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COLLEGE OF HUMANITIES AND SOCIAL SCIENCES SCHOOL OF  
BUSINESS  
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**AUTOMATION OF TAX COLLECTION BY GHANA REVENUE  
AUTHORITY. (ASOKWA OFFICE)**

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## DECLARATION

I hereby declare that this submission is my own work towards the 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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## **DEDICATION**

This research exercise is dedicated to my Mother and father Mr. and Mrs. Noronaa for their support, encouragement and effort throughout the two years of my study at the Kwame Nkrumah University of Science and Technology.

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## **ABSTRACT**

For any government to match in performance with the growth and expectations of its citizenry, it must significantly increase its fiscal ability of revenue collection without incurring costly recurring overheads that will erode it. 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 of tax collection by the Ghana Revenue Authority. After interviewing twenty (20) officials from the Asokwa branch of Ghana revenue authority (GRA) in automation system it can be said that the automation is a powerful monitoring tool for GRA. The research reports findings based on interview of staff of GRA's experiences with automation, indicated an efficient and effective means of tax administration. The evidence suggests a positive effect of automation system usage and the cost of tax administration, and effective means 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. 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 and better monitoring in order to effectively sustain the utility and generate an acceptable return on investment related to the system.

## TABLE OF CONTENTS

DECLARATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENTS .....	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES .....	ix
LIST OF FIGURES .....	x
ABBREVIATIONS .....	xi
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.0 Background of the Study .....	1
1.1 Statement of the Problem.....	2
1.2 The Study Objectives.....	3
1.2.1 General Objective .....	3
1.2.2 Specific Objectives .....	3
1.3 Research Questions .....	4
1.4 Significance of the Study .....	4
1.5 Scope of the Study .....	5
1.6 Limitations of the Study.....	5
1.7 Organization of the Study .....	6
CHAPTER TWO .....	7
LITERATURE REVIEW .....	7
2.0 Introduction.....	7
2.1 Background of Automation.....	7
2.2 Automation Defined.....	8
2.3 Challenges Associated with Computerized Procedures and Automation.....	10
2.4 Types of Computerized and Automated Procedures .....	13
2.4.1 Paper-Based Procedures (PBPs) .....	13
2.4.2 Computerized Procedures (CPs).....	13
2.4.3 Electronic Procedures (EPs) .....	13
2.4.4 Computer-Based Procedures (CBPs).....	14

Limitations to Automation.....	14
2.6 Automation of tax Administration.....	15
2.7 Common ICT Applications in Tax Administration.....	16
2.8 Role of Automation System on Revenue Mobilization.....	18
.2.9 Benefits of Automation in Revenue Mobilization.....	19
2.10 Tax Administration.....	21
2.11 Tax administration of Ghana.....	23
2.12 The need for Reform in the Tax System in Ghana.....	24
2.13 Revenue Mobilization and Automation System.....	30
2.14 The Ghana Single Window (GCNet) for Ghana Revenue Authority.....	31
2.15 Challenges of Implementing the Reforms.....	32
2.16 Forms of Taxes in Ghana.....	33
2.16.0 Company Tax.....	34
2.16.1 Capital Gain Tax.....	35
2.16.2 Branch Profits Tax.....	35
2.16.3 Sales Tax/ Value Added Tax (VAT).....	35
2.16.4Fringe Benefits.....	36
2.16.5 Local Taxes.....	36
2.16.6 Gift Tax.....	36
2.16.7 Stamp Duty.....	37
2.16.8 Mineral Royalties.....	37
2.16.9 Communication Service Tax.....	37
2.16.10 Tax Stamp.....	37
2.16.11 Vehicle Income Tax.....	38
2.16.12 Airport Tax.....	38
2.16.13 National Fiscal Stabilization Levy.....	38
2.17 Tax Collection in Ghana.....	38
2.18 Standards in Automation.....	40
2.19 Empirical Literature on Challenges in Automation of Tax Collection.....	43
CHAPTER THREE.....	45
RESEARCH METHODOLOGY AND PROFILE.....	45
Introduction.....	45
3. Research Design.....	45

3.2 Source of Data.....	45
3.2.1 Primary Sources of Data .....	45
3.2.2 Secondary Sources of Data .....	46
3.3 Population .....	46
3.4 Sample Size and Sampling Technique.....	47
3.5 Data Collection Instruments .....	47
3.5.1 Interview: .....	47
3.5.2 The questionnaire.....	48
3.6 Data analysis .....	48
3.7 Profile of the Ghana Revenue Authority .....	49
CHAPTER FOUR.....	50
DATA ANALYSIS AND DISCUSSION OF RESULTS .....	50
4.0 Introduction.....	50
4.1 Level of Automation of Tax Collection.....	50
4.2 Compliance to Best Standards .....	58
4.3 Challenges of Automation of Tax Collection .....	60
4.4 Suggested Solutions .....	61
CHAPTER FIVE .....	65
SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATIONS .....	65
5.0 Introduction.....	65
5.1 Summary .....	65
5.1.1 Level of Automation of Tax Collection.....	65
5.1.2 Compliance to Best Standards .....	66
5.1.3 Challenges of Automation of Tax Collection .....	66
5.3 Recommendations.....	67
5.3. 4. Control of the Collection Process .....	68
APPENDIX.....	69
REFERENCES .....	78

## LIST OF TABLES

4.1.0 Introduction of Automation .....	51
Table 4.1 Introducing Automation.....	51
Table 4.2 Areas of Automated Operations. ....	51
4.1.4 Accessibility of the Automated System by Staff. ....	54
Table 4.4 Accessibility of Automated System.....	54
4.1.5 Accessibility of a Decentralized Automated Revenue Collection System and Manual hard Copy Records. ....	54
Table 4.5 Decentralized Automated Revenue Collection System.....	54
4.1.8 ICT Application on Taxation and Tax Administration. ....	56
Table 4.8 Application on Taxation and Tax Administration. ....	56
4.1.10. Recommendation for Future Improvement.....	57
Table 4.10 Recommendation for Future Improvement.....	57
4.2.2 The Automated System and Achievement of Revenue Targets .....	59
Table 4.11 The Automated System and Achievement of Targets .....	59

## **LIST OF FIGURES**

Figure 2.1 Elements of an Automated System.....	10
Figure 2.2 Intelligence tools and processes-illustrated .....	16
Figure4.1 Effects of Automation .....	53
Figure 4.2 Benefits of the System Usage in Revenue Mobilization .....	58
Figure4.3 Existence of challenges on automation system .....	60

## ABBREVIATIONS

UNCTAD	United Nations Conference on Trade and Development
GRA	Ghana Revenue Authority
CP	Computerized procedures,
EDI	Electronic Data Interchange
ASYCUDA	Automated System for Customs Data
PBP	Paper Based Procedures
VDU	Video Display Unit
EP	Electronic Procedures
APRI	African Policy Research Institute
ICT	Information and Communication Technology
WTO	World Trade Organization
VAT	Value Added Tax
VATS	Value Added Tax Service
IRS	Internal Revenue Service
RAs	Revenue Agencies
IT	Information Technology
FIRA	Federal Inland Revenue Agency
GCNet	Ghana Community Network
SIGTAS	Standard Integrated Government Tax Administration System
TIN	Tax Identification Number
KRA	Kenya Revenue Agency
IMF	International Monetary Fund
GDP	Gross Domestic Product
RADDEX	Revenue Authority Digital data Exchange

RAGB	Revenue Agencies Governing Board
GTZ	German development cooperation
LTU	Larger Tax Unit
ITAS	Integrated Tax Administration System
NITA	National Information Technology Agency
MTO	Medium Tax Office
STO	Small Tax Office

## CHAPTER ONE

### INTRODUCTION

#### 1.0 Background of the Study

In Ghana as per Kayode et al 2009 taxation began in 1850 as custom duties which was imposed on imported products at advariluem rate of 0.5% which was regulated by principal collectors at the cape coast castle. In 1852 the poll duty was presented and was charged one shilling for each individual living inside of the British protection region yet was canceled in 1854.

In September 1931 Governor Sir Ranford Slater the then governor of the Gold coast made efforts to introduce income tax but had to abandon it due to stiff opposition he encountered from the members of the legislature assembly and instead imposed tax on cocoa export. In 1943 due to the decline in demand for cocoa government had no option than to reintroduce income tax in the gold coast by Sir Alan Burns (kayode et al 2009).

On the 18<sup>th</sup> August 1943 the income tax bill was brought to the legislature by Mr. W B Dare who was the then commissioner for tax designated for West Africa. On 22<sup>rd</sup> September 1943 income tax ordinance 27 was passed into law and its administrative body named income tax department (Nakyea 2006)

Since its inception it has gone through various evolutions both in name and structure, however the inefficiencies and corruption that abound the manual procedures (Zineldin 2007) requires the need for a system that will limit these problems and improve revenue collection, hence Automation.

In the perspective of (UNCTAD 2006) one of the critical apparatuses of accomplishing proficiency in tax administration is computerization framework.

Subsequently, computerization sways on the effectiveness of expense organization. Ghana revenue authority received and actualized UNCTAD created computerized framework which covers and incorporates tax clearance process. The framework has demonstrated to handles custom declaration and bookkeeping procedures and also information created for statistical and economic purposes.(UNECE, 2007). (Engman 2005) in an examination study expressed that computerization is indicator of proficiency. He however conceded that the cost of executing; keeping up and operations are considerable as advanced by Hawley (1996). Prior to the presentation of computerization the Ghana revenue authority prepared business and different records manually because of the expanding volume of business documents and restricted human asset element to handle the work the automated introduced to cover all revenue collection bodies beginning with the customs which utilized the Electronic Information Exchange (EDI) to oversee and control all it business activities starting with computer clearance for export and has since been extended to cover imports ,seaport, airport and the Inland Revenue bodies nationwide .

### **1.1Statement of the Problem**

To large extent tax revenue forms the “life blood” of most developed and developing nation’s economy. It is the most reliable sources of revenue generation to most economies. The revenue collection machinery of GRA needs to be streamlined. Revenue is the main source by which a government finances its expenditure .It is for this reason that any problem hampering the efficient tax collection system in Ghana must be researched into and a lasting solution found so as to ensure smooth collection of taxes. In spite of the role played by taxation in Ghana it is immerse with basic, administrative and assets lacks obstructing smooth tax collection and which

authorities have not given careful consideration and henceforth the requirement for genuine interest in tax collection systems. The present rule of revenue agencies being allowed to hold, 3% of the aggregate assessments they gather to bolster their operations is not yielding the obliged results. The manual procedures and absence of qualified Human resource use in revenue mobilization imply that it obstructs their operations to gather the required income to bolster the economy.

No exploration work has been done on automation of tax collection known to the researcher except reports highlighting on significance of automation on business associations execution. This research work seeks replies to the inquiry what automation of tax collection of the Ghana revenue authority play in guaranteeing successful tax collection and issues connected with its operations? The Ghana revenue authority charged to collect assessment confronts various difficulties including the human, institutional, attitudinal and infrastructural issues for change management. How to ensure maximum compliance amongst business administrators and citizens, transitioning from the manual to the automated system and back up techniques in the occasion of the system glitch.

## **1.2The Study Objectives.**

### **1.2.1 General Objective**

To examine the automation of tax collection by GRA with reference to Asokwa office.

### **1.2.2 Specific Objectives**

1. To identify the level of automation of tax collection at Asokwa office of GRA
2. To assess whether automation of tax collection meet standards practices

3. To determine the challenges of automation system of tax collection of the Asokwa office.

### **1.3 Research Questions**

1. What is the level of automation of tax collection of the Asokwa office of GRA?
2. To what extent do the automation meet best standards.
3. What are the challenges of automation system in tax collection of the Asokwa office?

### **1.4 Significance of the Study**

The study is intended to draw management of Ghana Revenue Authority (G.R.A) attention to understanding the need for streamlining the automation system to ensure that it operate within best standard practices to capture taxpayers who were not on the tax net and also cover loopholes that lead to revenue leakage. It Helps management to improve performance of the automated system by engaging staff on training to ensure efficiency and effectiveness and best returns of the automation system which will maximize revenue collection for national development. It will also enhance productivity among employees of Ghana Revenue Authority (G.R.A) because automation has proved to increase productivity much faster and avoid delays than the manual system. The study would help identify some of the challenges of the system which when rectify would increase revenue mobilization for the government coffers. Every nation development depended on it efficient revenue collection system.

The research work also expected to serve as a reading material for most students in their academic pursuit in the area of taxation.

### **1.5 Scope of the Study**

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 domestic VAT section which deals with the indirect taxes and internal revenue section which is also in charge of the direct taxes in the Asokwa office of Ghana Revenue Authority, Kumasi.

