

**AUTOMATION SYSTEM PROCEDURE OF THE GHANA  
REVENUE AUTHORITY ON THE EFFECTIVENESS OF  
REVENUE COLLECTION.**

**(A Case Study of Customs Division)**

BY

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## DECLARATION

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

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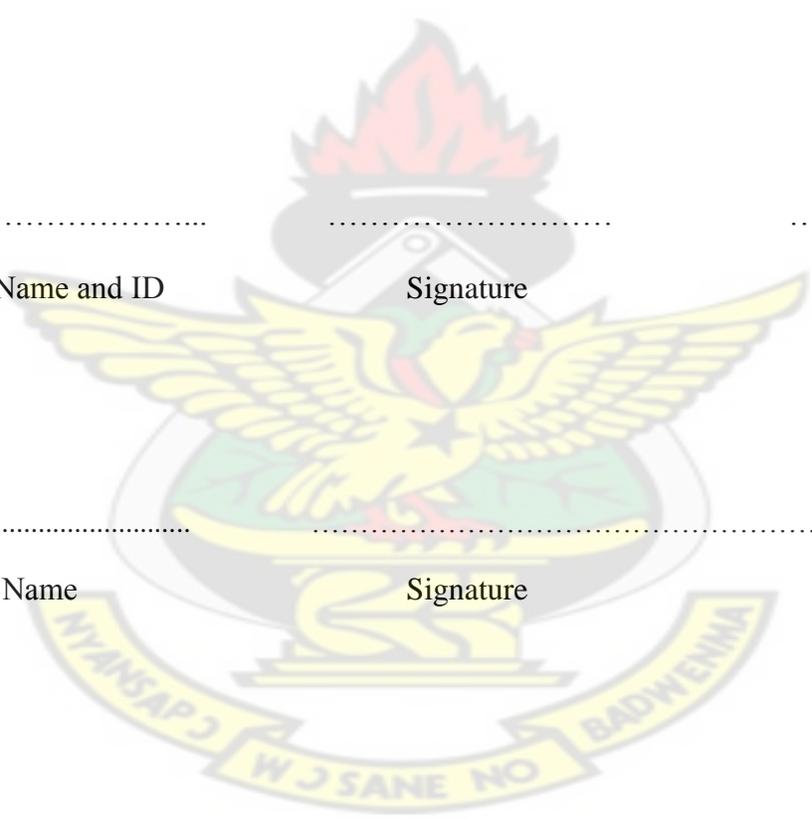
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## DEDICATION

This research exercise is dedicated to my mother, Elizabeth Korkor Tetteh, for her support and firm foundation of my education and effort throughout my two years at the Kwame Nkrumah University of Science and Technology.

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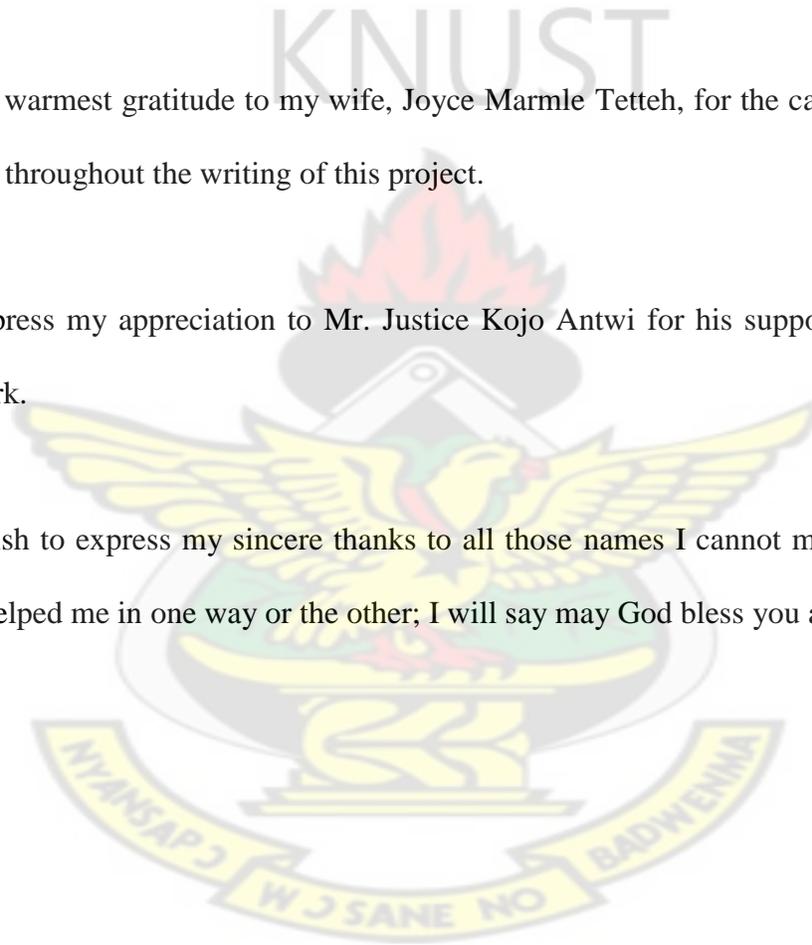
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## **ABSTRACT**

For any government to match in performance with the growth and expectations of its citizenry, it must dramatically increase its fiscal depth without incurring costly recurring overheads. Automated systems have been proven to be capable of introducing massive efficiencies to business processes that can result in increased revenue. Applying technological solutions towards the strategic goals for government will be a key step towards transforming government into an entity that can keep abreast of the needs, requirements and expectations of today's modern world. The aim of this study was to examine the automation system procedures of the Ghana Revenue Authority on the effectiveness of revenue collection. After interviewing forty (40) officials from the Customs Division (CD) with specific duties and responsibilities in automation system management at the Ghana Revenue Authority (GRA) it can be said that the automation is a powerful monitoring tool for GRA. The research reports findings based on cross sectional approach to investigating GRA's experiences with automation, efficiency and effective tax administration. The evidence suggests a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection. Additionally, automation was significantly related with tax clearance time. The research makes significant empirical contribution to analyzing tax automation and administration cost, time efficiency and effectiveness of revenue collection. Some of the results are consistent with the notion that automation leads to efficiency in tax administration.. As such, the primary aim of computerized revenue collection (automation system) must be to dramatically increase cash receipts in order to effectively sustain the utility and generate an acceptable return on investment related to the system.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

Tax administration is a difficult and unenviable task, but nevertheless critical for revenue generation required for accelerating growth and to improve the quality of life of the citizens. Automation system based approaches have become an important vehicle for achieving efficiency in tax administration, (UNCTAD, 2006). Hence, automation impacts on the efficiency of tax administration. Efficiency of tax administration is defined as costs, tax clearance time and effectiveness of revenue collection. Replicating what other 90 nations have done, Ghana Revenue Authority (GRA) adopted the UNCTAD developed Automated System for Customs Data and Management, which is fully integrated and covers the complete tax clearance process. The system handles customs declarations, accounting procedures, transit and other suspense procedures, generation of trade data that can be used for statistical and economic analysis (United Nations Economic Commission for Europe, 2007). Several studies have identified automation as a predictor of efficiency and research shows a link between customs administration efficiency and automation (Engman, 2005). However, he posits that the costs of implementing, maintaining and operations are substantial, echoing the view advanced by Hawley (1996). Further, GRA continued to witness tax processing and clearance delays, despite its use of computer programmes transfer electronic information required by tax authorities to authenticate tax declarations, accurate assessment of tax dues, increased time efficiency, reduced tax administration cost, and improved effectiveness of revenue collection (Sykesville, 2003). Recent studies associate a

significantly positive impact of automation on containing the high cost, time inefficiency and ineffective manual procedures of tax administration and revenue collection, corruption, delays and computing errors (Vasudevan, 2007); Peled (2000); Zineldin (2007). These scholars posit that automation is an avenue to efficiency and effectiveness in terms of clearance time and cost of revenue collection. Except a few recent reports highlighting the importance of automation in the performance of organization, no known research has assessed the impact of automation and information adoption in customs tax administration in Ghana.

Prior to the introduction of an automated system, trade-related documents were manually processed by Customs officers. Given the constraints faced by the then Ghana Customs Excise and Preventive Service (CEPS) because of the increasing volume of international trade and limited number of officers, Customs implemented Electronic Data Interchange (EDI) to control all Customs commercial operations by introducing computer clearance system for exports. The system has been expanded to cover imports and fully implemented at seaports and airports nationwide in 2000.

## **1.2 Statement of the Problem**

Revenue is one of the principal means by which a government finances its expenditure. Funds provided by taxation have been used by states and their functional equivalents throughout history to carry out their many functions. Some of these functions include the enforcement of law and public order, protection of property, provision of economic infrastructure, public works, social engineering and the administration of government itself.

Most modern governments also use revenue/taxes to fund welfare and public services. These services include education systems, health care systems, and pension for the elderly, unemployment benefits, and public transportation. Energy, water and waste management systems are also common public utilities which are funded by revenue generated through taxes.

Solution to most challenges faced by governments all over the world depend on revenue fund available to execute the ever increasing programmes targeted at improving the welfare of its citizens and Ghana is not an exception.

Revenue collection machinery of the Ghana Revenue Authority needs to be revamped. It is said that authorities have played around with the problem at the margins and hence need to invest massively in revenue collection systems. Currently, revenue agencies are allowed to retain 3% of the taxes they collect to support their operations. But the system is simply not working. The lack of qualified personnel and heavily manual systems mean that it is operating well below the level needed to attain the revenue levels needed to support the economy.

Except a few recent reports highlighting the importance of automation in the performance of organizations, no known research has assessed the impact of automation in revenue mobilization. This research therefore seeks to discuss the central question; what role does the automation system of the Ghana Revenue Authority play to ensure effective revenue mobilization and problems associated with its operations?

### **1.3 Objectives of the Study**

The research study seeks to achieve the following objectives:

1. To find out the role of the automation system in revenue mobilization in Ghana.
2. To determine the challenges of the automation system of the Ghana Revenue Authority.

### **1.4 Research Question**

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

1. Does the activity of the Ghana Revenue Authority officials impede the efficiency of the automation system?
2. Has the introduction of automation system helped to facilitate revenue mobilization?
3. What challenges confront Ghana Revenue Authority after the introduction of the automation system?

### **1.5 Significance of the Study**

The study would enable management of Ghana Revenue Authority (G.R.A) to understand the need for:

- Streamlining the automation system and procedures
- Helping officials to improve performance to ensure efficiency and effectiveness of the automation system and procedures
- Enhancing productivity among employees of Ghana Revenue Authority (G.R.A)

- Generating increased revenue for the government coffers from the Ghana Revenue Authority (G.R.A) operations.

## **1.6 Limitations and Scope of Study**

A number of challenges were encountered by the researcher during the course of the study.

These are outlined as follows;

- Busy schedules of respondents resulted in late receipt of questionnaires and some of the respondents failed to turn in their questionnaire.
- Due to the unavailability of funds and mainly time frame within which the work was to be carried out, the study was limited to the Customs Division of Ghana Revenue Authority, Accra.
- Access to data was a major challenge since most officials were not willing to present sensitive data where the research was concerned.
- Respondents' feedbacks were not appropriate for the study as individual differences and disagreement came to play.

These limitations were obviously predicted, but other challenges were experienced during the primary data collection. Among them were the misplacement of questionnaire by some respondents and the subsequent refusal of some respondents to meet submission deadlines.

