Impact of Computerized Information System on Tax Collection: A Case Study on Ethiopian Revenue and Custom Authority Adama Branch

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Abstract: A computerized information system involves the use of computer hardware and software to perform sorting, storing and retrieving functions that would otherwise have been done manually by a staff of a bank or an owner of a business. This study was conduct on the title impact of CIS on tax collection system of ERCA Adama branch. It addresses four basic research questions designed to assess impact of CIS on tax collection system of the office. For the purpose of the study primary data were used, in which more information was obtained by questionnaires and unstructured interviews. The researchers used both open and close-ended questionnaires to employees of the office. The researchers used a census method of sample size determination and descriptive design of data analysis. After the data has gathered, it was analyzed and presented. The data analysis has been carried out based on tabulation and percentage method. Careful interpretation of analyzed information would carry out to arrive at reasonable generalization. Ultimately, the research is expected to provide reasonable results that could help the management ERCA Adama branch to make reasonable decisions for their future activity. The major finding of the study states that CIS system in one or another way is important for government revenue collection in ERCA Adama branch office.

Keywords: SIGTAS, CIS, ERCA, Tax Collection

1. Introduction

1.1. Background of the Study

A computerized information system involves the use of computer hardware and software to perform sorting, storing and retrieving functions that would otherwise have been done manually by a staff of a bank or an owner of a business. Prior to technological advancement, many operations were being kept only on a manual basis whereby the person needs to complete a manual basis document for each activity, and then spend all day or better still a week writing the reports of the day or week into a special journal or ledger. This clearly took some time; time that would otherwise have been spent in managing the business. More importantly, completing the accounting records has sometimes been seen as a hurdle to business, rather than a way of making it more profitable [1].

An information system is an organized means of collecting, entering, and processing Data and storing, managing, controlling, and reporting information so that an Organization can achieve its objectives and goals [2].

Along with the improvements in the technology, information systems is become computerized. Improvements in this technology have replaced manual operation systems with computerized ones. The revolution in the information systems, which started in the early 1950s when the first business computers became available, is still in progress [3]. Large mainframe computers have been replaced by small and fast personal computers at lower costs. As a result, computers in most cases now perform activities previously performed manually. Companies can now capture, process, store and transmit data with the help of computers. Whereas data collection and processing were performed manually in the historical system. Online collection and processing of data is performed by computerized systems [4].

In the context of ERCA the modernization of tax administration is one of the major components of tax return which include computerization of operation through application of different tax collection systems, software, computer networks etc. with different alternatives of application that needs improvement and updating advancement in the system.

1.2. Statement of the Problem

Applying computerized information systems in the tax assessment and collection system of Ethiopian revenue and custom authority in one or another way improve quality of information, reduce time and cost of operation, facilitate decision making process, safeguard assets of the organization, allow strong internal control. It is possible to apply computerized information systems in any organization in any part of the world.

Ethiopia revenue and custom authority Adama branch office is the government body in which its primary objectivity is to collect maximum revenue from tax as much as possible. Thus, the researcher wants to address the impact of the computerized information system on the tax collection system in Ethiopian revenue and custom authority Adama branch. As far as the researcher capacity to review previous findings related to the problem, there is no related research performed mainly in the Adama area and there is a lack of documents. This is due to the fact that the system is a new application and not familiar to the organization. The previous manual information systems used by the organization consume time and cost; rely on physical locks to access it and distortion of files by the employees is high. So the researcher is motivated to show a better system for tax collection that can overcome the above drawbacks of manual information systems. The above listed problems motivate the researcher and want to fill the current gap by addressing the following questions.

1 What is the current tax collection system of the branch office?
2 What is the effect of using a computerized information system on tax collection?
3 What are the necessary infrastructures for Applying CIS?
4 What is the advantage of having a clear and well developed operating system which is feasible to apply?

1.3. The Objective of the Study

1.3.1. General Objective

The overall objective of the study is to examine the impact of the computerized information system in the collection of tax in the case of Ethiopia revenue and custom authority Adama branch office.

1.3.2. Specific Objective

A careful review of the general objective leads to the development of the following specific objectives.

1 To assess the current tax collection system of the branch office.

2 To show the impact of computerized information system application on collection of tax.
3 To identify which types of computerized information system fits to which type of operation in the tax collection system.
4 To examine the necessary infrastructure for applying computerized information systems.

