Evaluating the Success of Standard Integrated Government Tax Administration System: An Information System Utilized by the Belize Income Tax Department

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Abstract

There have been multiple researches conducted on Information Systems success models, but not so much can be said about the conceptualization and measurement of the Standard Integrated Government Tax Administration System (SIGTAS). It yet has to be determined if Information System success model can be prolonged to assess SIGTAS. This study will test the adaptation of DeLone and McLean's IS success model in the context of the Standard Integrated Government Tax Administration System (SIGTAS). Information quality, system quality, service quality, use, user satisfaction, perceived net benefit, complementary technology quality and computer self-efficacy are the eight dimensions that the model consists of. Data was collected via questionnaire from thirty (30) employees who are employed at the Belize Income Tax Department and utilizes SIGTAS on a daily. The eight success variables were supported by the data significantly and their relationship were hypothesized. Based on our findings, it is evident that the information system- SIGTAS is successful at the Income Tax Department of Belize. The conclusion discusses the limitations that should be given great consideration for future research.

Keywords: SIGTAS; information systems success model; perceived net benefit.

Background

SIGTAS stands for Standard Integrated Government Tax Administration System. It is the information system used at the Income Tax Department. SIGTAS is a user friendly Information System that is used by multiple persons at each of the six branches of Income Tax Department across the country. Data is entered into SIGTAS and reports can be generated based on what the user requests.

SIGTAS makes the employees at the Income Tax Department work with increased efficiency and are able to complete tasks and achieve operational excellence. Customer's supplier intimacy is also achieved because the customers can pay their business tax online. The payment goes directly to the customers Tax Identification Number (T.I.N) so payment can be made on time so as to avoid interest and penalties. Managers and supervisors are able to generate reports and retrieve vital information on any tax payer so that there is improved critical decision making. While there is no competition because the department is a government department survival is inevitable. SIGTAS is necessary for the survival of The Income Tax Department because it works, once employees are well trained they can do wonders with the system and achieve all the goals of the department.

Introduction

There are many functions in a business, so organizations have aided by establishing investments in Information and communication technology (ICT). Recently, organizations avie been seeking innovative measures as to how efficiency can be enhanced in order for them to achieve goals and objectives of the organization. (Prasad, 2014).

The nature of a business determines the kind of management information system an organization would utilize. (Avgerou, 2008). For the purpose of this research, Standard Integrated Government Tax Administration System (SIGTAS) is the assigned system for the tax administration function with the purpose of developing great value and transactions with tax payers and employees, with respect to information quality, system quality, service quality, quality of all complementary assets, the user satisfaction, use and perceived net benefits of the system, that are vital aspects which is used to determine the success of the Information System SIGTAS (Wollela 2008).

The research focuses on three key point which reflects the importance this paper. The amount of users can be ascertained and on the flip side the reason for non-use may also be determined (Sebastian D, Sebastian W. & Torsten E. 2013). Another aspect is that of shortcomings; user experience will be known and if the shortcomings are dealt with then users experience can be pleasant and easy.

Moreover, from this research the success of SIGTAS at the Income Tax Department of Belize will be generated. SIGTAS is very important to the Income Tax Department as there are many benefits like increased tax collection, compliance, decreased evasion of fraud and being able to track tax liability which are all highly dependent on the reliability of the information system. Tax management and administration cannot be overly emphasized with the need for a computerized technology.

Literature Review

Theoretical foundation: Information system success

Information systems have been around for many years now as a result of investments made to find out the success of information systems. SIGTAS is a special type of information system. Therefore, in this section we establish the theoretical foundation and conceptualization of SIGTAS success based on prior IS success studies. Delone and Mclean (1992), attempted to structure abundance of variables that deals with the diversity of information success. They analyzed but did not empirically test more than 100 empirical papers

containing IS success measures between 1981 and 1988. Delone and Mclean argued that there wasn't much relevance in calculating input variables. Also, they were six major factors in IS which are as follows: information quality, system quality, consumption of the output of IS, user satisfaction, individual impact and organizational impact. According to McLean and Petter (2009), these six variables were known as success variables. Researchers have studied and examined the relationships identified in the model. McLean & Petter (2009) stated that, "Some studies found high correlations among the variables, while others found either low or no significant correlations."