## **1.7 Organization of the Study**

The study has been organized in five chapters

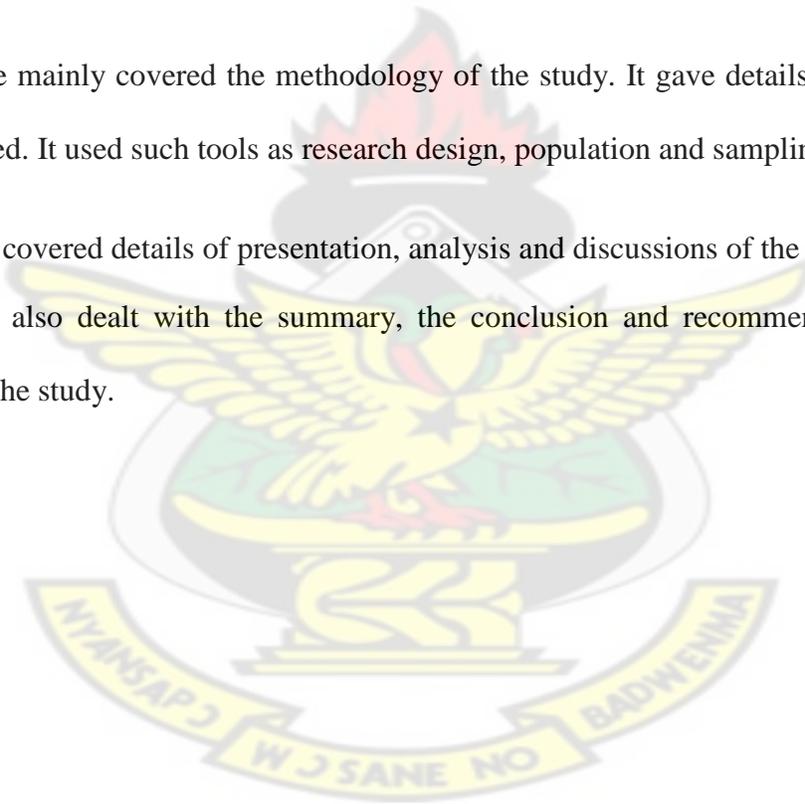
Chapter one focused on the introduction, background to the study, statement of the problem, research questions and significance of the study. Other items captured in the same chapter were limitations of the work as well as how the work was organized.

Chapter two dealt with a review of literature such as what automation system is all about, functions of automation system in revenue mobilization, and benefits of automation system in revenue mobilization.

Chapter three mainly covered the methodology of the study. It gave details of how research was conducted. It used such tools as research design, population and sampling techniques.

Chapter four covered details of presentation, analysis and discussions of the data collected.

Chapter five also dealt with the summary, the conclusion and recommendations of what came out of the study.



## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

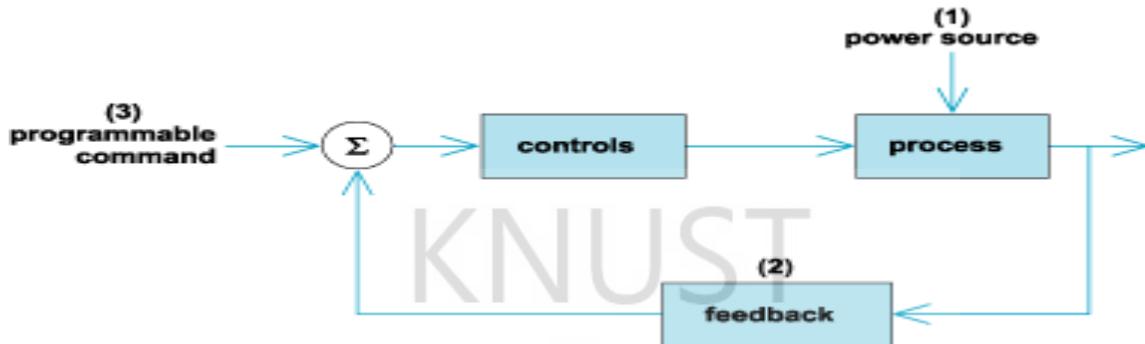
#### 2.0 Introduction

This section outlines existing literature on the subject matter. A description of what automation system is all about, functions of automation system, benefits of automation system, challenges and implementation of automation system. Moreover, this chapter looked at revenue mobilization and automation system.

#### 2.1 Automation System Defined

**Automation** is the use of control systems and information technologies to reduce the need for human work in the production of goods and services. In the scope of industrialization, automation is a step beyond mechanization. Whereas mechanization provided human operators with machinery to assist them with the muscular requirements of work, automation greatly decreases the need for human sensory and mental requirements as well. Automation plays an increasingly important role in the world economy and in daily experience. Nonetheless; the advent of World War II and the advances made in electronic computation and feedback have certainly contributed to the growth of automation. While feedback is usually associated with more advanced forms of automation, so-called open-loop automated tasks are possible. Here, the automated process proceeds without any direct and continuous assessment of the effect of the automated activity. For example, an automated car wash typically completes its task with no continuous or final assessment of the cleanliness of the automobile.(Hollingum 2005).

### *Elements Of An Automated System*



Source: Hollingum J (2005). *Modular Automation Beats the Recession*, *J.Comput*, 15(2):455-489

However, it observed that the system could perform far more than its present result if monitoring is taken seriously. Documentary evidence revealed that there had been countless occasions on which the system had alerted its users about then on-payment of revenue but those responsible for monitoring did not follow up.

## **2.2 Initiatives and Challenges in Computerization and Automation of Customs Procedures:**

Bangladesh has gone a long way towards modernizing its customs administration through massive computerization of customs offices and complete automation of customs procedures. The process began with the automation of clearance procedures at the Chittagong Custom House, the biggest customs station in the country that handle more than 50% of total volume of import and more than 80% of total volume of export of the country. This was done with the introduction of Version 2.0 of ASYCUDA (Automated System for Customs Data), a

software developed and designed by UNCTAD, in 1994. This was followed by the supply of adequate number of computers to the Chittagong Custom House under the ETAC (Excise, Tax and Customs) Data Computerization project adopted by the National Board of Revenue (NBR). (*United Nations Economic Commission for Europe 2007*)

The computerization and automation process later expanded to other major customs stations. Today the ASYCUDA System is being used by all the Custom Houses in Bangladesh- namely, Chittagong, Dhaka, Benapole and Mongla. This, in other words, imply that about 90% of the volume of trade (both import and export) of the country are actually fully automated by now. The National Board of Revenue has a plan to introduce the system at four( 4 ) Land Customs Offices (LCO) in January and at two(2) more LCOs in June next year, thereby expanding the coverage of automation to more than 95% of the total volume of trade in the country. Such computerization and automation programmes were carried out under various modernization projects undertaken by the NBR with funds from donor agencies. These include Customs Administration Modernization Project, Modernization and Automation Project etc.

While continuing its focus on modernization through automation of procedures, the Customs Administration has, over the years, also followed closely the developments made by UNCTAD, and accordingly upgraded its automation software, from ASYCUDA version 2.0 to ASYCUDA<sup>+</sup> version 16.f to ASYCUDA<sup>++</sup> version 18.d. The National Board of Revenue has already taken steps to upgrade its system further with the latest version (ASYCUDA World).

The major features of the ASYCUDA system used by Bangladesh Customs are-

- ⌚ Declaration processing

- ⌚ Selection of Lane (Green, Yellow, Red)
- ⌚ Assessment of Goods
- ⌚ Payment and Release of Goods
- ⌚ Log Register of users

In the meantime, the NBR has gone ahead with its attempt to introduce a Single Window System at the Chittagong Custom House. In 2008, CHC, in cooperation with Chittagong Chamber of Commerce and Industry, has undertaken an automation project with a view to enabling the users/stakeholders of Custom House to use online facilities through interfacing. Under the purview of that project, Bill of Entry Module for online submission of customs declarations (Direct Traders Input) by importers/clearing and forwarding agents, and Manifest Module for online submission of Import General Manifest/Export General Manifest by shipping agents were implemented on October 06, 2008 and August 08, 2008 respectively. Plans are on to bring other stakeholders into the process through creating more interfaces. The NBR has decided recently to introduce the system also at the Dhaka Custom House, the second most important customs station in the country.

The recent installation of container scanners at the Chittagong Custom House for quick and hassle-free examination of both in- and out-bound cargo is another positive step on the part of the NBR in its efforts to modernize its customs offices and procedures.

While carrying out the above-mentioned computerization and automation of customs procedures, the Customs Administration in Bangladesh was driven by the desire to achieve the following objectives:

- To reduce cost of doing business;
- To empower CHC to have better control over the information flow so that CHC can take decision based on available data;
- To improve efficiency and effectiveness of the customs system;
- To ensure transparency and accountability;
- To ensure protection of generated revenue;
- To facilitate paperless transaction on an e-trade environment;
- To minimize human interference; and
- To make information available to stakeholders for better trade facilitation

### **2.3 Automation of Customs Administration**

Automation of tax administration is derived from the general concept of automation, a concept that delineates a process of having machines to accomplish tasks hitherto performed wholly or partly by humans (Gutierrez, 2006 and 2008; Kochan, 2005). Computerization aids the conduct of complex processes accurately, efficiently and effectively (Hollingum, 2006, 2007). Shivakumar (2007) as well as Gutierrez (2008) emphasize the appropriate application of automation to tax administration. Automation of tax administration allows tax data entry, automated processing, computation and analysis as well as automatic production of tax reports and feedback required for control and risk management purposes (Moore, 1999; Holniker, 2005; Partch 1997).

According to Holniker (2005), automation of tax administration includes developing powered computer programmes to carry out tax assessments and computations; and to

determine tax dues at high levels of speed and accuracy (Guido, 2007). Automation argues Katsuya-Takii (2003) is a catalyst and stimulus for customs modernization. Customs automation is usually part of an overall tax administration reform (Rao, 2000) and modernization programme (Greenwood et al., 2008; Guido, 2007; Gutierrez, 2006). Automation of customs administration is the processing of customs documents by the computer-assisted treatment of electronically transmitted information. Booze et al. (2007) see the main functions of automation of customs administration to include: controlling cross-border flow of goods, ensuring compliance with government rules and regulations, collecting of the duties and taxes due according to the national customs tariff and tax code, and protecting a country against the importation of goods and materials intended for illegal purposes. Customs automation makes extensive use of computer systems consisting of comprehensive and integrated software packages which Greenwood et al. (2008) describes as cargo control, to monitor all movements of importation, transit and exportation, and ensure that all goods are duly cleared before release; and declaration processing, to capture and process data for duty and revenue collection. Swindley (2007) adds payment and accounting, to register and account for payments by importers and exporters; and risk management, to select those consignments bearing higher risks, concealing duty and tax noncompliance, illegal importation of drugs or materials aimed for terrorist activities.

Finally Graham and Wendy (2003) adds statistics and reporting, to extract data for dissemination of foreign trade statistics and to generate management reports for customs for efficient communication between customs, traders, and other government agencies. The system increases transparency in the assessment of export and import duties and taxes,

reduces substantially the customs clearance time, and predictability. The overarching benefit is the direct and indirect reduction in administration cost and increased effectiveness in collection of customs revenue (Katsuya-Takii, 2003). Vasudevan (2007) observed that automating customs administration leads to increased collection of duties and taxes due to the uniform application of laws and regulations; the automated calculation of tax due; and built-in security.

It also results into more effective revenue collection and administration controls; improved and timely foreign trade statistics as trade data are an automatic by-product of the computerized system; and less corruption due to transparency and automated procedures. The notable benefits advanced by Ward and Dietmar (2007) are faster release of cargo passing through customs clearance; simpler procedures and documents, based on international standards; reduced physical examination of goods; separation of payment of duties and taxes from physical clearance of goods and faster electronic lodgement of customs declarations, using Direct Trader Input or other on-line connections. Holniker (2005) highlighted other advantages as: reduced customs auditing of documents.

Notwithstanding the foregoing benefits, Ward and Dietmar (2007) noted that automating customs administration has cost implications, which vary from country to country and according to the initial situation of the customs administration in terms of available ICT, human expertise and the structure of tax administration (Peled, 2008).

The success Booze et al. (2007) argues, depends on strong political will and support for the automation/modernization processes; appropriate legal instruments, a transparent and collaborative approach by stakeholders, cooperation between the public and private sectors; and a phased implementation of the customs automation systems (Hollingum, 2005; Gutierrez, 2008).

#### **2.4 Role of Automation System on Revenue Mobilization**

Revenue Agencies continue to witness tax processing and clearance delays, despite its use of computer programmes transfer electronic information required by tax authorities to authenticate tax declarations, accurate assessment of tax dues, increased time efficiency, reduced tax administration cost, and improved effectiveness of revenue collection (Sykesville, 2003). Recent studies associate a significantly positive role of automation on containing the high cost, time inefficiency and ineffective manual procedures of tax administration and revenue collection, corruption, delays and computing errors (Vasudevan, 2007); Peled (2000); Zineldin (2007). These scholars posit that automation is an avenue to efficiency and effectiveness in terms of clearance time and cost of revenue collection.

#### **2.5 Tax Administration**

Tax administration is rooted in the theory of revenue exaction which Albright (2008) describes as a corollary that gives an undisputed justification of the positive theory of the state and its relationship with the market economy. Though Thomas (2008) explains the importance of the theory of revenue exaction in a more succinct manner, he leaves a gap by dealing more with taxation theory than tax administration. Both Thomas and Albright in their

contribution fail to adequately show how the theory of revenue exaction relates to tax administration, an aspect this paper sets out to investigate. The critique against the revenue exaction theory is directed at the fact that despite its providing a rational basis for a taxation mechanism, it is silent about what this mechanism is (Gunning, 2007).