2. Review of Related Literature

Computerized information system is the process of storage and handling of data, which is normally referred to as an operating environment consisting of computer hardware and software under which the tax collection system operates. Computer hardware and Software are interdependent and so one cannot do without the other. The link here is that the type of information system employed determines the operating environment. So, the nature of software used determines its hardware in selecting a computer hardware depends upon several factors like the number of users, secrecy level and the sectional or departmental activities in the bank, etc. [5].

2.1. Major Operations in Tax Collection

A tax collection activity involves a number of distinguishable functions, such as the identification of taxable properties, assessment, collection, enforcement and appeals each one of which could be contracted for in different ways.

2.1.1. Tax Assessment

Tax assessment is a tool that local governments use to exact a property tax rate on residents. The local government in the United States tax assessor is an appointed or elected official charged with determining the value of each taxable property in a municipality and township. They valued properties based on many criteria such as location, age of business, size, and current economic condition. It is not an appraisal and it does not represent a value of worth. It is strictly a value so the tax can be fairly derived for properties that are similar so the similar property pays about the same in tax Local governments use this information to determine the necessary rates of taxation to support the community annual public budget [6].

2.1.2. Tax Collection

A tax collector is a person who collects unpaid taxes from other people or corporations, tax collectors are portrayed in fiction as being evil, and in the modern world shares a similar stereotype to that of lawyers. The first bill that the department sends to taxpayers contains a detailed breakdown on the tax penalty and interest the taxpayer owes an explanation of why they owe this amount and an explanation of the rights and duties during the collection process. If the taxpayers have past unpaid balance, the departments are authorized by law to attempt to collect the debt. If necessary the department may place a lien on their property or business, stop renewal of license and use collection agencies [7].

2.2. Methods of Tax Collection

There are two main methods of revenue collection, namely electronic revenue collection and manual system. Electronic revenue collection is a comprehensive solution for the electronic collection of government fees, taxes and custom duties [8]. This method serves as a means to achieve a cashless environment via the introduction of virtual funds and automate all revenue collection processes, allowing government agencies to exploit the full capabilities of the technology to transform its service to the public. Electronic revenue collection system provides various electronic methods that enable the government to collect all revenue related to the government service, customs and taxes and so forth. Manual system of revenue collection is centrally from one place and unlike the electronic system of revenue collection they inhibit autonomy done using manual receipts. Manual system of revenue collection leads to high cost of collection, fraud, under payment and leakages of revenue.

Designate revenue collection points for convenience and efficiency. In addition, losses through corruption and tax evasion need to be reduced by applying stiffer penalties to corrupt officials and tax evaders. This can be achieved by contracting collections to a private collection agency; thus, increasing revenue from existing sources and reducing cost [9].

2.3. Necessary Infrastructures to Tax Collection

2.3.1. Computer

Computer is as an electronic device for storing and processing data, typically in binary form, according to instruments given to it in a variable program [10]. Computers are electronic devices that can follow instructions to accept input, process that input, and produce information [11].

Computer as an electronic device, operating under the control of instructions stored in its own memory, that can accept data, process the data according to specified rules, produce results and store the results for future use. Computers process data into information. Data is a collection of unprocessed items, which can include text, numbers, images, audios and videos. Information conveys meaning and is useful to people [12].

2.3.2. Network Infrastructure Management

The network infrastructure management team had the following roles currently exists within head office:
1 Network Team Leader;
2 Operating System Senior Officer;
3 Operating System Officer;
4 Communication Senior Officer;
5 Communication Officer;
6 IT Security Officer;
7 The Hardware System Senior Engineer [13].

The team handles day to day activities such as checking of network connectivity, attending to system user issues, application databases related issues such as access problem, and network related hardware, software, software malfunctions, and Virus problems. These troubleshooting would be either personal or remote troubleshooting. They are also into providing access attributes that include creation and modification rights for users. This team has native form of Definitive hardware store (DHS) and Definitive software Library (DSL). With the help of physical or remote access they provide up-gradation and then the End Users support team schedules it with the End User while coordinating with them. They also conduct Security and antivirus management that happens to be a push system followed for the policies and signatures. They get the support by Asset Manager for procuring H/W or S/W from stores, Auction team that floats tenders for H/W and S/W procurement and the team works during normal working hours of ERCA based on Verbal / Telephone from System Users and Letters (Hardcopy) occasionally. They proactively perform self-diagnostics using CISCO functionality and system monitoring. They also receive inputs by other teams such as DBA, Programming, etc.

