It also, buttresses the assertion of Picot, Bortenlanger, and Re Hrl, (1997) that information technology streamlines activities of organizations by saving time and costs and reflects the view of Bannister (2007) which indicates that Information and Communication Technology in public sector organizations is valuable for efficiency and effectiveness. Notwithstanding the opportunities that ICT offers in the working environment, it faces some threats in relation to implementation, project management and policy (Fountain, 2001a; Heeks, 1999; Snellen & van de Donk, 1998).



4.1.5 Statistics Production

A key area of the Ghana Statistical Service institutional reform exercise was improving statistical production and dissemination within the National Statistical System (GSS, 2011b). As part of measures to improve the production and dissemination of statistics, component four of the Multi Donor Trust Fund provided financial support for the Post Enumeration Survey (PES) and the 2010 Census Data Processing which include report preparation (GSS, 2013). To this end, the study examined the extent that the Multi Donor Trust Fund enhanced the production of quality and timely statistics.

Table 4.12: Respondents view on GSS financial constraints in its operation

Responses	Frequency	Percentage (%)
Yes	110	80
No	28	20
Total	138	100

Source: Field Survey, 2017

Table 4.12 shows respondents' view on Ghana Statistical Service financial situation in its operations. As indicated in the Table, one hundred and ten of the respondents constituting 80% said Ghana Statistical Service experienced financial constraints in its operation, while 20% responded no. The result indicates that majority of the respondents held the view that Ghana Statistical Service experienced financial constraints in its operation. This is in support of the resource-dependence theory that organizations lack the resources they need in a competitive environment (Pfeffer & Salancik, 1978).



Table 4.13: Respondents perception on effects of GSS financial constraints on quality and timeliness of statistics produced

Responses	Quality of Statistics		Timeliness of Statistics	
	Freq	%	Freq	%
Yes	14	13	68	62
No	40	36	6	5
Somehow	56	51	36	33
Total	110	100	110	100

Source: Field Survey, 2017

Table 4.13 discusses effects of Ghana Statistical Service financial constraints on the quality and timeliness of statistics produced. Fifty six of the respondents representing 51% said financial constraints somehow affected the quality of statistics produced by Ghana Statistical Service, 36% said financial constraints did not affect the quality of statistics produced, while 13% responded in the affirmative. In addition, the table reports that sixty-eight of the respondents constituting 62% said financial constraints affected the timeliness of statistics produced by the Ghana Statistical Service, 33% said it somehow affected the timeliness of statistics produced, while only five percent reported no.



The result further indicates that significant proportion (64%) of the respondents expressed the notion that financial constraints experienced by the Ghana Statistical Service affected the quality of statistics produced as against 36% which said no. In addition, majority (95%) of the respondents were of the view that financial constraints affected the timeliness of statistics produced, while only five percent responded no. This revelation further affirms Aryeetey and Fosu (2005) argument that two decades of reforming the civil service in Ghana have not

adequately solved the problems of macro-economic stability leading to continuous existence of institutional constraints in the mobilization of resources and their allocation. Thus, access to resources is very critical for the existence and prosperity of organizations (Pfeffer and Salancik, 1978). In this light, successful organizations in the course of time are those that are able to acquire, develop and deploy scarce resources and skills (Connor, 2002).



Table 4.14: Respondents perception on quality and timely post enumeration statistics produced with the support of the MDTF

Post enumeration activities	N	Mean	SD
The 2010 PHC National and Regional Analytical reports were produced and published within a relatively short period of time due to adequate financial support and regular cash flow	138	3.7246	0.99464
The Post Enumeration Survey was noted for its high quality	138	3.9130	0.76872
The publishing of the Post Enumeration Survey Report by the GSS made Ghana one of the few countries in Africa to have published their Post Enumeration Survey after the 2010 round of Population and Housing Census in Africa	138	3.9710	0.70392
The Census Atlas produced and published was noted for its high quality	138	3.9783	1.01426
The MDTF provided the requisite technical and financial support which ensured the production of timely and quality statistics	138	4.1304	0.6586

Source: Field Survey, 2017

Note: 5= Strongly Agree; 4= Agree; 3= Do not know; 2= Disagree; 1= Strongly Agree; SD = Standard Deviation

Another objective investigated by the study was the extent to which respondents agree to post enumeration activities supported under the Multi Donor Trust Fund. To measure this, a 5-item 5-point Likert scale (5- strongly agree to 1- strongly disagree) was used. Scores above 3 indicate high scores, meaning the respondent agreed to the item stated in Table 4.14 supported by the Multi Donor Trust Fund, while scores below 3 indicated otherwise.



Thus, Table 4.14 reports mean scores and standard deviation obtained by the respondent on post enumeration activities supported under the Multi Donor Trust Fund. The mean scores obtained on the individual item ranged from 4.1304 to 3.7246. Specifically, the following means were recorded by the five items measuring the Multi Donor Trust Fund post enumeration activities: “The Multi Donor Trust Fund provided the requisite technical and financial support which ensured the production of timely and quality statistics”– 4.1304 (SD - 0.6586). This is in line with the Institutional Philosophy of Change which essentially looks at how external forces are able to compel institutions into particular patterns and structures (Meyer and Rowan, 2006). It is in this context that the Government of Ghana requested assistance from the World Bank and other Donors to strengthen the Ghanaian Statistical System, starting with the GSS (World Bank, 2013a).