Additionally, how should it be conducted in order to achieve the desired administrative efficiency defined in terms of time lag, cost and effectiveness in terms of revenue collection(Gunning, 2007). The theory is therefore, insufficient in underpinning taxation, tax administration, and how this administration can be enhanced by automation. It needs to be complimented by the efficiency theory and the effectiveness paradigm both of which provide the rational basis for adopting automation in tax administration (WTO,2007).At this stage there is a need to make a distinction between a tax and taxation which Albright (2008) makes a distinction between a tax as being any payment by economic agents and individuals to the government and taxation which focuses on the methodologies for determining the means of raising taxes, the types and rates of taxes. The debate as advanced by McKee (2008)focuses on the system and methods of raising the needed resources. Therefore, taxation includes a mechanism of legislation, policies and plans, which determine the different types and rates of taxes (Parsons,2006, 2007; Abichandani, 2008), while Moore and Schneider (2004) opines that the implementation of the enacted system is what constitutes tax administration.

Recent research by Tomsett (2008) supports the view that the administration of any adopted taxation system should be acceptable and easy for taxpayers and efficient (Kennedy and Sugden, 2007). According to Graham and Wendy (2003) most forms of taxes are less

efficient hence much more money is invested and less is collected in revenue. In some countries with large informal sectors, even the administration of income tax may not be efficient because employers in these sectors tend to evade the income tax of their employees (Travis, 2004; Lee, 2005; Tretton, 2007). What is not clear from the debate is the emphasis on a good tax administration system being efficient and effective, but failing to show how such efficiency and effectiveness can be achieved.

## **2.6 The Need for Reform in the Tax System in Ghana**

The revenue structures of most developing countries have not been as productive as desired. Too often the growth in revenue has failed to catch up with government spending pressures, a situation that has occasioned huge imbalances between the demand and supply of public budgetary resources. These countries have then had to reform their tax structures, with the general objectives of revenue adequacy, economic efficiency, equity and fairness, and simplicity (Osei, 2006). The main elements of the reform programmes include:

- Imposing a small number of taxes with the broadest possible base and moderate rates (World Bank, 1990).
- Using VAT to replace commodity taxes in order to minimize disincentives for investments and exports (Osei2006).
- Not only avoiding raising taxes on the poor, but also reducing their tax burden. This is achieved by levying excise duties on luxury items and exempting foodstuffs to protect the low-income groups.
- Avoiding tax incentives and shifting to broader, simpler tax bases on which lower rates are applied.

- Minimizing corporate tax evasion (some countries levy minimum taxes on a company's net worth).
- Lowering distortions that reduce economic welfare and growth.

More often, policy advice directed towards countries desiring to reform their tax systems has emphasized the introduction of either new taxes or new rates on existing bases, more stringent administrative changes to seal loopholes that encourage tax evasion, and the need to widen tax bases and reduce exemptions. Other measures include the allocation of more budgetary resources to the revenue authorities, paying higher salaries to revenue officers and imposing relatively prohibitive penalties. Generally, special attention is also directed to the simultaneous reduction of the tax rates and widening of the base as one of the most effective approaches for addressing the twin problems of the disincentive effects of high marginal tax rates and tax evasion.

Tax reform measures are mainly undertaken in order to restore buoyancy to revenues, strengthen modern taxes, and drastically reduce the complexity and lack of transparency of the system (World Bank, 1990). The main factors contributing to improved revenue performance are changes in tax legislation, tax administration and minimal tax evasion(Booze 2007).

According to a *Ghana Revenue Authority Newsletter (Edition 001, Volume 001)*, Tax administration in Ghana is beset with challenges. These include:

- Fragmentation of domestic tax administration between the Valued Added Tax service (VATS) and the Internal Revenue Service (IRS).
- Duplicated support functions across the Revenue Agencies (RAs)
- Pursuit of independent reforms by the RAs including computerization and organizational changes
- Lack of a strong, unify headquarters to support and manage the operations of the Domestic Tax and the Customs Administration.
- Incomplete data on taxpayers due to non integrated IT systems for data storage and retrieval
- Ineffective and inefficient tax collection systems
- Ineffective application of the tenets of taxation – equity, fairness, simplicity, convenience, transparency and tax neutrality
- Existence of significant weaknesses in the key functions and business processes needed to administer a modern system

## **2.7 Benefits of Automation System in Revenue Mobilization**

According to Holniker 2005, the use of the system has resulted in a significant improvement in the revenue collection time for tax payers. Revenue mobilization is one of the key factors for economic development of nations and links into national agenda on social well being, poverty reduction and economic development of countries and their citizens. Ghana Revenue Authority is a mandatory element in the movement of goods across borders and the procedures applied to these goods significantly influence the role of national industry in

international trade and their contribution to national economy. In the context of the international trade environment Ghana Revenue Authority plays a critical role not only in meeting the goals of the governments but also in ensuring effective controls that secure revenue compliance with national laws, ensuring security and protection of society.

The efficiency and effectiveness of Ghana Revenue Authority procedures has a significant influence on the economic competitiveness of nations and in the growth of international trade and the development of the global marketplace. As government organizations that control revenue generation, Ghana Revenue Authority administrations are in a unique position to provide increased security to the global supply chain and to contribute to socio-economic development through revenue collection and trade facilitation ([www.gra.gov.gh](http://www.gra.gov.gh)).

According to Hawley (1996), Modern trading practices make it essential for Ghana Revenue Authority administrations to provide simple, predictable and efficient procedures for the clearance of goods and movement of people while simultaneously tackling increasingly complicated national and international requirements to ensure compliance with national laws, international agreements and meeting security challenges.

Travis (2004) indicated that to strengthen and go beyond existing programmes and practices, Ghana Revenue Authority has developed a regime that will enhance the security and facilitation of revenue collection. A Framework of Standards is a regime that enhances the security and facilitation of international trade. This global supply chain security initiative, on the part of the international Customs community, is aimed at protecting world trade from the

threats posed by international terrorism, organized crime and ever-increasing Customs offences. At the same time it provides a structured platform to facilitate the movement of legitimate goods being traded internationally. Not only does the Framework usher in a safer world trade environment, it also heralds the beginning of a new approach to working methods and partnership for both Customs and business in the 21st century. Based on the principles of co-operation, the Framework cements the bonds between Customs administrations and their business stakeholders who together commit to the implementation of a series of 17 Standards that regulate the security and facilitation of international trade.

### **Pillars of the Framework**

The Framework rests on the twin pillars of Customs-to-Customs network arrangements and Customs-to-Business partnerships. To ensure ease of understanding, the pillars involve a set of standards (*United Nations Economic Commission for Europe (2007) Automated System for Customs Data and Management*).

### **The Customs-to-Customs Pillar**

Under this Pillar, Customs administrations must work co-operatively with common and accepted standards to maximize the security and facilitation of the international trade supply chain as cargo and container shipments move along the nodes of the global trading system. This is to provide an effective mechanism for securing the international trade supply chain against the effects of terrorism and other forms of transnational crime.

## **The Customs-to-Business Pillar**

Within this Pillar, each Customs administration has to establish a partnership with the private sector in order to involve it in ensuring the safety and security of the international trade supply chain. The main focus of this pillar is the creation of an international system for identifying private businesses that offer a high degree of security, and sets forth the criteria by which businesses in the supply chain can obtain authorized status as an Authorized Economic Operator (AEO) (*United Nations Economic Commission for Europe (2007) Automated System for Customs Data and Management*).

## **GHANA CUSTOMS**

Ghana, being strategically positioned and viewed by the West African Region as the gateway to West Africa, believes that, trade facilitation is the positive way to accelerate economic development. The above belief and vision, led Ghana Customs to express its intent to implement the Framework of Standards by signing the Declaration of Intent at the June 2005 Council meeting ([www.gra.gov.gh](http://www.gra.gov.gh)).

## **STATUS OF IMPLEMENTATION OF THE SAFE FRAMEWORK**

### **Clearance Procedures**

Ghana Revenue Authority procedure of clearance has been automated and implemented since 2002. The system has two components namely the Ghana Community Network (GCNet) and the Ghana Customs Management Systems (GCMS). The GCMS provides CEPS with fully integrated computerized system for the management of Customs declarations and related activities. And the GCNET is the platform enabling the GCMS to share data with all the parties involved in the processing of trade document and Customs clearances. The system is

still ongoing and Ghana hopes to automate all its entry points. For now, all the major entry points have been automated ([www.gra.gov.gh](http://www.gra.gov.gh)).

### **Benefits of the Clearance System:**

- \* Streamlining clearance procedures
- \* Reduced error rates
- \* Time saving
- \* Reduced human interventions
- \* Increased revenue mobilization

### **Modern Technology in Inspection**

Ghana Customs has acquired a scanner at the major sea port .This is used in scanning container and heavy load trucks. This procedure enables customs to undertake a comprehensive inspection of imported goods while ensuring security in the supply chain by detecting dangerous commodity ([www.gra.gov.gh](http://www.gra.gov.gh)).

### **International Standards Organization (ISO) Certification**

This program is on-going and is aimed at standardizing and improving upon CEPS management system and procedures to improve upon service delivery to Customers, and becoming internationally recognized as an efficient, transparent and effective organization.

### **Risk Assessment System**

Risk assessment is no doubt an important tool in revenue mobilization. To this effect the selectivity module is incorporated in the GCNet system for operation.

### **Bilateral Agreements and Cooperation with other Customs Administrations**

Ghana Customs continues to engage in bilateral cooperation with neighbouring Customs administrations especially in the area of transit trade to ensure facilitation within the sub-region. To this effect Ghana Customs has entered into Memorandum of Agreement (MOA) with some of its neighbouring Countries, and also with the U.S on Customs matters([www.gra.gov.gh](http://www.gra.gov.gh)).

### **Improvement of Transit Operations**

The management of Customs has implemented an electronic tracking and monitoring system in its transit operations to reduce delays and prevent revenue leakages associated with Transit operations. It is worth noting that this initiative is undertaken in collaboration with the private sector stakeholders.

### **Partnership**

Customs has organized a Stakeholders Forum to gain the trust of the business community and have them voluntarily comply with the new standards of the Framework in order to have a meaningful participation and enjoy the accrued benefits not only locally but from the international trading community. With good planning and commitment, the SAFE Framework should be implemented effectively and fully. It is also important to mention that Ghana

Revenue Authority appreciates the private sector partnership, and sees it as a tool to enhance the framework of standards since they are a part of the global supply chain ([www.gra.gov.gh](http://www.gra.gov.gh)).

## 2.8 Revenue Mobilization and Automation System

According to Sani 2009, automation system helps to improve revenue collection. They are based on the electronic payment system through applications such as toll revenue collection, automatic fare collection, bus revenue system and parking system. Additionally by automating revenue collection, service providers have better audit trail since all transactions captured can be detailed by time, whom and where. This prevents revenue loss through abuses as all moves are recorded electronically. Automation also allows huge transactions to be handled efficiently.

According to him, automating revenue collection is especially critical within the revenue collection agencies, which requires fast and efficient output, as there will always be a trade off between control and operational needs.

Also, to enhance Ghana Revenue Authority's operational efficiency, a number of innovative features have been incorporated into revenue collection procedures such as Smart Tax which involves the migration of taxpayer data from the manual system into the computer and automation of cashiering functions. (*Ghana News Agency Business & Finance* / Fri, 03 Apr. 2009)

Within the system also, there is a Transit Module, which among its features computerize the major businesses of registration, assessment, collection and accounts as well as networking. It also captures the taxpayer details, and then breaks it into sub-consignments

## **2.9 Constraints and Challenges of Revenue Mobilization**

Despite enjoying formal support from the highest levels of government, the Ghana Revenue Authority (GRA) had to contend with a number of constraints and challenges that would directly impinge on its efforts to emerge as a strong, legitimate and performing organisation.

*(www.gra.gov.gh).*

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### **Limited Opportunities for Revenue Generation**

A major challenge facing the new GRA was the country's limited tax base. For the vast majority of Ghanaians (over 90%) who live and work in the rural areas, the rural economy had been devastated and was, in any case, largely non-monetised. Moreover, most rural Ghanaians were experiencing acute poverty, exacerbated by social dislocation and trauma.

