

Determinants of Successful Implementation of SIGTAS: The Case of Bole Sub City Category “A” Tax Payers

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Abstract

The main purpose of this study is to investigate the Determinants of successful implementation of SIGTAS in Bole sub city small taxpayers branch office Category “A” Tax payers. In order to achieve these objectives, both qualitative and quantitative research approach methods were applied. Sample respondents are Category 'A' taxpayers and Tax experts selected using stratified random sampling and simple random sampling respectively. Structured questionnaires were used to gather relevant information pertinent to the study. The collected data was summarized and presented by using descriptive statistical tools such as tabular form and percentages. Inferential statistical tools like Spearman rank correlation test and Binary logistic regression SPSS V.21 model were used to analyze the collected data. According to the description and regression output, Management support, IT infrastructures, skilled man power and effect of the System were contributed significantly for the successful implementation of SIGTAS and Comprehensiveness function of SIGTAS is significant for the descriptive analysis. All of these five independent variables are making 76.6% of the contributions for successful implementation of SIGTAS in the sub city the study was undertaken. The study recommends that managers should actively participate in the system implementation process, managements should provide on job & off job training for the employees, and also the authority better to upgrade the total system capacity of SIGTAS and assure collection of huge amounts of revenue in the sub city.

Keywords: SIGTAS, Tax automation, Tax Administration, Information technology, Category ‘A’ tax payers

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1. Introduction

1.1. Background of the Study

In today’s knowledge based world, providing public services heavily depends on information and communication technologies. The internet has simply become the basic information communication and sharing area of the future (UNCTAD, 2008). While information technologies provide austerity at an important level, they also improve the quality of the public service. One of the important application areas related to the use of information technologies in the public services is taxation. Electronic tax return, payment systems and tax automation systems generated in this area gain an increasing importance because of their ability to increase collections. Electronic tax management applications firstly started in the USA, and then spread in other developed and developing countries. Factors such as information and communication technologies which develop rapidly together with the process of globalization, gain strength and decrease costs and the increasing information sharing have extended the electronic tax management applications all over the world (de Wulf & Sokol, 2005).

African tax administrations have experienced rapid modernization in the past two decades. The digitalization of tax records and widespread adoption of ICTs have been key features of this process, not only for tax administration but also for public sector management more broadly. Most countries today operate automated financial management, customs, and 159 out of 193 UN member states have automated tax systems (World Bank, 2016). In the era of globalization, most developing countries want to become integrated with the international economy. On the other hand, they face significant challenges in this pursuit, including the need to increase tax revenues. Hence, developing countries tax policy makers have to analyze the current conditions in the country and establish the appropriate tax policies that can raise sufficient revenue. Ethiopia, like other many developing countries, has increasingly begun to restructure its tax systems for this specific purpose. (www.vanguardngr.com, 2012/13). For instance in Nigeria, the former Federal Inland Revenue Service (FIRS) announced ongoing efforts to automate tax collection with the Integrated Tax Administration System (ITAS) to be implemented on a tailored solution known as the Standard Integrated Government Tax Administration System (SIGTAS). The principal goal of this project is to re-engineer the tax administration service delivery, eliminate gaps and redundancies in the current administrative assessment processes by leveraging technology in line with worldwide best practices ultimately leading to simpler taxpayer compliance. The main objective is to transform the tax administration systems. Optimize its contribution to national development. Broadly speaking, automation of the tax administration process will produce transparency and efficiency with little human interface. The most essential aspect of SIGITAS will be to widen the tax net, deepen compliance, create a friendlier environment for taxation as well as curb leakages in tax administration. Also, the introduction of SIGTAS will standardize a process which