### **1.6 Limitations of the Study**

The researcher during the course of the study was confronted with some challenges which among others are outlined as follows

1. Busy schedules of respondents resulted in late receipt of questionnaires and some of the respondents failed to turn in their questionnaire.
2. Access to data was a major challenge since most officials were not willing to release sensitive data where the research was concerned.
3. Some Respondents feedbacks were not appropriate for the study as individual differences and disagreement came to play.
4. These were obvious predicted limitations; however 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. In the mist of these challenges the researcher surmounted them using the following measures
  1. Frequent visit and phone calls to respondents' offices to remind them of the need to speed up the answering of the questionnaire
  2. The researcher has to re-assure them of keeping all information confidentially as possible.

3. In some cases the researcher did follow up interaction to clarify the information provided.
4. For those who cannot find their questionnaire a follow up interview was conducted.

### **1.7 Organization of the Study**

The research has been sorted out into five parts. The primary part is centered on the study background, the problem articulation, research inquiries, and significance of the study. Other things captured in the same part were impediments of the work, in and additionally how the work was sorted out. Part two dealt with related written literature involving meaning of automation and function relative to revenue mobilization, and advantages of computerization in revenue collection. Chapter three mostly covered the research methods and methodology. It outlines in details of how researcher conducted the study. It involves such areas as research design, population and sampling techniques. Chapter four secured presentation, analysis and discussions of the information gathered. The findings, suggestions and the conclusion formed section five.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This segment blueprints existing writing on the topic. A depiction of what automation system is about, elements of automation system, advantages of computerization framework, challenges and execution of automation system. Additionally, this section looked at revenue mobilization and automation system as well as the tax administration and forms of taxes in Ghana and best benchmarks in automation.

#### **2.1 Background of Automation**

Tax collection was tag with negative name in it early history in light of the fact that tax authorities utilized some of the rudest techniques to demand it. After some time in any case, as man turn out to be more enlightened understood that taxes which are never welcome by the general public yet must be required guaranteeing the citizen participation and accommodation. Indeed, even while the citizen who permitted the utilization to be made needs and hope to be treated with thought.

Automation along these lines gives advanced intends to enhancing and disentangling tax administration. Computers however accelerate processes in automation no computer, however advanced, can surmount the statutory complexities concocted by bright authoritative artists. None the less it is vital to dive into the routes by which modern technology innovation can help with calculations, checks, correlations, and other phases of the various undertaking of preparing returns. In general automation has demonstrated to making tax administration more productive and that is without anyone else's input an enormous advantage to citizens.

As opined by Williams the initial phase in source information automation was undertaken in the 1870s when Jean Baudot manufactured the first paper-tape punch and reader. Williams burroughs and Christopher sholes likewise created the first economically pragmatic arithmetic machine, and the first financially viable typewriter separately in the meantime. However Hollerith and powers made a genuine leap forward when they formulated the trailblazer of today's punch card, which utilizes straightforward little gaps as one of a kind dialect for handling data mechanically.

As indicated by (Williams 1969) regardless of the way that there was sublime beginnings and continuous changes, source information automation has rather advanced less contrast with other technological improvement.

## **2.2 Automation Defined**

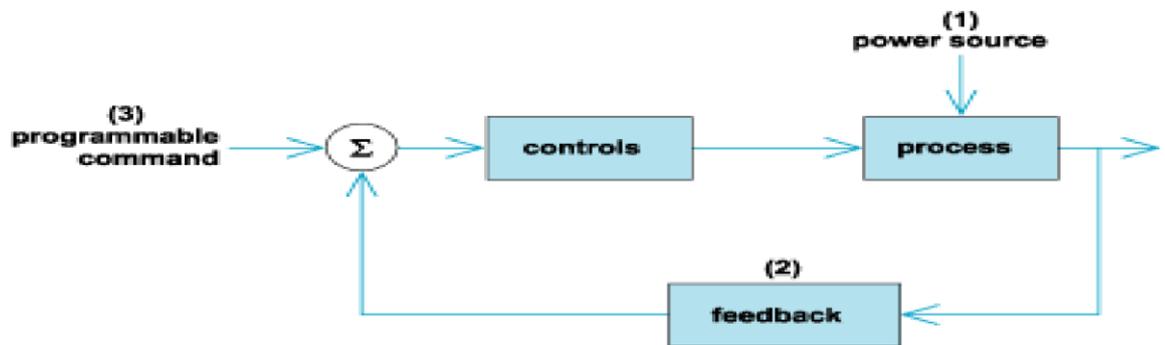
As per (Williams 1969) individuals have been given misinterpretation about automation by cartoonists and sensational writers. He said some thought it is a name for an Orwellian creature sneaking somewhere in the mountains of West Virginia. "We do have our National PC Center at Martinsburg, West Virginia; however it houses just some individuals and a couple manageable machines". Williams characterized automation and information handling to mean mechanical or electronic frameworks which perform tedious undertakings at rapid. He noticed that a century prior to it was punch card hardware and electric charging machines which were somewhat esteemed as cutting edge. He went ahead to allude to present day computerization as mind boggling systems and different types of mass-memory, rapid information high-speed data storage, handling, and recovery equipments in which Speed is of essence on account of the volume of work to be done is huge.

Automation has a tendency to be exceptionally lavish considering the cost of the types of equipment. Nonetheless, contrasted with the volumes of work it performs, the unit cost of operation are generally little. They handle a mess of errand in business and bookkeeping including confirming the accuracy on returns and checking for noncompliance or duplicate returns. Automatic data processing has expanded the tax administration within a short time. Tax administration and technology has additionally been advancing. Volumes and technology are quickly expanding to accomplish more prominent limit, speed and economy (Williams 1969).

Hollingum 2005 also describe automation as the utilization of different control systems for operating equipments, for example, machinery in factories in manufacturing plants and different applications with insignificant or limited human intervention. He further indicated the cost savings included in the utilization of computerization as it is utilized to save labour, energy, materials and to enhance quality, precision, accuracy and least human intervention as automation enormously decreases the requirement for human tactile and mental prerequisites. Automation assumes an undeniably vital part in the world economy and in every day experience.

The advent of the Second World War and the advances made in electronic computation and feedback has significantly influenced decidedly the development of automation. While a propelled type of automation frequently include feedback different types of computerization are possible (Hollingum2005).

**Figure 2.1 Elements of an Automated System**



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

### **2.3 Challenges Associated with Computerized Procedures and Automation**

As far back as 45 years there was acknowledgment that ICT investment requires significant responsibility of resources. In such manner, Smith (1969) remarks that "while we have genuinely all around Ideas about what the system should have the capacity to do, we still must accommodate our needs with the tremendous cost included". In the perspective of Organization for Economic Cooperation and Development (OECD), in public organizations, a significant proportion of ICT ventures experience issues and/or fail. This particularly in light of the fact that the administration arrangements are regularly frail and which resulted budgets being exceeded, and set deadlines are not met and which mostly results in the expected quality of the new system being far less the standard agreed when the project was undertaken" (OECD, 2001). . As indicated by Leydesdorff and Wijsman (2008)

organizational, political and technical complexities are some the reasons that results in spending plan over-run.

Notwithstanding the disadvantages referred to above, specific challenges have likewise been related to computerized procedures systems. Some of the difficulties include:

1. Transitioning to reinforcement methodology (e.g., PBPs) in the occasion of CP system breakdown; the potential for human lapses in navigation and timekeeping can be increased in light of the fact that administrators have gotten to be acclimated to the backing gave by CPs
2. Narrower "field of view" given by computerized procedures systems than with PBPs, reducing the number of steps visible in parallel, therefore making "looking ahead" more difficult
3. Failure to perceive issues with the CP system or to take suitable action because of inattention, which may be brought about by different exercises obliging consideration, or by lack of concern (Because the computerized CP system has been being used for quite a while and it has constantly worked appropriately)
4. Potential adverse effect on clients' correspondence and coordination with some CP system one individual can deal with the procedure with little help, though with PBPs several users may be included in executing the task; this can reduce user's communication and awareness of the status and advancement through the procedure.

There is an inherent befuddle in adaptability between ICT system and political and organisational procedures. While political and organisational procedures are dynamic and adaptable by nature, once a choice has been taken to build up a specific ICT system and the undertaking is in progress, it is difficult to change the Project. Such changes are not incomprehensible, but rather have their cost as far as time and cost overwhelms."

Addition to the above, an ICT intervention: (1) can create issues where there is no agreement ; and/or (2) may be compelled by existing structures and processes; and/or (3) may confront resistance from tax administration employees and/or (4) may be limited by the predominant administrative system. In particular, the procedure could be derailed when: top administration does not adequately comprehend the utility of ICT; and/or the specialized and experts are ignorant of a public sector organization's operations and information requirements; and/or stakeholders, especially frontline staff, are threatened by the initiative. (Heeks and Davis, 2001). In addition, innovation is not socially nonpartisan (Frissen, 1989). In this latter perspective institutions influence the way information is utilized the same as information shapes the way organizations work – ordinarily by fortifying the existing administration culture" (Hood, 1998).

It is likewise vital to note that political and social flow additionally have a part to play in advancing or undermining advancements in ICT, particularly issues to do with client (especially taxpayers) access and importance. An absence of access may stall e-government projects. In addition, clients "worry over protection and security" (West, 2005), and there may be uneasiness that "data will be utilized to increase state regulation of citizens' lives" (Barrett, 1992).

## **2.4 Types of Computerized and Automated Procedures**

Different levels of functionality are provided by computerized procedures, in addition to different levels of automation. This is because the guideline and criteria for every computerize procedure implementation depended on the type of function it is design to perform. It is helpful to define categories of CPs based on their functionality.

The following terms are used to distinguish between hard copy or paper-based procedures and computerized procedures:

**2.4.1 Paper-Based Procedures (PBPs)** – procedures provided on conventional hard copy form

That is given on routine printed version structure

**2.4.2 Computerized Procedures (CPs)**– procedures exhibited on a PC driven display unit (VDU), conceivably including extra usefulness above just recreating them on a VDU.

Within CPs, there are distinctive classes which are characterized by usefulness and illuminating its appropriateness.

**2.4.3 Electronic Procedures (EPs)** –these are CPs that are indicated on a Computer driven unit (VDU) in the structure of a text or graph that are fundamentally imitations of PBPs. EP frequently have the systemthat may incorporate the ability to call up an applicable procedure from a connection on another display, or connections between related methods, however for every situation the outcomes that is presented is the same as or like a proportionate PBP.

**2.4.4 Computer-Based Procedures (CBPs)** – CPs that incorporates different capacities which is not found in PBP or EPs, for example,

1. Able to recover and show the particular data needed to perform procedure step automatically
2. Ability to show relevant indications either specifically in the procedure itself or on another showcase page or segment of the presentation
3. Ability to Automatically process step rationale and showcase the outcomes
4. It can automatically check the essentials or preconditions (however surrendering the choice over to the client)
5. Tracking of preconditions over various steps
6. Capacity to recover and show a softcopy automatically.

#### **Limitations to Automation**

1. Despite the complexity of modern technology it is still not able to automate all the desired tasks.
2. Automation comes with huge capital investment and also turnout large volumes of work therefore in event of system breakdown the potential cost is quiet high and hazardous. Therefore, some personnel are needed to ensure that the entire system functions properly and that safety and product quality are maintained.
3. When all processes becomes highly increasingly automated or paperless it reaches it maximum that less labour can be saved or quality improvement to be gained. This is where both diminishing returns and the logistic function set in.

Exhaustion of opportunities also set in when more and more processes are automated and only a few left to exhaust. New technological paradigms may however set new limits that surpass the previous limits (EPRI 2007).