Any New configuration and installation is also being carried out by them. Generate Monthly Report that includes type of failures, number of installation etc.

Key observations
1 Acknowledgement is received from users, currently by communication between Network infrastructure Team and User through diagnostics tools.
2 Repeating issues/problems are existent; issues are also documented as well incident records/Problem databases and related documentation exists currently only on paper.
3 Monthly Operational report exists that comprises of type of failures, number of installation, out of resource experience.
4 BSC based performance parameters are used for evaluating these roles.
5 New joiners are inducted with training, OJT exists and official workshops given to users usually Team lead identifies needs; Director follows up with tendering process but through informal hand holding [13].

2.3.3. Scanning Machine

The Scanning Machine team was founded a few years ago and the Following Roles currently exists within head office.
1 Scanning Machine and Support Team Leader.
2 Scanning Operating System Senior Officer. And there is not much clarity on the roles at the customs branch station. The team's main tasks during operations are:-
(1) Import and Export Control by scanning cargo track vehicles;
(2) Cargo tracking using GPS Based and provides acknowledgement by Tax Identification provides Number (TIN). On the reporting front, we were not able to find any instances of reporting or metrics being tracked by this team.

Key Observations
1 No Linkages but use End user support team for automated system for custom data troubleshooting.
2 Enforcement Deputy Director General.

2.3.4. Software Development

The Software Development team
1 Software Engineer;
2 Senior Programmer;
3 Programmer;
4 Junior Programmer;
5 Documentation/ Librarian [13].

The team builds systems that augment SIGTAS or automated systems for custom data development systems (e.g. end user support- ticketing system, withholding, sales register and more such development coming on head office systems such as asset tracking. They develop queries, web templates for reporting and evaluating system developments, bug fixing on existing systems and configuring applications servers. They also occasionally provide training to end users. All these developments are with context to Oracle and Java. They coordinate with the Network Infrastructure and Database team for fulfilling the requests while working on normal ERCA operating hours.

2.4. Information Management and Planning

The information Management and planning team had the following roles currently existing within head office.
1 Information Administration and planning Team leader;
2 Information Processing Senior Officer;
3 Information processing officer;
4 IT support junior Officer;
5 Information Processing Junior Officer;
6 Web page Officer;
7 Planning and information Senior Office;
8 Planning and information Officer.

The planning team collates Monthly report of each team (Monthly performance report-12 and Quarterly performance report-4) and the information Team- Compile and provides export/import data to users such as countries, investors, Higher education users like teachers and students. They do not support any of the team; however, they coordinate with other teams for information [13].

This team is centrally located and works during normal operating hours and has a planning team set schedule (yearly) on reports and also receives requests from various Directorates and Branch offices within ERCA and/or planning and research directorate.

The Information Team receives requests through telephone from users or occasionally by means of enters. Based on these inputs the team provides Standard (Monthly and Quarterly) Report, Random Customized Report in the form of e-Copies.

Key Observations

No Acknowledgment received from users, currently by communication between planning and information Management team and User.
1 Not much documentation exists.
2 New joiners are inducted with small training (Data Quality).
3 Team adherence to timeliness and set format do exist.
4 Major Challenges currently being faced are Resource Crunch, Web publishing requirements.
5 Data Availability and Quality is another major challenge faced by this team.

6 Reports are currently used from ASYCUDA; the team expects reports from SIGTAS as well.
7 Planning and information Management Team is a candidate for service reporting and should have linkage with End User Support team for effectiveness and employee productivity. Roles and responsibilities have been defined for this team [13].

2.5. Customs Procedure Codes

It is to be recalled that in ASYCUDA V2.7 we have created many CPC in line with the regime codes for the statistical information and special tax calculation purposes. Now, in ASYCUDA++ the former standard is replaced by the new accepted international standard to meet the present situation of the world trade activity the core elements of the Customs Declaration which makes the declaration to be payable or exempted from Customs duty and other taxes The improved Customs procedure Code had followed the international standard and practice to meet the requirements needed in ASYCUDA++ in addition to the standard procedure code, the Additional Procedure Codes (APC) have also been integrated for statistical and taxation purpose. The ASYCUDA++ procedure codes are made up of two elements. Namely, extended procedure Code (EPC) and additional procedure codes (APC). The extended Procedure code contains 4 digits. It is the standard and the main part of the customs procedure. The National procedure Code (another name for APC) contains three digits and these codes are mostly used for statistical purposes and to define a special taxation and exemption [13].