The Multi Donor Trust Fund providing the requisite technical and financial support which ensured the production of timely and quality statistics is supported by the Project report that within a relatively short period of ten months as many as thirteen 2010 Census Analytical Reports including one national and ten regional, Census Atlas and Demographic, Social, Economic and Housing Characteristics (DSEH) Reports had been published (GSS, 2013). The World Bank Independent Evaluation Group Report (World Bank, 2016) admitted that provisional results of the 2010 Census were released in February 2011 and the final results were made available in May, 2012 well within the timeframe of the original project. The publications are available on the internet and hard copies at the GSS and local book stores in Ghana (World Bank, 2016). “The publishing of the Post Enumeration Survey Report by the Ghana Statistical Service made Ghana one of the few



countries in Africa to have published their Post Enumeration Survey after the 2010 round of Population and Housing Census in Africa” – 3.9710 (SD - 0.70392) is in congruence with the Ghana Statistics Development Project Implementation Completion Report (GSS, 2013).

In terms of production of statistical reports in a relatively short period of time due to adequate financial support and regular cash flow under the MDTF, implementation of the STATCAP by the Kenya National Bureau of Statistics also expanded the coverage of data as recommended by the International Monetary Fund with more major surveys conducted on a regular basis, including integrated survey of services, foreign investment survey and census of industrial production (WB, 2016b). A remarkable achievement of the project (STATCAP) was that the time lag in producing national accounts statistics reduced from about two years at appraisal to nine months when the project closed (WB, 2016b). Statistics on government finance and debt saw a reduction in production time as they were released in three months (WB, 2016b). The delay for monetary and banking data was shortened from three to four months to one month and the delay for trade and balance of payments data was cut from twelve months to five months (WB, 2016b). “The Census Atlas produced and published was noted for its high quality” – 3.9783 (SD = 1.01426) is affirmed by the World Bank Independent Evaluation Group Report (World Bank, 2016) that the enhanced Geographic Information System data including the 2010 Census Atlas was widely used and cited by international researchers, “The Post Enumeration Survey was noted for its high quality” – 3.9130 (SD - 0.76872) and lastly “The 2010 PHC National and Regional Analytical reports were produced and published within a relatively short period of time due



to adequate financial support and regular cash flow” – 3.7246 (SD - 0.99464). These results are also supported by the User Satisfaction Survey (USS) which indicated users’ approval of GSS services and satisfaction with the quality of official statistics produced by Ghana Statistical Service (GSS, 2013). There were, however, other areas such as improvement in dissemination of statistical products on the GSS website and timeliness in release of data which needed positive action to address the weaknesses were noted in the Implementation Completion Report (GSS, 2013).

It is in this light that Bunse and Fritz (2012) said donor support to institutional reform is aimed at improving how the state is performing in relation to changing institutions and generating greater capacity, commitment, efficiency, integrity, and responsiveness to achieve developmental goals.

All the mean scores obtained in Table 4.14 were above 3 which implies that most of the respondents strongly agreed with all the 5 items measuring the support of post enumeration activities under the Multi Donor Trust Fund. In fact, the publishing of the 2010 PHC National and Regional Analytical reports within a short period of time as a result of adequate financial support and regular cash flow under the Multi Donor Trust Fund vindicates Aryeetey and Fosu (2005) argument that the continuing existence of institutional constraints in the mobilization of resources and their allocation explain why two decades of reforming the civil service in Ghana have not yielded the expected results. In fact, the initial Multi Donor Trust Fund Grant Agreement budget which was six million, two hundred and twenty-three thousand, four hundred and thirty-five United States Dollars



(US\$ 6,223,435) was increased to six million, three hundred and fourteen thousand, three hundred and sixty-two United States Dollars (US\$ 6,314,362) at the end of the project (GSS, 2013). This shows the extent of mobilization of resources in support of the GSS Institutional Reform Programme.

Though the Multi Donor Trust Fund provided adequate financial support and regular cash flow, the disbursement rate for the project stood at 17.2% as at the end of January 2012 almost a year into implementation (GSS, 2013). This is a reflection of the Ghana Statistical Service spending capacity at the inception of the project which adversely slowed down implementation of the project at the initial stages. This is a clear demonstration of Ghana Statistical Service inability to spend the project fund in the first year of implementation. This consequently affected the project timelines such that the Ghana Statistical Service was compelled to obtain approval from the World Bank to extend the project implementation by six months in order to fully implement the project activities (GSS, 2013). The situation underscores the importance of the capacity of an institution to expend project fund to ensure implementation within the project time frame. Notwithstanding the slow disbursement rate of the Ghana Statistical Service at the inception of the project, the Service was able to step up its spending capacity such that by the end of December 2012 the disbursement rate had risen sharply to 60% (GSS, 2013).

4.1.6 Legal Reform Programme

The first component of the Multi Donor Trust Fund captioned “Legal and Institutional Reform” focused on the development of a comprehensive legal reform programme for



Ghana's National Statistical System through the revision of existing law and preparation of new law to govern the whole NSS (GSS, 2013).

Table 4.15: Respondents level of knowledge and understanding of the Statistical Service Act, 1985 (PNDCL 135)

Responses	Frequency	Percentage (%)
Very high	22	16
High	66	48
Low	42	30
Very low	8	6
Total	138	100

Source: Field Survey, 2017

Table 4.15 reports on respondents' level of knowledge and understanding of the Statistical Service Act, 1985 (PNDCL 135). Twenty-two respondents representing 16% expressed very high level of knowledge and understanding of the Statistical Service Act, 48% expressed high level of knowledge and understanding, while 30% and six percent expressed low and very low level of knowledge and understanding respectively.

The findings in Table 4.15 indicates that majority (64%) of the respondents have better knowledge and understanding of the Statistical Service Act, 1985 as compared to 30% with low and six percent with very low knowledge and understanding of the Act.



