Evaluating the Success of SmartStream System at Belize Treasury Department

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Abstract

Evaluating the success of information systems has become an essential part for many organizations not only in Belize but around the globe. A research has been conducted on the information success of SmartStream Systems at Belize Treasury Department. Data was collected from 30 working employees from Treasury Department in, Belize City, Orange-Walk and Corozal Branches by means of questionnaires. This study provides an empirical test of an adaptation of DeLone and McLean; success model in the context of SmartStream Information System. The model consists of six constructs which are information quality, system quality, service quality, user satisfaction, use, and perceived benefits. The two other constructs added were the complimentary technology quality and self-efficacy measure. The SmartStream information system being used by Treasury Department allows finance officers and treasury employees to conduct financial accounting processes much more effectively and efficiently. The aim of this research is to determine the benefit and value that SmartStream Systems add to the success of Treasury Department which resulted to be successful. The conclusion of this paper addresses the success of the majority of the responses which shows that more employees at Treasury Department find SmartStream systems to be helpful and beneficial.

Keywords: Delone & McLean Success Model, e-government, Enterprise level application Information System, SmartStream System

Introduction

Both private and public organizations should take advantage as the world becomes more technologically advanced. According to "IT governance for enterprise resource planning supported by the DeLone–McLean model of information systems success," "The core processes underlying effective and comprehensive IT governance are the same as those for an enterprise." (Bernroider, 2008). Hence, when it comes to information systems both public and private sectors seek the same goal which is to be both effective and

efficient. As stated in their mission statement, the Treasury Department administers both the general supervision of expenditure and receipt of revenue. Their role in our community is essential and therefore they must rely on technology to perform their day to day operations both efficiently and effectively.

The information system which not only the Treasury Department but, the Government of Belize utilizes is the SmartStream System. However, what differentiates these governmental agencies from one another is the way they use the SmartStream system to carry out their daily operations. "eGovernment implementation can result in significant benefits such as improved efficiencies, greater access to services, greater accountability, transparency, and citizen empowerment." (Gupta, Dasgupta, & Gupta, 2008). Moreover, according to the article "Re-conceptualizing Information System Success: the IS-Impact Measurement Model," the author states that "Organizations make large investments in Information Systems (IS) expecting positive impacts to the organization." (Gable, Sedera, & Chan, 2008).

For these reasons and many more, it is important for the researchers to see whether the SmartStream System is being an asset to the Government operations and is in effect, enabling those benefits.

"SmartStream is the Enterprise Level Application used by the Government of Belize (GoB) for its finance, accounting, personnel, and payroll processes." ("Database | Central Information Technology Office", 2019). In Belize, the smart stream system has four modules that are currently in use by the Government which are: Financials, Human Resource, Procurement and Active Access for Smart Stream. Each of these modules has sub-branches for which, depending on the department it is being utilized in, and implements. Among some of the features which describe the SmartStream System, some main ones are that: it is user-friendly, maximizes performance by streamlining information and business activities, and rapid ranking of data.

Management Information system (MIS) can be defined as the study of people, technology and organizations and its relationship among them. The information system is developed using Information Technology to aid an individual in performing a task." (Petter, Delone & McLean, 2008). Therefore, this research paper planned to comprehend the impacts that the information system has on the performance of the Treasury Department. Moreover, the purpose of this research is to evaluate the effect that the SmartStream System is having in the Treasury Department.

"Information Systems Success (ISS) model focuses attention on the information and system quality of specific IT systems." (Freeze, Alshare, Lane, & Wen, 2010). In this case, the researchers will use the updated Delone and McLean model of information system success to determine whether the SmartStream Information System is adding value to the Treasury Department. The Delone and McLean model consists of six main features which are: Information Quality, System Quality, Service Quality, User Satisfaction, Use, and Perceived Net benefits. (DeLone and McLean, 2003). Moreover, the researchers added two other components which are the Complementary Technology Quality and Computer Self Efficacy.

Since the Government of Belize is highly dependent on the SmartStream System, for their public departments to manage their payrolls, finance, personnel, and accounting it is empirical to determine whether the SmartStream System is executing its features effectively. More precise, it fundamental for the researchers to determine whether the SmartStream System is adding any value to the Treasury Department. There has not been any research conducted in the effectiveness and efficiency that the SmartStream System is adding specifically to the Treasury Department therefore, this research is conducted to fill that knowledge gap.