2.6. Standard Integrated Government Tax Administration System (SIGTAS)

In modern tax administration computerizing the tax collection procedure that satisfies the taxpayer's requirements in the best possible manner. Changing the administration in a computerizing way satisfies two opposite requirements. On one hand, it makes the work effective and efficient, on the other, to the taxpayer requirements, fairness and justice and rehabilitates the management of the Authority.

However, the Federal Inland Revenue Authority announced from 24 February 2004 the development of new software enabling the collection of value added tax through computer's named Standard Integrated Government Tax Administration System (SIGTAS). It is an integrated package with all modules necessary to manage all taxes and licenses [13].

2.7. The Benefits of SIGTAS

For Governments, it improves the efficiency of the tax collection, simplifying administration of tax laws and providing better control over compliance, is fully integrated so that governments can easily compare the taxes assessed and taxes collected, provides a detailed tax roll along with each taxpayer's assessments and payments, provides many management and statistical reports to keep the government fully informed on the state of tax administration.

For tax authority complete system to manage all aspects

system administration including the tracking of late- files and late-payers, exemption period- automatically, provides an overall view of all taxpayer liabilities and payments, eliminates manual calculation of penalties and interest, help ensure that data collected is valid, provides an easy to use and allows assessment calculation from previous years as well as the current year [13].

2.8. Review of Empirical Studies

A study has been conducted in Homabay County to determine the effectiveness of information systems on revenue collection by local authorities. There is a relation between computerized information systems and both efficiency and effectiveness in revenue collection, there is a strong positive relation between internal control systems and revenue collection as reported by 97% of the respondents, and that resistance to change by the council staff was derailing the full implementation of computerized information system [14].

3. Research Methodology

For this research, descriptive methods of research design were used because the research conducted tried to describe the existing tax collection system and wanted to elaborate steps on how the computerized information system impacts on tax collection in Ethiopian revenue and custom authority Adama branch office.

3.1. Sampling Technique and Sample Size Determination

The researcher used censuses method of sampling technique to all employees and managers from the specific department of tax assessment and collection since the researcher believes that adequate information for its study is available in this department. The tax assessment and collection department has 12 members of which one manager of the department, three senior tax officers, four minor officers and four data encoders. From the above members the researcher was to gather data sources by questionnaire and unstructured interview.

3.2. Data Source and Collection Methods

In the data collection process for the study, mainly primary sources are used. Primary data has been collected from two different sources. These are questionnaires and unstructured interviews. This unstructured interview leads the researcher to raise additional unclear ideas in the time of interviews it has used to overcome some drawback of secondary data such as unreliability and timeliness.

3.3. Methods of Data Analysis

The researcher has used different methods for data analysis, among them editing, Coding and tabulation of the data gathered from both primary and secondary data sources. Coding is a technical procedure by which data is categorized through coding the raw data to be transferred into symbolic usually numerals. They may be tabulated and counted. This can be by specifying the categories into which remains to be placed. The number would be depending on the number of questions on the questionnaires.

Tabulation can consist of simply counting the number of facts that fall into various groups. It communicates the result of the study, and can be used for several purposes (i.e. to calculate summary statistics). Tabulation can be done by hand; it is facilitated in determining the empirical distribution. Variables and frequencies were enumerated in each table for calculation of various statistics and communicative distributions would be employed to observe with less than or equal to specify quantities determined.

3.4. Method of Data Presentation

Finally, the researcher has presented the analysis in the form of tabulation, percentage and graphics in order to show the impact of the computerized information system on tax collection in ERCA Adama branch.

4. Data Analysis and Interpretation

4.1. Data Analysis from the Questionnaire

A total 12 questionnaires were distributed to the employees of ERCA Adama branch. All respondents have filled and returned the questionnaire. The questionnaires were distributed and collected by the researcher and here is the analysis and interpretation section.

***Table 1.** Respondents response towards their profile.*

Gender	Male	Female	Total		
No of respondents	7	5	12		
Percentage	58%	42%	100%		
Age group	18-28	29-49	50 & above	Total	
No of respondents	8	4	0	12	
Percentages	67%	33%	0%	100%	
Educational background	Degree Or above	Diploma	Certificate	Grade 10/12 complete	Total
No of respondents	11	1	0	0	12
Percentage	92%	8%	0%	0%	100%
Year of service in the organization	0-3	4-6	6 year & above	Total	
No respondents	7	3	2	12	
Percentage	58%	25%	17%	100%	

(Source: compiled from the questionnaire, 2016).