With the help of Delone and McLean (2012), there have been discoveries of a model that considered the information to be the output of an information system. In addition, it was also unfolded that data on its user can be measured at 3 levels. These levels include technical level – deals with how well a system transmits symbols of communication, semantic level – deals with the explanation and interpretation of meaning by the receiver relative to the actual meaning of the sender, and lastly the effectiveness level – deals with how the meaning of the message affects the person who received it behaviour. In reference to the Delone and McLean model, system quality is related to the technical level, information quality relates to the semantic level, while individual impact and user satisfaction relates to the effectiveness influenced level.

Moreover, Delone and McLean proposed a research which purpose was to shed light on the success of Information Systems. The D&M IS Success Model was then proposed as a framework for conceptualizing and operationalizing IS success (Delone and McLean 2003). Since then, approximately 300 articles in refereed journals had made use of and referred to this IS success model. In the original paper, it was concluded that the multidimensional and interdependent nature of the IS success requires careful attention to the definition and also to the measurement of each aspect of each dependent variable, more field study research should investigate and incorporate organizational impact measures, and most importantly, this success model needs more further development and validation before it could serve as the basis for the selection of appropriate IS measures (Delone and McLean 2003). Many researchers have criticized Delone and McLean's model saying that there are major gaps in the model (Seddon, 1997; Garrity and Sanders, 1998; Ballantine et al, 1996). The biggest criticism was based on the absence of service quality among the variables. Delone and Mclean decided to add service quality of their new model as a very important dimension of the IS success model, where in the e-commerce environment customer service is crucial. They did this because of researchers who tested and discussed the original model (Delone and McLean 2003).

Based on research contributions since the original paper that was introduced in 1992, and based on changes in the role and management of information system, Delone and Mclean have updated their original success model. In an effort to make the model more parsimonious, both authors decided to group all the "impact" measures into a benefit category called net benefits (Delone and McLean 2003). It was outlined that with the addition of service quality and the merging of impacts to net benefit, in no way changed the nature of the original model but instead made it a stronger model.

Information System Success: SIGTAS

Globally, there has been frequent technological advancements which sometimes alters businesses. In addition, tax administrations are one of the many businesses who utilize information technology to develop solutions to achieve operational and strategic needs. There are four main capabilities for the modern technology solutions for tax administration: a core tax system, an e-tax system, a compliance performance system, and a management information system (Jimenez, Mac, & Kamenov , 2013).

Due to the progress of companies worldwide that are utilizing SIGTAS it is evident that it has been acknowledged in developing countries. SIGTAS is generic in nature and is not a customized product (Prasad, 2014). It has been utilized by The Tax Administration by Kosovo for seventeen years to present.. SIGTAS was reviewed by the Office of the Auditor General and they noted several short comings which included shortcoming in the management of information in the system and lack of information update related to several activities developed in the system (Prasad, 2014). Moreover, some issues regarding the use of SIGTAS includes the following: delay in applying the use of system modules; incomplete reporting and incorrect information from the system; lack of interface between the activities within the system; delays

in processing of information in the system; and lack of system reconciliation with another tool used by the Tax Administration of Kosovo. The version of SIGTAS used today is likely to be different from that initiated by Kosovo in 2001. However SIGTAS roll out is critical to the success of IRC in the long term and all efforts should be undertaken to ensure that the shortcomings are minimized (Prasad, 2014).

Research model Hypothesis and Methodology

The research conducted on the Information system being utilized at the Income Tax department is the SIGTAS. In this research, the success of the Information System will be verified based on the information quality, system quality, service quality, usage intentions, user satisfaction and overall system benefits.

However, in this research, the researchers altered the traditional model since Belize is considered as a developing country. As a result, it was concluded that Belize is lacking of essential complementary assets in order to gain Information System Success. Organizations in Belize have invested substantially in information systems and programs, but these systems have failed to provide optimal success due to the country's poor investment in complementary assets and human skill sets needed to run any system. In respect to the lacking complimentary assets, this research studied the six dimensions of this model along with the addition of testing the available complementary assets and self-efficacy.