*(Osie 2006)*

The urban economy, although better off, also offered limited opportunities for revenue generation. The formal economy, comprising mainly small, micro- and medium enterprises, had been devastated and was only beginning to re-emerge. The much larger and burgeoning informal sector was by its nature beyond the reach of the tax authorities. The generally low level of economic activity and dilapidated infrastructure also meant that the level of trade was limited. Meanwhile, there were few individuals earning sufficiently high salaries to be eligible for personal income tax. The civil service, which offered the main source of formal employment, was barely able to offer a living wage.

## **A Skeptical and Uncooperative Taxpaying Public**

A second challenge was the fact that few Ghanaians believed that they should pay taxes. As in any country, there are few citizens who will voluntarily pay their taxes. Even those able and required by law to pay tax had not been used to declaring their earnings, whilst customs and excise regulations were regularly flouted. Taxation was perceived as a punitive measure, or simply as a means by which tax inspectors could supplement their own meagre salaries.

The country's political history meant that the association between paying tax and receiving services from government was missing. The quality of service delivery was poor; there was no tradition of political accountability, whilst the tragedy of genocide and civil strife had made the public services largely dysfunctional. Not only did it lack the basic human capacity to manage core services, but much of the country's social and economic infrastructure had been destroyed.

Previous leadership had not placed domestic revenue mobilization as a core element of economic policy, and the country had come to depend on international aid. Self-serving government behaviour, corruption within the revenue collection services and generally inefficient service provision meant that for most Ghanaians paying tax was viewed not as a civic responsibility, but as something to be avoided. The public was understandably sceptical and wary about the government's intentions and motives in setting up the GRA. Changing public perceptions was to be one of the key challenges that the organisation would face.

### **Poor Reputation of the Ghana Revenue Authority**

A third and related challenge concerned the reputation and capacity of the former revenue agency that the GRA replaced. Like the rest of the public services, the revenue agency had been affected by the intellectual crisis and was just beginning to function again. Yet many of the department's skilled and experienced staff had voluntarily retired or had fled the country. Equipment and file data had been destroyed or were missing.

Most crucially, there seemed to be little incentive to perform and little understanding of the purpose and functions of a revenue agency. There was no policy or strategy to guide the agency, the legal and policy framework was out of date, systems and procedures were antiquated, and staff had received almost no training. There was little discipline, with staff coming and going as they pleased. Corruption and bribery, including political interference, were rife and tax collectors had the reputation of being high-handed in their dealings with the public. According to former staff members, the service was largely dysfunctional; as one stakeholder put it, 'we were in a deep hole'. With little pressure to perform either from within government itself or from society at large, the revenue agency had become a neglected sector. ([www.gra.gov.gh](http://www.gra.gov.gh)).

### **Fragile Human Resource Base**

The country's human resource base was particularly fragile. Not only had one million people been killed and three million forced into exile, denying the country many of its most capable and experienced, but the education system had been thrown into a state of collapse. A

massive human capacity deficit had been created that was going to take at least a generation to overcome.

Compounding the problem was the fact that since independence the country had not invested in the development of secondary and tertiary education institutions. This meant there was a substantial shortage of Ghanaians with post-primary education. In 2002, 33% of the population aged 15 years and above had no education, 60% had only primary education, 7.1% had post-primary or secondary education, and only 0.4% had some tertiary education. Meanwhile, in the civil service, 79% of core civil servants had not completed secondary education in 1995, although this proportion fell to 51% by 1998. There was also a shortage of institutions - as well as trained staff to run them - to build up a new generation of professionals.(Osei, 2006)

The problem was especially acute with respect to professional areas relevant to the revenue service. The country had been producing virtually no professionals in the fields of accountancy, financial management and tax administration, but also in areas such as statistics and information technology. Not only did this affect the government's own capacity to manage tax administration, it also meant that the private sector was inadequately served with tax and accountancy professionals. A glaring gap was the absence of professional organisations serving as intermediaries and providing accountancy, audit and tax consulting services. Also missing was a professional association able to regulate and set standards of practice in these areas.

## 2.10 Stakeholders of Revenue Mobilization

The GRA interacts in different ways with several stakeholder groups: the government, taxpayers, and local and international partners.

### 2.10.1 The Government of Ghana

The GRA is a public sector agency, created by law and ultimately accountable to parliament. The government provides the legal and policy framework within which the GRA operates and provides the organisation political support and legitimacy (*Osafo 2001*). Spending ministries are the net beneficiaries of the GRA, in so far as the organisation collects domestic revenues that are distributed through the Treasury to these departments. In this respect, the government can be considered the GRA's prime 'customer'. Within the machinery of government, the following are of special significance:

- *The President* has from the outset played a significant role in promoting the GRA in encouraging Ghanaians to pay their taxes and in insisting on public service integrity, transparency and accountability. The president has also led a campaign of zero tolerance towards corruption.
- *The Ministry of Finance and Economic Planning* is the GRA's parent ministry and is therefore directly responsible as board member for monitoring the policy framework and operations of the organisation. It also provides the policy links between domestic revenue mobilization and broader strategies of macroeconomic management, public sector reform and poverty reduction.

- *The Bank of Ghana* is a board member and a critical stakeholder in terms of monitoring the link between domestic revenue generation and the management of fiscal and monetary policy. ([www.gra.gov.gh](http://www.gra.gov.gh)).

### **2.10.2 Taxpayers**

Taxpayers interact with the GRA as enterprises, individuals, traders and travellers, and contribute revenues through the payment of various taxes and customs and excise duties. They constitute the GRA's other 'customers' whose interests must be counterbalanced with those of the government, to whom the authority is ultimately accountable. Almost 90% of taxpayers are based in the capital, Accra. This is the group that the GRA interacts with on a daily basis and on whom it ultimately depends for its performance and support. Three categories of taxpayer can be distinguished:

- *Large taxpayers* comprise local and international companies operating in Ghana. This is a new and growing category of taxpayer. Although relatively few in number, they account for almost 80% of collected revenues. Such companies usually have sophisticated financial management systems and can be expected to be knowledgeable about their tax obligations.
- *Small taxpayers* comprise local small and medium enterprises as well as individuals. Although significant in number, this group accounts for less than 20% of revenues collected due to low incomes, poor accounting practices (don't keep books of account), lack of knowledge of the law, lower compliance rates and more general difficulties associated with their identification and registration (no fixed addresses). This category also includes the large but unregulated informal sector.

- *Local and international traders, investors and visitors* involved in the import and export of goods and services, which interact with the Customs Division.

Taxpayers are also consumers of government services and as such may also be regarded as indirect stakeholders. In this respect, public support for paying taxes depends in large part on the level of satisfaction with the quality of services delivered by the government. This is because the main justification for paying taxes is that it enables the government to deliver basic services. If there is dissatisfaction, then the level of compliance and cooperation risks falling. (Osei, 2006)

### **2.10.3 Local and International Partners**

The GRA relies on a number of local and international partners to assist it in implementing its mandate. These include:

- *The Ghana Private Sector* serves as an interlocutor with and a focal point for the GRA in seeking compliance and understanding on revenue issues among large, medium and small enterprises.
- *Police, army, local authorities and counterparts in neighbouring countries* are important partners in jointly tackling smuggling and tax evasion.
- *Tax and financial consultants* play a critical role as intermediaries in facilitating the preparation of tax returns and company financial reports, in auditing books of account, and in providing related services to the taxpaying community.

- *Revenue authorities in the West African region* have been an important source of knowledge, expertise and peer support and have helped the GRA to avoid the mistakes made by others. ([www.gra.gov.gh](http://www.gra.gov.gh))

## **2.11 Developing Technical Capabilities**

The performance management capabilities discussed earlier have provided the framework for developing the 'technical' capabilities required to carry out the GRA's core business - revenue collection.

The progressive strengthening of such technical capabilities has remained a priority of the organisation and has received particular support from IMF. Initially, attention was given to ensuring that basic systems and procedures across operational departments were in place and that the staff are able to carry out basic tasks. Thereafter, attention shifted towards professionalising the entire service with a focus on improving overall efficiency and effectiveness. Recently it was decided to modernise the entire approach to tax administration in order to boost the organisation's revenue collection capability, while at the same time reducing costs and raising service standards. In developing the technical capabilities of the organisation, attention has been given to:

- ensuring that the maximum potential revenue is collected;
- minimising losses through error or fraud;
- minimising transaction costs;
- serving customers in a manner that is convenient and responsive to their needs; and
- carrying out tasks in a manner that is fair, impartial and transparent.

Building up the core technical capabilities has involved various aspects of organisational and staff development, most notably getting structures right, developing staff competency, and putting in place appropriate business processes (systems, procedures, information technology, etc.).

### **Getting Structures Right**

As part of the modernisation programme, operational departments were regrouped around taxpayer categories to enable the organisation to become more responsive to client needs and as a basis for improving service delivery standards. The reorganisation has also created opportunities for greater cost effectiveness and efficiency in the management of business processes. The new customer orientation encourages operational departments to adopt more of an external focus and to hone their services to the particular needs of their clients. In turn this has pushed departments to think more strategically about the kinds of competencies staff need to achieve their objectives.

The reorganisation is at the same time creating opportunities for greater horizontal integration and better communications between the different operational and support departments. It also provides a basis on which to build integrated business processes supported by an IT platform that can facilitate the timely exchange of data across the organisation. The reorganisation is helping management and staff to gain a better sense of how the different departments contribute to the overall mission. So, while it has encouraged a degree of departmental specialisation linked to servicing the needs of particular customers, the restructuring has also meant that certain areas of technical expertise such as auditing can

be shared across departments, thereby enabling a more interdisciplinary approach to the performance of tasks. *(Parsons, 2006)*

### **Developing Staff Competency**

From the outset, the biggest challenge has been to develop a cadre of tax administration professionals - the organisation's performance ultimately relies on having in place adequate numbers of staff competent in the fields of tax administration, customs and excise, and revenue protection services. This task has been challenging for several reasons:

- most of the staff retained from the old organisation had received no formal training - in this regard, there were few tax administration professionals;
- there was no formal training policy or training capability within the organisation; and

With the support of IMF, the organisation has taken upon itself the task of developing a cadre of tax professionals through a mix of on-the-job training, mentoring, short courses and selected longer courses. Provision is now being made to establish an in-house training facility that will provide the organisation with its own internal capability to further professionalise its staff. The focus on in-service training is important. At first the organisation thought it would be able to recruit people from the market with requisite qualifications and experience, but this has not proven to be the case, for the reasons cited earlier. It was therefore decided to recruit generalists from the university (public administration, business and commerce, IT and lawyers) and to develop them internally into tax and customs professionals. *(Thomas, 2008)*

Staff development has focused on developing core skills and competencies related to the various specialisations associated with revenue collection (tax administration, customs and excise, VAT) and various functions (inspection, audit, etc.), including a sound knowledge of laws and regulations and accountancy principles and proficiency in implementing work routines. Equal attention has been given to instilling values of integrity and, most recently, to developing customer handling and interpersonal skills. Assuring staff integrity is important in any organisation, but is critical to the performance of a revenue authority.

It is important in terms of helping to minimise losses or under-collection of revenues due to theft, fraud or bribery. It is also vital to establishing the credibility and reputation of the organisation and in sending a message to taxpayers that there is no tolerance of fraud, corruption or evasion.

*Customer relations* is an aspect that has grown in importance as the organisation has come to understand that its performance can be assessed not only in terms of how much revenue is collected, but also in terms of the quality of the services it provides to its customers.

In considering customer relations, the GRA recognises that, first, although it does not provide a service in a traditional sense, it is a service provider and has the responsibility to serve the public in an appropriate manner. Second, customers are the partners of the GRA, and that treating them in an appropriate manner will help to maximise compliance and cooperation, resulting in higher collection levels. The reorganisation of operational departments around taxpayer groups has helped reveal some of the different competencies

that staff must have in order to carry out their duties. In other words, staff competencies need to be customised to take account of their clients (Osei 2006).

## **2.12 Developing Appropriate Business Processes**

Tax and customs administration is by its nature information and process dependent. The on-going modernisation programme is anchored around an effort to improve the ways in which data are processed using internationally recognised good practice. The intention is to put in place robust systems that are easy to use (for both staff and customers), speed up operations, reduce transaction costs, facilitate communication between departments and minimise risks of error or abuse in data processing. Given the organisation's current stage of development it is expected that these improvements will yield significant increases in performance in the short to medium term. (Osei, 2006)

Computerisation plays a key part in this upgrading process, offering a number of obvious but significant advantages over the former manual paper file system. Besides contributing to speed and accuracy, it also allows for a better deployment of staff - shifting personnel from routine administrative tasks to more specialised jobs such as auditing. It also allows a more strategic approach to the identification of potential areas of fraud or evasion through selective risk analysis.