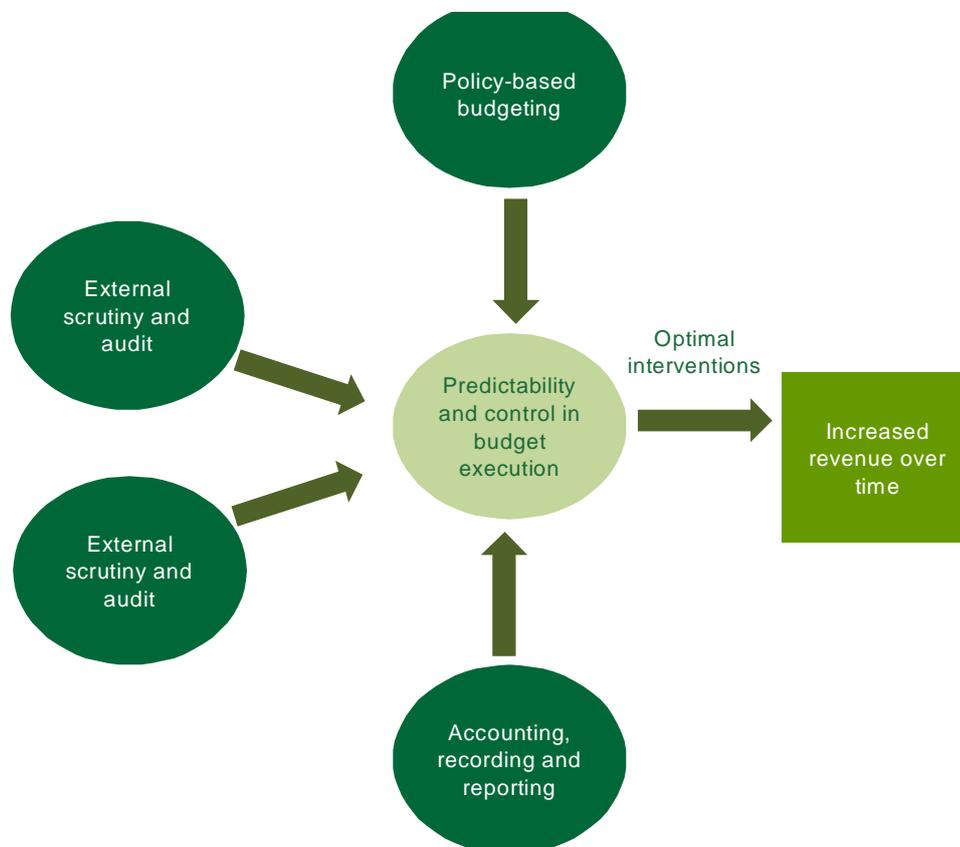
## **2.6 Automation of tax Administration**

It is undoubtedly, performance in revenue administration is altogether impacted by ICT, for instance, by: (1) making historical information promptly available; (2) Lessing of mistakes , processing times and costs; (3) better customer service and encouraging voluntary compliance and hence increasing revenue collections. this is done by making it more user friendly and convenient to file tax returns and pay any amounts due; a; (4) minimizing collusion between tax authorities and taxpayer by that minimizing the level of collaboration between taxpayer and tax administration staff; and (5) helping better harmonization of methods and related information flows included in decision making ((Smith, 1969); (Edwards-Dowe, 2008); (Chatama, 2013)).

ICT empowered applications are some the most complicated devices and procedures utilized when it come to decision making. They are basically used to raise revenues by capturing instances of non compliance with minimal manual effort. As represented in Figure 2.1, intelligence tools and processes depend upon automated information coordinating, precedent databases, campaign management and advanced rules based system. Automated information coordinating uses data from a several records (including third party data) to check the accuracy of data given by taxpayers. A precedent database informs the formulation of tax decisions. Campaign management revolves around making broadcasts to focus on taxpayers groups which expect to enhance compliance. Lastly, sophisticated rules based systems: “are used to define what actions should be taken (for example, send letter A to taxpayer X, while letter B

should be sent to taxpayer Y). Business rules provide the tactical detail about how strategy translates into actions” (Inland Revenue Department of New Zealand, 2009).

**Figure 2.2 Intelligence tools and processes-illustrated**



Source: Inland Revenue of New Zealand

## 2.7 Common ICT Applications in Tax Administration

Computerization is significant to the provision of service. In the area of taxes, trade facilitation is a principal service. Trade facilitation “involves the simplification, standardization in the movement of goods (Dias, 2009). To these ends, nations across Africa have made substantial investments in ICT in trade facilitation. There is widespread implementation across the continent (in over forty countries) of the Automated System for Customs Data (ASYCUDA) to manage foreign trade

transactions (e.g. manifests, customs declarations, and transit and suspense procedures etc) is remarkable. A later version of ASYCUDA used in countries for example, Benin, Botswana, Cameroon, Tanzania and Zambia takes into consideration direct trader participation so they can file declarations from wherever their base, and to minimize the buildup of documents.

As indicated by (USAID2012) the East African countries utilizes , ASYCUDA and different custom system , for example, revenue authority digital data exchange(RADDEX) to interfaced with an electronic cargo tracking system , which seeks to reduce the time and cost of cargo clearance between EAC nations by giving secure data connect that can be promptly accessed by approved clients "Information communicated through RADDEX... comprise of exports,re-exports, transit declaration that have been cleared by customs in the country of departure and reconciliation data from goods accepted in the country of entry". Apart from ASYCUDA and RADDEX specially tailored web-enabled Integrated Tax Management Systems are also a common feature in the area of domestic tax.

Nations, such as, Rwanda, Mali, and Senegal operate the Standard Incorporated Governmenttax administration system (SITGAS) (Fossat and Bua, 2013).SITGAS runs a range of functions including: taxpayer registration; account management; electronic filing (e-Filing); electronic payments and refunds; case tracking for audit purposes; reporting and so forth. Kenya Revenue Authority (KRA) no longer manually generates Taxpayer Identification Number (TIN) certificates. Rather through its iTax system, electronic registration (e-Registration) module, taxpayers are able register to obtain TINs online. KRA recently announced that it would further enhance iTax to enable the electronic collection of taxes. In this regard, KRA has partnered with a financial service provider UBA Kenya Bank to pilot the enhanced

features for the year ended 30th June 2013. As part of an effort to enhance domestic revenue collections (APRI2013)

Ethiopian government financed a project after a standard incorporated government tax administration system (SIGTAS) was effectively implemented with the CRC Sogemateam for the computerization of all taxes of the federal Inland Revenue authority (FIRA). The project additionally incorporated the decentralized installation of SIGTAS. The computerization managed by SIGTAS included excise tax sales tax commercial rental, income tax, PAYE, withholding tax, stamp duty, capital gain tax and so forth. The successful implementation accomplished among others computerization of all government taxpayers and administration of the whole federal taxpayer basis, interface with custom system. (ASYCUDA)(Federal inland income power Ethiopia 2006).

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

Sykesville 2003 argued that in spite of the utilization of computers system to exchange electronic data fundamental for tax purposes to the authorities to confirm taxes declared, guarantee legitimate and precise appraisal, increase utilization of time efficiency, reduce administration cost, and enhanced viability of revenue collection revenue agencies still keep on encountering assessment and clearance delay. As indicated by (Vasudyan et al, 2007) recent studies relate a significant positive role of automation in containing the high cost, time wastefulness and insufficient manual systems of assessment of tax administration and revenue collection, corruption, delays and computing errors. These scholars posit that automation is an avenue to efficiency and effectiveness in terms of clearance time and cost of revenue collection.

## **.2.9 Benefits of Automation in Revenue Mobilization**

As per Holniker 2005, the use of automation has brought about a major change in the revenue collection time for taxpayers. Countries advancement depended on upon it capacity to mobilize revenue from taxation which is connected to it national agenda on social prosperity, destitution lessening and economic development of their citizens. Ghana revenue authority play an exceptionally critical part in the transport of goods across borders and the procedures and techniques applied to these goods altogether impact significantly on national industry in international trade and their contribution to national economy. In the connection of with international trade the Ghana revenue authority has an extremely essential role not just in accomplishing the objectives of the government additionally in guaranteeing viable controls that ensure revenue compliance with national laws, guaranteeing security and protection of society. The performance as far as efficiency and effectiveness of Ghana revenue authority procedures has a significant bearing on the economic intensity of countries and in the development of international trade and the advancement of global market place. As an authority set up by the legislature to control revenue generation, Ghana revenue authority are in a unique position to provide increased security to the global supply chain network and to contribute socio-economic advancement through revenue collection and trade facilitation (Kagina 2012).

According to Hawley (1996), modern trading practices of nowadays make it fundamental for Ghana revenue authority administration to be in great position to provide basic, efficient and predictable systems for goods clearance and movement of individuals while at the same checking progressively complex local and international requirements to ensure compliance with national laws, international agreements and meeting security challenges. Travis (2004) opined that for Ghana

revenue authority to have the capacity to strengthen and go beyond existing programmes and practices, it has come up with a regime that will enhance the security and help in revenue collection. There was an initial increase of the tax-to-GDP ratio due to the tax reforms. Tax revenues rose from 5.6 % of GDP in 1983 to 17.0 % in 1994(Chand / Moene 1999). This he said cannot however be attributed to one specific single factor. However, improvements in tax administration seem to have made a significant contribution. The tax to GDP was collapsed in 2010 because of the rebasing of the cedi but there a major improvement in 2011 of about 3% that is 12.7% in 2010 to 15.9% 2011 (KAGINA 2012)

The establishment of the Large Taxpayer Unit (LTU) which was a step towards integration in 2004 was one reason for the increment in revenue performance. These LTUs were in charge of collecting all categories of taxes and duties of the 350 biggest taxpayers of the nation. The IRS and VATS likewise enhanced the auditing of taxpayers and gathering of data on tax liabilities more effectively and accurately (Christian 2008). These reforms of integration and modernization through data sharing in the between customs and domestic taxes; streamlined clearance permits ; and the introduction of Ghana integrated cargo clearance system to track location of goods at the ports and streamlined tax exemptions brought about the increment in performance to 46.6% in 2011.

In Nyambo 2009 perspective the formation of GRA had various accomplishments, for example, functionally incorporated pilot DT offices; VAT flat rate scheme; LTO re-assessment and implementation establishment of a tax policy unit; capacity building and improvement in tax administration and tax policy among others.

He indicated that the introduction of ICT has changed the way tax administration used to be handled at the large taxpayer department. It is known for its ability in

accelerating processing time in business. Nyambo (2009) tried these conceptions by means of investigating reactions from both staff and taxpayers at the division. Her discoveries uncovered that, 88.8% of staff concur that presentation of ICT at the LTD have shortened the protracted Awkward manual techniques. They were of the sentiment that preparation of taxes computation would be a great deal of work if they were done manually and that, ICT utilization has minimized lapses returns processing and assessment.

This affirmation was, bolstered by chatama 2013 where additionally, 100% of large taxpayers concur that handling time and responding to taxpayers inquiries have been reasonably reduced. As a result, 100% of Taxpayer and Tax consultants (firms) prepare tax return using computer and 41.7% submit them via Internet.

Automation serves the tax administrator in many ways. While these services may have little direct benefit to the taxpayer, he is the ultimate beneficiary. Automation reduces the unit cost of processing the taxpayer return and the administrative cost. Automation also enables completion of essential work that would never be possible with manual methods which is an assurance of fairer treatment by the taxpayer. . (Williams 1969).

## **2.10 Tax Administration**

Tax administration is established in the historical backdrop of revenue collection which Albright(2008) portrays as a consequence that delineated an undisputed legitimization of the positive theory of the state and its association with the market economy. Despite the fact that Thomas (2008) clarifies the concept of the theory of revenue exaction in a compact way, he leaves obscure by staying more with taxation

theory than tax administration. Both Thomas and Albright in their contribution neglect to sufficiently address how the theory of revenue exaction connects to tax administration. The critique against the revenue exaction theory is directed at the fact it failed to show what that mechanism is despite its providing a rational basis for a taxation mechanism (Gunning, 2007).

That aside by what means 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 along these lines, insufficient in supporting taxation, tax administration, and how this administration can be improved via automation. It should be bolstered by the efficiency theory and the effectiveness ideal model both of which provide the rational premise for embracing automation in tax administration (WTO, 2007). Albright 2008 subsequently made a qualification between tax and taxation 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) which concentrates on the systems and methods for raising the required 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.

Later 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).

ICT applications have evolved from tools to increase policy effectiveness, cut costs and realize efficiencies, to being more interactive and stakeholder focused (Snellen,

2005). Specifically, in the early 1990s, with the emergence of the internet, email and intranet combined with “the growth of customer relationship management”, and increased public demands for ‘service quality’ and new workmethods, the scope of modernization of the public sector through the application of ICT expanded electronic provision of government services and activities (Bovaird, 2003).

### **2.11 Tax administration of Ghana**

The capacity of a country to provide for the welfare and security of its citizenry as well as to develop and consolidate representative democracy is determined by its ability to raise enough resources. Democracies is not built on periodic elections but also on a social contract between governments and citizenry regarding the collection and spending of public revenue (Daniel et al 2013). As in other African countries, public revenues in Ghana depend on taxation. Many and varied factors underpin a country ability to collect enough tax revenue from domestic sources paramount among these is citizens level of compliance often influenced by the efficiency of the institution responsible for tax administration. The structure and magnitude of tax rates and the ability and willingness of citizens to pay .These factors call into sharp focus the need for tax reforms (Daniel et al 2013)

Ghana has a relatively long history of tax administration. The first customs law was passed under colonial rule in 1855 and later replaced in 1876 by a customs law based on the U.K. Customs Consolidated Act, 1876. Income tax was introduced in Ghana under the Income Tax Ordinance in 1943. The two main revenue institutions were the CEPS and the IRS. It is proposed to establish a third service with the introduction of VAT in 1995 to consolidate domestic tax administration in the country.