Table 4.16: Respondents perception on weaknesses of the Statistical Service Act 1985 (PNDCL 135) and the need to modify or repeal it

Responses	Frequency	Percentage (%)
Yes	68	49
Not sure	66	48
No	4	3
Total	138	100

Source: Field Survey, 2017

Table 4.16 discusses respondents' perception on weaknesses of the Statistical Service Act, 1985 (PNDCL 135) and the need for it to be modified or repealed. Sixty-eight of the respondents representing 49% said the Statistical Service Act, 1985 has weaknesses and for that matter needs to be modified or repealed, while three percent said no. The proportion (49%) of respondents who were in favour of modifying or repealing the Statistical Service Act, 1985 is significant in line with the International Monetary Fund (2005) affirmation of the need to change laws in order to introduce most public management reforms. Forty-eight percent (48%) of the respondents, however, were not sure whether the Act has weaknesses and needs to be modified or repealed.

The result in Table 4.16 indicates that about half (68) of the total number (138) of respondents for this study expressed the notion that the Statistical Service Act, 1985 (PNDCL 135) has weaknesses and needs to be modified or repealed. Almost half (66) of the total number of respondents were also not sure whether the Statistical Service Act has weaknesses and needs to be modified or repealed.



Table 4.17: Weaknesses identified by respondents with the Statistical Service Act 1985

Weaknesses identified with the Act	Frequency	Percentage (%)
The Statistical Service Act, 1985 does not enforce standardization of official statistics and monitoring of statistical production in the country.	8	12
The Statistical Service Act, 1985 needs to be updated to suit the current situation of statistical production with the advent of technology.	12	18
GSS needs legal mandate to coordinate the NSS effectively	20	28
The Statistical Service Act, 1985 does not provide the GSS the needed mandate over MDA's in the production of statistics in the country.	12	18
To legally compel the institutions to submit all data produced to the GSS as in the case of Births and Deaths registry	6	9
To establish funds to support statistical activities in the country	4	6
To separate the functions of the Government Statistician from that of the Service as is in the Statistical Service Act, 1985	6	9
Total	68	100

Source: Field Survey, 2017



Table 4.17 reports on weaknesses that respondents identified with the Statistical Service Act, 1985 (PNDCL 135) from one of the open-ended questions in the questionnaire. Twenty (28%) out of the sixty-eight respondents who expressed the notion that the Statistical Service Act 1985 has weaknesses said the Ghana Statistical Service needs legal mandate to coordinate the National Statistical System effectively, hence the need to repeal or modify the Act. Eighteen percent (18%) of the respondents said the Statistical Service Act, 1985 needs to be updated to suit the current situation of statistical production with the advent of technology. Six percent expressed the need to establish funds to support statistical activities in the country. The weaknesses identified with the Statistical Service Act confirms the International Monetary Fund (2005) assertion that new or modified laws are needed if there are gaps in traditional public management laws.

Table 4.18: Respondents level of awareness of legal reform programme of GSS under the MDTF

Responses	Frequency	Percentage (%)
Yes	66	48
Somehow	42	30
No	30	22
Total	138	100

Source: Field Survey, 2017

Table 4.18 discusses respondents' level of awareness of legal reform programme of the Ghana Statistical Service under the Multi Donor Trust Fund. As shown in the table, sixty-six of the respondents constituting 48% said they were aware of the legal reform programme of Ghana Statistical Service, 30% of them said they were somehow aware, while 22% said they were not aware. Thus, Table 4.18 shows that majority (78%) of respondents for this study were aware



of the legal reform supported by the project. This is an indication that the reform programme was communicated to staff continuously (GSS, 2013). However, a significant proportion (22%) of the respondents were not aware of the legal reform programme suggesting that there were communication gaps during the execution of the reform programme.

The last objective of this study examined respondents' opinions on objectives set out by the Multi Donor Trust Fund with respect to the legal reform. Five items measured this objective on a 5-point Likert scale (5-strongly agree to 1-strongly disagree). Mean score above 3 denotes respondents' agreement with the items while mean score below 3 denotes respondents' disagreement with the items. The outcome is presented in Table 4.19.



Table 4.19: Respondents opinion on objectives set out by the MDTF with respect to the legal reform

Variable	N	Mean	SD
The legal reform ensures efficient and effective coordination of statistical activities in the National Statistical System	138	4.0290	0.72438
It strengthens collaboration among Ministries, Departments, Agencies, District Assemblies and statutory bodies in the collection, compilation and publication of statistical information	138	4.0725	0.84264
It promotes the compliance and implementation of approved national standards on concepts, definitions, classifications, methods and international best practice by Ministries, Departments, Agencies, District Assemblies and statutory bodies	138	4.0290	0.81895
It promotes and builds statistical capacity and professional competencies within the National Statistical System	138	4.1159	0.79297
It establishes and operates a national statistical training center	138	3.8261	0.83634

Source: Field Survey, 2017

Note: 5= Strongly Agree; 4= Agree; 3= Not sure; 2= Disagree; 1= Strongly Disagree; SD = Standard Deviation

The result presented in Table 4.19 shows mean scores and standard deviation of respondents' opinions on the objectives set out by the Multi Donor Trust Fund with respect to the legal reform of Ghana Statistical Service. The mean scores ranged from 4.1159 to 3.8261 show that majority of the respondents strongly agreed or agreed while few respondents strongly disagreed, disagreed or were neutral. Most respondents expressed the notion that the best area of Ghana Statistical Service legal reform is that it promotes and builds statistical capacity and professional competencies within the National Statistical System scoring a mean of 4.1159 and a standard deviation of 0.79297.



It is worth noting that the result in Table 4.19 is further supported by the development of new legislation (Statistics Act) of Kenya National Bureau of Statistics which sought to improve coordination of statistical activities within the National Statistical System (WB, 2016b). Thus, the STATCAP led to the creation of Sector Working Groups with membership drawn from Ministries, Departments, and Agencies with responsibility in data production and the practice of regular meetings of group members (WB, 2016b). The Sector Working Groups played a key role in helping the Ministries, Departments, and Agencies develop adequate work programmes, comply with required standards and improve coordination across agencies (WB, 2016b). The practice of regular consultations and coordination through the interagency Sector Working Groups served as a channel for communications on developing work programmes, setting priorities and upholding professional standards among participating Ministries, Departments, and Agencies (WB, 2016b).