means reduced turnaround times for service offerings to taxpayers. A major emphasis of the deployment of SIGTAS is the automation of integrated communications and enterprise collaboration, document management portal, as well as the automated Value added tax collection system. ITAS is also prepared to support taxpayers in complying with regulations by reducing the administrative burden on them and providing easy access to information as and when owed. It is expected that by the time ITAS is deployed taxpayers will be able to view their full tax history of filing and assessment with the FIRS. In order jurisdictions where SIGTAS had been introduced such as Mali and Rwanda, taxpayers are able to use the platform as a one stop shop- with a simple combination of all tax types registering a tax identification, data of transactions etc. SIGTAS also has the capacity to handle a robust framework for tax roll, assessment, collection, audit, objection appeals, document handling, reporting, external system integration, system administration and accounting for each user. Instructively SIGTAS offers a platform for taxpayers and tax authorities to interact in a more transparent and confidential manner, while also providing valuable information for the taxpayer: (www.vanguardngr.com, 2012/13). In the implementation of ICT projects in organizations, there are certain determinants which can affect the successful implementation of ICT programs. Among these: top management commitment represents the strength of an individual's identification with, and involvement in, an organization. Management commitment is a leadership style where managers and subordinates participate together in determining the purpose of employment, determine the level of responsibility, and clarify the performance commitments (Chalk, 2008: 3). Commitment management refers to the promises and actions of top management to allocate resources and provide support to the work done by these resources (Phillips, 1999: 79).

Management commitment is the involvement and efforts to maintain behaviors to help others achieve their goals (Cooper, 2006). On the other hand IC infrastructure is one of the determinants of successful implementation of ICT programs. Chen, Y. & Thurmaier, K. (2011) define infrastructure in ICT as the computer and communication hardware, software, databases, people, structures and policies supporting an enterprise's information management functions. According to the World Bank Institute report of 2009, the backbone of ICT projects in revenue collection in the world ties itself to infrastructural facilities that range from hard infrastructure like: computer laboratories, computers, and electricity & computer hardware, to software infrastructure like local internet connection and computer software. Additionally training and skilled man power is the major determinants of ICT implementation. A comprehensive training program is therefore vital for the success of the project and should be compiled as early as possible. Training is essential to unlocking client readiness and is the best way to ensure sustainability of a system (Vickland & Nieuwenhuijs, 2005). According to Maake (2007), the challenges that most African countries faces include access to appropriate IT skills as well as appropriate functional skills by user departments. Africa faces significant human capital development challenges in building the capacity required in ICT projects. The shortage of skilled ICT people in the countries is exacerbated by the emigration of highly skilled ICT personnel and other professionals to developed countries, and from the public to the private sector (Farelo & Morris, 2006).

1.2. Statement of the Problem

In today's competitive, fast-paced business landscape, getting the most out of available resources is not an option but rather a necessity. Organizations are taking a highly proactive approach to systems modernization and operations in an effort to increase efficiency and effectiveness in their operations. System automation allows firms to automate new platforms of their revenue collection systems in order to reap maximum benefits (Bahwan Cyber Tek, 2012). System modernization provides measurable improvements in the efficiency and effectiveness of development and maintenance activities with on-time delivery and predictable quality (UNCTAD, 2008).

Several scholars and researchers have reviewed revenue system modernization and revenue collection. Gidisu (2012) did a study on the automation system procedure of the Ghana Revenue Authority on the effectiveness of revenue collection using a case study of customs division. It was established that there was a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection. In Ethiopia, since 2006 G.C, great strides in automating ERCA's operations have been made, hence ERCA's daily operation has become improved and service delivery to importers, exporters, taxpayers and other customers has become a lot easier. The ERCA has witnessed success in revenue collection over the first five years beginning from 2006 G.C. During this period, the ERCA has tripled revenue collection from 11.2 billion birr in 2006 G.C to 35.6 billion birr in 2010 G.C. Consequently the contribution of the revenue to covering the federal government's expenditure had considerably grown from 37.54 percent in 2006 G.C to 55.35 percent in 2010 G.C. (www.ERCA.gov.et, 2010). ERCA has prepared itself with a computer system to administer almost all domestic taxes including: Value Add Tax, Turnover Tax, Withholding Tax and other taxes. The computer system that enables ERCA to administer the taxes mentioned above is called Standard Integrated Government Tax Administration System (SIGTAS). The system allows ERCA to administer all aspects of most of the domestic taxes including: registration, assessment, cashing, and auditing in one easy-to-use integrated system. The system was introduced in ERCA in December 2006 G.C and is presently operational both at the head office and branch

offices level. (www.ERCA.gov.et, 2010). Like ERCA, Bole sub city small taxpayer branch office has tried to introduce and utilize ICT infrastructure for efficient and effective tax administration and to satisfy the interest of the taxpayer by having a vision to make the service delivery more flexible, convenient and closer to the taxpayers. However, even if the application of SIGTAS in tax administration activities is encouraged, the application of SIGTAS in tax administration is not efficient and more effective.