As it can be seen from table above, respondents were asked towards their sex, 7 (58%) of the total respondent respond that they are males; however, 5 (42%) of them replied that they are females. Even though most employees in the tax assessment and collection department are males, females also have a significant position in the department. Concerning their age, 8 (67%) of the respondents answered that their age lies between 18 and 28; nevertheless, 4 (33%) of them that his/her age lies between 29 and 49 years old and it shows that there is no anyone in the branch office whose age lies between 50 and above years old. This implies that most employees are young; this helps the researcher in order to get sufficient information regarding the impact of CIS on tax collection from fresh mind and the organization also using these work forces. Concerning their educational level, 11 (92%) of them replied that they has BA degree and above, whereas, 1 (8%) of them replied that their educational level were diploma; On the other hand, it shows that there is no one whose educational level is certificate or a person who have completed from grade 10/12. It implies that the majorities of the participants is educated, have a minimum of a BA degree and above that are expected to have awareness of the system and can give full information to the researcher, and can overcome their obligation in their job. Concerning their years of service, 7 (58%) of the informants said that they have worked form 0 up to 3 years; 3 (25%) of the informants said that they have worked for 4 up to 6 years, while 2 (17%) of them replied that they have worked above 6 years. Thus, the majority of the respondents have worked for fewer years, but there are also respondents who have more experience and can show steps to the other employees. Regarding occupation, 1 (8%) of the respondents said that their post is department vice-manager, 4 (33.5%) of the respondents said that their post is assistant tax collection officers; 3 (25%) of the respondents said that their post is senior tax collection officer, but 4 (33.5%) of them replied that their occupation were data encoder in to the computer system.

Thus it implies that most of the respondent has an occupation of assistant tax collection expert and manual data encoder into the computer. This shows that after tax assessment took place, tax collection started and data was encoded to the computer by employees.

Table 2. Do you think that CIS is important for the branch office.

No	Item	Response	
		Frequency	%
6	Yes	10	83
	No	2	17
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 2 shows that the items asked to employees on over all importance of CIS. Accordingly out of all the respondents 10 (83%) respond that CIS is important. Because it speed up work by saving time and cost of employees and tax payers;

enhance quality of work; used for data safe keeping and utilizing another time; to manage data service wisely and it decrease paper work as well as workload on employees; bring accountability and transparency; create confidentiality afforded by techniques such as encryption. However, from all respondents 2 (17%) respond that CIS is not that much important for tax collection.

Thus, from the above table, it can be seen that CIS is enough important for tax collection. But there are also respondents who respond that CIS is not important. This is due to the fact that the system is new or at an infant stage, so it is not familiar to the organization.

Table 3. Respondents response towards impact of CIS on tax collection in the office.

No	Item	Response	
		Frequency	%
7	Yes	10	83
	No	2	17
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 3 shows that impact of CIS on tax collection on ERCA Adama branch. Accordingly, out of all respondents, 10 (83%) respond that CIS is important for government revenue collection by giving automatic and systematic manipulation of tax collection; helps to calculate tax within a given tax rate; store different attributes of tax payer; leads to smooth relation between tax payer and the office by rendering fast and efficient service. It also initiate customer to work hard by showing different proclamation and regulation regarding the tax law of the country in a simple manner. If the system technology grows further, the office can have an online tax collection system. On the other hand, 2 (17%) of the respondents respond that CIS have no impact on tax collection system. This is due to that the system is new and not applicable now a day in the branch office as well as taxes are collected and data were stored manually.

Thus, from the above table, it can been seen that CIS is important for tax collection in the branch office.

Table 4. Respondents response towards the type of information system mainly used in the office.

No	Item	Response	
		Frequency	%
8	Computerized information system	10	83
	Manual information system	2	17
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 4 shows respondents' response to the type of information system used mainly in the office. Accordingly, 10 (83%), of respond that CIS is mainly used in the branch office for different operations of tax collection and there is no activity classification for manual and computerized because

if the system develop more the office can do every activity by CIS. But, 2 (17%) of the respondents said manual information systems are used mainly nowadays.