Literature Review

The public sector plays a major role in almost every country. Public sector departments are trying to emulate the Information System practices of the private sector to achieve greater performance objectives in the public service (Nandi & Nayak, 2008). Information system is important in many organizations, as well as the public sector and non-profit organization. Effective usage of Information system thus, is a crucial factor in achieving the performance and efficiency related objectives. As a result, Belize Sub-Treasury Department a department that falls under the public service currently utilizes smart stream information system. The Government of Belize allocates a vast amount of money in its fiscal year 2019/2020 budget for this information system (Barrow, D., 2019). The main purposes of this study were to assess the success of the information system in Treasury Department using the DeLone and McLean Information System model and determine if the DeLone and McLean model is effective in measuring its success.

Delone & McLean Model

Delone & McLean model are valid and applicable to the public sector. This model originated in 1992, since its existence the model has been wide ranging across many researchers conducted to evaluate Information system success. The relationships proposed by Delone and McLean have been tested in several domains. Since its publication, about 300 articles in refereed journals have made use of this IS success model (Delone and Mclean, 2003). DeLone and McLean model focuses on six variables of information systems which are system quality, information quality, use, user satisfaction, individual impact and organizational impact. However, other researchers have criticized Delone and Mclean's model and suggest that there are major gaps in the model. With those criticism being constructed ten years later the model was updated, and included six success dimensions which are system quality, information quality, service quality, usage, user satisfaction, and net benefits (Delone, W. H., & McLean, E. R. , 2003).
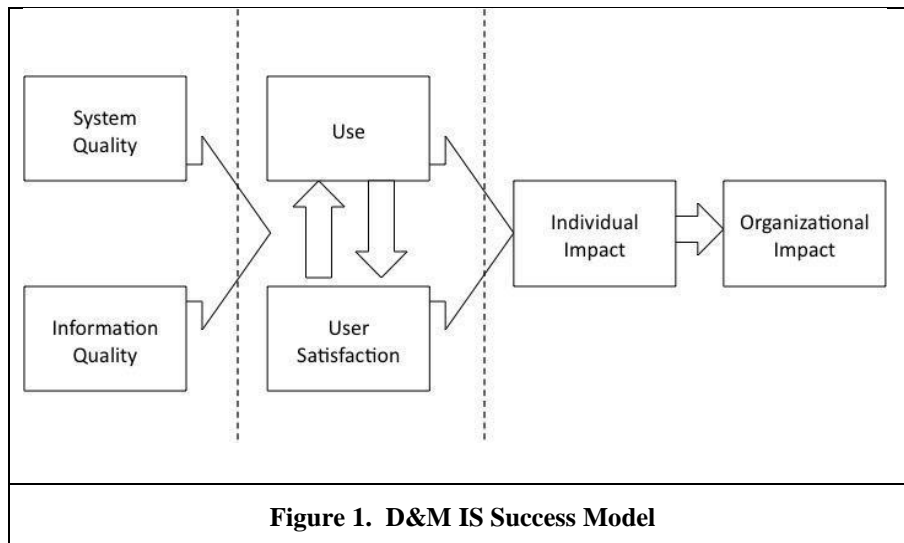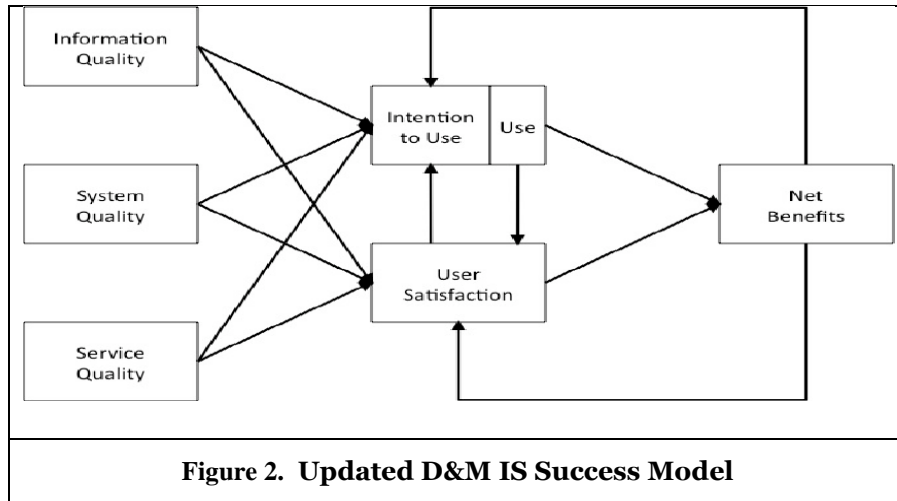
Figure 1. D&M IS Success Model

Figure 2. Updated D&M IS Success Model

Assessing e-government systems success: A validation of the DeLone and McLean model of information systems success

Delone & McLean information success model was tested in the context of government to citizens in Taiwan. Even though there has been numerous researches in information systems success, there has been little focused on e- government context (Wang & Liao, 2008). With the utilization of DeLone and McLean Model, the purpose of the study was to assess e-government success from the perspective of the citizens. The instrument that was used to obtain data for the study was a questionnaire. 119 questionnaires were distributed to users of government to citizen e-government in Taiwan. The results concluded that DeLone & Mclean success model dimensions were a rational measure of e-government system success. Particularly, Perceived Net Benefit has been considered a closer measure of government success than the other five success measures. Additionally, the findings clearly supported the total effects of Information Quality on Use, User Satisfaction and Perceived Net Benefit are substantially greater than those of System Quality and Service Quality (Wang & Liao, 2008).