Gebre Miruts & Seada Yakob (2015) conducted research on the dynamics of information and communication technology in Oromia: The Case of Goro Woreda. Hence, the finding revealed that, though, some positive changes can be cited, the main challenges of ICT implementation in the study Woreda are lack of managerial oversight, poor organizational integration, inoperative ICT equipment, poor network, insufficient ICT professionals, lack of sufficient computer, and poor communication structure. Above all, the poor attention given to the ICT program was the root cause for majority of the challenges. Finally, the study concluded the services given through ICT were not adequate and the implementation of the program was not successful. From this, adequate managerial oversight and support and grass root level administrative support federal and regional concerned bodies is recommended. Although according to Uvaneswaran SM. & Haimanote W.(2016) Conducted a research on Challenges in application of ICT in tax administration: A case of Dessie city revenue office, the cause for the inefficient application of ICT infrastructure are insufficient network connection between the central office of the tax authority and respective kebeles, limited number of skilled and motivated man power, low satisfaction of the taxpayers towards the technology and scarce ICT infrastructure are mentioned. As a result, it directly or indirectly affects the quality of service delivery, better revenue mobilization and collection, effective taxpayer's data encoding, tax assessment monitoring, and investigation activities. Furthermore, their study showed that taxpayers are also affected by the taxation service delivered by the office. However, as per empirical studies and reports of ERCA that the researcher consulted, the overall cause of inefficient ICT implementation have been studied rather than investigating the problems of each system applications or software like SIGTAS. Hence, these studies found out comprehensive problems towards factors affecting ICT implementation and also suggested general solutions. In addition to the above mentioned problem and as per the researcher's knowledge, limited research has been conducted related to SIGTAS in Ethiopia. Hence, the researcher insisted to conduct a study on determinants on successful implementation of ICT specifically SIGTAS in Bole sub city small taxpayers branch office.

1.3. Objectives of the Study

1.3.1. General Objectives

The general objective of the study was to identify the determinants affecting the successful implementation of SIGTAS in Bole sub city small taxpayers branch office, Addis Ababa, Ethiopia.

1.3.2. Specific Objectives

The specific objective is derived from the general objective and described as follows:

1. To identify the factors those determine successful implementation of SIGTAS

1.4. Research Hypotheses

To achieve the above listed Specific objectives, the following hypotheses are formulated.

H1: Top management commitment has statistically significant on the successful implementation of SIGTAS

H2: IT infrastructures have statistically significance on the successful implementation of SIGTAS. **H3:** Comprehensiveness function of SIGTAS has statistically significance on the successful implementation of SIGTAS.

H4: Skilled man power is statistically significant on the successful implementation of SIGTAS. **H5:** Effect of the System interims of revenue generation has statistically significant effects on the successful implementation of SIGTAS.