Until 1986, both the CEPS and the IRS formed part of the civil service. In 1985, two laws, the Customs, Excise and Preventive Law (PNDC Law 144) and the Internal Revenue Service Law (PNDC Law 143), were enacted to grant full operational and partial financial autonomy to these institutions. It is important to note that the provisions of these laws, which establish the IRS and the CEPS as Services of the Republic, are upheld by the constitution of the first republic (Tekper 1993)

Since the beginning of the Fourth Republic in 1992, various tax reforms have been undertaken, the introduction of Value-Added Taxes in 1995, this was withdrawn as a result of widespread protests and reintroduced in 1998 after a comprehensive education of citizens. The National Health Insurance Levy, which was created in 2003. Special fees on commodities and services, such as petroleum and communication taxes. Corporate and personal income tax reforms to restructure thresholds widen the tax base and introduce measures that encourage payment by small scale self-employed business persons. The integration of the Internal Revenue Service, the VAT Service and the Customs, Excise and Preventive Service into a single agency the Ghana Revenue Authority in 2009 all as part of the reforms to strengthen its capacity and authority. Despite these reforms, questions about the fairness and transparency of the Ghanaian tax system remain (CDD2013)

## **2.12 The need for Reform in the Tax System in Ghana**

Most developing nations revenue structures have failed to deliver the results. In many cases the growth in revenue could not match with the government spending weights, a circumstance that has brought about colossal imbalances between the demand and supply of public budgetary resources. These economies have then needed to change

their tax structures and systems, with the general targets of revenue adequacy, economic efficiency, equity and fairness, and simplicity (Osei, 2006).

Since 1992, the department for international development (DFID) has supported the VATS in Ghana in two activities mirroring the two endeavors to present VAT. The first, which gave 1.5 million £, was terminated after the nullification of VAT in June 1995. The second venture was actualized from 1997 to 2000 (Gray et al. 2001c). In March 2004, GTZ set up another project, the Good financial governance programme which was meant, to enhance the efficiency and effectiveness of tax legislation and administration. Its component concentrated essentially on direct taxes (GTZ data). In 2006, the RAGB and the Tanzania revenue authority (TRA) consented to an arrangement to hand over the TRA's software (i.e. the incorporated integrated tax administration system (ITAX)) to Ghana's tax administration. The adaptation of ITAX to Ghana's requirements was upheld by GTZ.

Registration and re-registration of Ghana's taxpayers to facilitate the one stop service under the GRA using the Total Revenue Integrated Processing System (TRIPS) initiated in December 2011 under the Geogov project. Progressing in 2011/12 is the change of the LTU to LTO and formation of MTOs and STOs. This is improved by the business process review being conducted with the assistance of Crow Agents UK in conjunction with GCNet (Atuguba 2006)

One group which is also concern with the problem facing GRA in their duties in Ghana in particular and the Commonwealth countries in general is the Commonwealth Association of Tax Administrators. At its ninth Regional Technical Programme held in Accra- Ghana from 11<sup>th</sup> July to 19<sup>th</sup> August 1994 at the Ghana Institute of Management and Public Administration (GIMPA) the group also outlined

certain problems among others that hinder smooth tax collection in the various countries, some of the problems identified by the participants include

- a) Political interference with tax administrators.
- b) Low literacy rate.
- c) Non – filing of returns.
- d) Misuse of taxes collected by public officials ( embezzlement) which taxpayers often refer to as their reason for non- compliance
- e) High tax rate and inefficient tax collection system
- f) Complex tax laws
- g) Multiplicity of taxes and rates
- h) Lack of effective prosecution of tax defaulters.
- i) Lack of incentives or low incentive paid to tax officials making them less committed to their duties.

It is evident that almost all the above mentioned problems affect effective tax collection in this country. The Internal Revenue Service (now GRA) itself may be aware of problems facing the service and it may also be much concerned about them. This is seen in speeches delivered by some top Government officials, management personnel of the service and articles written by some staff members. In 18<sup>th</sup> November 2009, DrKwabenaDuffour, the then Minister of Finance and Economic Planning presenting the 2010 budget to parliament stated the need for the continuation of reforms in the tax system in the medium term, to plug loopholes, reduce tax evasion and fairly taxing rent from natural resources to make the tax system more efficient and less dependent on indirect taxes. He explained the need to modernize the Ghana tax system and enhances revenue administration and the management of the three

revenue agencies Value Added Tax, Customs Excise and Preventive Service and internal revenue service would be merged into one body the Ghana Revenue Authority (GRA) in 2010 as part of the E- Ghana project. He outlined some of the challenges the new system will address as the problems of duplication, streamline operational policies and procedures, minimize administrative costs, reduce compliance cost for tax payers and improve efficiency.

On January 15 2010 at a sensitization seminar on the GRA project and Act he said government was committed to the utilization of technology under the e-governance project to ensure the automation of all tax and revenue agencies to reduce cost, collect revenue and enforce the law efficiently. He said “we should implement corporate governance as a matter of principle rather than as a response to regulations and pressure. Our manual process must give way to modern electronic platform and must enforce the law to make the implementation of taxes fair, transparent and accessible to all”(Duffour 2009).

Member of the Institute of Training and Development (MITD) News on an Internal Revenue Service (IRS) Automation project stated the reasons for automation of GRA. It said tax administration the world over is taking advantage of technology to modernize their operations. IRS cannot afford to be an exception and that it is important for the service to communicate with other Ministry Department and Agencies (MDA's) and any other external entities as the need arises. Furthermore it is equally important for internal processes to be automated to give quicker access to information, for it to be accurate to enable the same information to be presented in different ways for different audience.

The automation of GRA was to be implemented in phases, with the first phases being funded by German Development Fund (GTZ). This comprises of local area network

(LAN) connectivity in 6 pilot Districts namely, OSU, Kumasi, Legon, Tema main, Achimota and Agbogboloshie.

Zaney(2011) argued that Revenue generation is an essential component of fiscal policies formulated to satisfy economic and social needs. Thus any financial and a viable tax system means increased revenue generation backed by effective revenue collection strategies. He stated the daunting challenges which government as a key stakeholder is determined to overcome by creating a conducive environment for revenue administration and compliance (Zaney, 2011).

This determination on the part of government culminated into a project aimed at integrating and modernizing the country tax system with the objective of achieving higher domestic resource mobilization. This tax reforms culminated into the enactment of the Ghana Revenue Authority Act 2009 (Act 791) and is expected to improve tax payer services and processes and as well as compliance. It also entails a major review of all tax processes by utilizing technology under the E-Government project to reduce cost, collect revenue and enforce tax laws effectively.

In December 2009 upon the enactment of the Ghana Revenue Authority Act 791 which bring all the Revenue agencies under one authority, one of its key objectives for it establishment was to modernize domestic tax and customs operations through the review of processes and procedures and also integrate IRS and Vat. The GRA on it mission statement said to mobilize revenue for National development in a transparent ,fair effective and efficient manner and this can be achieved through among others application of modern technology.All the above attest to the fact that the current system faces a lot of challenges.

In the IRS Quarterly House Journal vol. 4 of 1992.the then commission, Professor J.E.A. Mills in his inaugural address at a seminar on improving the collection function

held on September 22<sup>nd</sup> to 24<sup>th</sup> 1992 for District Heads and their Deputies in Accra mentioned some of the problems facing the IRS in his speech. The then Commissioner said that the government had realized a shortfall in revenue collection. He said this means there is revenue leakage. The leakage may be due to several factors.

One factor which cannot be glossed over is the poor level of technical ability of officers of the Internal Revenue Service and Customs Excise and Preventive Service (CEPS) to address this problem of untrained staff, the government has embarked on a programme of training and retraining both IRS and CEPS staff. This is an indication to attest the fact that the service admits there is a problem of untrained staff (IRS Quarterly House Journal Report 1992).

The President of the Ghana National Chamber of Commerce and Industry (GNCCI) Mr. Seth Adjei Baah at a press launch of the automation of the process of issuing certificate of origin to cover export from Ghana said the new process will facilitate export from Ghana than the manual process. He stated that, there is the need to automate at this electronic age of e-commerce and e-governance in order to reduce fraud and unnecessary delays that is associated with the manual system. He said the automation and computerization was done by GNCCI in collaboration with customs division of the GRA and Ghana community network services limited (GC net) (Adjei 2011)

According to a Ghana Revenue Authority Newsletter (Edition 001, Volume 001), Tax administration in Ghana is beset with challenges including

- A. Fragmentation of domestic tax administration between the Valued Added Tax service (VATS) and the Internal Revenue Service (IRS).

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

According to National Information Technology Agency (NITA) the Ministry of Communication with the assistance from World Bank implemented the e-Ghana project. Provision of e-government services and private sector developments are two key components of the e-Ghana project among other components. The public private partnership (PPP) Automation of Revenue Generating Agencies is one of the projects being implemented under the e-Ghana Project. The PPP arrangement is a Design, Finance, Build, Operate and Transfer (DFBOT) model and is intended to operate for a period of five (5) years (NITA 2013).

### **2.13 Revenue Mobilization and Automation System**

As indicated by NITA2013 the joining of e-Ghana standards, e-government service supported organizations and e-GIF standards, the PPP will altogether enhance the

efficiency and effectiveness of tax administration and also reduce the time and expenses of registering a business. Also, it will bring about a superior designed and operated system which will enhance revenue collection and will give added worth and convenience to the citizens of Ghana.

According to a chatama the mode of payment at Tanzania Revenue Authority in general and at Large Taxpayer Department in particular has reasonably changed. No one is paying directly using cash, 91.7% of taxpayers and consultants pay through Tanzania Interbank Settlement System TISS, and the remaining 8.3% pay through Electronic Transfer EFT. 83.3% of both staff and taxpayers agreed that, the use of ICT provides them with accurate and timely information needed for decision making. Appropriate decision making is a very useful ingredient in improving performance and efficiency in tax administration. The improved performance was presumed to improve revenue collections.

Additionally, to enhance effectiveness in the Ghana revenue authority operations various innovations have been merged into revenue collection processes, for example, smart tax which includes the relocation of taxpayer information from the manual system into the computer and automation of cashiering functions. (Ghana News Organization Business & Fund | Fri, 03 Apr. 2009).

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

The Ghana Single Window (GCNet) for Ghana Revenue Authority is an automation which permits for the lodgment and sharing of data and standardized information which satisfies all regulatory requirements with single administrative document for all GRA Administrations. It was setup after taking concerns raised by stakeholders on

how slow, difficult and costly processes are and government longing to encourage trade and make Ghana hub of investment and center for West African sub region

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 and domestic revenue collection system, reduce transaction costs and finally reduce delays in trade operators encounter in clearing consignments through the Ports.

As part of the quest to improve taxpayer records, efficiency and effectiveness of tax administration GCnet donated public address to support GRA taxpayer registration awareness campaign. It will enable GRA ensure that a vast majority of local taxpayers hear the message. Under the new automated system been implemented by GCnet in conjunction with the GRA and registrar general department (RGD) is re-registering existing taxpayers and businesses and as well as new ones. The domestic tax revenue divisions (DTRD) were to hook onto the new system to facilitate the process with the view to update taxpayer and business registration, improve service delivery, reduce compliance cost and promote investment collaboration.

### **2.15 Challenges of Implementing the Reforms**

A successful change management includes overcoming the difficulties of human, institutional, attitudinal and infrastructural issues which were the real challenges that have been affecting the system

Ensuring that high level of compliance among trade operators and declarants and furthermore overcoming resistance demeanor of some regulatory agencies to interface with system to improve tradefacilitation. Creating complementary electronic system for other trade related agencies for example, port cargo management and MDAs within

the system. Addressing infrastructural issues particularly at certain regional and District levels.

Blankson (2011) opines that the task of squeezing ahead with the change while staying aware of revenue collection is similar to juggling two balls noticeable all around, the scarcest diversion could bring about them being dropped. The numerous training meetings and workshops are fundamental for the change but then they take personnel off the hands on revenue collection obligations. Institutional loyalty to the past organizations additionally came to play in different ways, continuous staff affiliations, labour organizations and so forth that are to a large extent based on the old agencies and present demand which do not give much perception to the truth of all staff belonging to one authority.

One major test to management is the issues of integrity of staff with a specific end goal to maintain a credible organization. He said with the active involvement of staff, a draft code of morals has been produced to control the behaviour of staff in their dealings with taxpayers. The continuous utilization of the names of the past internal revenue office rather than that of the GRA by the media is likewise a major challenge to the management. As accomplices in the change process it is in this way imperative that they introduce the GRA effectively to general public.