Developments in Public Sector Accounting Practices in Barbados (SmartStream)

Philmore Alleyne conducted a study on Developments in Public Sector Accounting Practices In Barbados. Unlike, other researchers conducted using the DeLone & McLean model; this study does not utilize the model but mentions perceived benefit. Notably, Barbados is a developing country, therefore this study focuses on examining how effective smart stream information system is in developing countries such as Barbados. Its main objectives are to determine the accounting practices using smart streams (Alleyne, P. 2017). This IS aims at enhancing accountability, transparency, and operational efficiency and effectiveness. The reform of public sector accounting practices included mainly computerization of accounting information system. However, there are challenges such as inadequate training and high costs were experienced, the reform process resulted in improved efficiency in the collection of revenue, more transparent and accurate reporting of the country's financial position, better performance management, and greater accountability for those institutions which adopted the accrual basis of accounting. In order to achieve what was mentioned the adaptation of smart stream information system were implemented in Barbados. Smart stream system is a recognized leader in financial transaction management solutions that enables firms to overcome their post trade processing issues through increased automation. This information system has enabled effectiveness and efficiency in Barbados. However, in order to determine the true success of how smart stream adds value to Barbados financial institutions, a research should be conducted prior to this research utilizing DeLone and McLean Success Model.

Summary

This literature consisted of two studies that were conducted, the first in Taiwan and second in Barbados. Taiwan being a developed country and Barbados a developing country, therefore the success of information system in both countries vary. Also, the utilization of DeLone & McLean information success success model. Belize is a small developing country, it has many public sector departments but this study focuses on Treasury Department and the information system, smart stream. Is a newly introduced system by the Central Information Technology Office (CITO). SmartStream system is used by the Treasury Department of Belize for its finance, accounting, personnel, and payroll process. Thus, this study will provide the first empirical test of this information system used by the Treasury Department in Belize. This research seeks to focus solely on Treasury Department as it is the responsible department for all revenues and expenses of the country. The employees of treasury department work on a first-hand basis with the smart stream system. The importance of Information Systems in Treasury Department is on the rise, thus, assessing the success of SmartStream in a Caribbean country such as Belize, is important as it serves as an umbrella for processing of critical government business functions.

Methodology

Research Model and Hypothesis

This Research utilized the updated DeLone and McLean Information Success Model as a means to measure how effective is the SmartStream system in the Treasury Department in Belize. The D&M IS Success model included six (6) measurements: Information quality, system quality, service quality, user satisfaction, use, and perceived net benefits. In this model, "systems quality" was used to measure technical success; "information quality" measures semantic success; and "use and user satisfaction," measures effectiveness success. (Delone & McLean, 2003). However, two (2) more measurements were added which include: Complementary technology quality, and computer self-efficacy measure.

Information Quality measured whether the information provided by SmartStream is relevant and up-to-date to the user's job, If the information is easy to understand and if there is enough information provided to carry out his/her job functions.

System quality measured the ease of use, user friendliness, and interactive features of the system.

Complementary technology quality focused on whether the hardware device and internet access was adequate to allow for the effective use of the system.

Service Quality measured whether the IT personnel maintained the system and provided to proper services to ensure the system is used effectively.

User Satisfaction measured the user's impressions of the system.

Use measured the frequency of use, dependability, Knowledge of the user towards the system.

Perceived Net Benefits measured the pros to using the SmartStream system and whether it provides any advantages.