2. Literature Review

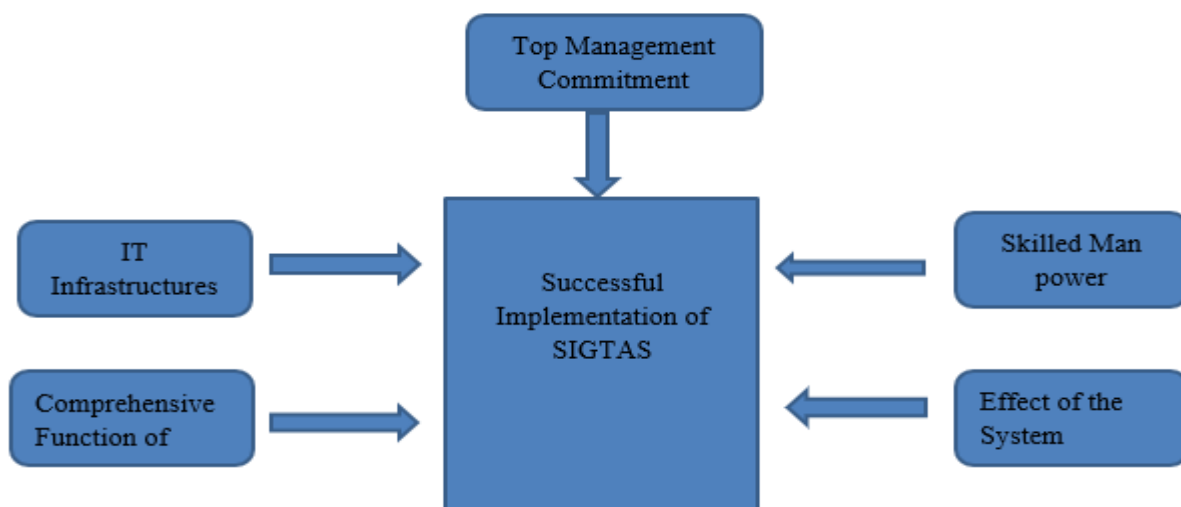
2.1. Empirical Studies

To review empirical study about determinants of successful implementation of SIGTAS, there are several studies among those the following main studies were reviewed as follows: According to Martin Otundo (2015), he conducted a research on the title factors influencing information communication programs in Kenya revenue authority. His findings reveal that financial resources, ICT infrastructures, Top management commitment and organizational cultures affect the successful implementation of information communication technology program in KRA Mombasa branch. On the other hand Martin Wanyoike (2015) conducted a research on the factors influencing implementation of integrated financial management information system in managing project funds in Mombasa county Kenya. The findings showed that the organizational arrangements have not been taken into account effectively especially the legal and the structural arrangement both bureaucratic and departments arrangements. This has greatly influenced the implementation of IFMIS negatively in the county. Technical challenges have been found to influence the implementation of IFMIS projects. Management played a significant

role in implementing the IFMIS projects though the staff felt the management did not offer support. Human capacity and capital resources availability like proper remuneration allocations and availability of adequate training has a significant influence in the implementation of IFMIS. It is the personnel that determine the direction of projects and this to great extent is tied to their experience and skills development. Umulisa Micheline & Noor Ishmael Hassan (2017) conducted a research on assessment of factors affecting implementation of ICT projects in telecommunication industry of Rwanda: A case study of Airtel Rwanda: The study found that there is a positive relationship between Technical team, project planning, management support and IT infrastructure on the implementation of ICT projects.

Gebre Miruts & SeadaYakob (2015) conducted research on the dynamics of information and communication technology in Oromia: The Case of Goro Woreda. Hence, the finding revealed that, though, some positive changes can be cited, the main challenges of ICT implementation in the study Woreda are lack of managerial oversight, poor organizational integration, inoperative ICT equipment, poor network, insufficient ICT professionals, lack of sufficient computer, and poor communication structure. Above all, the poor attention given to the ICT program was the root cause for the majority of the challenges. Finally, the study concluded the services given through ICT were not adequate and the implementation of the program was not successful. From this, adequate managerial oversight and support and grass root level administrative support federal and regional concerned bodies is recommended. Uvaneswaran SM, & Haimanote W. (2016) the cause for the inefficient application of ICT infrastructure are insufficient network connection between the central office of the tax authority and respective kebeles, limited number of skilled and motivated man power, low satisfaction of the taxpayers towards the technology and scarce ICT infrastructure are mentioned. As a result, it directly or indirectly affects the quality of service delivery, better revenue mobilization and collection, effective taxpayer's data encoding, tax assessment monitoring, and investigation activities. Furthermore, taxpayers are also affected by the taxation service delivered by the office. But Uvaneswaran SM, & Haimanote W. (2016) it was worked on by Dessie Revenue Authority reviewed on Challenges in application of Information Communication Technology in Tax administration, and the study found major factors (challenges) that limit the application of ICT in the office. Inadequate ICT infrastructure provision in the office is the major challenge for effective application of ICT for effective tax administration. Specially, computers and fixed phones are not adequate in the office. Lack of leadership commitment is another challenge and city administrators are not active and reluctant to allocate adequate budget and inefficiently to bring better solutions for the existing problems. As the findings, insufficient training facilities are another major challenge in the application of ICT in the office and as a result the skill of ICT users is quite inadequate. The study found that there is a problem regarding network connection and poor network connection is a serious problem because it creates slow motion in systems and affects the service delivery of tax assessment and collection, and also it delays in decisions making of taxpayers' complaints. Furthermore, some experts in the office do not have adequate awareness about the operation of ICT technology in an efficient way especially on computers and email. Not only civil servants but also higher officials have low awareness about the importance of technology and don't give full attention to the application of technology. But this conclusion as I already stated in my statement of the problem, indicates comprehensive problems towards determinants of ICT implementation rather than indicating the problems of SIGTAS.