Thus, from the above table, it can been seen that even though there are certain operations which are done by manually for tax collection purpose in the office, but the office mainly, use CIS for different operation regarding tax assessment and collection.

Table 5. *Respondent response towards factor determining effectiveness of CIS on tax collection.*

No	Item	Response	
		Frequency	%
9	Yes	9	75
	No	3	25
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 5 shows factor determining CIS. Accordingly, 9 (75%) of the respondents replied that there are factors that determine effectiveness of CIS on tax collection. These include lack of reliable data encoded into the computer; having no system-based information is also another factor. The rest 3 (25%) of respondents said that there is no factor which determine effectiveness of CIS on tax collection.

Thus, from the above table, it can be inferred that there are factors that can affect the effectiveness of CIS on tax collection. But some respondents respond that CIS applicability for tax collection was not affected by any factor. This is due to the fact that the system is new and the organization was not adopting the system for the time being.

Table 6. *Respondents response towards infrastructure that determine effectiveness of CIS.*

No	Item	Response	
		Frequency	%
10	Yes	11	92
	No	1	8
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 6 shows the item asked towards infrastructures that determine effectiveness of CIS. Accordingly, 11 (92%) of respondents respond that there are many infrastructures which determine the effectiveness of CIS on tax collection such as computer hardware and software; networked computer and effective network in remote areas; electric power and telecommunication. However, 1 (8%) of respondents respond that no any infrastructure which determine effectiveness of CIS for tax collection.

Thus, from the above table, it can be indicated that even though effectiveness of CIS is determined by many infrastructures, there are also respondents whose reply were on the other side that CIS were not affected by any infrastructures. This is due to the unfamiliarity of the system and the organization.

Table 7. *Respondents response towards employees' level of knowledge in application of CIS on tax collection.*

No	Item	Response	
		Frequency	%
11	Very good	2	17
	Good	6	50
	Need improvement	4	33
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 7 shows the item asked towards employees' level of knowledge. Accordingly, out of all the respondents, 2 (17%) of the respondents answered that it was very good; 6 (50%) of the respondents answered it was good; and 4 (33%) of the total was answered that it needs improvement.

Thus, from the above table, it can be infer that although most employees have good level of knowledge towards application of CIS on tax collection in the branch office, there is also employees whose awareness need improvement. This is due to the system's unclearness and unfamiliarity to the organization.

Table 8. *Respondent response towards major problems related to application of CIS in collection of tax.*

No	Item	Response	
		Frequency	%
12	Yes	5	42
	No	7	58
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 8 shows item towards problems in applying CIS on tax collection. Accordingly, 7 (58%) out of all respondents answered that CIS application have its own problem for the tax collection system, this include the system itself (SIGTAS) needs update and improvement; there is network problem; lack of effective management and system coordinator from top to bottom and change in the resistance behavior of the system. On the other hand, 5 (42%) of the respondents answered that there is no any problem related to application of CIS in tax collection by the branch office.

Thus, from the above table, it implies that even if there are problems that hinder the application of CIS on tax collection in ERCA Adama branch.

Table 9. *Respondents' response towards level of customer satisfaction.*

No	Item	Response	
		Frequency	%
13	Very good	2	17
	Good	6	50
	poor	4	33
	Total	12	100%

(Source: compiled from the questionnaire, 2016).

Table 9 indicates the items level of customer satisfaction in the application of CIS on tax collection. Accordingly, 2 (17%) of all respondents answered that it was very good; 6

(50%) of respondents answered it was good: 4 (33%) of respondents said it was poor.

Thus, from the above table, it depicts that, even though most customers are interested in this system, there are also customers that are not fully satisfied.

4.2. Data Analysis from Unstructured Interview

Here is the analysis by the researcher from the other primary source unstructured interview with the department manager. The manager responds towards the application of CIS on tax collection in the branch office and what success it shows after manual information system changes to CIS.

Accordingly, he implied that after the branch office has been using CIS the number of employees are decrease through time because it avoids paper work and shift to computerized manner. The system creates integration nationally with many areas in the country; creates inter relationship with other systems like ASYCUDA; as the name implies data stored in standardized manner with their specific tax account and tin number. Compared to that of a manual information system it can sort, process, store and retrieve data much more quickly. Application of CIS on tax collection decrease errors and risk especially in repetitive works like tax calculation.