Having in place state-of-the-art systems also gives the staff a sense of pride and confidence, and helps to project the image of an organisation that is modern and efficient. For customers, increased automation combined with initiatives to simplify procedures and forms and to

create a one-stop shop (a single tax payment point), is expected to result in greater levels of compliance as well as the recognition that it is less easy to 'cheat' the system.

- For the then *Customs Excise and Preventive Service*, the introduction of ASYCUDA++ which links up seven of the ten steps associated with the processing of customs clearances, is described as 'a miracle'. The system will enable them to reduce the time it takes to process documentation from an average of two days to just several minutes. It will also reduce the department's dependence on information provided by intermediaries (e.g. shipping agents), enable greater selectivity of inspections based on more sophisticated risk analyses, and reduce losses due to human error.
- For the *Revenue Protection Department*, automation can significantly enhance the speed with which intelligence work is undertaken. It is expected that information sharing between departments will be improved and this will facilitate inter-departmental cooperation.
- For the *Large Taxpayers and Internal Revenue Departments*, the process of tax administration will be fully integrated, linking up the various stages of the process: registrations, returns, assessment, collection, audit, enforcement and risk analysis.

## **2.13 HOW TAX REFORMS IMPACT REVENUE**

### **Ghana Tax Reforms**

Ghana's tax reforms constitute the major policy instrument needed to accelerate growth and poverty reduction (Osei, 2006). Ghana's major changes in tax administration fiscal policies played a key role in improving the country's revenue mobilization and overall fiscal health. The prime factors cited for the increase in revenue are the expansion of tax base, the structure of taxation; and reorganization of the tax administrator. If tax administration is to become effective in developing countries, enormous combinations of qualitative human and material re-sources need to replace the professional roles of revenue institutions.

Designing a suitable medium-term fiscal framework that fosters a sustainable delivery of better public services and infrastructure while maintaining a credible commitment to fiscal prudence confronts many challenges. The main task of fiscal administration in these ministries tends to be virtually coordinated with expenditure allocation and control by the budget division.

However, as revenues, policy is compromised and the actual supervision of revenue performance becomes relaxed, leading to ineffective administration and loss of revenue.

Graham (2003), found that foreign loans are still the most attractive way to finance budget deficits, while a significant devaluation risks and a high levels of domestic interest rates are involved. Generally, the deficit leads to a change in government net assets and can be financed by either drawing down assets or incurring new liabilities of both domestic and foreign nature. The choice between foreign and domestic borrowing depends on the cost (interest rates), maturity structure and risks.

## **2.14 Restructuring Ghana's Revenue Administration**

The administrative reforms in Ghana centred on removing the revenue institutions from the Civil Service and granting them operational autonomy, with view to improve efficiency through enhanced work and employment conditions. Two practical steps were taken in Ghana in 1985 to strengthen revenue administration in the country. These were the establishment of the National Revenue Secretariat (NRS) and the creation of the two major revenue organizations, the Customs, Excise and Preventive Service (CEPS) and the Internal Revenue Service (IRS), as autonomous institutions outside the civil service (Osafo, 2001). The three factors primarily cited for the increases in revenue are: the expansion in the bases of taxation as a result of liberalizing the economy; the changes made to the structure of taxation; and the extensive reorganization of the institutions that administer taxes in the country.

## **2.15 Fiscal Policy through Taxation**

Setting up an efficient and fair tax system in developing countries is far from simple, unless their economy is integrated in the international economy. Taxation is the only rational means of raising the revenue to government spending on goods and services. The absolute tax system in those countries should raise essential revenue without excessive borrowing and discouraging economy activity. Most workers in Sub-Saharan Africa are employed in agriculture or in small enterprises, as a result raising revenue, income taxes and consumer taxes, play diminished role in those economics (Moore 2004).

Tax policies in developing countries are puzzling on many dimensions: revenue/GDP is surprisingly small compared with that in developed economies. Taxes on labour income play a minor role and poorer countries collect on average only two-thirds or less of the amount of tax revenue that richer countries do, as a fraction of GDP (Gutierrez, 2006). Reforming an efficient tax administration is not an easy process for an emerging economy, when the tax officials' wages are low, without an efficient computerized operation system and well-trained staff. Much of Africa's growth potential remains locked away, because we have been unable to develop rapidly enough and extensively enough the needed infrastructure links, particularly in transport and communications.

At the result, most Sub-Saharan Africa governments forced to take a system that allows them to exploit whatever option available, rather than establishing a rational, modern and efficient tax system (Lee, 2005). The other side of strengthening this argument is that small taxpayers cannot be expected to pay tax based on a complex tax structure and that a simplified tax regime needs to be set up for them. We argue that low expenditures in developing countries are the result of the pattern of taxation. If the pattern of taxation were changed, the expenditures would also change. The pattern of taxes in different countries varies, reflecting such factors as economic structure, history and the tax structures found in neighbouring countries. The key areas of public expenditure measures are health and education. Unless tax revenues grow sufficiently to finance desired services over the long term, governments must reduce expenditures, raise tax rates, or alter other structural characteristics of the system.

As a working rule, revenue growth should be roughly equal to the overall economic growth rate. With a constrained budget, it is difficult to meet the public demand and is very common

in poorer countries. There is a need for fiscal policy not only by reducing expenditure, but also by tax reform. We should also point out that the tax system in many African countries is neither well structured nor as effective as a source of revenue and has made it virtually impossible to recover from the downward economy. Simply by cutting the expenditure only without developing an effective tax system will undermines the growth and the construction of effective state institutions. As for the promotion of confidence in a strong and stable domestic economy, a stable currency is essential for price stability through a different control of mechanisms (Backhaus, 2005).

### **2.16 Fiscal Policy Through Decentralization**

The main goal of fiscal decentralization is to move governance closer to the people and this does require strengthening local government finances. The idea is to give local governments some taxing power and expenditure responsibility and allows them to decide on the level and structure of their expenditure budgets. In this way, people at the lowest level of government will be able to choose the kind of government they want and will actively participate in governance. Fiscal decentralization requires local governments with some autonomy to make independent fiscal decisions. Fiscal decentralization is also defined as a transfer of responsibility, resources and accountability to a local community and could considerably enhance levels of participation by citizens in governance. When a local government is able to make innovative decisions its positive impact on equity is one of the notable effects of decentralization per capita expenditures.

Same patterns of decentralization are observed in the second set of studies that included -- the Philippines, Ghana, Uganda and Zambia. The Philippines had the highest degree of decision space partly because of the country's institutional capacities as well as the form of decentralization (Booze et al 2007).

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### **2.17 The Ghana Single Window (GCNet) for Ghana Revenue Authority**

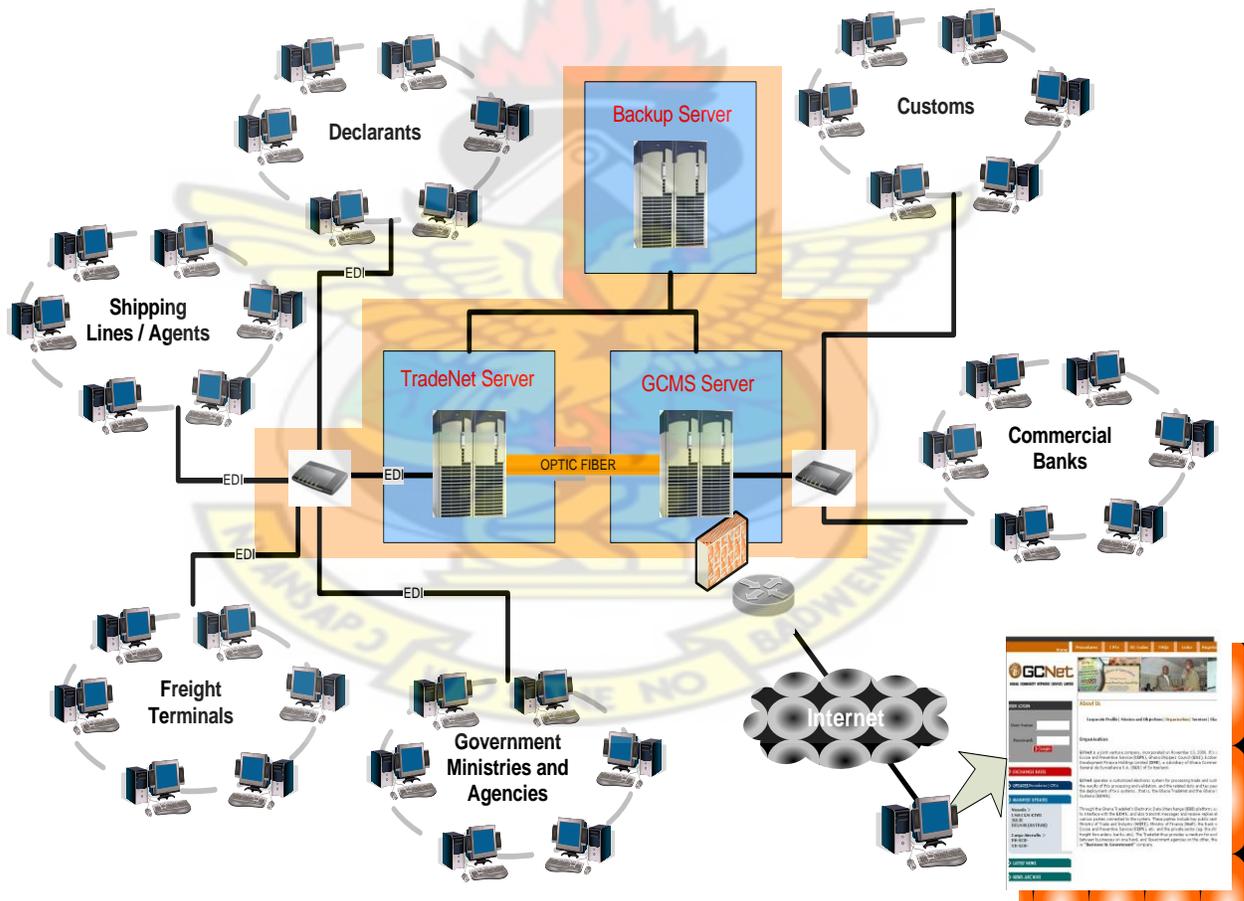
The Ghana Single Window (GCNet) for Ghana Revenue Authority is an automation system which allows for the lodgement and exchange of data and standardized information which fulfils all regulatory requirements with a single administrative document for all Customs Regimes ([www.gcnetgh.com](http://www.gcnetgh.com)).

It was established following concerns raised by Stakeholders on slow, cumbersome and expensive clearance procedures and government's desire to facilitate trade and make Ghana the trade and investment hub in the West African sub-region([www.gcnetgh.com](http://www.gcnetgh.com)).

Its core objectives are to facilitate legitimate trade and clearance of goods through customs in a secured manner and enhance mobilization of trade-related revenue for Government, reduce malpractices associated with import / export trade reduce transaction costs and finally reduce delays in trade operators encounter in clearing consignments through the Ports([www.gcnetgh.com](http://www.gcnetgh.com)).