Figure 2.1 Research framework



Source: Constructed by the researcher from the literature

3. Research Methodology

3.1. Research Design

Since this research is conducted in order to see the relationship between the variables and the effect of one variable over the other. Thus, the research follows an explanatory research design and descriptive research design was chosen.

3.2. Research Approach

The study used a quantitative and qualitative approach (a mixed research approach). The quantitative approach with a quantitative research questionnaire used to answer the questions which are very imperative to meet the main objectives of the study. Furthermore, the qualitative approach was used closed ended questionnaires to know the branch office's factors that affect the successful implementation of SIGTAS.

3.3. Population (Universe)

According to Cox, (2013), target population in a study is the entire group of items or individuals having common observable characteristics with information that the study is interested in, Hence the target population or universe of the study was 5,005 category 'A' small taxpayers of the revenue office as of the data from Bole sub city small tax payers branch office tax collection & assessment department on December 2018. In addition, 149 employees who are taken from Bole sub city small taxpayers human resources department in December 2018, / tax officers were part of the target population.

3.4. Sample Size

In this study, 200 questionnaires were distributed to the taxpayers and 32 questionnaires were distributed to the employees which are prepared in English and translated in Amharic versions to only to the taxpayers to reduce the impact of language barriers, the sample size is obtained by Carvalho (1984) formula . Hence, the sample size is obtained as follows:

Table 3.1. Sample size determination

N	51-90	91-150	151-280	281-500	501-1,200	1,201-3,200	3,201-10,000	10,001-35,000	35,001-150,000
Small	5	8	13	20	32	50	80	125	200
Medium	13	20	32	50	80	125	200	315	500
Large	20	32	50	80	125	200	315	500	800

Source: Carvalho (1984).

The target total population of the taxpayers as already stated in the population (universe) is about 5,005 which are found between 3,021 and 10,000 and the sample size will be in the medium 200. On the other hand, the target population of the employees lies between 91-150. Hence the sample size will be 32 which is found in the large number in order to participate in a large number of employees from the selected departments.

Table 3.2. Sample selection procedures using simple random sampling method

No.	Departments	Population	Percentage	Sample
1	Audit	43	32/149=0.2147	9
2	Tax Assessment & Collection	64	21.47%	14
3	Customer Services	42	21.47%	9
	Total	149	21.47%	32

Source: Own Computation from Bole sub city data -as of December, 2018

Table 3.3. Sample selection procedures using stratified sampling method

No.	Types of business	Population	Percentage	Sample
1	Manufacturing	240	200/5005=4	10
2	Merchandising	2189	4%	88
3	Construction	856	4%	32
4	Import and export	378	4%	50
5	Service provider	1216	4%	15
6	Others	126	4%	5
	Total	5,005	4%	200