Computer Self- Efficacy Measure focused on whether the user was competent and confident in using the system.
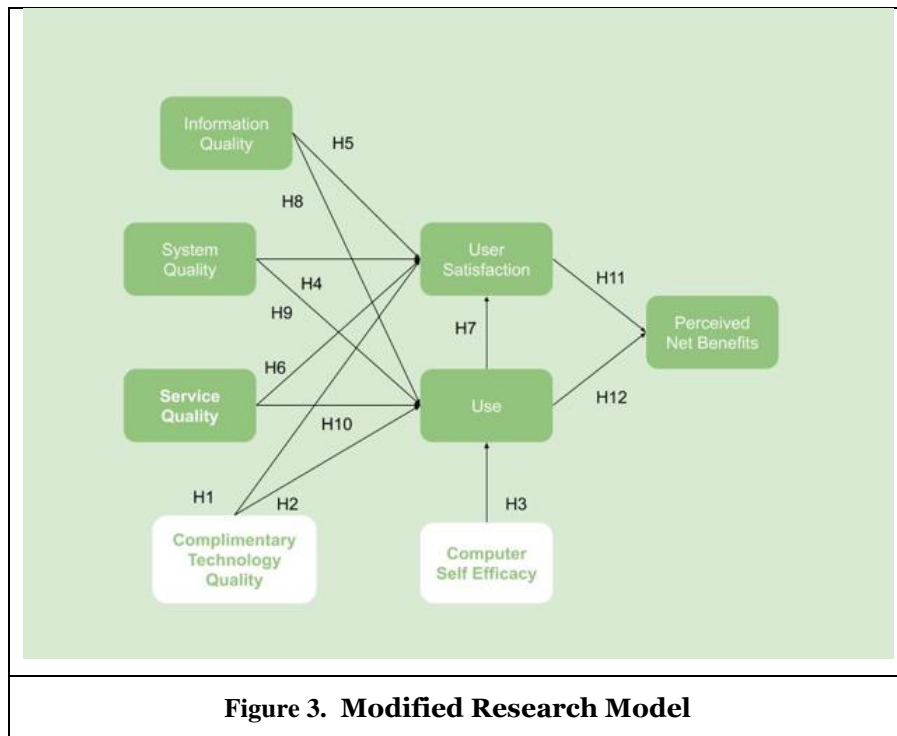
Figure 3. Modified Research Model

Hypothesis

H1. Information quality will positively impact user satisfaction.

H2. System quality will positively impact user satisfaction.

H3. Service quality will positively impact user satisfaction.

H4. Use will positively impact user satisfaction.

H5. Information quality will positively impact use.

H6. System quality will positively impact use.

H7. Service quality will positively impact use.

H8.User satisfaction will positively impact perceived net benefit.

H9.Use will positively impact perceived net benefit.

H10.Complementary technology quality will positively impact system use.

H11. Complimentary Technology Quality will positively impact User Satisfaction

H12. Complimentary Technology Quality will positively impact Use.

H13.Computer Self Efficacy will positively impact Use.

Description of Participants

The Central Information Technology Office CITO describes SmartStream as an enterprise level application that is used by the Government of Belize for its finance, accounting, personnel, and payroll processes. It is used to provide a range of solutions to all back office operations. (Central Information Technology Office, n.d.) As such, in order to test the effective and whether this system is being utilized to add value to the

Treasury Department, thirty (30) employees with various job positions including: secretary, finance officer, assistant finance officer, 1st class clerk and 2nd class clerk was issued a questionnaire to fill out.

Construct Measurement

The questionnaire utilized for this research was premised on the model developed by DeLone and McLean Information System Success Model. The measurement used to evaluate the success of the SmartStream system were: information quality, system quality, complementary technology quality, service quality, user satisfaction, use, perceived net benefit, and Computer Self- Efficacy Measure.

The questions were revised to better fit the SmartStream system. Information Quality was measured using six (6) questions from Bailey and Person (1983). System Quality was measured by four (4) questions by Alshibly ,(2011). Complementary technology quality was evaluated using four (4) questions by Teece, (1988). Service quality consisted of four (4) questions sourced by Chang et al., (2009). User Satisfaction contained four (4) questions Seddon and Yip (1992). Likewise, Use was measured using four (4) questions Balaban et al., (2013) Rai et al., (2002). Perceived Net Benefits had six (6) questions Alshibly,(2011); Tansley et al, (2001) and lastly, Computer Self- Efficacy Measure contained nine (9) questions Compeau and Higgins, (1995). These questions were rated using a Likert scale of 7 ranging from disagree (7) to agree (1), and never (7) to often (1).