In conjunction with historical research, this study attempted to extend the Delone and McLean model regarding IS Success to the developing world of technology. As seen before, the research model presented in this study was an extension to the traditional model with the modification to include complementary technology quality and computer self-efficacy as a measurable construct. These inclusions are a key dimension in assessing overall system success in developing countries where internet connections are slow and inadequate. Thus, this study focused mainly on the perspective of the employees of the Belize Income Tax Department, and used the six dimensions of IS Success inclusive of the additional constructs, complimentary technology quality and computer self-efficacy as shown in Figure 1.

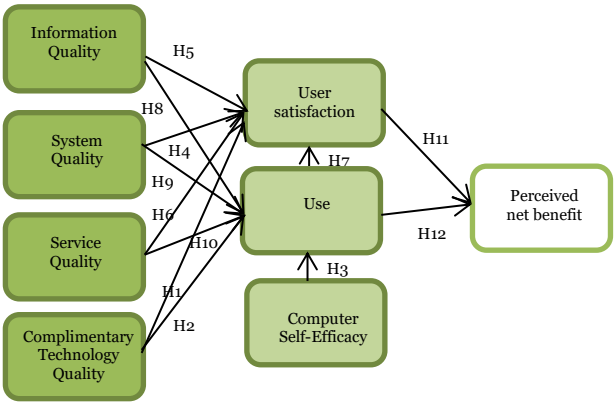

Figure 1. Modified Research Model Developing Countries

Figure 1 illustrates the six constructs of the Delone and Mclean model inclusive of the additional construct, Complementary Technology Quality and Computer Self-Efficacy used to validate this research study.

The hypothesized relationship between collaboration and communication system success variables are based on the theoretical and empirical work reported by DeLone and McLean (2003). As they suggest, the success model needs further development and validation before it could serve as a basis for the selection of appropriate IS measures. Accordingly, the study hypothesized the following twelve hypotheses tested:

Hypothesis:

H1. Complementary technology quality will positively impact user satisfaction.

H2. Complementary technology quality will positively impact system use.

H3. Computer self-efficacy will positively impact system use.

H4. System quality will positively impact user satisfaction.

H5. Information quality will positively impact user satisfaction.

H6. Service quality will positively impact user satisfaction.

H7. Use will positively impact user satisfaction.

H8. Information quality will positively impact use.

H9. System quality will positively impact use.

H10. Service quality will positively impact use.

H11.User satisfaction will positively impact perceived net benefit.

H12.Use will positively impact perceived net benefit.

Construct Measurement

Validated measuring instruments from previously verified instruments were used in this research for the quantitative data collection. The information quality construct was measured by a six-item scale from Bailey and Person (1983), with modifications to fit the specific context of SIGTAS. Bailey and Pearson's instrument is widely accepted, has been tested for reliability and validity by several researchers, and has become a standard instrument in the IS field. A four–item scale was adopted and refined from instruments used by Al-Shibly (2011) to measure the system quality construct.

Service quality construct was measured using a four–item scale adopted and refined from instruments used by Chang et al. (2009). In this research, we consider satisfaction as an evaluative judgment regarding a specific SIGTAS experience and the affective attitude. This construct was measured with a four-item scale from Seddon and Yip (1992). Use was measured by a four-item measure adapted from previous studies (Balaban et al., 2013; Rai et al., 2002). The SIGTAS perceived benefits defined as an achievement of a firm's objectives. This was operationalized by a six-item scale adopted from Alshibly (2011) and Tansley et al. (2001). Complementary technology quality was measured using a three-item scale adopted from Teece (1988) and computer self-efficacy was measured using a ten-item scale adopted and refined from instruments used by Compeau & Higgins (1995). Table 1 presents the research constructs and related survey items used for measurement of each of these constructs.