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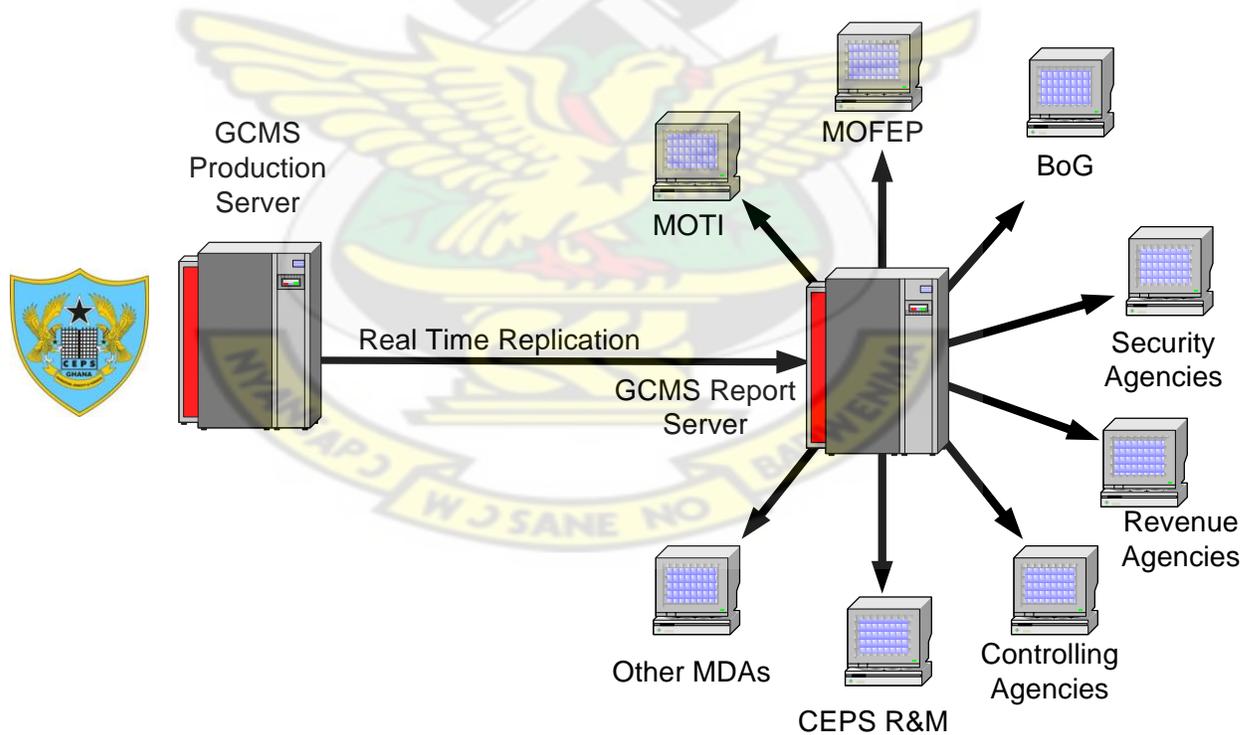
Diagram (i): How the system works



Source: [www.gcnet.gh.com](http://www.gcnet.gh.com)

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**Diagram (ii): How is all this data shared?**



Source: [www.gcnet.gh.com](http://www.gcnet.gh.com)

## **2.18 Specific Reforms in Revenue Collection**

Under the Customs Reforms and Modernization Project (CRM), the Ghana Revenue Authority (GRA) has undertaken, among other things, installation of an electronic data interface system, establishment of a user-friendly Customs Division, introduction of pilot one-stop customs activity at border posts, streamlining of port operations through introduction of scanners, and development of a one-stop documentation process for handling import-export documentation. Such reforms, which are in various stages of implementation, are the building blocks needed to support Ghana's move to improve its ports as a free ports, a move seen as a "milestone in revolutionizing trade in the region," and one that will greatly strengthen Ghana's position of regional economic leadership.

Trade Facilitation Project Ghana launched a trade facilitation project in 2004. Under the overall coordination of the Ministry of Trade and Industry, the project recognized the critical importance of trade facilitation to importers, exporters, and the Ghanaian economy as a tool for solving trade-related situations and supporting Ghana's bid to continue as a leader in the West Africa regional integration process ([www.gcnetgh.com](http://www.gcnetgh.com)).

## **2.19 Challenges of Reform In Revenue Collection**

Delays, legislation, staffing/management, institutional conflicts, and capacity of Ghana Revenue Authority have all proved to be challenges during the introduction of the automated system in revenue mobilization. Research conducted at the Ghana Revenue Authority show that most projects take longer to implement than was originally planned ([www.gcnetgh.com](http://www.gcnetgh.com)).

Implementation of revenue collection strategies and introduction of new electronic and customer service systems have forced the Ghana Revenue Authority to undertake extensive

change-management activities. These have not been without incident. In its efforts to move its reforms forward quickly, the Ghana Revenue Authority (GRA) introduced its first programs and personnel shifts before carrying out change management sessions ([www.gcnetgh.com](http://www.gcnetgh.com)). There was a period of internal uncertainty as retrenchments were carried out and new employees recruited.

Now, as part of its customs modernization reform activities, Ghana Revenue Authority (GRA) employees are employed under the terms of service contracts that spell out expectations, in keeping with the government of Ghana's larger results-based management strategy. Inadequate harmonization among key players also continues to contribute to delays in implementation.

## **2.20 Challenges of Automation at the Ghana Revenue Authority.**

In spite of its successful implementation at the major ports and stations, a number of challenges are being encountered in the automation process.

### **1. Resource constraints**

Resource constraints have made the GRA dependent upon its partners, GCNet, for implementing the Automation program. GRA Administration finds it difficult to maintain and service computer logistics (hardware, software and accessories) and to provide constant power, electric, supply.

## **2. Resistance at individual and institutional levels**

Overcoming the human factor, in terms of the availability of skilled personnel to operate the systems, and the seeming reluctance to change the way they have done things over the ages, posed the foremost challenge that constrained the automation implementation.

Whilst the computer skills of the target users of the system were not available or at best limited, a number of them also showed an inhibition to learn and change to the new skills required of them. To a large extent this was due to certain vested personal interests. For instance, some individuals in certain key positions in the previous manual processes sought to resist the changes introduced. This stemmed from the fact that the transparent electronic processes eliminated the possibility for them to have personal contact with trade operators, with its attendant loss of status and rent seeking possibilities.

This resistance to change at the individual level was also manifested at the institutional level with its attitudinal constraints. The rationalization of operations demanded a clear delineation of operational functions and boundaries. In a few cases, this gave rise to institutional turf wars, which unduly led to a resistance to the revised new processes and operational workflows, and thereby stalled automation progress.

## **3. Ensuring compliance**

The general level of compliance within the economic environment was also low, and ensuring that a credible level of compliance was maintained among trade operators, especially as attempts were made to remove undue controls and facilitate trade, posed another challenge. There was some fear that letting go of the previous manual controls would lead to undue abuses.

This was due to the fact that declarations made by a number of importers, for instance, in terms of the description, quantities or values of their consignments tendered to be questionable. Under the circumstance, it was challenging for some Compliance Officers to accept innovations proposed such as risk selectivity and consignment targeting, designation of certain Declarants as Gold Card bearers who need not be subject to intrusive examinations, and post clearance reviews in order to facilitate trade.

#### **4. Upgrading processes in other agencies**

Also for the benefits of a seamless clearance process to be fully obtained, there was the need to automate the manual, paper-based operations of other agencies within the clearance process. The development and introduction of such complementary electronic systems for other trade-related agencies posed yet another challenge.

With regard to port operations, for instance, the electronic issuance of bills of lading by the shipping lines to consignees or the amendments of bills of lading (e.g. where shipments are made through consolidators) and the related payments would significantly have contributed to expeditious clearances.

#### **5. Assuring stakeholder confidence**

A further challenge was the need to ensure that the system's integrity was not breached, and to assure and enhance stakeholders' confidence in it by consistently demonstrating through its performance that it was credible and reliable.

This was especially critical at a time when some existing manual revenue and security controls were being removed to facilitate trade.

## 6. Ensuring security

At a time when even reputed financial institutions were being hit by a spate of frauds, a major challenge was to ensure that the system, through which almost sixty-percent of the country's tax revenue was collected, was not breached either by intrusion, spam, or various viral infections (e.g. "Netsky", "My Doom", "Nimda", "Blast", "Novarg") that hit a number of systems around the world and brought operations to a halt.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter outlines the methodology employed by the researcher for the study which included the administration of questionnaires to officials with specific duties at the Customs division of the Ghana Revenue Authority, Accra. In undertaking this research both primary and secondary data sources of information were used. With secondary data, information was gathered from textbooks, journals, magazines and other print media as well as the electronic media and the internet. Primary data was collected by the use of structured and unstructured interview and questionnaire of those who have adequate knowledge of the topic.

This chapter again observed the research design, sampling techniques, data collection tools as well as the method of data analysis.

#### **3.1 Research Design**

The main aim of this research study is to examine the automation system procedures of the Ghana Revenue Authority on the effectiveness of revenue mobilization. An extensive research of this nature would require an approach bearing in mind the population hence a descriptive survey process of collecting data was used in testing the research questions concerning the status of the subject under study. For the purpose of the study, this approach was considered suitable as a method of eliciting information needed in drawing useful conclusions from the research study. Other designs such as interviews were also employed considering the subject under study.

### **3.2 Population and Sample Size**

The total population involved in this study was the permanent employees within the Ghana Revenue Authority (G.R.A). However the sample size for the Research was limited to forty (40) officials. The essential reason was that respondents would be in good position to mention the role of the automation system on the effectiveness of revenue mobilization. In addition, views and opinions from stakeholders were also considered to effectively contribute greatly in the research.

### **3.3 Sampling Techniques**

A random sampling technique was employed to select respondents for the study. This technique was used because it ensured that all respondents in the population were given the same opportunity of being selected. The goal of the sampling method used was to obtain a sample that is a representative of the population. The techniques used by the researcher to select the sample size required prior knowledge of the target population which allowed a determination of the size of the sample needed to achieve a reasonable estimate with accepted precision and accuracy of the population.

### **3.4 Data Collection Procedure**

The researcher went to the Customs Division of Ghana Revenue Authority head office at Accra to conduct the interview with the sampled respondents. The personal interview was a face to face interaction. This approach was firmly selected so that the researcher could interact on a personal level with all staff. The questionnaire was personally administered by

the researcher and contained series of structured questions which were related to the research work and directed to respondents with the aim of gaining first-hand information. Respondents were allowed sufficient time of five working days to complete the questionnaire. The questionnaire consisted of both open ended and close-ended questions. Thus, in some cases, respondents were to choose the option that best reflected their opinions. The questionnaire afforded respondents much flexibility and privacy in answering the questions without any undue influence. The questionnaire was in simple and unambiguous language and as such, did not pose any problem as regards interpretation.

### **3.5.0 Secondary Sources of Data**

The sources of secondary data for this research consist of mainly published text books, CEPS Journals, VAT and IRS Journals as well as data from the official website of Ghana Revenue Authority (G.R.A) and other revenue mobilization publications.

Data was also collected from academic journals and papers that feature articles on automation system procedures in revenue mobilization and a number of research works that have been published on the subject in the electronic media. The advantages associated with this method among other sources of data collection are outlined as follows:

- Secondary data is always available and is usually quite inexpensive
- The collection of secondary data and its analyses saves time and effort
- Secondary data is very ordinary. It is easily available and every researcher can get it without much effort

### **3.5.1 Primary Sources of Data**

The source of primary data was influenced by the size of the population, and subject under review, the researcher found it necessary to use a structured questionnaire and interview skills. This ensured that respondents shared information about intimate and relevant matters concerning the subject under review.

For the purpose of this study, primary data comprised of responses obtained through questionnaires administered to target respondents under study. The personal interview method which was also employed was more flexible for both the researcher and respondent.

Several advantages are associated with this method and they include:

- Access to direct data or response from selected respondents
- Unbiased information
- Original data

### **3.6 Research Constraints and Problems**

Several challenges were encountered by the researcher in the administration of the questionnaires which have been outlined as follows:

- Situations where respondents were not met at all or even those present had misplaced their questionnaires and new ones had to be given.
- Some respondents having been assured of the anonymity of their personalities declined to offer any assistance to the researcher.

### **3.7 Data Organization and Analysis**

In trying to understand the automation system procedure of the Ghana Revenue Authority, responses were grouped and analysed using SPSS and other computer-aided programs such as frequency tables, percentages and graphs. These were also used for pictorial representation of the data collected. In order to ensure clarity of expression and accuracy, information gathered was foremost checked. The raw data was then organized considering the issues for which the questionnaire was designed to address. Descriptive explanations were also used to make the findings of the analysis more meaningful.

### **3.8 Limitations**

The research work was limited in scope by several factors such as:

- Respondents were demanding anonymity before responding to the questionnaire. In such cases the researcher had to make it clear that the study was for academic purposes.
- Some of the top officials could not be reached for any comment.
- The research was also constrained by finance.

### **3.9 Profile of the Ghana Revenue Authority**

In December 2009, the three tax revenue agencies, the Customs, Excise and Preventive Service (CEPS), the Internal Revenue Service (IRS), the Value Added Tax Service (VATS) and the Revenue Agencies Governing Board (RAGB) Secretariat were merged in accordance with Ghana Revenue Authority Act 2009, Act 791. The Ghana Revenue Authority (GRA)

thus replaces the revenue agencies in the administration of taxes and customs duties in the country.