In fact, all the five items in Table 4.19 show respondents' agreement which affirms the Institutional Theory and Philosophy of Change assertion that social, economic and legal pressures are able to influence organizational structures and practices (Graetz and Smith, 2010).



Table 4.20: Respondents opinion on extent that implementation of the new legal reform programme would strengthen statistics production in the NSS

Responses	Frequency	Percentage (%)
Yes	90	65
Somehow	28	21
No	2	1
Don't know	18	13
Total	138	100

Source: Field Survey, 2017

Table 4.20 discusses respondents' opinion on the extent to which the implementation of the new legal reform programme would strengthen statistics production in the National Statistical System. As shown in the table, ninety of the respondents constituting 65% said the implementation of the legal reform programme of Ghana Statistical Service would strengthen statistics production in the National Statistical System, 21% of them said it would somehow, 13% of the respondents did not know whether implementation of the legal reform programme would strengthen statistics production, while one percent said it would not. The table further discloses that majority (86%) of the respondents expressed the notion that implementation of the new legal reform programme to extent would strengthen statistics production as against only one percent who said it would not. Despite the high expectation (86%) of respondents that implementation of the legal reform programme would strengthen statistics production in the country, it was unfortunate that the election in December 2012 delayed submission of the draft National Statistical System Law entitled "Statistics Bill 2012" to Parliament and could not be passed by the end of the project supported by the Multi Donor Trust Fund (GSS, 2013). Post evaluation report on the implementation of the reform by the World Bank Independent



Evaluation Group partly suggested that the Ghana Statistical Service also failed to effectively monitor and track the progress of the Statistics Bill (World Bank, 2016). As a result, it became necessary to revise the Statistics Bill and made part of the delivery of the Second National Strategy for the Development of Statistics from 2017– 2021 (GSS, 2016).

Table 4.21: Respondents opinion on extent that the GSS reform programme was communicated to staff

Responses	Frequency	Percentage (%)
Yes	40	29
Somehow	78	57
No	20	14
Total	138	100

Source: Field Survey, 2017

Table 4.21 discusses respondents' opinion on the extent that the Ghana Statistical Service reform programme was communicated to staff. As shown in the table, forty of the respondents constituting 29% said the Ghana Statistical Service reform programme was adequately communicated to staff, 57% of them said it was somehow adequately communicated to staff and 14% of the respondents said it was not adequately communicated to staff.

The table further shows that majority (86%) of the respondents expressed the view that the Ghana Statistical Service reform programme was to an extent adequately communicated to staff. This revelation validates the project report that there was continuous communication with staff through quarterly staff sensitization durbars (GSS, 2013). This ensured staff buy-in and enabled them to appreciate the essence of the project and supported its implementation (GSS,



2013). However, 14% percent of the respondents who said the reform programme was not adequately communicated to staff is an indication of communication gaps. Thus, other channels of communication were either not utilized or maximized.

Table 4.22: Respondents opinion on extent that the reform programme was successfully implemented with the MDTF

Responses	Frequency	Percentage (%)
Yes	40	29
No	2	1
Somehow	54	40
Don't know	42	30
Total	138	100

Source: Field Survey, 2017

Table 4.22 discusses respondents' opinion on the extent that the reform programme was successfully implemented under the Multi Donor Trust Fund. As shown in the table, forty of the respondents constituting 29% said the reform programme was successfully implemented with the Multi Donor Trust Fund, 40% of them said it was somehow successfully implemented, 30% of the respondents said they did not know whether it was successfully implemented and one percent said it was not successfully implemented.

The table further discloses that majority (69%) of the respondents expressed the view that the reform programme was to some extent successfully implemented with the Multi Donor Trust Fund as against 30% who did not know and one percent who said it was not successfully implemented. The view expressed by majority (69%) of the respondents that the reform programme was to some extent successfully implemented with the Multi Donor Trust Fund is



confirmed by the Ghana Statistical Development Project Report (World Bank, 2013a) which rated the Performance of the Borrower (Ghana Statistical Service) Moderately Satisfactory for implementation of the Reform Programme supported by the MDTF. The World Bank Independent Evaluation Group of the Ghana Statistical Development Project (World Bank, 2016) also rated the Performance of the Borrower (Ghana Statistical Service) Moderately Satisfactory. The World Bank (2015) Independent Evaluation Group Project Performance Rating of “Moderately Satisfactory” means a successful project and is defined as “There were moderate shortcomings in the operation’s achievement of its objectives, in its efficiency, or in its relevance” (World Bank, 2015, p. 14).

The successful implementation of the Ghana Statistical Service reform programme vindicates Wilson (2000) that organizations were not able to survive because they did not change their old ways of doing things. These organizations found themselves ensnared in favoured ways of thinking because that thinking heralded success in the past (Wilson, 2000). Thus, Wilson (2000) buttresses the point that organizational change is key to success.

The success of the Ghana Statistical Service reform programme with the support of the Multi Donor Trust Fund is very significant as it refutes the assertion of Balogun and Hailey (2004) that while many organizations appreciate the need for change, as many as 70% of the change programmes do not achieve their intended outcomes.