Table 1. Measurement items for questionnaire		
Construct	Survey Questions	Source
Information Quality	IQ1: SIGTAS provides essential data. IQ2: SIGTAS provides valid data. IQ3: SIGTAS provides information that is easy to access. IQ4: SIGTAS provides information that is related to your occupation. IQ5: SIGTAS provides up-to-date information. IQ6: SIGTAS is easy to utilize.	Bailey and Person (1983)
System Quality	SQ1: SIGTAS is easy to use. SQ2: SIGTAS is user-friendly. SQ3: SIGTAS provides high-speed information access. SQ4: SIGTAS provides interactive features between users and system.	Al-Shibly, (2011)
Complementary Technology Quality	CTQ1: The software on the device (desktop computer, laptop, mobile device) I use to access SIGTAS is adequate. CTQ2: The device hardware (desktop computer, laptop, mobile device) used to access SIGTAS is adequate. CTQ3: The device (desktop computer, laptop, mobile device) used to access SIGTAS has an adequate internet connection in regards to speed and reliability.	Teece, D. J. (1988)
Computer Self-Efficacy Measure	CSE1: I can use SIGTAS independently. CSE2: I can use SIGTAS without previous knowledge of utilizing an information system. CSE3: I can use SIGTAS only if I had proper training. CSE4: I can seek assistance if I don't understand how to utilize SIGTAS. CSE5: I can use SIGTAS if I had sufficient time to complete task. CSE6: I can use the built-in help facility for assistance when using SIGTAS. CSE7: I can use SIGTAS only if I had the manual for reference. CSE8: I can use SIGTAS if I had seen someone else using it before trying it myself. CSE9: I can use SIGTAS if someone else helps me get started. CSE10: I can use SIGTAS if someone showed me how to do it first. CSE11: I can use SIGTAS if I had previously used a similar system to do a similar task.	Compeau, D. R., & Higgins, C. A. (1995)
User Satisfaction	US1: Most of the users bring a positive attitude or evaluation towards SIGTAS function. US2: You think that the perceived utility about SIGTAS is high. US3: SIGTAS has met your expectations. You are satisfied with SIGTAS.	Seddon and Yip (1992)

Perceived Net Benefits	NB1: SIGTAS improves job performance. NB2: SIGTAS is cost efficient. NB3: SIGTAS helps the organization achieve its goal. NB4: Using SIGTAS enhances productivity. NB5: Using SIGTAS improves assessment and training processes. NB6: Overall, using SIGTAS enhances recruitment and performance management.	Al-Shibly, (2011); Tansley et al, (2001)
Use	U1: The frequency of use with SIGTAS is high. U2: You depend upon SIGTAS. U3: I was able to complete a task using SIGATS even if there was no one around to tell me what to do as I go. U4: I have the knowledge necessary to use SIGTAS.	Balaban et al., (2013) Rai et al., (2002).
Service Quality	SQ1: The support staff keeps SIGTAS software up to date. SQ2: When users have a problem, SIGTAS support staff show a sincere interest in solving it. SQ3: SIGTAS support staff respond promptly when users have a problem. SQ4: SIGTAS support staff tell users exactly when services will be performed.	Chang et al., (2009)

Table 1. Measurement items for questionnaire

Sampling and Data Collection

The data for this study were collected from a sample of employees which included supervisors, clerks, inspectors and cashiers of the Belize Income Tax Department. The method of the research sampling is "purposive sampling" which allows the researchers to use their own judgment to select suitable people for the sample. The Human Resource Manager of the Belize Income Tax Department reported a staff of 140 employees. A total of 40 questionnaires were handed out to various employees of the department from different location within the country. These participants were instructed to carefully read the first page of the questionnaire which thoroughly explained the purpose of the questionnaire and further reassured participants that their responses would be kept confidential and anonymous. This first page also served as a means of gaining informed consent from the participants. However, only 30 questionnaires were returned of which 13 were males and 17 females.

Table 2. Characteristics of respondents

Characteristics	**Number**	**Percentage**
Gender		
Male	13	43.3%
Female	17	56.7%
Age		
Less than 18		
From 18 to 25	8	26.6%
From 26 to 30	6	20%
From 31 to 50	14	46.6%
Over 50	2	6.6%

Education		
PhD		
Masters	2	6.6%
Bachelors	6	20%
Associates	14	46.6%
High school	8	26.6%
Primary school		
Position		
Manager		
Supervisor	2	6.6%
Non-Manager		93.3%
Computer Experience		
1 – 5 years		
6 – 10 years	18	60%
11 – 15 years	6	20%
16 – 20 years	3	10%
21+ years	3	10%
Years of Service		
1	1	3.3%
2	6	20%
3	5	16.6%
4	4	13.3%
5	3	10%
6	5	16.6%
7	3	10%
8	0	0%
9	1	3.3%
10+	2	6.6%

The respondents' characteristics are presented in Table 2

Data Analysis and Results

Due to the small amount of sample size, hypothesis testing was not possible so the researchers analyzed the data utilizing applied research techniques.