## **2.16 Forms of Taxes in Ghana**

In 2001, another tax law, The Internal Revenue Act 2000 (Act 592), was passed to levy direct taxes. The Internal Revenue Regulations, 2001 (L. I. 1675) was likewise passed. There have been various amendments to the law and regulations. The main notable national levies in the nation are:

a) The National Health Insurance Levy of 2.5% imposed on specific goods and services.

b) The National fiscal stabilization levy of 5% levied on profit before tax of organizations and establishments of certain listed sectors of the economy.

The National Health Insurance Levy is administered on the lines of the value added tax. Taxes comprise of the income taxes, sales and service taxes managed by the Domestic Tax Revenue Division (DTRD) of the Ghana Revenue Authority (GRA) and Customs and Excise Duties administered by the Customs Division (CD) of the GRA.

#### **2.16.0 Company Tax**

Unless particularly exempted in the law, organizations (both residents and non-resident) are obliged to pay tax on income relating to business and investment, derived from, accumulated in, brought into or received in Ghana after the necessary adjustments are made. The rate of assessment is by and large 25%. There are distinctive rates pertinent to specific organizations. From 2012, mining organizations are to pay corporate duty at a rate of 35%. The proposed revision to the tax law to constrain institutions with tax free status pay tax on income from business activities was not effected. The corporate entity is taxed independently from its share holders. All organizations need to file returns four months after their accounting year. It is additionally obliged that they make quarterly tax installment on the current year's income based on the provisional assessments made by the DTRD or the organization itself (where the DTRD has authorized it).

### **2.16.1 Capital Gain Tax**

Organizations are obliged to pay tax on gains made on realization of chargeable assets. Chargeable assets incorporate land (which is not for agriculture in Ghana), buildings, shares, and goodwill and business assets among others. Chargeable assets do exclude trading stock, securities of an organization listed on the Ghana Stock Exchange amid the initial 15 years of the establishment of the Stock Exchange , Classes 1, 2, 3 and 4 assets (e.g. vehicles, plant and machinery, air and sea transport, Computers, and so on).

### **2.16.2 Branch Profits Tax**

A branch of any outside organization doing business in Ghana is taxed like any corporate entity in Ghana. With the aim of preventing tax avoidance schemes (such as transfer pricing, thin capitalisation and income-splitting), the Commissioner of the GRA is entitled to adjust chargeable income of the branch on the basis of the turnover of the whole group. Where it repatriates its branch profit after tax, it will be required to pay 10% tax on the amount repatriated. This is in addition to any corporate tax paid.

### **2.16.3 Sales Tax/ Value Added Tax (VAT)**

These are indirect paid by consumers on some goods and services to the state through registered people or organizations. The rate is 15% for organizations and people whose turnover for a 12 month period is GH¢120,000 or above on the estimation of goods and services. This excludes the National Health Insurance Levy Toll of 2.5%.

Organizations and people whose turnover for a 12 month period falls beneath GH¢120,000 are to pay a presumptive tax of 6% of their turnover. (No input or output VAT is calculated.) There are exceptions indicated in the VAT law. Exempt supplies

incorporate agricultural products and inputs, printed matter, approved medical and pharmaceutical supplies, transport, financial services, land, building and construction. While Imports are taxable exports are zero rated. Under Excise duty, the rate for environmental tax has been decreased from 20% to 15%. Additionally extract obligation rates are to be lessened on a sliding scale to organizations utilizing local raw materials as substitutes in the production of excisable products.

#### **2.16.4 Fringe Benefits**

Except for dental, therapeutic, and health insurance costs, all fringe benefits derived from employment are taxable. Benefit relating to accommodation and cars have their own particular treatment determined in the tax Law. For every single other benefit, the open market value or a reasonable value is added to taxable income and subject to tax. For some services provided its employees (e.g. food offered in a canteen, office outings, transportation of employees, accident insurances and payments to retirement funds), the employer has the option to pay the income tax on account for the employee.

#### **2.16.5 Local Taxes**

These are collected by the District, Municipal and Metropolitan Assemblies (Authorities) from persons doing business within their territories. They are additionally in charge of the collection of property rates.

#### **2.16.6 Gift Tax**

Subject to specific exclusions, gift tax is payable by each individual on the aggregate estimation of the gift received by the individual by way of gift within the year of assessment. The rate ranges from 5% to 15%.

### **2.16.7 Stamp Duty**

Stamp obligation is paid (at different rates) by person who undertakes certain transactions including the accompanying:

- (a) Conveyance or transfer on the sale of any property
- (b) Appointment of a new trustee
- (c) Natural resource lease or license (e.g. mining and timber)
- (d) Agreement or memorandum of agreement
- (e) Award of cost in a matter of dispute
- (f) Bill of exchange (e.g. issue of cheques)
- (g) Bill of lading
- (h) Insurance policy.

### **2.16.8 Mineral Royalties**

Holders of mining leases are obliged to pay royalties at determined rates to the government on month to month premise but not on quarterly premise.

### **2.16.9 Communication Service Tax**

This is a tax on communication service providers in light of turnover. The scope of this duty has been extended to incorporate the accompanying:

- a. public/corporate data operators
- b. providers of radio (FM)broadcasting services
- c. providers of free- to-air television services.

### **2.16.10 Tax Stamp**

This is a tax imposed on operators in the informal sector. The amount paid is based on turnover and nature of product but not on profit.

### **2.16.11 Vehicle Income Tax**

This is a tax imposed on commercial vehicles. It is paid quarterly.

### **2.16.12 Airport Tax**

This is imposed on both domestic and international travels. It varies depending on the passenger class and the place of destination.

### **2.16.13 National Fiscal Stabilization Levy**

This levy was imposed on businesses in 2009 but has been abolished from January 2012. ( PKF 2012)

## **2.17 Tax Collection in Ghana**

With regard to improving governance, the tax system is very important in improving good governance because it plays a threefold role. Firstly, a sound macroeconomic policy is a very critical precondition for stability, equity and long-term growth. For economic governance to improve the core elements are adequate fiscal policy and its administrative implementation, effective and efficient tax collection system and sound financial management. Secondly, for any state to be financial independent there should be increases in revenue collection through taxes, fees or user charges, to reduce the state reliance on foreign transfers. The government is able to finance and provide public goods be it justice, security, or social services Independent of the conditionality of external donors. The underlying assumption is that there exists a close link between mobilising internal revenue and good governance. Thirdly, the tax system bears an inherent conflict between "the state" and "the citizen", which is due to different levels of rationality. While in theory it is the responsibility of the state to provide for it citizens and for every person to contribute financially to strengthening

the state's capacity, in reality citizens usually follow a free rider's attitude and avoid taxation as much as possible. Therefore, a responsible, democratic, and inclusive state must ensure that tax collection is based on transparent and contestable rules in a fair manner. The way in which revenue is collected by the state mirrors its respect for citizen's rights. Transparency and accountability in the tax system are all the more crucial as the tax administration deals with money and therefore there is receptive to unofficial payments or even corruption.

Compared to other African countries, Ghana's performance in revenue mobilisation looks quite impressive which according to IMF estimations, tax revenue collection equals 16.3 per cent of GDP; in Western Africa, only Côte d' Ivoire which provides for a higher rate of revenue collection (18.7 per cent of GDP), while comparable figures for most other African countries are well below 15 per cent.(GTZ 2002)

According to the World Bank tax revenue in 2011 was 14.87% of GDP. Tax revenue refers to compulsory transfers to the central government for public purposes. The bulk of Ghana's central government revenue is administered by three revenue agencies. These are the Internal Revenue Service (IRS), VAT Service (VATS), and Customs, Excises and Preventive Services (CEPS) now collectively called Ghana Revenue Authority (GRA). IRS is responsible for administering the Income Tax Act (comprising Individual Income Tax and Profits Tax) as well as some minor taxes. In Ghana, the Personal Income Tax is a tax collected from individuals and is imposed on different sources of income like labour, pensions, interest and dividends. Revenues from the Corporate Income tax is a tax collected from companies. Its amount is based on the net income companies obtain while exercising their business activity, normally during one business year. Revenues from these Income Taxes are an important source of income for the government of Ghana. VATS is commissioned

with collecting inland VAT, while the task of CEPS consists in collecting excises and trade taxes, including customs duties and VAT on imports (World Bank 2015).

## **2.18 Standards in Automation**

The whole scope of the computerization task is critical to inspect when you make benchmarks for test automation . In the event that you ignore something while drafting the standards, it can be costly to change guidelines after. A few arrangements of guidelines for computerization are:

### **1. Test Devices (software)**

There are numerous automation test apparatuses available. Some of them were intended for testing a particular class of uses. Case in point, most test instruments have both a scripting dialect and catch/playback devices, while others were intended to be basically for catch/playback. Chances are you will utilize both the catch/playback and the scripting dialect highlights, regardless which device you pick. . 2. Libraries

Every project has only one library and that there is no duplication of usefulness in the library. Case in point, if there is a library record that as of now contains a few capacities to make arbitrary numbers, all irregular number capacities in the library ought to be in that document. Having only one library of schedules instead of a few will spare time in library support.

### **3. Logging**

Having a typical logging configuration is major for computerization that can be comprehended and repaired by everybody on the group. Consider what the log records ought to resemble. Should they be in plain content?

Will individuals who are not acquainted with the computerization have the capacity to peruse the log records and comprehend the outcomes? Does the test device have

manufactured in logging usefulness? Provided that this is true, will it address your issues, or will it be important to compose a custom logging engine?

#### 4. Error handling

What ought to the tests do when they experience a slip? Should they log pertinent data about the disappointment, endeavor to tidy up, and proceed onward to the following test? Then again, would it be a good idea for them to quit everything, leaving the product in the disappointment state until somebody explores the disappointment? Should there be diverse levels of lapse taking care of, where the mistake is taken care of distinctively in view of the seriousness of the disappointment?

#### 5. Environment

What is the default automation environment? For instance, will automation keep running at stand out screen resolution and colour? On the other hand, will the tests need to keep running with a few distinct resolutions and colour? Assuming this is the case, which ones? What number of intelligent drives is on the test machine? What amount of free space will be on every commute? Which working system(s) will the automation need to keep running on? Which dialect renditions of the product will be bolstered? Will the application under test be introduced before any tests start?

#### 6. Introduction and Tidy up Schedules

The automation work that is called toward the starting and another capacity that is called toward the end of each script. There will probably be circumstances where there is a need to roll out improvements before running any test, and having an introduction routine called by each script makes this conceivable.

#### 7. Unattended Running

Should there be a prerequisite that scripts must run unattended (With no client collaboration once the test has begun)? On the off chance that this prerequisite is set

up, and the test script needs data from the client, can the test read the data from a design document that may be altered by the client before running the test? If client collaboration is permitted, under what conditions is it permitted? At the point when is a test permitted to provoke for data, and what kind of data can the test solicitation?

#### 8. Support and temporary files

On the off chance that an experiment needs to load or read data from an information record, where will the document be found? In the event that the test needs to make an nonpermanent record, where ought to the test make the document? Should the test be obliged to erase its nonpermanent documents when wrapped up?

#### 9. Documentation

. By what means will experiments be recorded? In what manner will library schedules be recorded? What sort of documentation ought to show up as remarks in the source record?

#### 10. Source Administration

Who has authorization to change the source code for individual test scripts or for the library? At the point when redesigning library documents, what survey procedure ought to be set up to guarantee changes are not made that will break test scripts?

Standards help you accomplish operational magnificence by

1. Improving performance
2. Lowering maintenance costs
3. Reducing downtime
4. Enhancing operability
5. Saving money

6. Improves communication (Brian1999).

### **2.19 Empirical Literature on Challenges in Automation of Tax Collection**

Notwithstanding the benefits of automation, Ward and Dietmar (2007) noted that automating tax collection has cost implications, which vary from country to country and according to the initial situation of the tax administration in terms of available ICT technology, human expertise and the structure of tax administration (Peled, 2008). The success Booz et al.(2007) argues, depends on strong political will and support for the automation or 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 tax automation systems (Hollingsworth, 2005; Gutierrez, 2008).

In many developing countries taxpayer services which are increasingly recognized as a key element in promoting compliance are weak. Much attention is often needed to modernize and design services to encourage voluntary compliance. The Automated Tax Office (ATO), for instance, has a multi-purpose taxpayer services, education and communication programme differentiated by taxpayer segment (large, medium, and small businesses) designed to encourage compliance.

Corruption in revenue authorities not only reduces short-term revenues but also creates a long-lasting erosion of compliance. Methods to address corruption in Revenue assessments (including simplified, transparent, and ideally automated procedures, and the potentially beneficial signaling effect of high-profile prosecutions), are some experiences. But escaping from the bad equilibrium of high corruption and low revenue is hard. As in most Revenue assessment matters, strong

political will to drive anti-corruption policies is crucial, ideally as part of a whole-of-government approach (Michael Keen et al 2015).