Files within the computer based information system can be password protected and encrypted, so that only authorized users can access the data. Manual information systems rely upon physical locks and to control access. Since computers are networked, the same information can be accessed at anytime and anywhere. But in a manual information system data held in one location is not instantly available anywhere else. A phone call will have to be made to the data store to request the information, and then the relevant file will need to be located and a faxed copy sent back across. The taxpayer file stored into the computer can easily be corrected and updated if error occurred. These lead to consistent quality of output and create effective communication between taxpayer and the office.

According to the manager of tax assessment and collection department explanation, firstly the taxpayer makes self-assessment on their revenue and submits their business profit report to the tax assessment and collection department. Then after submission, the offices send a data filtration officer to check some aspects on the reliability of the business attributes and if it is reliable the taxpayer pays cash at bank and submits the receipt to the cashier. The next activity is a data encoder officer encodes the reliable information into the computer. Normally after the taxpayer assesses their business, they submit their business profit manually, but after some steps it is encoded to the computer.

Some infrastructures are not fully available in the branch office such as network, electric power, generator service in place of electric power. Whereas computer availability is somewhat fair. According to the manager's explanation even though the system is new and not very familiar, it is applicable for tax collection purposes by the authority with some drawbacks. The above analysis is also supported by previous works of other researcher like:

The effect of information technology on the efficiency of tax administration in Nigeria [15]. This research tend to show that effective tax administration resulting from the application of Information Technology leads to an increase in tax base as more potential taxpayers are drawn into the tax net when there is a conducive environment.

Effect of technology and information systems on revenue collection by the county government of Embu, Kenya [16]. Overall; it was found that technology and information systems had the effect on revenue collection. The study recommends a revision of the County's Act and the integration of information systems in the management activities of Embu County.

Information technology and tax administration in adamawa state board of internal revenue yola, Nigeria [17]. it was found out that IT infrastructures (digital devices, internet facility) were not regularly maintained; web portal network for e-filling of tax is not available for corporate taxpayers to conveniently remit their taxes, no adequate online facility on desk to help aid tax collection.

5. Conclusion and Recommendation

5.1. Conclusion

As mentioned earlier the main purpose of this paper is to assess the impact of computerized information systems on tax collection. Based on the previous analysis the major findings of this study are the following.

Generally, according to the employees, a computerized information system is necessary and applicable for tax collection in the branch office.

CIS is important for tax collection that many operations is done by computers and data are sort, process, and stored and retrieved for later use by computerized information system.

Even though most employees have a good level of knowledge of the system, there are others that need improvement. This is due to the system being new and unfamiliar.

On the above analysis, it explained that customer satisfaction is good towards impact application of CIS on tax collection in the office, but there are also groups respond that they are not satisfied with the application. This is due to customers lacking adoption of the system and they are mainly familiar with the manual system.

Lack of reliable data encoded into the computer and lack of system-based information is main determinant factors for effectiveness of CIS on tax collection in the office.

Application of CIS on tax collection mainly affected by infrastructures; such as computer hard ware and software, networked computer and electric power. These all are not fully available in the office.

Since the system is new it lacks improvement and shortage of system coordinator from top to bottom.

5.2. Recommendation

Based on the data from the above findings and conclusions made, the researcher suggests the following recommendation has been given for the problem stated in ERCA Adama branch office.

1 The branch office should continue to use CIS for tax collection purpose since many operations has done by this system.

2 The office should continue working with those employees who have a good level of knowledge.

3 The office should keep a good level of customer satisfaction by giving fast and efficient service to taxpayers. But there are also groups that are not fully satisfied so the office should give quality service by minimizing cost and time of employees and taxpayers; try to create a smooth relation between taxpayer and the employee. The office also should initiate customers to work hard by giving them direction towards different proclamations and regulation regarding the tax law of the country in a simple manner. If the above things become favorable, the system technology will grow furthermore in the office and an online tax collection system is developed.

4 In order to minimize error of data encoded to the computer system, the office should filter documents from taxpayers before it is encoded into the computer.

5 The office should ask for a budget from the federal government to overcome shortage and improvements of networked computers, electric power and to buy their own generator.

6 In order to overcome problems related to the system itself (SIGTAS) the office should use an improved and updated system to enhance the quality of work on tax collection.

7 In order to address the problem of a lack of system coordinator, the office should have its own qualified system coordinator from top to bottom or who can manipulate the system to facilitate work done and keep employees safe.

8 The office should arrange training programs, participation on forums and capacity building for employees to maximize their knowhow on the system implementation.

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