The primary purpose of the study was to compare the usage and success of Standard Integrated Government Tax Administration System (SIGTAS) at the Income Tax Department. One comprehensive questionnaire was used highlighting the usage of this Information System based on the Delone and McLean Model and were distributed to employees at the Income Tax Department countrywide. The results of the issued questionnaires were displayed through the use of histograms and bar charts. To allow for effective visuals, the histograms provided a better comparison of success of the system using the constructs of the theoretical model.

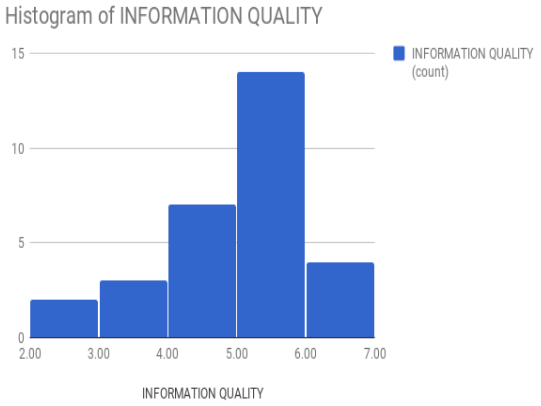

Figure 1. Histogram of Information Quality

Figure 1 displays the responses that measures information quality of Income Tax Officers.

As indicated, an average of 70.10% rated SIGTAS information quality at the Income Tax Department

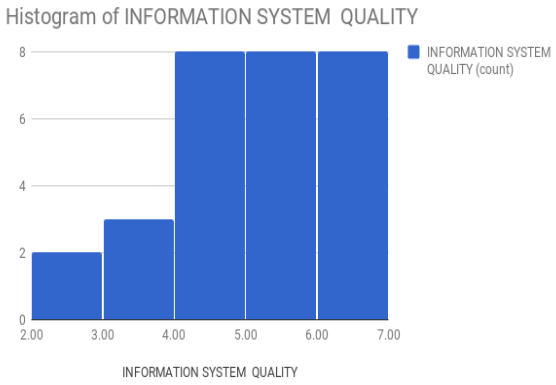

Figure 2. Histogram of Information System Quality

Figure 2 represents the average responses of tax officers for the construct that measures information system quality.

As indicated, an average majority of 80% rated SIGTAS information system quality at 4.91.

We attribute this average score to the fact that the information produced is not optimal.

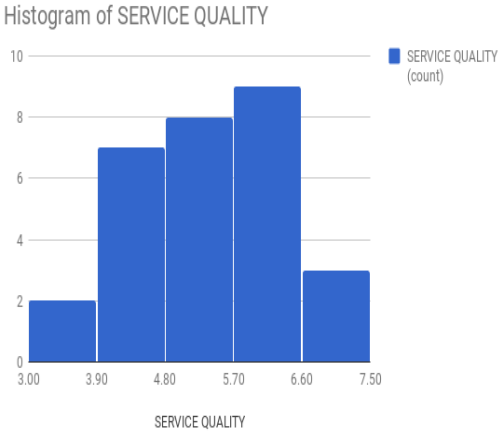

Figure 3. Histogram of Service Quality

Figure 3 represents the average responses of tax officers for the construct that measures service quality.

A percentage of 72% rated this construct at an average of 5.07.

It demonstrates that the service of the information system can be improved, and only a handful of respondents agreed that the system is up-to-date, and effective.