Source: Own Computation from Bole sub city data -as of December, 2018

3.5. Source of Data and Type of Data

Table 3.4. Data type, sources and Method of data analysis

No	Items	Types of data	Sources of data	Method of data analysis
1	Tax payers	Primary data	Structured Questionnaires	Inferential/Descriptive analysis/Binary logistic analysis
2	Employees	Primary data	Structured Questionnaires	Descriptive analysis

Source: Self-administered questionnaires, 2019

3.6. Data Analysis and Interpretation

After collecting the necessary data from different sources, it is going to be edited, coded, and tabulated. Then, data analyzed using a computerized data analysis package known as SPSS version 21. The collected data analyzed by adopting statistical techniques like tables, percentages, graphs and figures. Farther more quantitative methods of data analysis were adopted using the Spearman rank correlation, multicollinearity and Binary logistic regression analysis.

3.7 Model Specification

$$\ln\left(\frac{P_i}{1-P_i}\right) = f(\beta_0 + \beta_1 TMC_i + \beta_2 ITI_i + \beta_3 CFSIG_i + \beta_4 SKIL_i + \beta_5 SYSE_i + \epsilon_i)$$

- Where; Pi = probability of outcome
- β0 = Constant
- β1- β5=Regression Coefficients representing the contributions of each independent
- TMC=Top Management Commitment
- ITI = IT Infrastructures
- CFSIG =Comprehensive Function of SIGTAS
- SKIL =Skilled Man power
- SYSE=Effect of the System

4. Research Findings, Analysis and Discussion

4.1 Reliability

Table 4.1 Tests of Reliability

Cronbach's Alpha	Number of Items
.706	24

Source: Questionnaire data, 2019 SPSS 21 output

4.2 Validity

The researcher distributed the questionnaire to a sample of 10 Bole sub city small taxpayers as a pilot. The respondents were asked if they face a challenge on understanding the questionnaire and comments about the questions. Comments were taken and some amendments were considered. The questionnaire was originally written in English and then translated into Amharic to ensure clarity and easy meaning.

4.3 Test of Logistics Model Assumptions

Multi- Collinearity Test: Strong correlations among the independent variables and the existence of value greater than 0.80, tolerance value below 0.10 and Variance Inflation factor (VIF) greater than10 in the correlation matrix are the indicators of the existence of multicollinearity (Field, 2009; Myers, 1990; Pallant, 2007).

Table 4.2 Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	Top management commitment	.661	1.513
	IT infrastructures	.735	1.360
	Comprehensiveness function of SIGTAS	.645	1.551
	Skilled man power	.844	1.184
	Effect of the System	.858	1.165

Source: Questionnaire results 2019(SPSS 21)

The result in the table 4.21 above shows the acceptable reliability of the research variables in which the correlation among predictors were not high indicates there was no multicollinearity problem among variables.

4.4. Binary Logistic Regression Analysis

Table 4.3. Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	4.009	5	.548

Source: Own computation through SPSS 21 (2019).

The above table 4.24 shows the “Hosmer and Lemeshow test” model fit test yielded a chi-square value of 4.009 with p-value of 0.548, which is greater than the α value(0.05), suggesting that the logistic model fits the data well.

Table 4.4. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	73.763	.512	.766

Source: Own computation through SPSS 21 (2019).

From the above table the value of R square was 0.512 and 0.766 which shows that the state of successful implementation of SIGTAS were explained by the change in the response from top management commitment, IT infrastructures, Comprehensiveness of function of SIGTAS, skilled man power and effect of the system in terms of revenue generation.

Table 4.5 Binary logistic regression result (Independent Variables as Predictors to successful implementation of SIGTAS).

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	TMC(1)	2.818	.845	11.125	1	.001	16.748	3.197	87.736
	ITI(1)	2.527	.702	12.954	1	.000	12.515	3.161	49.554
	CFSIG(1)	1.831	1.099	2.773	1	.096	6.238	.723	53.807
	SKIL(1)	2.281	.742	9.452	1	.002	9.784	2.286	41.879
	SYSE(1)	2.005	.800	6.282	1	.012	7.425	1.548	35.612
	Constant	-6.351	1.416	20.120	1	.000	.002		

Source: Own computation through SPSS 21 (2019).