Table 4.23: How can challenges encountered during the reform programme be addressed in any future reform processes of the GSS

Respondents suggestions	Frequency	Percentage (%)
By communicating regularly to the staff	42	30
By building the capacity of staff to improve their performance	12	9
By making vehicles available to carryout official assignments	8	6
The objectives, goals and plans of future reforms should be clearly stated and made known to staff	10	7
Future reforms should ensure the total involvement of staff of the various directorates	12	8
Sensitization and awareness programmes should be adequately done to prepare the staff for the reform	54	40
Total	138	100

Source: Field Survey, 2017

Table 4.23 emanated from an open-ended question in the questionnaire of this study which discusses how the challenges encountered during the reform programme could be addressed in any future reform processes of the Ghana Statistical Service. As shown in the table, 40% of the respondents said sensitization and awareness programmes should be adequately done to prepare staff for the reform. This fact was supported by the Project Implementation Completion Report that the Multi Donor Trust Fund was designed through interactive and consultative process involving the government, MDAs, the private sector and development partners, but it did not include sensitization and awareness programmes preceding the implementation of the project (GSS, 2013). The observation is well noted and recommended in this study. Thirty percent (30%) of the respondents said challenges encountered during the reform programme



could be addressed in any future reform processes of the Ghana Statistical Service by communicating regularly to the staff. The project report said continuous communication was done through quarterly staff durbar to have the buy-in of staff to ensure the success of the reform programme (GSS, 2013). However, other channels of communication were not emphasized in the report pre-supposing that they were not harnessed. This is in line with Table 4.21 which reported that 14% of the respondents expressed the view that the reform programme was not adequately communicated to staff. Thus, the suggestion that future reform programme should be communicated adequately to staff is very laudable and recommended by this study. Six percent of the respondents said making vehicles available to carry out official assignments would alleviate challenges in future reform processes of the Ghana Statistical Service. This suggestion is supported by the fact that vehicles were not procured under the Multi Donor Trust Fund (GSS, 2013).

4.2 Summary of the Chapter

The chapter analyzed and interpreted the responses from questionnaires administered for the study. The finding reveals that all the respondents were available during the implementation of the reform programme showing that they had the requisite capacity to respond to the issues in the questionnaire. The results show that most staff at the head office have the needed background in statistics to perform their duties to enable Ghana Statistical Service meet its mandate. A significant proportion of the Ghana Statistical Service staff, especially statisticians and those assigned to Human Resource, Finance and Administration participated in training programmes which did not solve any problem on the job but they were able to use the skills acquired during the training to the job.



Technological innovations in the Service enhanced the operations of the Ghana Statistical Service. The 2010 Population and Housing Census National and Regional Analytical Reports were published within a relatively short period of time due to adequate financial support and regular cash flow under the Multi Donor Trust Fund.

The Statistical Service Act, 1985 has weaknesses and for that matter needs to be modified or repealed but unfortunately, the Statistics Bill, 2012 could not be passed by the end of the Multi Donor Trust Fund. The Ghana Statistical Service Reform Programme was adequately communicated to staff and was successfully implemented. Summary, conclusions and recommendations of the study are presented in the next chapter.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the key findings, conclusions and recommendations.

5.1 Summary of key findings

The findings indicated that a higher number of male respondents took part in the exercise than the females. Majority of the respondents were available when the Multi Donor Trust Fund initiatives were undertaken. A higher proportion of the respondents having postgraduate degree certificates show that the Ghana Statistical Service Policy enjoining professional staff to have Masters' Degree as the minimum entry requirement as part of the reform programme is yielding results. Proportion of statistician respondents was higher than the non-statisticians. This is attributed to the fact that the Ghana Statistical Service is established mainly for statistics production and more statisticians are needed to be able to achieve its mandate. Most of the respondents were aware of the Multi Donor Trust Fund initiatives undertaken by the Ghana Statistical Service. This implies that respondents were in a better position to answer the issues in the questionnaire.

5.1.1 Extent that the Multi Donor Trust Fund enhanced staff capacity towards the production of statistics

The first objective was to examine how the Multi Donor Trust Fund enhanced staff capacity towards the production of statistics. The results indicate that majority (71%) of the respondents were aware of the development and implementation of a comprehensive training programme under the Multi Donor Trust Fund. A higher proportion of the respondents (all professions)



attended a training programme or a course supported by the Multi Donor Trust Fund to enhance their performance on the job. A very high proportion (97%) of the respondents (all professions) attended training programmes that were related to their work. Majority (71%) of the respondents (all professions) had problems on the job before they attended training programmes. However, 36% of the respondents (all professions) attended training programmes but did not solve any problem on the job. This raises serious concerns and presupposes that staff might have been selected for training programmes which did not reflect their training needs. Thus, there is the need to probe further to find out why training programmes attended by such a proportion of staff did not solve any problem on the job since the Ghana Statistical Service has to obtain value for money spent on training their staff.

In addition to the training issues, almost one-third (32%) of the statisticians attended training programmes which did not solve any problem on the job is very critical considering the core function of the Ghana Statistical Service which is statistics production and the need to meet the second component of the Multi Donor Trust Fund which sought to improve the capacity of the Ghana Statistical Service.

On the other hand, 74% of non-statistician respondents assigned to Human Resource, Finance and Administration attended training programmes which did not solve any problem on the job shows that the Multi Donor Trust Fund did not pay the needed attention to the training needs of these three professions even though their functions are equally important in the running of the Service. A significant proportion (14%) of respondents were not trained to improve their skills and knowledge on the job during the reform programme. This proportion significantly falls short of what was revealed by the Project Implementation Completion Report that at least 95% of the total staff strength benefited from one training or the other under the Multi Donor



Trust Fund (GSS, 2013). The study reveals the proportion (14%) of professionals in the GSS head office who were not trained as against the proportion (5%) of all GSS staff both professionals and non-professionals not trained.