Table 1. Measurement items for Questionnaire		
Construct	Survey Questions	Source
Information Quality	IQ1: Treasury's SmartStream system provides information that is exactly what you need IQ2: Treasury's SmartStream system provides information you need at the right time IQ3: Treasury's SmartStream system provides information that is relevant to your duties IQ4: Treasury's SmartStream system provides sufficient information IQ5: Treasury's SmartStream system provides information that is easy to understand IQ6: Treasury's Smart Stream system provides up-to-date information	Bailey and Person (1983)
System Quality	SQ1: Treasury's SmartStream system is easy to use SQ2: Treasury's SmartStream system is user-friendly SQ3: Treasury's SmartStream System provides high-speed information access	Alshibly, (2011)

	SQ4: Treasury's SmartStream system provides interactive features between users and the system	
Complementary Technology Quality	CTQ1: The computer (desktop, laptop, mobile device) you normally use to access Treasury's SmartStream system is adequate CTQ2: The computer (desktop, laptop, mobile device) you normally use to access Treasury's SmartStream system has a fast and reliable internet connection	Teece, (1988)
Service Quality	SV1: The IT personnel keeps Treasury's SmartStream system software up to date SV2: When users have a problem Treasury's SmartStream system IT personnel show a sincere interest in solving it SV3: Treasury's SmartStream system support staff respond promptly when users have a problem SV4: Treasury's SmartStream system IT personnel tell users exactly when services will be performed	Chang et al., (2009)
User Satisfaction	US1: You have a positive attitude towards Treasury's SmartStream system US2: You think that Treasury's SmartStream system is useful US3: Treasury's SmartStream system has met your expectations US4: You are satisfied with Treasury's SmartStream system	Seddon and Yip (1992)
Use	U1: Your frequency of use of Treasury's SmartStream system is high U2: You depend upon Treasury's SmartStream system U3: You were able to complete a task using Treasury's SmartStream system even when there was no one around to tell you what to do. U4: You have the knowledge necessary to use Treasury's SmartStream system.	Balaban et al., (2013) Rai et al., 2002).
Perceived Net Benefit	NB1: Treasury's SmartStream system helps you improve your revenue collection NB2: Treasury's SmartStream system helps you save time and costs	Alshibly, (2011); Tansley et al, (2001)

	NB3: Treasury's SmartStream system helps you achieve your financial goals	
	NB4: Using Treasury's SmartStream system improves your financial budgeting	
	NB5: Overall, using Treasury's SmartStream system enhances your productivity	
Computer Self Efficacy Measure	I COULD COMPLETE THE JOB USING THE INFORMATION SYSTEM... CSE1: if I had only the information system manuals for reference. CSE2: if I had never used an information system like it before. CSE3: if I had seen someone else using the information system before trying it myself. CSE4: if I could call someone for help if I got stuck. CSE5: if someone else had helped me get started. CSE6: if l had a lot of time to complete the job for which the information system was provided. CSE7: if I had just the built-in help facility for assistance CSE8: if someone showed me how to do it first. CSE9: if I had used similar information systems before this one to do the same job	Compeau and Higgins, (1995)

Table 1. Measurement items for Questionnaires

Data Analysis & Results

This research does not test the hypothesis. Instead, applied research is done due to restrictions, finances, and time limitations. A total of 30 surveys were distributed in the Treasury Department of Belize City and Orange Walk Town. There was a 100% response rate, with the majority being from the Belize City's Treasury Department. To display the data gathered, a histogram will be used for each section.

Figure 4. Computer Self-Efficacy Measure
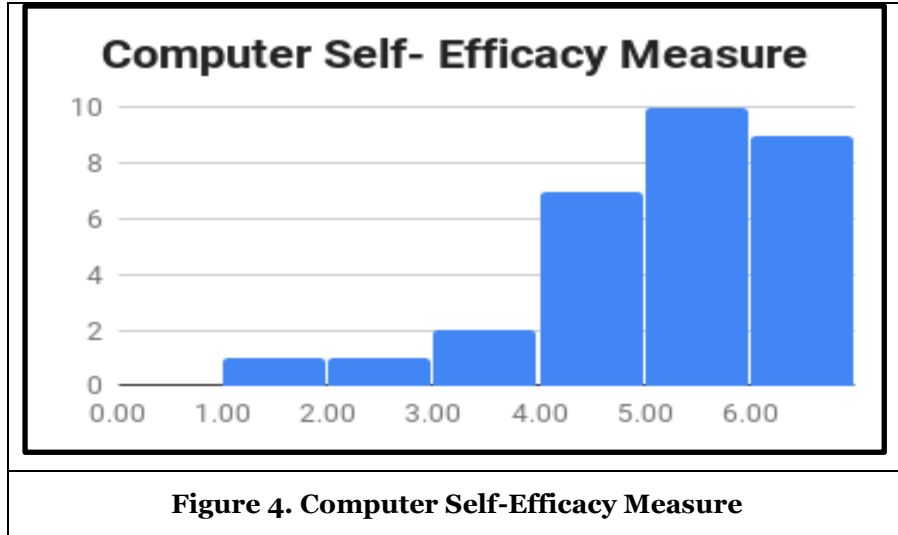
Computer Self-Efficacy measures how comfortable the user is interacting with technology. Figure 4 shows that 26 respondents responded positively to neutral in agreeing that they felt they were able to adequately use a computer to accomplish Smart Stream tasks. A minority of 4 responded that they disagreed.