The Ghana Revenue Authority (GRA) has been established to:

- Integrate the management of Domestic Tax and Customs
- Modernise Domestic Tax and Customs operations through the review of processes and procedures
- Integrate Internal Revenue Service (IRS) and the Value Added Tax Service (VATS) into domestic tax operations on functional lines.

The establishment of the GRA is a culmination of years of plans to streamline the administration of tax collection in Ghana which began in 1986 when CEPS and IRS were taken out of the Civil Service and made semi- autonomous and self accounting public sector institutions with separate boards. The same year, the National Revenue Secretariat (NRS) was set up to formulate revenue policies, manage tax reforms and supervise the activities of CEPS and IRS.

In 1998, the Value Added Tax Service was established to administer VAT and other consumption taxes. The Revenue Agencies Governing Board (RAGB) also began operations in 2001 to supervise and monitor the operations of the Revenue Agencies. In 2002, the Taxpayer Identification Number was introduced to enhance information interchange and risk profiling. Then in 2004, the Large Taxpayer Unit (LTU) was set up to operate on functional

lines as a pilot programme for the future integration of tax administration in Ghana as well as to serve the needs of large taxpayers as a one stop shop operation. ([www.gra.gov.gh/](http://www.gra.gov.gh/)).

It is envisaged that the integration of the Revenue Agencies will bring the following benefits to taxpayers and tax administration.

- Reduced administrative and tax compliance cost
- Better service delivery
- Improved departmental information flow.
- Holistic approach to domestic tax and customs administration
- Enhanced revenue mobilisation

The GRA has three main divisions:

1. Customs Division
2. Domestic Tax Revenue Division
3. Support Services Division

The three-winged structure designed to ensure maximum efficiency in the Authority's core business of revenue mobilisation merges the management support services of finance, administration, research of the erstwhile agencies under one Support Services Division, leaving the Customs Division and the Domestic Tax Revenue Division unencumbered by peripheral functions to focus entirely on revenue collection with Support Services Division supporting them with the required management services.

## **VISION**

To be a world class revenue administration recognised for professionalism, integrity and excellence.

## **MISSION**

To mobilise revenue for national development in a transparent, fair, effective and efficient manner.

This will be achieved this through:

- Professional and friendly client services
- Promotion of voluntary compliance
- Application of modern technology
- Effective border protection
- A well trained, disciplined and highly motivated staff

## **CORE VALUES**

- Integrity and fairness in our service delivery
- Teamwork, innovation and professionalism are our hallmarks

([www.gra.gov.gh/](http://www.gra.gov.gh/))

## **CHAPTER FOUR**

### **DATA ANALYSIS AND DISCUSSION OF RESULTS**

#### **4.0 Introduction**

This chapter in detail examines and analyses all data collected on the sampled respondents in examining the automation system procedures of Ghana Revenue Authority, a case study of the Customs Division. The findings and the following analysis carried out on the responses outlines the key areas of challenges in the automation system procedures for some selected employees within specific duties at the Ghana Revenue Authority. Responses from multiple questions in some cases were more than the sample size as respondents had the option to choose more than one answer.

#### **4.1 Analysis of Findings**

Regarding descriptive explanations in ensuring clearer illustration of data collected, tables and charts have been employed to make sure that data collected from the field will aid in making the research findings more meaningful. The following analysis shows the responses received from forty (40) officials with specific duties and responsibilities at the Customs Division of the Ghana Revenue Authority

#### 4.1.1 Findings from Officials of Ghana Revenue Authority

A total number of forty (40) officials from the Customs Division of Ghana Revenue Authority were selected for the research study. The target respondents were selected to provide answers to the structured questionnaire and were also expected to provide reasons for their choice of an answer.

**Table 4.1.2: Sex of GRA Officials**

Sex	Frequency	Percentage (%)
Male	28	70
Female	12	30
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

Table 4.1.2 shows that 70% of the officials sampled at the Customs Division of the Ghana Revenue Authority were males whilst 30% of them were females. This is an indication of a high male representation of the officials at Division.

**Table 4.1.3: Respondent's Years of Service**

Years of Service	Frequency	Percentage (%)
Ten years or more	15	37.5
Between 5 Years and 10 Years	5	12.5
Less Than 5 Years	20	50
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

With table 4.1.3, respondents were asked to indicate the number of years spent at the Customs Division. 50% of the respondents indicated less than 5 years, 37.5% mentioned ten years and more, while 12.5% indicated between 5 years and 10 years. This observation shows that half of the staff population sampled have worked with the Customs Division for less than 5 years.

**Table 4.1.4: Do you agree with the introduction of Automation System?**

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	40	100
No	0	0
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

From table 4.1.4, officials were asked to indicate whether they were in agreement with the introduction of automation system, total respondents (40 respondents) representing 100% mentioned that they agreed with the introduction. They indicated that the system has reduced delays in all processes and operations regarding revenue mobilization.

**Table 4.1.5: Were discussions made with the various staff and stakeholders to determine how the automation system should actually function and operate?**

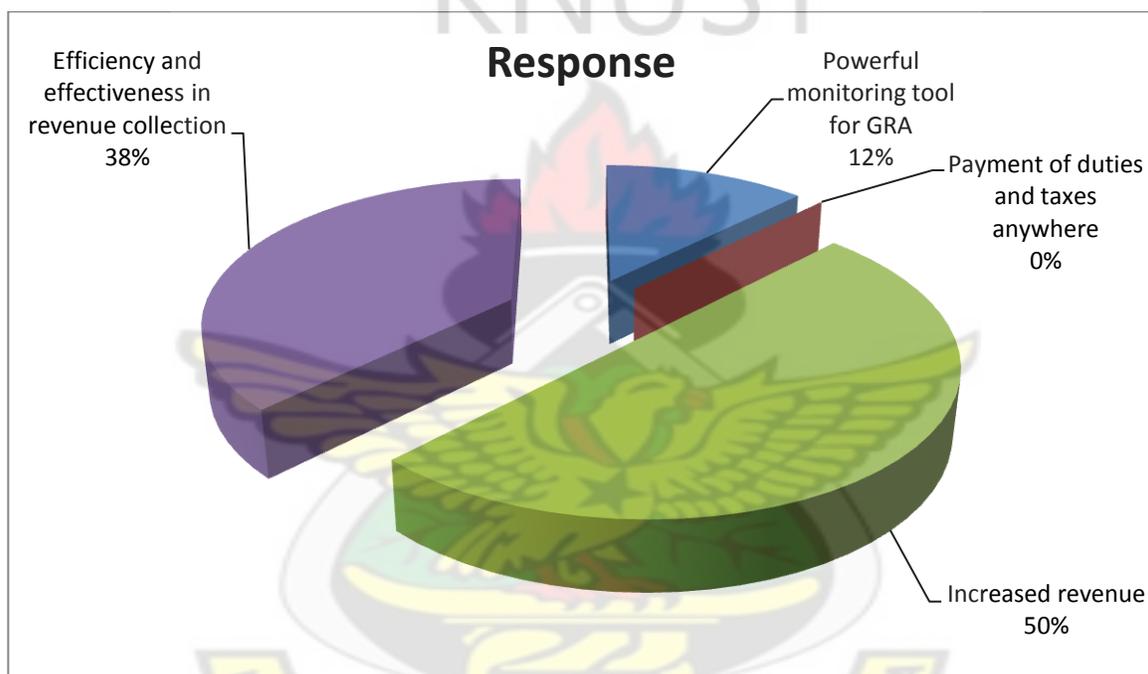
<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	25	62.5
No	15	37.5
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

With table 4.1.5, officials were asked to indicate whether discussions were made with the various staff and stakeholders to determine how the automation system should actually function and operate. 25 responses out of total responses representing 62.5% all agreed

whilst the remaining 37.5% said they disagreed. However, maximum respondents (62.5%) were of the opinion that much education was conducted about the operations of the automation system. It is observed from the analysis that some sections of the staff have not had discussions to determine how the automation system should actually function and operate.

**Figure 4.1.1: What difference has the introduction of the automation system brought?**



Source: Field Research, March 2011

Regarding figure 4.1.1, respondents were asked to indicate the difference the introduction of the automation system has brought to GRA. 50% of the respondents indicated the introduction has brought increased revenue to GRA, 38% said the introduction has brought efficiency and effectiveness in revenue collection, whilst the remaining 12% indicated that it is a powerful monitoring tool for GRA. There was no response for payment of duties and

taxes everywhere. This is an indication that the automation system has brought differences in the operations at Ghana Revenue Authority.

**Table 4.1.6: Is the automated system readily able to run on commonly available batteries?**

Response	Frequency	Percentage (%)
Yes	15	37.5
No	25	62.5
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

Table 4.1.6 indicates that, 15 respondents representing 37.5% interviewed disclosed that the automated system was readily able to run on commonly available batteries whilst the remaining 25 respondents representing 62.5% said the automated system could not run on available batteries. Respondents who formed the majority were quick to add that the automated system had backup energy system hence power outage could not pose major problems.

**Table 4.1.7: Do you expect significant improvement with the automation system in the future?**

Response	Frequency	Percentage (%)
Yes	40	100
No	0	0
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

Total respondents from officials at Customs, representing 100% all shared the view that the Automation System at GRA needed a significant improvement in its operations. This

according to them was as a result of the efficient and effective role it plays in revenue collection. This is evident on table 4.1.7.

**Table 4.1.8: Do you believe that the introduction of automated system has increased revenue mobilization?**

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	40	100
No	0	0
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

Analysis from the question above shows that total respondents from officials at Customs representing 100% all indicated that introduction of automated system has increased revenue mobilization in their operations at Ghana Revenue Authority. This observation was emphasized by all respondents.

**Table 4.2.0: Are you satisfied with performance of the automated system in revenue collection?**

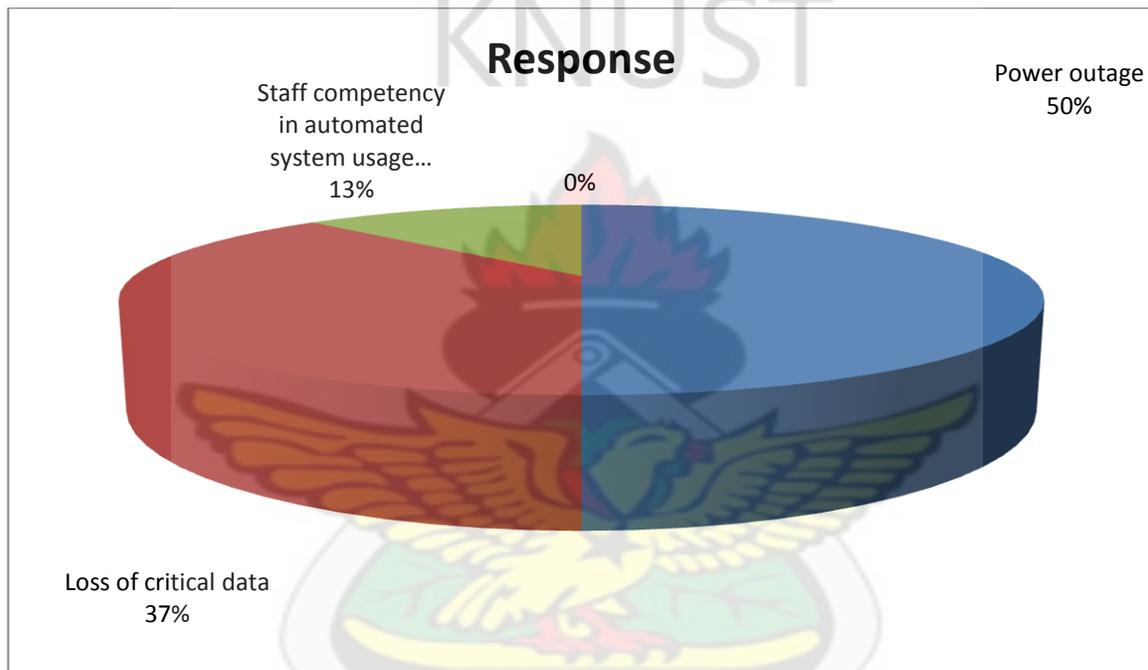
<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	30	75
No	10	25
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

Table 4.2.0 shows responses on whether officials were satisfied with performance of the automated system in revenue collection at GRA. A maximum of 75% responses indicated that they were satisfied with its performance whilst 25% responses mentioned that they were

dissatisfied with its performance. This observation shows that a few respondents are not particularly satisfied with the performance of the automated system in revenue collection.

**Figure 4.2.1:** Which area do you anticipate future improvements to be implemented with regards to the automated system operations?