5.1.2 How the upgrading of information technology with the Multi Donor Trust Fund enhanced the operations of the Ghana Statistical Service

The second objective was to examine how the upgrading of information technology with the support of the Multi Donor Trust Fund enhanced the operations of the Ghana Statistical Service. Majority of the respondents emphatically said that the upgrading of Ghana Statistical Service Information Technology (both hardware and software) under the Multi Donor Trust Fund enhanced the production of statistics. Most respondents supported the view that the upgrading of Ghana Statistical Service Information Technology under the Multi Donor Trust Fund improved communication and internet connection within the Ghana Statistical Service and beyond. Most of the respondents said information technology enhanced Ghana Statistical Service communication and coordination within the National Statistical System. Majority said information technology contributed in reducing the time lag for statistical production, improved dissemination of Ghana Statistical Service activities, improved the quality of Ghana Statistical Service products and services and reduced time spent by Ghana Statistical Service staff on their work. Majority of the respondents said information technology enhanced innovation, efficiency and effectiveness on the job of staff. The technological innovations by Ghana Statistical Service shows how the Service is embracing modern information technology to enhance its work.



5.1.3 Extent that the Multi Donor Trust Fund enhanced the production of quality and timely statistics

The third objective was to find out the extent that the Multi Donor Trust Fund enhanced the production of quality and timely statistics. The result indicates that significant proportion of the respondents expressed the notion that financial constraints affected the quality of statistics produced. A higher proportion of the respondents were of the view that financial constraints affected the timeliness of statistics produced. However, majority of the respondents said the 2010 PHC National and Regional Analytical reports were published relatively within a short period of time due to adequate financial support and regular cash flow under the Multi Donor Trust Fund.

Most respondents expressed the view that the Census Atlas produced and published with the support of the Multi Donor Trust Fund was noted for its high quality. A higher proportion of the respondents supported the view that the Multi Donor Trust Fund provided the requisite technical and financial support which ensured the production of timely and quality statistics.

5.1.4 Extent that the legal reform programme supported by the Multi Donor Trust Fund improved the coordination of statistics in the National Statistical System

The fourth and last objective was to assess the extent that the legal reform programme supported by the Multi Donor Trust Fund improved the coordination of statistics in the National Statistical System. The result indicates that about half (68) of the total number (138) of respondents expressed the notion that the Statistical Service Act, 1985 (PNDCL 135) has weaknesses and needs to be modified or repealed. Twenty out of the sixty-eight respondents who expressed the notion that the Statistical Service Act, 1985 has weaknesses said the Ghana Statistical Service needs legal mandate to coordinate the National Statistical System



effectively, hence the need to repeal or modify the Act. Majority of the respondents expressed the notion that implementation of the new legal reform programme to extent would strengthen statistics production. Most respondents expressed the view that the legal reform was to ensure efficient and effective coordination of statistical activities in the National Statistical System. Majority of the respondents were in favour that the legal reform would promote and build statistical capacity and professional competencies within the National Statistical System. Despite the high expectation of most respondents that implementation of the legal reform programme would strengthen statistics production in the country, unfortunately the “Statistics Bill 2012” was not passed by Parliament by the end of the project supported by the Multi Donor Trust Fund.

5.2 Conclusions

The study concludes that the Multi Donor Trust Fund offered opportunities for Ghana Statistical Service staff to attend various training programmes to enhance their capacity on the job. However, a significant proportion (36%) of respondents (all professions) attended training programmes which did not solve any problem on the job. Almost one-third of statisticians attended training programmes which did not solve any problem on the job shows the outcome of the capacity building aspect of the Multi Donor Trust Fund. Majority (74%) of non-statistician respondents assigned to Human Resource, Finance and Administration attended training programmes which did not solve any problem on the job does not speak well on how the whole training programme was designed and implemented under the Multi Donor Trust Fund. A significant proportion (14%) of respondents were not trained to improve their skills and knowledge on the job during the reform programme. All these are weaknesses that the study has identified with the implementation of the second component of the Multi Donor Trust



Fund which sought to enhance the capacity of the Ghana Statistical Service staff. Therefore, the GSS has to come out with appropriate measures to address these bottlenecks.

The upgrading of Ghana Statistical Service Information Technology (both hardware and software) under the Multi Donor Trust Fund enhanced the production of statistics. Information technology contributed to reducing the time lag for statistical production, improved dissemination of Ghana Statistical Service activities, improved the quality of Ghana Statistical Service products and services and reduced time spent by Ghana Statistical Service staff on their work. Thus information technology enhanced innovation, efficiency and effectiveness on the job of staff.

The study concludes that the Multi Donor Trust Fund enabled the 2010 PHC National and Regional Analytical reports to be published relatively within a short period of time due to adequate financial support and regular cash flow. The Census Atlas produced and published with the support of the Multi Donor Trust Fund was noted for its high quality. The Multi Donor Trust Fund provided the requisite technical and financial support which ensured the production of timely and quality statistics.

The study concludes that the Ghana Statistical Service needs legal mandate to coordinate the National Statistical System effectively, hence the need to repeal or modify the Statistical Service Act, 1985 (PNDCL 135). The implementation of the new legal reform programme to extent would strengthen statistics production and ensure efficient and effective coordination of statistical activities in the National Statistical System. Majority of the respondents were in favour that the legal reform would promote and build statistical capacity and professional competencies within the National Statistical System. However, the “Statistics Bill 2012” was



not passed by the Sixth Parliament by the end of the project supported by the Multi Donor Trust Fund.

The Ghana Statistical Service reform programme was to an extent adequately communicated to staff and was successfully implemented with the Multi Donor Trust Fund.