Compliance with the legal obligations affects the revenue yield, efficiency and fairness of any tax system. Noncompliance undermines revenue, distorts competition (putting the noncompliant at an advantage), and compromises equity (both horizontally between taxpayers otherwise alike, but differing in their degrees of compliance and, potentially, vertically to the extent that the better off escape their obligations more extensively). Governments anxious for revenue may concentrate their efforts on more compliant taxpayers, widening the distortions and a perception of unequal treatment can jeopardize wider willingness to comply.

The costs of automation to both government and the taxpayer are hard to measure, but can be significant. Meeting their obligations imposes some cost on taxpayers: the opportunity cost of an owner manager's time, for instance, or those of taking professional advice. Measuring these costs is not easy much harder than measuring aggregate spending on Revenue assessment. Filing a VAT return will cost much the same, whatever the net amount remitted. These are commonly found largely on small businesses, potentially leading to a failure to register (becoming a 'ghost') or a reduction in activities to a level at which tax is not payable (Michael Keen et al 2015)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY AND PROFILE**

#### **Introduction**

The research methodology describes the procedure or philosophical basis used to achieve the research. (Dawson 2002). This chapter therefore outlines the methodology employed by the researcher to gather information to write the report. This included the administration of questionnaires to officials at the Ghana Revenue Authority, Kumasi Asokwa. In undertaking this research both primary and secondary data were used. The chapter likewise incorporated the research design, sampling technique as well as data collection tools.

#### **3. Research Design**

The primary aim of this exploration study is to examine the automation of tax collection by Ghana Revenue Authority (Asokwa office).The researcher adopted qualitative methodology of gathering information remembering the theme under study and the descriptive research methodology was utilized in testing the research questions on the target population concerning the status of the subject under study.

#### **3.2 Source of Data**

The research data was collected from both secondary and primary source.

##### **3.2.1 Primary Sources of Data**

The source of primary data was mainly the interview and questionnaire conducted by the researcher. The researcher found it necessary to use a semi-structured questionnaire to ensure that respondents give the relevant information relating to the

objectives which the researcher set to achieve and when the answered questionnaire were received from officials the researcher fillip through to ensure that answers which were not clear to the researcher were asked for further clarification. The personal interview method which was also employed was flexible for the respondent with the researcher meeting the respondents at their offices and had face to face conversation in which the researcher asking questions pertinent to the objective of the study. Ambiguous answers were further followed with another question in a clearer way for the respondent to give his /her view

Several advantages are associated with this method and they include:

1. Access to direct data or response from selected respondents
2. Unbiased information
3. Original data

### **3.2.2 Secondary Sources of Data**

The secondary data was extricated from published reading materials, and information from the Ghana revenue authority website (G.R.A) and different productions on automation of taxes. Information was additionally accumulated from scholarly diaries and papers on automation and various exploration works that have been published on the subject in the electronic media.

### **3.3 Population**

The aggregate populace included in this study was the permanent workers of the Ghana revenue authority (G.R.A) Asokwa office consisting of the both direct and indirect section. However the sample size for the research was restricted to twenty (20) authorities. The main reason was that respondents were in great position to give

the appropriate responses to the subject matter of the study. What is more, perspectives and feelings from stakeholders likewise contributed significantly to the exploration.

### **3.4 Sample Size and Sampling Technique**

The sample size for the research was restricted to twenty (20) authorities. The main reason was that these respondents were in great position to give the appropriate responses to the subject matter of the study. What is more, perspectives and feelings from stakeholders likewise contributed significantly to the exploration. A purposive sampling technique was also utilized to choose respondents for the study. This strategy was viewed as suitable in light of the fact that it guaranteed that the respondents were carefully selected from the population given the sort of information that was required by the researcher in order to achieve the objectives set out in the research study. However the researcher ensured that selected sample was a representative of the population.

### **3.5 Data Collection Instruments**

The researcher went to the Asokwa branch of Ghana Revenue Authority in Kumasi to ascertain the data using two main instruments. First, conduct the interview with the sampled respondents. The second was the use of questionnaire.

**3.5.1 Interview:** Interview is a form of data collection where there is a face to face conversational encounter between the researcher and the respondents. It is a popular form of data collection and can provide a rich source of material when properly conducted .Despite the fact that interviews are time consuming, expensive and there is

high risk of interviewers' effect on responses of the interviewee. (Tashakkori and Teddlie 1998)

The researcher had the opportunity to interview some staff of the Asokwa district office of GRA to obtain their views regarding the subject matter of the research. The personal interview was conducted with the help of an interview guide which the researcher deemed appropriate working tool considering the objectives and questions. This approach was cautiously selected so that the researcher could interact on a personal level with the staff.

**3.5.2 The questionnaire:** A semi-structured questionnaire was administered by the researcher to staff of Asokwa GRA and contained both open and closed ended questions of which some demand yes or no responses while others were opened ended in which spaces were provided for the respondents to fill in the appropriate answers with the aim of gaining the right information. The questions were related to the specific objectives set out by the researcher. Thus, in some cases, respondents were to choose the option that best reflected their opinions. The questionnaires afforded respondents much flexibility and privacy in answering the questions and were simple and unambiguous as such, did not pose any problem as regards interpretation. Respondents were allowed sufficient time of one week to complete the questionnaire.

### **3.6 Data analysis**

In trying to understand the automation of tax collection by (Asokwa office) of the Ghana Revenue Authority, data collected from the responses were grouped and analyzed using tables and charts. In order to ensure clarity of expression and exactness, all information and materials gathered was appropriately examined. The

raw data was then sorted out and broken down utilizing tables and diagrams considering the issues for which the research was intended to address. The vast majority of the discoveries of the research were clarified more significant utilizing the descriptive technique.

### **3.7 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 Service (VATS) and the revenue agencies governing board (RAGB) Secretariat were converged as per Ghana revenue authority Act 2009, ACT 791. The Ghana revenue authority (GRA) subsequently replaces the revenue agencies in the administration of taxes and custom duties in the country. The Ghana revenue authority (GRA) has been set up to:

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

The setting up of the GRA is a perfection of years of arrangements to streamline the organization of taxes collection in Ghana which started in 1986 when CEPS and IRS were taken out of the civil service and made semi-independent and self accounting public sector institution separate board. 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.

## **CHAPTER FOUR**

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

#### **4.0 Introduction**

This chapter examines and analyses in detail all data collected on the sampled respondents in examining the automation of tax collection of Ghana Revenue Authority, a case study of the Asokwa office of Kumasi. The findings and the analysis carried out on the responses as outlined in the objectives of the study as level of automation, assess whether automation of tax collection meet best standards, and the challenges in the automation from some selected employees of the Asokwa office of 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 Level of Automation of Tax Collection**

Regarding descriptive explanations in ensuring clearer illustration of data collected, tables and charts have been adopted to make sure that data gathered from the field will aid in making the research findings more understandable. The following analysis shows the responses received from twenty (20) selected officials of the Ghana Revenue Authority, Asokwa office Kumasi for the study. The target respondents were selected to provide answers to the questionnaire and interview and were also expected to provide reasons for their choice of an answer.

#### 4.1.0 Introduction of Automation

**Table 4.1 Introducing Automation**

Response	Frequency	Percentage (%)
Yes	20	100
No	0	0
Total	20	100

Source: field research June 2015

From table 4.1., officials were asked to indicate whether they were in agreement with the introduction of automation system, total respondents (20 respondents) representing 100% mentioned that they agreed with the introduction. They indicated that the system has reduced delays and human intervention in all processes and operations regarding revenue collection. It also assists in tracing revenue in all sectors and guides the authority in its core activity of collecting revenue

#### 4.1.1 Areas of Automated Operations

**Table 4.2 Areas of Automated Operations.**

Areas	Frequency	Percentage (%)
Indirect taxes	20	100
Direct taxes	0	0
Total	20	100

Source: field research June 2015

From table 4.2 officials were asked to indicate the extend of coverage .All the respondents agreed that only the indirect taxes area (customs and vat) are automated while the direct taxes comprising the Internal Revenue Service is yet to be automated .10 officials respondents representing 50% agreed that the level of automation is low

between 1-20 %, 8 representing 40% agreed it is between 21-40% this showed that the level of automation is still very low less than 50%.The reason is that the direct tax which forms the largest percentage is still manual ,however the computerization is still ongoing and that the taxpayer declaration is still not credible.

#### **4.1.2 Consultation of Stakeholders on Automation.**

**Table 4.3 Consultation of Stakeholders on Automation.**

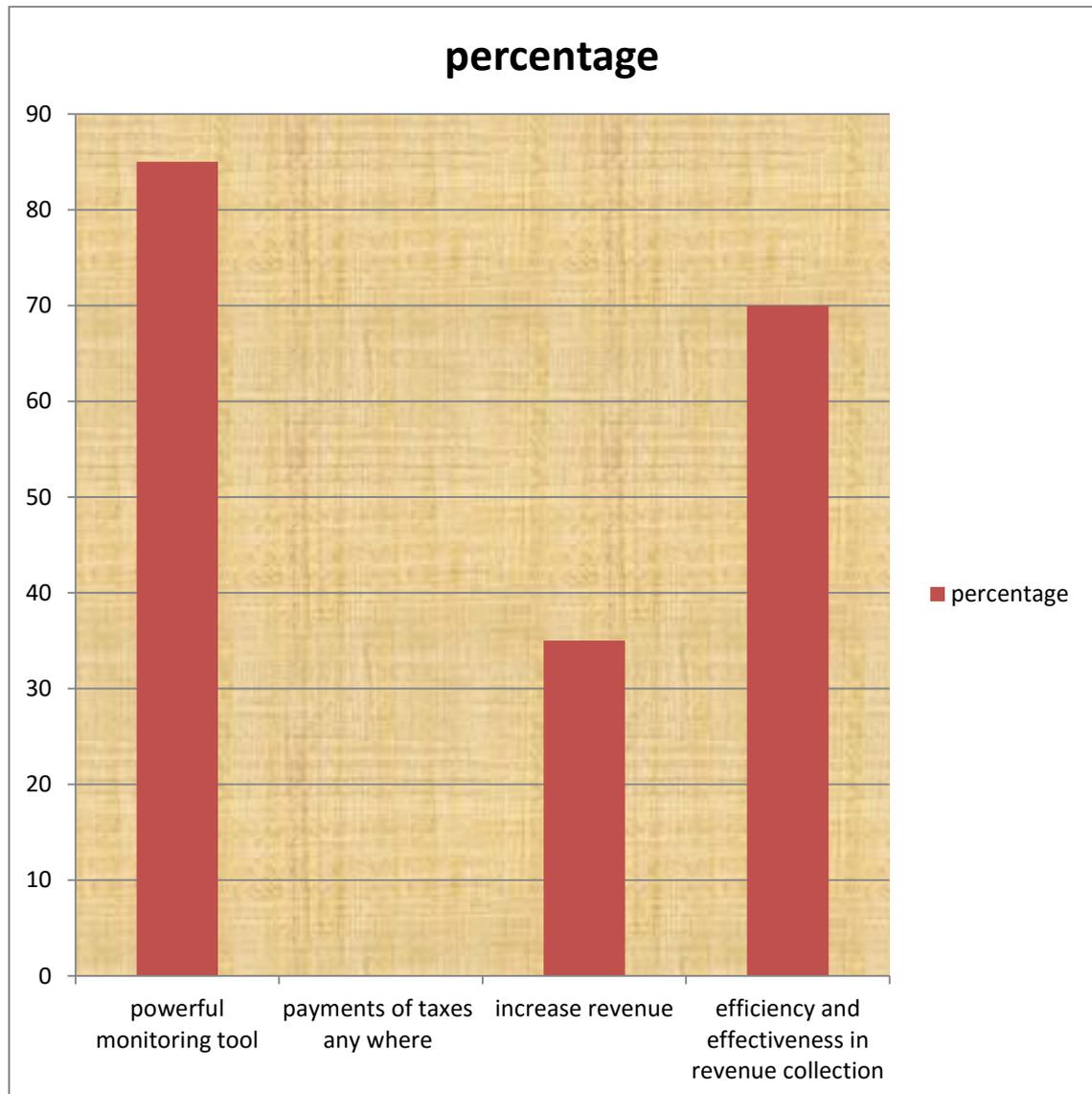
response	frequency	Percentage (%)
Yes	10	50
No	10	50
Total	20	100

Source: field research June 2015

With table 4.3 officials were asked to indicate whether discussions were held with the staff and stakeholders to ascertain how the automation should be introduced and operated. 10 responses out of total responses representing 50% all agreed whilst the remaining 50% said they disagreed. It is observed from the analysis that some sections of the staff have not had discussions to know how the automation system should operate and function. It could be observed from the discussion that broad consultation was not made.