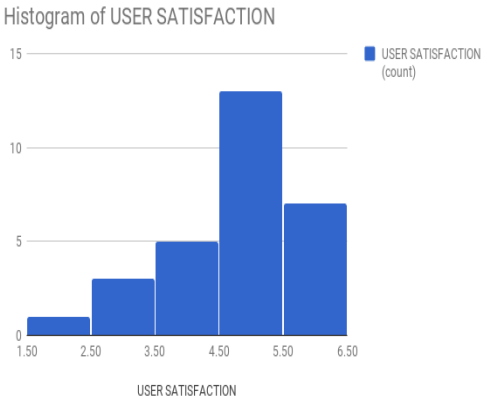

Figure 4. Histogram of User Satisfaction

Figure 4 Displays the average results from 66.10% of User Satisfaction of SIGTAS at the Income Tax Department.

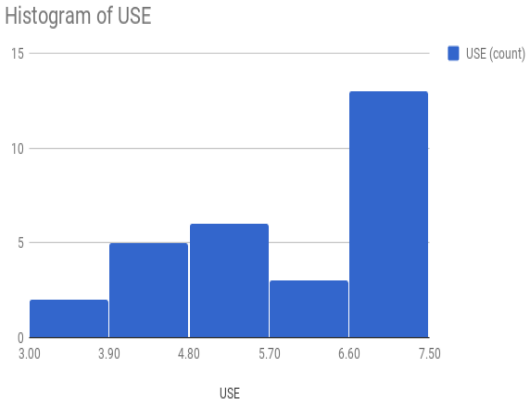

Figure 5. Histogram of Use

Figure 5 displays the results from 82.30% of the respondents based on the use of SIGTAS.

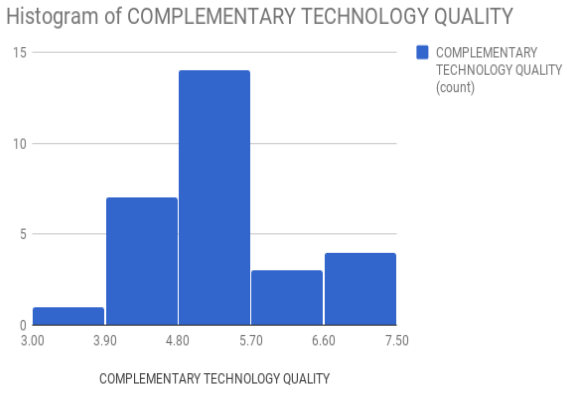

Figure 6. Histogram of Complementary Technology Quality

Figure 6 displays the results generated from 70.60% of the research population in regards to the complementary technology quality of SIGTAS.

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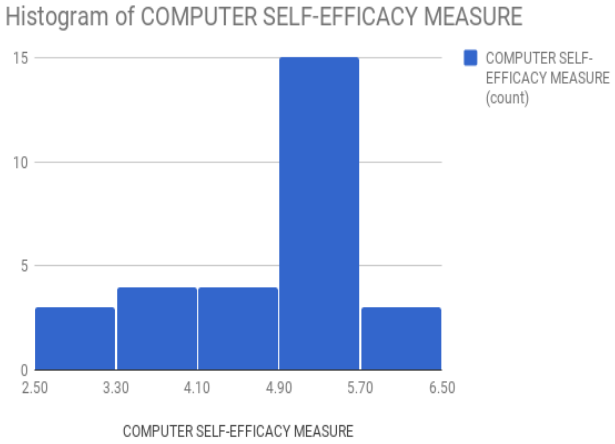

Figure 7. Histogram of Computer Self-Efficacy Measure

Figure 7 displays the findings generated from 67.90% of the respondent which means that majority of the respondents don't have problems utilizing and comprehending SIGTAS.

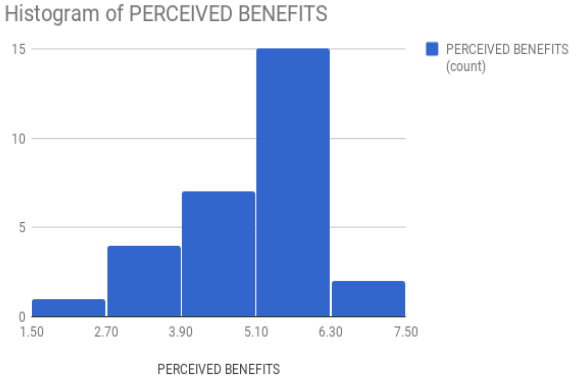

Figure 8. Histogram of Perceived Benefits

Figure 8 displays the benefits perceived by the staff of the Income Tax Department who utilizes SIGTAS. 72.40% of the research population gave positive feedback that it is highly beneficial while a few perceived it to not be beneficial.