Source: Field Research, March 2011

It is obvious from figure 4.2.1 that, 50% respondents said that Power outage is the area of the automated system operations they anticipate future improvements, 37% respondents mentioned loss of critical data whilst 13% indicated staff competency in automated system usage as the area they anticipate future improvements to be implemented. The analysis indicates that there are few challenges to be anticipated in future at Ghana Revenue Authority with regards to automation system operations.

**Table 4.2.1: Which gain is Government likely to benefit from automated system usage in revenue collection?**

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Increase cash receipts	20	50
Increasing collection efficiency	12	30
Expanding its revenue base	0	0
Control of the Collection Process	5	12.5
Efficient Time Utilization	3	7.5
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

Table 4.2.1 Shows responses given by employees of the GRA as to which gains is government likely to benefit from automated system usage in revenue collection. 50% of respondents indicated that the government would benefit from increase cash receipts. 30% were of the view that it would lead to increase collection efficiency. 12.5% of respondents stated that government would be able to control the collection process. 7.5% indicated that government would benefit from efficient time utilization. There was no response for expanding its revenue base. This is an indication that the automation has led to increase in cash receipts.

**Table 4.2.2: Have you proposed any changes to automated system procedures in the past regarding effective revenue collection that have been rejected?**

<b>Proposed Change</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Effective Training for all Staff	25	62.5
Increasing collection efficiency	10	25
Expanding its revenue base	5	12.5
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

From the analysis on table 4.2.2, respondents at the Customs Division of Ghana Revenue Authority (GRA) were asked to indicate whether they had proposed any changes to

automated system procedures in the past regarding effective revenue collection that have been rejected. Majority of respondents representing 62.5% said they proposed an effective training for all staff regarding automation system procedure, 25% said increasing collection efficiency, whilst 12.5% said expanding revenue collection base.

**Table 4.2.3: Which do you think are the key objectives of automation system which have been realized?**

<b>Objectives of Automation System</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Improved revenue collection processes and quick tax clearances	20	50
improved revenue receipts for government	10	25
The process of revenue collection is tightly controlled to avoid fraud, evasion and under-collection	10	25
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Research, March 2011

It can be observed from table 4.2.3 that among all the objectives of automation system, 50% of respondents said Improved revenue collection processes and quick tax clearances, 25% each said improved revenue receipts for government and the process of revenue collection is tightly controlled to avoid fraud, evasion and under-collection were the key objectives. This shows that leakages that occurred because of untimely collection, fraud and under-collection have been reduced by streamlining and automating the revenue collection process.

## CHAPTER FIVE

### SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

#### 5.1 SUMMARY

The purpose of this research was to examine the automation system procedure of the Ghana Revenue Authority on the effectiveness of revenue collection.

The research study commenced with the profile of Ghana Revenue Authority (GRA) and beyond answering the specific questions identified for the evaluation, the findings of this research will have many ways of improvement for revenue collection processes as well as implementation of areas of operations on revenue collection.

Evaluating the responses shows that majority of the respondents' years of service were less than 5 years. This observation clearly outlined experiences in the pre-automation system usage era and post-automation system usage era emphasizing on the effectiveness in the post-automation system usage era as against the pre-automation system era. Respondents commended the introduction of automation system in revenue collection and indicated that pre-automation system usage era was ill managed resulting in inefficiency and slow procedural efforts in revenue collection.

Data Analysis obtained from the research indicate that most of the automation system objectives have been realized that is:

- improved revenue collection processes and quick tax clearances
- improved revenue receipts for government

- The process of revenue collection is tightly controlled to avoid fraud, evasion and under-collection
- Leakages that occurred because of untimely collection, fraud and under-collection has been reduced by streamlining and automating the revenue collection process
- Daily reporting of cash receipts and due payments to be collected is automatically generated by the system
- For government to match in performance with the growth and expectations of its constituents

The following were key issues outlined by majority of respondents:

For government to match in performance with the growth and expectations of its citizenry, it must dramatically increase its fiscal depth without incurring costly recurring overheads. Automated systems have been proven to be capable of introducing massive efficiencies to business processes that can result in increased revenue for government.

Applying technological solutions towards the strategic goals for government will be a key step towards transforming government into an entity that can keep abreast of the needs, requirements and expectations of today's modern world.

Significant improvement in revenue collection at all GRA Divisions connected to system, through plugging of most sources of revenue leakage, and transparency of operations should be enhanced.

It is clear that there are many organizations that should be included in the collection system but for one reason or the other, have been able to avoid or evade paying taxes due to the

government. These organizations represent a significant potential source from which revenue can be generated.

The growth in tax revenue must approximate the growth in expenditure for macroeconomic stability to hold (World Bank, 1990). On its part, the tax structure must be stable and flexible. Stability of a tax structure allows revenue to be predicted with certainty. Revenue instability can complicate fiscal management especially if expenditures are inflexible downwards, and the options open to policy makers are limited.

To complement the positive gains by the government through the introduction of the automation system, the government must also use a series of sanctions and penalties where necessary and possible. Sanctions are essentially the withholding of a service for noncompliance.

The results last but not the least suggest that the relationship between automation and effectiveness of revenue collection was significant, positive and predictive, implying that with automation of revenue collection, the effectiveness of its collection increased.

Finally, a large number of the respondents were of the view that GRA has improved revenue collection for government.

## **5.2 CONCLUSIONS**

Several major findings were presented in this paper. The results and evidence from the GRA suggested that whereas automation leads to efficiency of tax administration, this was rejected as automation had not led to efficiency through cost reduction, reduction of clearance time and effectiveness. The implications were that GRA achieved the computerization of tax administration at an increasing rate of costs due to incomplete automation of all the systems.

Secondly, the impact of automation on the clearance time of tax payment meant that the computerization of tax administration at GRA failed to fully solve the delays in the clearance time, hence, not realizing the purpose of automation.

Thirdly automation impacted minimally on the effectiveness of revenue collection as the increase ineffectiveness was prior to automation. From a policy standpoint, the results suggested that automation leads to cost reduction. However, the complexity of automation resulting from integration of various heterogeneous disciplines means that its application to any process such as tax administration goes through phases and stages until the whole process is fully accomplished. This explains why automated tax administration is developed and adopted in phases, and dealing with the contributing factors like break downs and full automation can achieve noticeable efficiency.

### **5.3 RECOMMENDATIONS**

Ghana Revenue Authority (GRA) can mobilize additional revenue by increasing collection efficiency as well as by expanding its revenue base. With increased reach and fiscal depth, the many challenges facing GRA can be addressed in some measure simply by having access to more financial resources. As such, the primary aim of computerized (automation system) revenue collection must be to dramatically increase cash receipts in order to effectively sustain the utility and generate an acceptable return on investment related to the system.

### **Increased Collection Efficiency**

Leakages that occur because of untimely collection, fraud and under-collection could be reduced by streamlining and automating the revenue collection process. Penalties may be automatically applied to late payments. Daily reporting of cash receipts and due payments to be collected should be automatically generated by the system.

### **Control of the Collection Process<sup>2</sup>**

The process of revenue collection can be tightly controlled to avoid fraud, evasion and under-collection. Daily reconciliations will have to be made for each collection point. The system should be able to automatically remind the collection officer when payments are due and monitor the level of bad and doubtful payments presented by the taxpayers, alerting supervisors to possible problems. Fraud control can be enforced by ensuring the collection device ceases to operate if reconciliation is not performed for a specified time. Further collection will be stopped and supervisors will be immediately alerted to recover the collection device and monies owed.

### **Efficient Time Utilization**

The revenue collection process must mitigate any delays in payments by factoring in the cost of the delay in payment. Actual transactions should immediately alert the collection officer of amounts due, automatically recording actual spot collection amounts. Late collections then become the problem of the payee instead of the revenue collecting organization.

### **Training Required**

Much training is needed to utilize and interact with the revenue collection process to avoid time consuming, costly and difficult bottlenecks in the collection process. Training is

necessary; it should be done by means of the collection device itself which should have a comprehensive reference as well as a tutorial for operations.

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(Appendix)

**QUESTIONNAIRE  
ON THE  
AUTOMATION SYSTEM PROCEDURE OF THE GHANA REVENUE  
AUTHORITY ON REVENUE MOBILIZATION**

**(A Case Study of the Customs Division)**

This questionnaire is designed to evaluate the automation system procedure of the Ghana Revenue Authority on the effectiveness of revenue mobilization as an academic exercise.

Please tick the appropriate box or write in the space provided.

**Please, note that any information provided would be treated confidential**

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**A. Respondent's Occupational Information**

1. Sex : Male (  ) Female (  )
2. How long have you been at post?.....

**B. Automation System Introduction**

3. Do you agree with the introduction of Automation System?  
Yes (  ) No (  )
4. Were discussions made with the various staff and stakeholders to determine how the automation system should actually function and operate?  
Yes (  ) No (  )
5. What difference has the introduction of the automation system brought?
  - (a) Powerful monitoring tool for GRA (  )
  - (b) Payment of duties and taxes anywhere (  )
  - (c) Increased revenue (  )
  - (d) Efficiency and effectiveness in revenue collection (  )

6. Is the automated system readily able to run on commonly available batteries?  
Yes ( ) No ( )

7. Do you expect significant improvement with the automation system in the future?  
Yes ( ) No ( )

8. Do you agree that a decentralized, automated revenue collection system allows for increased and timely access to information that would otherwise take too much time and effort to generate from the available hard copy record?  
Agree ( ) Disagree ( )

Why?

.....  
.....  
.....

Do you believe that the introduction of automated system has increased revenue mobilization at GRA?

Yes ( ) No ( )

9. Do you believe that there are still outstanding issues to be addressed concerning automated system operations at GRA?

Yes ( ) No ( )

If Yes, explain the issues

.....  
.....

### C. Performance of Automated System

11. Are you satisfied with performance of the automated system in revenue collection?

Yes ( ) No ( )

12. Which area do you anticipate future improvements to be implemented with regards to the automated system operations?

Power outage ( )

Loss of critical data ( )

Staff competency in automated system usage ( )

13. In your view, which gain is Government likely to benefit from automated system usage in revenue collection?

Increase cash receipts ( )

Increasing collection efficiency ( )

Expanding its revenue base ( )

Control of the Collection Process ( )

Efficient Time Utilization ( )

14. Have you proposed any changes to automated system procedures in the past regarding effective revenue collection that have been rejected? If so, please provide details.

Yes ( )

No ( )

If Yes, mention some of the changes .

.....  
.....  
.....

15. What do you consider to be the main factors likely to affect the smooth operation of the automated system of the Ghana Revenue Authority?

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.....  
.....  
.....

## ABBREVIATIONS

<b>UNCTAD</b>	<b>United Nations Conference on Trade and Development</b>
<b>GRA</b>	<b>Ghana Revenue Authority</b>
<b>CEPS</b>	<b>Customs, Excise and Preventive Service</b>
<b>EDI</b>	<b>Electronic Data Interchange</b>
<b>ASYCUDA</b>	<b>Automated System for Customs Data</b>
<b>ETAC</b>	<b>Excise, Tax and Customs</b>
<b>NBR</b>	<b>National Board of Revenue</b>
<b>LCO</b>	<b>Land Customs Offices</b>
<b>CHC</b>	<b>Chittagong Customs House</b>
<b>ICT</b>	<b>Information and Communication Technology</b>
<b>WTO</b>	<b>World Trade Organization</b>
<b>VAT</b>	<b>Value Added Tax</b>
<b>VATS</b>	<b>Value Added Tax Service</b>
<b>IRS</b>	<b>Internal Revenue Service</b>
<b>RAs</b>	<b>Revenue Agencies</b>
<b>IT</b>	<b>Information Technology</b>
<b>AEO</b>	<b>Authorized Economic Operator</b>
<b>GCNet</b>	<b>Ghana Community Network</b>
<b>GCMS</b>	<b>Ghana Customs Management Systems</b>
<b>ISO</b>	<b>International Standards Organization</b>
<b>MOA</b>	<b>Memorandum of Agreement</b>
<b>IMF</b>	<b>International Monetary Fund</b>
<b>GDP</b>	<b>Gross Domestic Product</b>

<b>CRM</b>	<b>Customs Reforms and Modernization</b>
<b>RAGB</b>	<b>Revenue Agencies Governing Board</b>
<b>NRS</b>	<b>National Revenue Secretariat</b>
<b>LTU</b>	<b>Larger Tax Unit</b>

KNUST