4.5. Testing of Hypothesis and Discussion

Hypothesis 1: Top management commitment

H₀: Top management commitment has no statistically significant effect on the successful implementation of SIGTAS.

The odds of not successful implementation of SIGTAS is 16.748 times higher for those who said there is no top management commitment as compared to those who said there is a top management commitment, keeping other covariates fixed.

The result is also supported by previous studies of (Gebre Miruts & SeadaYakob 2015; Martin Otundo 2015; Micheline & Noor Ishmael Hassan 2017), they found that management support is one of the main determinants of successful implementation of ICT projects or programs.

Hypothesis 2: IT Infrastructures

H₀: IT Infrastructures have no statistically significant impact on the successful implementation of SIGTAS.

The odds of not successful implementation of SIGTAS is 12.515 times higher for those who said there are no IT Infrastructures as compared to those who said there are IT Infrastructures, keeping other covariates fixed.

This result is consistent with previous studies of (Uvaneswaran SM. & Haimanote W.2016; Gebre Miruts & SeadaYakob 2015; Martin Otundo 2015; Micheline & Noor Ishmael Hassan 2017), they found that IT Infrastructures play a vital role in the successful implementation of ICT projects.

Hypothesis 3: Comprehensive function of SIGTAS

H₀: Comprehensive function of SIGTAS has no statistically significant effect on the successful implementation of SIGTAS.

Thus, the comprehensive function of SIGTAS was not statistically significant on the successful implementation of SIGTAS. Thus, don't reject the null hypothesis (H₀) of the comprehensive function of SIGTAS has no statistically significant effect on the successful implementation of SIGTAS.

Hypothesis 4: Skilled man power

H₀: Skilled man power has no statistically significant effect on the successful implementation of SIGTAS.

The odds of not successful implementation of SIGTAS is 9.784 times higher for those who said there is no skilled man power as compared to those who said there is available skilled man power, keeping other covariates fixed.

The result is also supported by previous studies of (Uvaneswaran SM. & Haimanote W.2016; Gebre Miruts & SeadaYakob 2015; Martin Wanyoike (2015), indicated that availability and adequacy of training has a significant

influence in the implementation of ICT programs.

Hypothesis 5: Effect of the System

H₀: Effect of the system interims of revenue generating has no statistically significant effect on the successful implementation of SIGTAS.

The odds of successful implementation of SIGTAS is 7.425 times higher for those who said there is an effect of the system interims of revenue generating as compared to those who said there is no effect of the system interims of revenue generating, keeping other covariates fixed.

The result is consistent with other previous studies. The empirical findings by (Gidisu 2012; the ERCA has witnessed success in revenue collection over the first five years beginning from 2006 G.C. During this period, the ERCA has tripled revenue collection from 11.2 billion birr in 2006 G.C to 35.6 billion birr in 2010 G.C. Consequently the contribution of the revenue to covering the federal government's expenditure had considerably grown from 37.54 percent in 2006 G.C to 55.35 percent in 2010 G.C. (www.ERCA.gov.et, 2010)).

Table 4.6. Summary of testing hypothesis

Hypothesis	Association between variables	Significant	Conclusion
H1	TMC on Implementation of SIGTAS.	Yes	Accepted
H2	ITI on Implementation of SIGTAS.	Yes	Accepted
H3	CFSIG on Implementation of SIGTAS.	No	Rejected
H4	SKIL on Implementation of SIGTAS.	Yes	Accepted
H5	SYSE on Implementation of SIGTAS.	Yes	Accepted

Source: Questionnaire results, 2019 (SPSS 21)

5. Conclusions and Recommendations

5.1. Conclusions

The main objective of the study was to identify the determinants of successful implementation of SIGTAS: the case of Bole sub city small taxpayers branch office. The samples were Bole sub city category 'A' tax payers and selected department's employees of the authority.