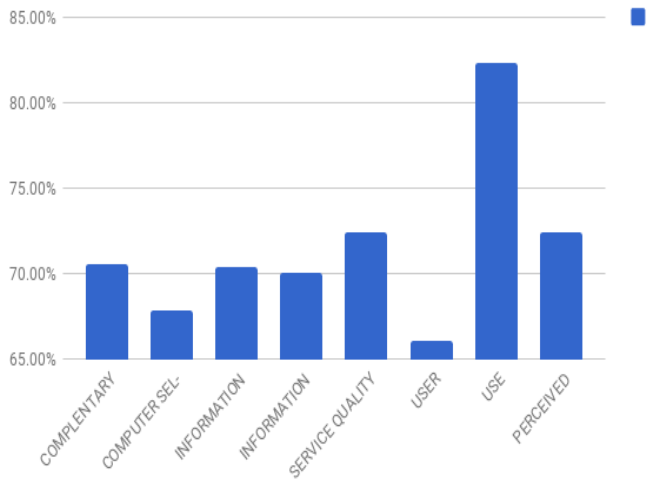

Figure 9. Bar Chart of Average Responses

Figure 9 is a bar chart showing the average responses from the respondents that utilizes SIGTAS at the Income Tax Department. The information generated was used to measure the success of SIGTAS at the Income Tax Department. The key areas that were researched upon included the information quality, system quality, service quality, user satisfaction, use, perceived net benefit, complementary technology quality and computer self-efficacy

Conclusion

This research measured the success of the Standard Integrated Government Tax Administration System (SIGTAS). For this purpose, a SIGTAS success measurement model was developed based on the DeLone and McLean (2003) updated IS success model, which features the multidimensional nature of SIGTAS' success. The results show that information quality, system quality, service quality, user satisfaction, use, perceived net benefit, complementary technology quality and computer self-efficacy are valid measures of SIGTAS success. The hypothesized relationships between the eight success variables were significantly supported.

According to the proposed model, system use has the strongest correlation to SIGTAS success than the other seven success measures. System use could be sustained and even improved if the proper training is received for its use and its perceived net benefits, user satisfaction and service quality are aligned and managed properly. In this model, system use was found to have a strong direct effect on perceived net benefit, indicating the importance of system use in executing duties and increasing perceived net benefit. Simply saying that increased use will yield more benefits, without considering the nature of this use, is insufficient (DeLone & McLean, 2003), as system use is a necessary condition of yielding benefits to the Income Tax Department since it is necessary to use the system. Thus, efforts can be directed towards ensuring formal training is received for the use of IS in order to optimize its use.

Lastly, the findings indicated two constructs that influence the use construct are also closely measured to SIGTAS success, namely service quality and perceived net benefits. In order to increase user perceived net benefit and service quality, the Income Tax Department and its Information Technology Department need to address better information quality and system quality. Consequently, it will influence user system usage behavior and satisfaction evaluation, and the corresponding perceived net benefit. The findings clearly indicate that the total effects of information quality on use, user satisfaction, and perceived net benefit are substantially greater than those of computer self-efficacy measure and user satisfaction. Additionally, complementary technology quality leaves much to be desired, which indicates that the Income Tax Department needs better hardware and faster and reliable internet access.

Limitations and Future Research

There were limitations as we conducted the research due to the fact that we only gathered information from the Income Tax Department of Belize. We were also unable to gather a random sample from the departments that utilizes SIGTAS would have increased the generalizability of the results. The research also

might have been limited to the fact that the respondents were mainly females and not everyone has the same level of education which might have affected their computer literacy.