Figure 5. Complementary Technology Quality
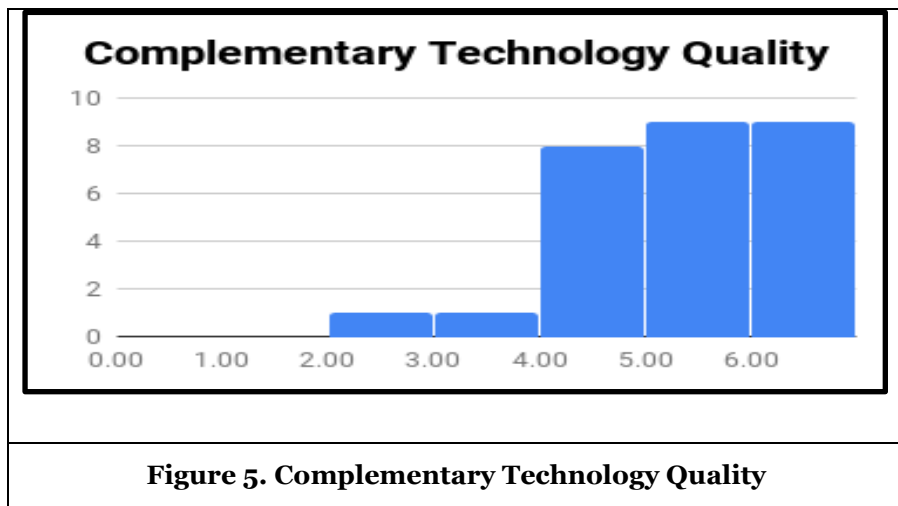
In this research, complementary technology refers to the hardware and internet quality being used at the Treasury Department. The response from participants to Complementary Technology Quality can be seen in Figure 5. There were 26 respondents that answered positively and 4 that responded neutrally to this section.

Information Quality
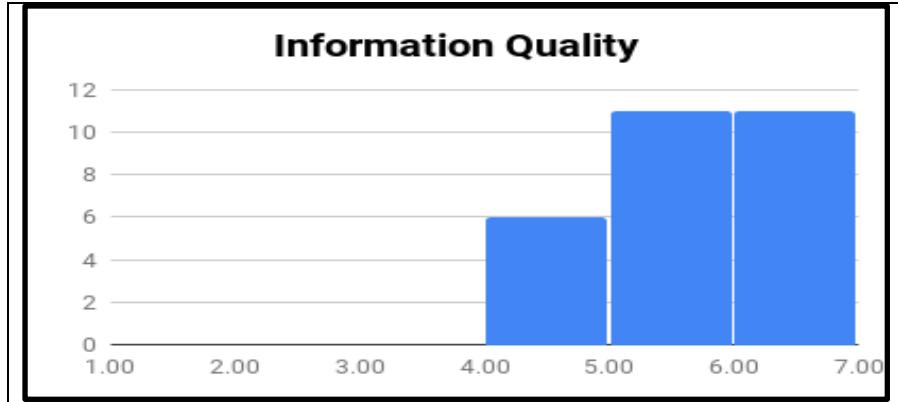
Figure 6. Information Quality

Information quality refers to the information produced by the SmartStream system. All 30 of respondents answered positively from 4-7 to this portion of the survey as indicated in Figure 6.
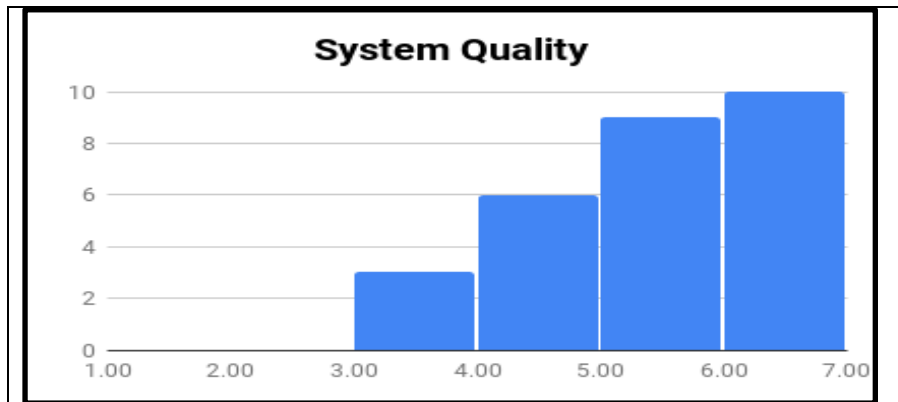
System Quality

Figure 7. System Quality

Figure 7 indicated the perception of respondents on the quality of the SmartStream system. 25 participants responded between 4-7 that they agreed Smart Stream's quality was satisfactory. On the other hand, 3 responded neutrally and 2 gave no response.