### 4.1.3 Effects of Automation

Figure 4.1 Effects of Automation



Regarding chart 4.1, respondents were asked to indicate the difference the introduction of the automation has brought to GRA. 85% of the respondents (17officials) indicated the introduction of the automated system serves as a powerful monitoring system tool for GRA. 70% (14 respondents) said the introduction has brought efficiency and effectiveness in revenue collection while 35% (7officials)

believed the automation increased revenue. This is an indication that the automation system has brought differences in the operations at Ghana Revenue Authority.

#### **4.1.4 Accessibility of the Automated System by Staff.**

**Table 4.4 Accessibility of Automated System**

response	frequency	Percentage (%)
Yes	20	100
No	0	0
Total	20	100

Source: field research June 2015

Table 4.4 showed that, all 20 respondents representing 100% interviewed disclosed that the automated system was not readily commonly available for all to access. All respondents were quick to add that the automated system was available to only the section in charge of indirect taxes (custom and vat) and that it was still ongoing

#### **4.1.5 Accessibility of a Decentralized Automated Revenue Collection System and Manual hard Copy Records.**

**Table 4.5 Decentralized Automated Revenue Collection System**

response	frequency	Percentage (%)
Agree	100	100
Disagree	0	0
Total	20	100

Source: field research June 2015

From table 4.5 all respondents agreed that automated decentralization of revenue collection allows improve and timely access to information than the manual hard copy records. it has

improved transparency and credibility in some taxpayers thus increase revenue

#### 4.1.6 Whether Automated System addresses all Operation Issues at GRA

**Table 4.6 Operational Issues by Automation**

response	frequency	percentage%
Yes	20	100
No	0	0
Total	20	100

Source: field research June 2015

All 20 respondents indicated that the automated system do not address all operational issues. Some of the reasons they cited include; the automation is not in all the District Offices, not all the officers are trained on it hence difficult to assess it success.

#### 4.1.7The Performance of the Automated System.

**Table 4.7 Performance of Automated System.**

response	frequency	Percentage (%)
satisfactory	20	10
very satisfactory	0	0
excellent	0	0
Total	20	100

Source: field research June 2015

All the total respondents representing 100% indicated that the system was satisfactory .They were satisfied with the system performance .None however supported that the

system was excellent. Some of the reasons stated are; not much education was done on the system usage and automation is still on the low scale and integration and segregation issues still pending.

#### 4.1.8 ICT Application on Taxation and Tax Administration.

**Table 4.8 Application on Taxation and Tax Administration.**

response	frequency	Percentage (%)
agree	20	100
disagree	0	0
total	20	100

Source: field research June 2015

All the 20 respondents representing 100% agreed that ICT applied on taxation improves tax administration. They indicated that ICT make tax collection much easier and simpler. It also corrects the loopholes in the system.

#### 4.1.9 Appropriate Description of GRA Automated System

**Table 4.9 Appropriate Description of GRA Automated System**

response	frequency	percentage
A. Procedures provided in conventional hard copy media	3	15
B. procedures presented on a computer DVD unit	0	0
C. procedures presented on a computer DVD unit in text or graphical form	2	10
D. procedures presented on a computer based on automatic retrieval, display of soft copy processing of	15	15

step logic and display of results.		
Total	20	100

Source: field research June 2015

15 officials of the GRA representing 75% agreed that automated system refer to procedures presented on a computer based on automatic retrieval, display of soft copy processing of step logic and display of results. While 3 respondents that are 15% believed it is procedures provided in conventional hard copy media, 2 officials representing 10% also indicated it is procedures presented a computer DVD unit in text or graphical form.

#### **4.1.10. Recommendation for Future Improvement.**

**Table 4.10 Recommendation for Future Improvement.**

response	frequency	percentage
A. staff training in automated system usage	9	45
B. system sustainability	5	25
C. data usage	6	30
Total	20	100

Source: field research June 2015

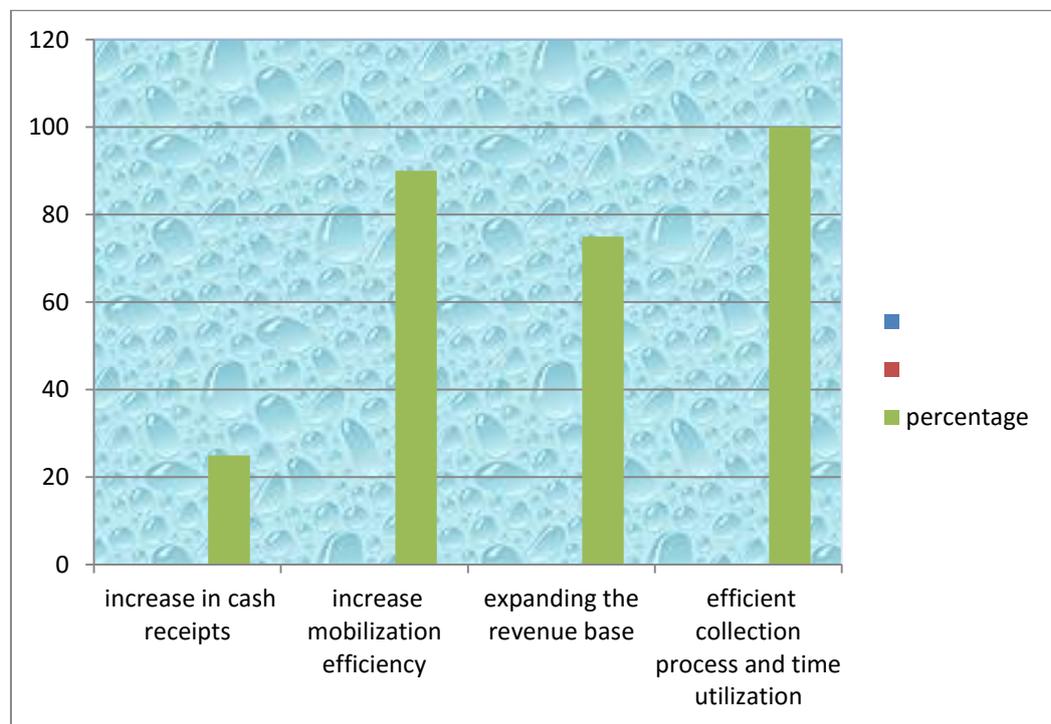
In table 4.10 officials were asked to indicate areas for improvements 9 representing 45% felt staff training on the system usage was recommendable 5 out of the 20 respondent believed system sustainability while 6 representing 30% think it should be data usage. This showed that much education is needed on the automated system operation and performance.

## 4.2 Compliance to Best Standards

This section analyzed the findings on GRA's automation system as against standard practices pertaining to automation.

### 4.2.1 Benefits of the System Usage in Revenue Mobilization.

**Figure 4.2 Benefits of the System Usage in Revenue Mobilization**



Source: field research June 2015

From chart 4.2 above out of 20 total respondents 90 % representing 18 respondents believed that the system usage resulted in increase mobilization efficiency, 75% indicated that it led to expansion of the revenue base while 100% that is all respondents said the automation brought efficient collection process and time utilization in revenue mobilization while only 5 respondent that is 25% believed it results in increase cash receipts. All respondents agreed that the automation system has positive effect on revenue mobilization in that it reduces work load, make monitoring easy, differentiation between medium and small tax payers enabling better service to them, speed of work and tracking of taxpayer.

#### 4.2.2 The Automated System and Achievement of Revenue Targets

**Table 4.11**The Automated System and Achievement of Targets

response	2012	2013	2014
Yes	0	0	20
No	20	20	0
Total	20	20	20
frequency	20	20	20
percentage	100	100	100

Source: field research June 2015

In table 4.11 Respondents were asked whether they achieve revenue target for the previous three years. The responses showed 100% for 2012 and 2013 that, they were not able to achieve the set targets however in 2014 they were unanimous again in their response that they achieved the target to about 97% .the reasons were partial due the automation system which helps in tracking and tracing the taxpayers and they could not achieve the 2012/13 target due to the economic conditions. They could not give the researcher figures because it was against the code of ethics.

#### 4.2.3 The automation system and standard practices on revenue mobilization

**Table 4.12** The automation system and standard practices on revenue mobilization

response	frequency	percentage
Agree	20	100
Disagree	0	0
Total	20	100

Source: field research June 2015

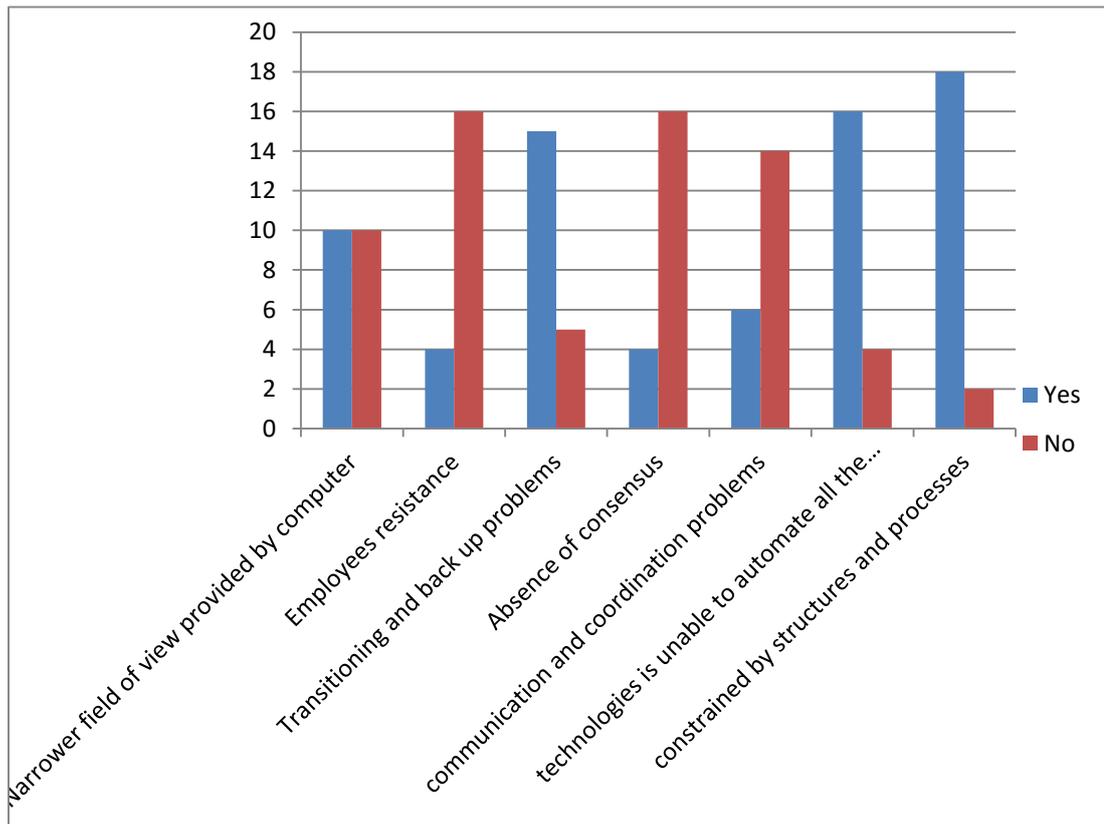
In Table 4.12 respondents were asked whether the automated system meet standard practices regarding revenue mobilization .All 20 officials representing 100% agreed that the introduction of the system met current practices because they are able to speed up processes faster and efficiently, knowing the taxpayer position at any point in time, monitoring revenue collection, tracing the taxpayers and differentiating between large, medium and small taxpayers as pertained in other jurisdictions using the automation.

### 4.3 Challenges of Automation of Tax Collection

This section also analyzed the challenges that the introduction of the automation system have been engulf with.

#### 4.3.1 Existence of challenges on automation system in tax collection

**Figure 4.3 Existence of challenges on automation system**



From the figure 4.3 above respondents were asked to indicate the existence of some challenges with the automated system in tax collection. 16 officials representing 80% believed that there were no staff resistance while 4 officials that is 40% believed there was staff resistance. 75% of respondents believed there was transitioning and backup problems while 25% said there was no such problems. 16 respondents that is 80% indicated there were no absence of consensus 20% believed there were absence of consensus. Opinions divided when it come to narrower field of view provided by computer 50% believed the computer narrow the view of workers and therefore kills initiative as everything is to be done is spelt out by the automated system. 50% did not believe so. 70% of officials responded that there were no communication and coordination issues when it came to the use of the automated system while 30% also believed there were issues of communication and coordination. 16 officials representing 80% affirmed technologies are not able to automate the entire desired task. Only 20% agreed that technologies able to automate all the desired task. 18 respondents that are 80% agreed that the automated system is constrained by existing structures and processes while only 10% disagree with that assertion.