Implications

Empirical evidence generated from applied research has shown that in determining success using the Delone and McLean model of IS Success, SIGTAS is a favorable given that it does yield a high net benefit. In this research, the six constructs of the model along with the two additional constructs were tested in efforts to understand system success in developing countries. Studies from this research have shown that the inclusion of the seventh and eight construct provided results of interest to developing countries that are unable to effectively receive optimal success from the integration of information systems. The inclusion of complementary technology quality and computer self-efficacy measures are significant because both constructs were in the lower ranks and need to be addressed. In an effort to manage any information system, a relationship between the people who uses the system, the technology to access the system and the organization in which these systems are implemented, must be satisfied.

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APPENDIX

Questionnaire I – Standard Integrated Government Tax Administration System (SIGTAS)

Purpose

This questionnaire asks for information about how effective and productive the use of SIGTAS is. The data generated will be used to analyze the performance of SIGTAS. We will also formulate recommendations from the data collected to provide ways in which SIGTAS can be improved in order to procure optimum benefits when utilizing SIGTAS.

Instructions

Please answer all questions honestly. All responses will be strictly confidential as it will be used to enhance the SIGTAS system and provide convenience for its users. Thanks in advance for your cooperation.

Sincerely,

University of Belize MIS Research Team

1. Background Information	Answers:
Please enter your age:	>18☐ 18-25☐ 26-30☐ 31-50☐ 50+☐
Please enter amount of computer experience you have in years:	
Please indicate the number of years you have been working for this company:	1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐ 10+☐
Please indicate your gender:	Male ☐ Female ☐
Please indicate highest education level attained:	PhD ☐ Masters ☐ Bachelors ☐ Associates ☐ High School ☐ Primary School ☐
Which of the following best describes your position in this company?	Manager ☐ Foreman/Supervisor ☐ Non-Manager ☐

Indicate your agreement with each statement by rating it from (1) strongly disagree to (7) strongly agree.

Information Quality	Disagree ----------
SIGTAS provides essential data.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS provides valid data.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS provides information that is easy to access and comprehend.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS provides information that is related to your occupation.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS displays up-to-date information.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS is easy to utilize.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Information System Quality	**Disagree ----------**
SIGTAS is easy to use.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS is user-friendly.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS provides high-speed information access.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

SIGTAS provides interactive features between users and the system.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Service Quality	**Disagree ---------- Agree**
SIGTAS support staff keeps SIGTAS up-to-date.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
When users have a problem with, SIGTAS support staff shows a sincere interest in solving it.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS support staff respond promptly when users have a problem.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS support staff tells users exactly when services will be performed.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
User Satisfaction	**Disagree ---------- Agree**
The users are positive when utilizing SIGTAS.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
You think that the perceived usefulness about SIGTAS is high.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS has met your needs.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
You are satisfied with the performance of SIGTAS.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Use	**Disagree ---------- Agree**
You use SIGTAS frequently.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
You depend upon SIGTAS.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I was able to complete a task using SIGTAS even when there was no one around to tell me what to do as I go.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I have the knowledge necessary to use SIGTAS.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Perceived Benefits	**Disagree ---------- Agree**
SIGTAS improves job performance.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS is cost efficient.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS helps the organization achieve its goal.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SIGTAS enhances productivity.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Using SIGTAS improves assessment and training processes.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Using SIGTAS enhances recruitment and performance	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Complementary Technology Quality	**Disagree ---------- Agree**
The software on the device (desktop computer, laptop, mobile device) I use to access SIGTAS is adequate.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
The device hardware (desktop computer, laptop, mobile device) I use to access SIGTAS is adequate.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
The device (desktop computer, laptop, mobile device) I use to access SIGTAS has an adequate internet connection in regards to speed and reliability.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Computer Self-Efficacy Measure	**Disagree ---------- Agree**
I can use SIGTAS independently.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

I can use SIGTAS without previous knowledge of utilizing an information system.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS only if I had proper training.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can seek assistance if I don't understand how to utilize SIGTAS.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS if I had sufficient time to complete task.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use the built-in help facility for assistance when using SIGTAS.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS only if I had the manual for reference.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS if I had seen someone else using it before trying it myself.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS if someone else helps me get started.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS if someone showed me how to do it first.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
I can use SIGTAS if I had previously used a similar system to do a similar task.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