Service Quality

Figure 8. Service Quality

The perspective of respondents on Smart Stream's service quality can be seen in Figure 8. 18 responded highly positive between 5-7. However, 8 responded neutrally between 3 to 5. Lastly, the remaining 2 gave a negative response.
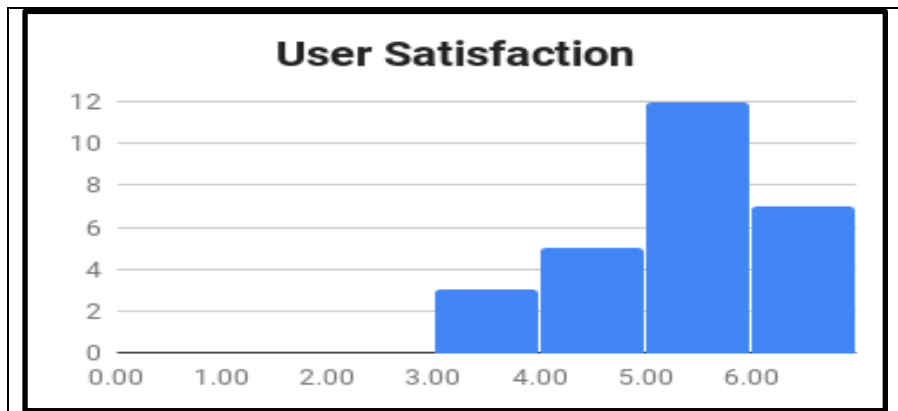
User Satisfaction

Figure 9. User Satisfaction

Figure 9 indicates the overall satisfaction of the user towards the SmartStream system. 19 participants answered between 5-7, while the remaining 8 responded neutrally to positive between 3-5.
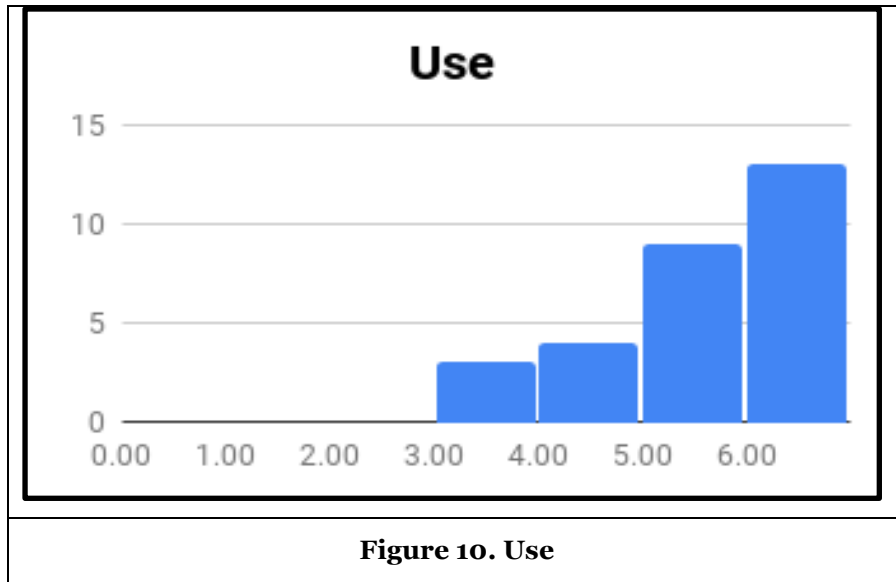
Figure 10. Use

Figure 10 shows the results of participants response to the use of the SmartStream system. All respondents gave a neutral to positive response between 3-7.