5.3 Recommendations


Based on the findings of the study, the researcher recommends the following:

1. **Reducing the Gender Gap in the Workforce:** The findings showed a higher number of male respondents participating in the exercise than the females. The gender gap of the respondents is very significant. It is very obvious from this revelation that the Ghana Statistical Service staff population is dominated by males. Ghana Statistical Service Management should make conscious efforts to reduce the gender gap of the staff workforce through recruitment exercise.
2. **Measures to Replace Staff close to Retirement:** Majority of the respondents in the study are of the age group between 40-49 years, followed by 50 years or more. Thus, a significant number of Ghana Statistical Service staff are close to retirement. Management of GSS has to put in place the necessary measures to replace the caliber of skills that are likely to be lost through retirement in less than ten years to ensure that the required skills to run the office are available at any point in time to enable the Ghana Statistical Service deliver on its mandate.
3. **Implementation of Training Plan based on Staff Training Needs:** The result indicates that a significant proportion of the respondents attended training programmes which did



not solve any problem on the job. As part of the measures of resolving the weaknesses that the study identified with the implementation of training programmes which sought to enhance the capacity of the Ghana Statistical Service staff, the following are recommended:

- The Human Resource Directorate of the Ghana Statistical Service has to develop and implement a training plan based on the training needs of the staff to ensure that training programmes attended or organised for staff of the Service are oriented to solve problems on the job.
- The designing of training programmes by the Human Resource Directorate or a consultant assigned with that responsibility should collect data from the staff (trainees) on their job problems in order to design the training programmes to address those problems.
- Conscious efforts should be made by the Human Resource Directorate to ensure that both statisticians and non-statistician staff of the Service benefit from training programmes to enhance their skills and knowledge on the job.

- 
4. **Establishment of Statistics Fund:** The study revealed that Ghana Statistical Service experiences financial constraints in its operations which delays the release of data and other statistical products of the Service. It is against this background that the Multi Donor Trust Fund was created which provided adequate financial support and regular cash flow. Indeed, the Multi Donor Trust Fund provided the requisite technical and financial support which ensured the production of timely and quality statistics. Implementation of the Multi Donor Trust Fund shows clearly that Ghana Statistical Service needs a system or fund in

place that will ensure adequate and regular cash flow to support its work in order to meet the higher demand for data in recent times. In view of this, the Ghana Statistical Service should continuously solicit support through Development Partners and the Government of Ghana for adequate and regular cash flow to support its work.

5. **Implementation of the Legal Reform Programme:** The findings show that Ghana Statistical Service needs legal mandate to coordinate the National Statistical System effectively. Thus, the Ghana Statistical Service has to implement the legal reform programme effectively to strengthen statistics production as the legal reform is expected to ensure efficient and effective coordination of statistical activities in the National Statistical System. Therefore, the Ghana Statistical Service should intensify its efforts by engaging key stakeholders for the necessary support to ensure the passage of the Statistics Bill.
6. **Ensuring Effective Communication Channels:** Though the Ghana Statistical Service reform programme was to some extent adequately communicated to staff, respondents recommended that GSS has to ensure that future reform programmes are regularly communicated and discussed with the staff in order to address any challenges that may arise. Other channels of communication apart from staff durbars should also be harnessed.
7. **Staff Involvement in Future Reform Programme:** Objectives, goals and plans of future reforms should clearly be stated and made known to staff prior to the implementation of the reform and put in place measures that will involve the staff in the reform exercise for them to own the entire exercise to make it successful.
8. **Organizing pre-reform awareness and sensitization programmes:** The study noted that the Multi Donor Trust Fund was designed through an interactive and consultative



process involving the government, MDAs, the private sector and development partners, but it did not include sensitization and awareness programmes prior to the implementation of the project to prepare staff for the reform. Thus, Management of the Ghana Statistical Service should ensure that future reform programmes are preceded by sensitization and awareness programmes in order to prepare the staff adequately for the reform.

9. Future research on staff training should find out from the respondents (staff) why training programmes attended by staff did not solve any problem on the job. This will bring out the real problems to enable Management find appropriate solutions to them.



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APPENDIX

Data collecting tool

UNIVERSITY FOR DEVELOPMENT STUDIES (UDS)
FACULTY OF INTEGRATED DEVELOPMENT STUDIES
DEPARTMENT OF AFRICA AND GENERAL STUDIES

QUESTIONNAIRE FOR STAFF OF GHANA STATISTICAL SERVICE (GSS)

Dear Respondent,

As part of the requirements to complete a Master of Philosophy Degree Programme in Development Studies at the University for Development Studies, we are required to conduct a study on a topic of interest for assessment. The questionnaire below is a means of soliciting information to complete a study on the topic: *An Assessment of Ghana Statistical Service Institutional Reform Programme: Role of the Multi Donor Trust Fund*. In line with this, you are hereby assured of confidentiality and that whatever information disclosed here shall be used only for academic purposes. Thank you in advance for your co-operation.

Instruction: Please, read each statement carefully and tick [] the appropriate answer or provide the necessary information.

SECTION A: THE SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

1. Sex: Male () Female ()
2. Age: 20-29 years () 30-39 years () 40-49 years () 50 and above ()
3. What is your highest level of education?
WASCE/SSCE/SHS () Undergraduate () First Degree () Postgraduate/Masters ()
Other (specify).....
4. Grade/Rank:
.....
5. Directorate.....
6. How long have you been working with the Ghana Statistical Service (GSS)?



6 -10 years () 11-15 years () 16-20 years () Above 20 years ()

7. Which of the following category of staff are you?

- Statistician () Statistician (GIS) () Non-Statistician (IT) ()
 Non-Statistician (Finance, HRM, Administration) ()

SECTION B: STAFF LEVEL OF AWARENESS OF THE MULTI DONOR TRUST FUND

8. Are you aware of the Multi Donor Trust Fund initiatives undertaken by the Ghana Statistical Service? Yes () Somehow () No ()

9. If no to question 8, please give reason(s)

.....

10. Please indicate your level of awareness of the following MDTF initiatives by the GSS by ticking the options provided using the scales below?