#### **4.4 Suggested Solutions**

Applying automation of revenue collection as solutions towards achieving the strategic goals and targets of government revenue 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. There was the need for the system to speed up to cover all the areas.

Improve client services by improving communication between tax administration and taxpayer will significant improve revenue collection at all GRA Divisions connected to the 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.

In order to complement the positive gains by the government through the introduction of the automation system, the government must also use the available legal sanctions and penalties where necessary and possible.

#### **4.5 Discussions**

From the analysis above it confirm the facts of Holniker 2005 that, the use of the automation has brought a significant improvement in revenue collection time for tax payers (Chatama, 2013). It reduces errors, processing times and costs; improvement in client service and promoting voluntary compliance and hence increasing revenue collections. Vasudevan 2007 also associated to the significant positive role of automation on containing the high cost, time inefficiency and ineffective of the manual procedures of tax administration and revenue collection, corruption, delays and computing errors.

The analysis showed that the introduction of the automated system at GRA has actual serve as an efficient and effective way of revenue collection and therefore increase revenue and, also for monitoring both performance and taxpayers. Respondents unanimously agreed that the current automation was not able to address all the operational issues of GRA which supported (EPRI 2007) that modern technology is not able to automate all the desired tasks. Therefore, some human factor is still necessary to insure that the entire system functions properly and that safety and product quality.

All officials agreed that ICT applied on taxation improves tax administration. They indicated that ICT make tax collection much easier and simpler. It also corrects the loopholes in the system, which collaborated what (Dias2009 andUSAID2012) stated.Automation is pivotal to the provision of services. In the area of taxes, trade facilitation is a principal service(Dias, 2009). The Revenue Authority Digital Data Exchange (RADDEX) seeks to reduce the time and cost of cargo clearance between by providing secure information bridge that can be readily accessed by authorized users (USAID, 2012). IRS and VATS also made the auditing of taxpayers and collection of information on tax liabilities more effective and accurate (Christian 2008).

All officials agreed that automation has the benefit among others of efficient collection processes and time utilization while 85% believed it increases mobilization efficiency that confirmed the assertion of (Nyambo2009 and Gunning 2007) that ICT has the capability in speeding up processing time in business Victor – Nyambo (2009),cost and effectiveness in terms of revenue collection (Gunning, 2007).

This also showed why the respondents unanimously agreed that the automation system met best standard because they were able with the introduction of the system to achieve 97% of the set targeted revenue in 2014. The performance in 2011 which was 46.6% over that of 2010 was as a result of the reforms such as integration and modernization through information sharing between customs and domestic taxes; streamlined clearance on permits; introduction of Ghana integrated cargo clearance system to track location of goods at the ports and streamlined tax exemptions.

Chatama2013also agreed that ICT usage has minimized errors in returns processing and in assessment. He also, opines that100% of Large Taxpayers agrees that processing time and responding to taxpayers queries have been reasonably shortened.

As a result, 100% of Taxpayer and Tax consultants (firms) prepare tax returns using computer and 41.7% submit them via Internet (chatama 2013).

According to the Organization for Economic Cooperation and Development (OECD), in a public sector setting, a significant proportion of ICT projects experience problems and/or fail, lack of human expertise and the structure of tax administration (Peled, 2008). Specifically, the governance arrangements are frequently weak and as a result budgets are spent in excess, deadlines are exceeded and often the results are low quality of the new system which is far below expected standard agreed when the project was undertaken” (OECD, 2001). According to Leydesdorff and Wijsman (2008) budget overruns result from a combination of organizational, political and technical complexities. The results from the question posed to the respondents collaborated clearly, issues raised by (Peled and OECD) on challenges of automation. It is observed that staff resistance, communication and coordination and absence of consensus were the issues that were not a problem while opinions were divided on the computer providing narrower field view.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

The purpose of this research was to examine the automation of tax collection of the Ghana Revenue Authority, level of automation, the standard practices and the challenges on revenue collection. This chapter consists of the summary conclusion and recommendation.

#### **5.1 Summary**

The research study commenced with the specific questions to solicit the view of respondents for evaluation, the findings of this research would help in many ways of improving revenue collection processes as well as implementation of areas of operations on revenue collection.

##### **5.1.1 Level of Automation of Tax Collection**

The 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 study on automation indicated the following.

1. Improved revenue collection processes and quick tax clearances
2. A powerful monitoring tool for GRA
3. The automation brought efficiency and effectiveness in revenue collection because the system is perfectly managed to prevent fraud, evasion and under-collection

4. Improved day by day reporting of money receipts and due installments to be gathered is consequently produced by the system.

### **5.1.2 Compliance to Best Standards**

The results suggested that the automation of revenue collection met best standard practices as in any part of the world which was significant and positive implying that with automation of revenue collection, the amount of collection has increased for the government as shown by the respondents of GRA particularly 2014

### **5.1.3 Challenges of Automation of Tax Collection**

The following were key challenges outlined by majority of respondents with the automated system; transitioning to back up procedures in the event of computer procedures system malfunction, the current technologies is unable to automate all desired task ,the system is constrained by the existing structures and processes ,and though the introduction of the automated system was good the level of automation was excessively low less than 50%and areas which has been automated is not readily available for all to access. Though automated systems have been proven to be capable of introducing massive efficiencies to business processes that can result in increased revenue for government the accessibility to all staff for quick processes was a problem.

## **5.2 Conclusion.**

The results and evidence from the research study of GRA confirmed the suggestion that automation leads to efficiency of tax administration and hence tax collection, as was testified by officials that automation had led to efficiency and effectiveness in revenue collection. The implications were that the computerization of tax

administration of GRA serves as a monitoring tool and therefore increases revenue. Secondly, the results suggested that the automation has met standard practices as pertained in other jurisdiction because it speed up processes faster and efficiently, knowing the tax payer position at any point in time, monitoring revenue collection and differentiating between large, medium and small taxpayer .

The complexity of automation resulting from integration of various disciplines such as VAT, CEPS and IRS however 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 ,issues of structures and processes, transitioning and backup and the ability to automate all desired task to achieve full automation are yet issues to be resolved to ensure complete efficiency.

### **5.3 Recommendations**

Ghana Revenue Authority (GRA) can generate extra income when it increases its collection efficiency and extending its income base. The numerous difficulties confronting GRA can be addressed in some measure by having access to financial resources. In that capacity, the essential aim of computerization (automation system) revenue collection must be to significantly increase cash receipts.

#### **5.3.1. Increase Progress of Automation**

One major concern that every respondent was interested in is the low level of the automation. People in place of authority should speed up the process. Due to this low level accessibility of the system to all staff was a problem which rather made it difficult for clients and staff to feel the benefits that system is suppose to bring

### **5.3.2. Staff Training**

There is need for training of staff on the new system .It has been revealed from the research that not all staff knows how to run the system or how the system is operated .This might possibly be due to the non availability of it to all. Seminars and workshops should be organized to train and upgrade workers on the system.

### **5.3.3. Strengthand Backup**

The automated system should have very powerful backup not only within the GRA but also outside elsewhere to provide safe backup to forestall any eventuality in the event of system malfunction or failure or natural disaster. Upgrading and installation of new computers are also required which ensure speedy processing of documents and better customer services.

### **5.3. 4. Control of the Collection Process**

Fraud, evasion and under-collection can be avoided by tightening the revenue collection processes. 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.

### **5.3.5 Efficient Time Utilization and Communication**

The automated system should improve client services by improving communication between tax administration and taxpayers'. Actual transactions should immediately alert the collection officer of amounts due, automatic recording actual spot collection amounts. Late collections then become the problem of the payee instead of the revenue collecting organization.

**APPENDIX**

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF BUSINESS**

**RESEARCH QUESTIONNAIRE**

Automation of tax collection by Ghana Revenue Authority (GRA). Case of

ASOKWA GRA

This questionnaire is designed to assess the automation of tax collection by GRA as an effective means of revenue mobilization. This is an academic exercise.

Please tick the appropriate box or write in the space provided. Note that any information provided would be treated confidential.

**Section A**

**Level of automation of tax collection**

1. Do you like the idea of introducing automated system? Yes ( ) No ( )

1a if yes assign

reasons.....

.....

.....

1b if no why.....

2a. Indicate the areas of automated operations.....

2b.Areas where automation does not cover.....

.....

.....

.....

3a. To what extent do you think is the percentage of coverage of the level of automation

A. 1-20% ( )

B. 21-40% ( )

C. 41-60% ( )

D. 61-80% ( )

E. 81-100% ( )

3b. Assign reasons for your

choice.....  
.....  
.....  
.....

4. Were the staff and stake holders consulted on the introduction of the automated system? Yes ( ) No ( )

4a. If yes in what way.....

4b. If no why.....

5. What difference have you encountered since the introduction of the automated system? Tick where applicable.

A. A powerful monitoring tool for GRA ( )

B. payment of taxes anywhere ( )

C. increase revenue ( )

D. efficiency and effectiveness in revenue collection ( )

E. where others

specify.....

6. Is the system readily available to all to access? Yes ( ) No ( )

6a. if no why.....

6b. if yes assign reason.....

7. Do you agree that a decentralized automated revenue collection system allows improved and timely access to information than the usual manual hard copy records?

Agree ( ) disagree ( )

7a. if you disagree why.....

8. Has the introduction of automated system improved revenue mobilization at GRA?

Yes ( ) No ( )

8a. if yes justify.....

8b. If no why.....

9. Are you convinced that the automated system addresses all operation issues at

GRA yes ( ) No ( )

9a. If no state the issues

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

9b.if yes state the

reasons.....

10. How would you grade the performance of the automated system?

- A. satisfactory ( ) B. very satisfactory ( ) C. excellent ( )

10a.Assign reasons for your answer.....

11. Do you agree with the view that ICT application on taxation improves tax

administration? A. agrees ( ) B disagrees ( )

11a. State reasons for your

choice.....

12. Which of the following appropriately describe GRA automated system

- A. procedures provided on conventional hard copy media
- B. procedure presented on a computer driven video display unit.
- C. Procedures presented on a computer driven video display unit in text or graphical form
- D. procedure presented on a computer based on automatic retrieval, display of soft copy processing of step logic and display of results
- E. others specify.....

13. Which area would you recommend for improvement in the future?

- A. staff training in automated system usage
- B. system sustainability
- C. Data storage
- D .others specify.....

**SECTION B**

**Effect of automation of tax collection in revenue mobilization**

12. In your view what are the likely benefit of the system usage in revenue mobilization?

- A. Increase in cash receipt ( )
- B. Increase mobilization efficiency ( )
- C. Expanding the revenue base ( )
- D. Efficient collection process and time utilization ( )
- E. Others specify.....

13. Have you made any suggestion in the past about the automated system regarding effective revenue collection that was not considered? Yes ( ) No ( )

13a If yes state some of them.....

13 b. if no why.....

14. Do you achieve revenue target under the automation system for the last three years?

**Year yesNo justify/ remark**

2012	( )	( )
2013	( )	( )
2014	( )	( )

15. To what extent do you agree that the automation meet standard practices on revenue mobilization

A. agree ( )      B. Disagree ( )

15A State reason for your choice.....

16. What are the main areas for improvement in relation to revenue mobilization?

.....

.....

.....

.....

.....

**SECTION C**

**Challenges of automation in tax collection**

17. Indicate the existence of the following challenges in relation to automation system in tax collection

Challenges Yes No Reasons

1. Transitioning, to backup procedures in the event of computer procedures

System malfunction ( ) ( )

.....

2. Narrower field of view provided by Computer procedures system than

With paper based procedures ( ) ( )

.....

3. Failure to recognize problem with the computer procedures system or to take

appropriate action due to Inattention ( ) ( )

.....

4. Potential negative impact on communication and coordination ( ) ( )

.....

5. Current technologies is unable to Automate all the desired tasks ( ) ( )

.....

6. Resistance from revenue Administration employees ( ) ( )

.....

7. Create problems in the Absence of consensus ( ) ( )

.....

8. Constrained by existing Structures and processes ( ) ( )

.....

9. Others specify.....

.....

.....

.....

.....

18. In what ways can these challenges be addressed?

**Challenges solutions**

1. Transitioning, to backup procedures In the event of computer  
proceduresSystem malfunction

.....

2. Narrower field of view provided by Computer procedures system than with  
paper based procedures

.....

3. Failure to recognize problem with the computer procedures system or to take  
appropriate action due to Inattention

.....

4. Potential negative impact on communication and coordination

.....

5. Current technologies is unable to Automate all the desired tasks  
.....
6. Resistance from revenue Administration employees  
.....
7. Create problems in the Absence of consensus  
.....
8. Constrained by existing Structures and processes  
.....
9. Others specify.....

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