Based on the specific Objectives of the study, the factors those determine successful Implementation of SIGTAS in Bole sub city category 'A' tax payers based on the findings are top management commitment, IT infrastructures, Comprehensive function of SIGTAS, Skilled man power and Effect of the system interims of revenue generation. Hence, the findings are listed below based on the descriptive and Inferential results.

The first determinant on the successful implementation of SIGTAS is top management commitment. The findings reveal that top management didn't supervise during the payment period moreover, if top management were actively participating in the implementation of the system; it improves the service delivery process of the organization.

Binary logistic regression results also assured that top management commitment has a significant influence on the successful implementation of SIGTAS in Bole sub city small taxpayers branch office.

The second determinant on the successful implementation of SIGTAS is IT infrastructures commitment. The findings suggest that SIGTAS didn't provide high-speed information access to the taxpayers, also the availability of system connection is insufficient to deliver all services, Moreover, due to the insufficiency of the system connection, it is affecting the service delivery process of the sub city.

Binary logistic regression results confirmed that IT infrastructures have a significant influence on the successful implementation of SIGTAS in Bole sub city small taxpayers' branch office.

The third determinant on the successful implementation of SIGTAS is assessing the comprehensiveness of the system to deliver all functions required by taxpayers. The findings indicated that the multi functionality of the system to process many tasks at one time has poor capacity, because of this poor multi functionality of the system, taxpayers affected by the service delivery process. On the other hand, some systems have compatibility problems with the modules of SIGTAS. Moreover, SIGTAS's capacity helps to select taxpayer collection & assessment, tax audit and investigation based on risk assessment in the sub city is poor. Lastly, concerning the integration of the departments using the system to deliver services to the taxpayers as well as to the internal users for decision making purposes is poor. However, according to the respondents of the tax payers in binary logistic regression analysis, the Comprehensive function of SIGTAS has a positive influence but it was insignificant on the successful implementation of SIGTAS.

The fourth determinant on the successful implementation of SIGTAS for this research was concerning the skilled man power of the sub city. The findings shows that the authority didn't give sufficient training for utilizing the system and because it didn't get the appropriate training for the employees, it has a significant influence on utilizing the system effectively as well as it creates a problem regarding the service delivery process of the authority. But with the above problems, the system being automation gave opportunities to improve personal skills in tax administration.

Although in binary logistic regression results skilled man power has a significant influence on the successful implementation of SIGTAS in Bole sub city small taxpayers' branch office.

Finally, the fifth determinant of successful implementation of SIGTAS is the effects of SIGTAS interims of generating tax revenue in the sub city. Findings reveal that implementation of SIGTAS improved the effectiveness as well as the efficiency of the authority. Additionally, the implementation of SIGTAS in the authority also radically changed the revenue collection capacity of the sub city.

Binary logistic results assured that effects of the system have a significant influence on the successful implementation of SIGTAS in Bole sub city small taxpayers branch office.

5.2. Recommendations

Based on the findings of this study and from actual statistical analysis of the data, the researcher found it is important to make some recommendations to guide the authority, other concerned bodies and researches.

Management plays a significant role in implementing the SIGTAS. Therefore, the managers should be having a positive attitude by providing the required resources, increasing the number of communications to their top managers, horizontally to their co-managers and vertically to their employees about situations concerning the current systems and also discussing with IT technicians for delivering better service to the taxpayers. Moreover, managers should actively participate during system interruption.

Since the sub city has a huge revenue potential, the number of taxpayers in the sub city and the connection capacity of the branch office is unbalanced, the branch office is better to convince the head office to upgrade the capacity of the system in order to smoothening the service delivery process.

The comprehensiveness of the system is a problem of the total system found in the city. So the branch office better to communicate with Addis Ababa city administration revenue authority for upgrading the system or totally changing the current system.

The authority better to give short term and long term training by means of on job training and off job training in order to overcome lack of skill and knowledge gap to those staff workers to easily manipulate the system and solve problems as they occur.

Despite the above problems hindering the revenue collection capacity of the authority, Bole sub city is collecting a huge amount of money for every year. Still the sub city could improve its revenues collection capacity by eliminating the above problems and successfully implementing the system.

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