4 = Very much aware 3 = Aware 2= Somehow 1= Not aware

		4	3	2	1
A	It built GSS staff capacity towards the production of statistics				
B	It upgraded GSS Information Technology to enhance its operations				
C	It enhanced the production of timely and quality statistics				
D	It initiated development of a legal reform programme for the country's National Statistical System				



SECTION C: STAFF CAPACITY DEVELOPMENT INITIATIVE

11. Are you aware of the development and implementation of a comprehensive training programme for GSS staff under the MDTF? Yes () Somehow () No ()

12. Did you ever attend a training programme or a course supported by the MDTF to enhance your job performance? Yes () No ()

If no, please skip to question 19, if yes please go to question 13

13. Was the training programme or course attended related to your job? Yes () Somehow () No ()

14. Were you having problems on your job prior to this training programme or course?
Yes () Somehow () No ()
15. To what extent would you say the course or training programme was able to solve the problems? Completely () Somehow () Did not solve any problem
16. Please indicate the type of course or training you attended
In-house at GSS () Overseas/outside the country () In the country ()
17. Are you able to apply the skills you acquired on the course or training to your current job setting? Yes () No () Partially () Do not know ()
18. If no to question 17, which of the following factors can you attribute to your inability to apply your new acquired skills?
Lack of motivation ()
Lack of proper supervision ()
Lack of conducive working environment ()
Lack of appropriate and adequate working tools and materials ()
Training programme or course was not related to my job ()
Other
(specify).....

SECTION D: UPGRADING OF GSS INFORMATION TECHNOLOGY

19. Did the upgrading of GSS Information Technology (hardware and software) under the MDTF enhance the production of statistics? Yes () No ()
20. If no to question 19, please give reason(s)
.....
.....
.....



21. Please read the options provided (A-G) and give your opinions by ticking the scales below.

5 = Strongly agree 4 = Agree 3 = Do not know 2 = Disagree 1 = Strongly disagree

		5	4	3	2	1
A	The upgrading of Information Technology (IT) under the MDTF improved communication and internet connection within the GSS					
B	The upgrading of IT enhanced GSS Communication and Coordination of statistical activities within the National Statistical System					
C	The upgrading of IT contributed in reducing the time lag between the end of GSS survey field data collection, production and dissemination of reports					
D	The upgrading of IT improved dissemination of GSS survey and census reports					
E	The upgrading of IT improved the quality of GSS products and services					
F	The upgrading of IT reduced time spent by GSS staff on their work					
G	The upgrading of IT enhanced innovation, efficiency and effectiveness on the job of staff					

SECTION E: STATISTICS PRODUCTION

22. Does the GSS experience financial constraints in its operation? Yes () No ()

23. If yes to question 22, does it affect the timeliness of statistics produced by the GSS?
Yes () No () Somehow ()

24. If yes to question 22, does it affect the quality of statistics produced by the GSS?
Yes () No () Somehow ()



25. Most of the 2010 Population and Housing Census (2010 PHC) post enumeration activities of the GSS were supported under the MDTF. The following (A-E) form part of the post enumeration activities supported under the MDTF. Please tick with the scale given to express your opinions on the activities provided.

5 = Strongly agree 4 = Agree 3 = Do not know 2 = Disagree 1 = Strongly disagree

		5	4	3	2	1
A	The 2010 PHC National and Regional Analytical reports were produced and published within a relatively short period of time due to adequate financial support and regular cash flow					
B	The Post Enumeration Survey was noted for its high quality					
C	The publishing of the Post Enumeration Survey Report by the GSS made Ghana one of the few countries in Africa to have published their Post Enumeration Survey after the 2010 round of Population and Housing Census in Africa					
D	The Census Atlas produced and published was noted for its high quality					
E	The MDTF provided the requisite technical and financial support which ensured the production of timely and quality statistics					

Staff level of awareness of the GSS legal reform programme initiative under the Multi Donor Trust Fund

SECTION F: LEGAL REFORM PROGRAMME

26. How will you assess your level of knowledge and understanding of the Statistical Service Act, 1985 (PNDCL 135)?
 Very high () High () Low () Very low ()



27. Do you think the Statistical Service Act, 1985 (PNDCL 135) has certain weaknesses and for that matter needs to be modified or repealed?
 Yes () Not sure () No ()

28. If yes to question 27, please state the weaknesses that you know, if no go to question 29

29. Are you aware of the legal reform programme of the GSS under the MDTF?
 Yes () Somehow () No ()

30. The following (A-E) were part of the areas of GSS legal reform under the MDTF. Please tick with the scale given to express your opinions on the areas provided on the GSS legal reform.

5 = Strongly agree 4 = Agree 3 = Do not know 2 = Disagree 1 = Strongly disagree

		5	4	3	2	1
A	The legal reform ensures efficient and effective coordination of statistical activities in the National Statistical System					
B	It strengthens collaboration among Ministries, Departments, Agencies, District Assemblies and statutory bodies in the collection, compilation and publication of statistical information					
C	It promotes the compliance and implementation of approved national standards on concepts, definitions, classifications, methods and international best practice by Ministries, Departments, Agencies, District Assemblies and statutory bodies					
D	It promotes and builds statistical capacity and professional competencies within the National Statistical System					
E	It establishes and operates a national statistical training centre					

31. Do you think implementation of the new legal reform programme under the MDTF would have strengthened statistics production in the National Statistical System?

Yes () Somehow () No () I do not know ()

32. Was the GSS legal reform programme implemented under the MDTF?

Yes () No () I do not know ()

33. If no to question 32, please state the reason(s) why it was not implemented.

.....

34. Was the GSS reform programme implemented with the MDTF adequately communicated to staff? Yes () Somehow () No ()

35. If no to question 34, please give reason(s)

.....



.....
36. If yes to question 34, indicate how frequently the reform programme was communicated to staff Weekly () Monthly () Quarterly () Annually ()

37. Was the GSS reform programme successfully implemented with the MDTF?
Yes () No () Somehow () I do not know ()

38. If no to question 37, please give reason(s)
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.....
.....

39. How can these challenges be addressed in any future reforms processes within GSS?
.....
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Thank you very much for your participation