Figure 11. Perceived Net Benefits
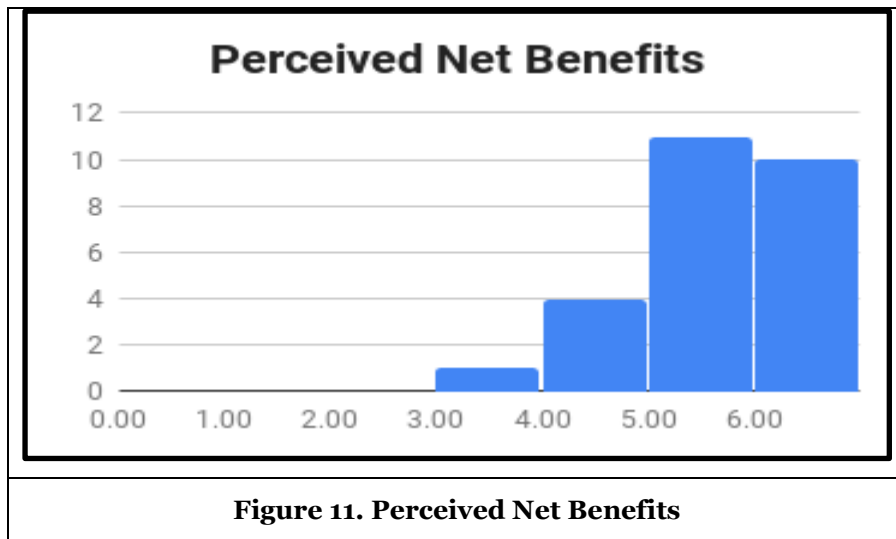
Lastly, Perceived Net Benefits measures the success and use of SmartStream in the Treasury Department. All 26 respondents answered between 3-7 which indicates neutral to highly positive attitudes towards SmartStream. The remaining 4 did not respond to this portion of the survey.

Discussion

The research conducted aimed to measure the level of success and use of the SmartStream system in the Treasury Department. To properly measure the Information System's success an existing model formed by Delone and Mclean (2003) was used. This model takes a close look at some dimensions that greatly contribute to the system's success rate of implementation. In essence, this model is used to assess and

quantify the level of success of the Information System. However, the model was modified a bit by introducing self-efficacy and complementary technology quality, in order to allow the paper to be accurate and support the research. The two additional constructs allow the research to gather more data on the success of Smart Stream with the users.

The research indicates that the elements result in different variances. The differentiation of results is due to the responses from the employees of the organization. The model constructed indicates the perceived net benefits is showing that the Information System is moderately successful in the department. The perceived net benefit had a 5.7 average, which stipulates that the users felt that the overall SmartStream system is somewhat successful and useful.
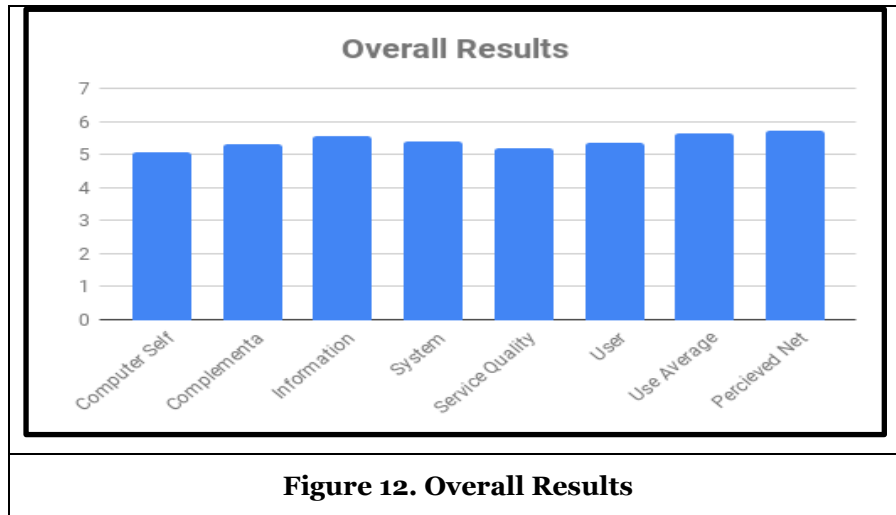
Figure 12. Overall Results

Employees feel that SmartStream adds value to the department and is needed in their daily tasks. The average use of the SmartStream system was 5.6. This may be indicative that the department is still doing some elements of its processes manually. The average of responses for user satisfaction is 5.36, this may signify that while most employees feel satisfied with the system, others are not. This could be for various reasons, such as users are not comfortable using it. Computer self-efficacy was the lowest at an average of 5; Hence, this shows that even if the SmartStream is adding value to the department, users are not very comfortable in using it. Meanwhile, complementary technology had an average of 5.3. This shows that the hardware and the internet may be unsatisfactory within the department. Additionally, service quality is moderately neutral at an average of 5.2. This can be interpreted as the information systems support staff not doing regular maintenance to the system and providing needed support. Lastly, the system quality averages at 5.4, and the information quality at 5.57. Both indicate that users view each fairly high.

The data can be considered stable with the results gathered. The information system is moderately useful, and is considered to be at a neutral to low positive level of quality. After reviewing the responses, it seems respondents view the SmartStream system as being adequately valuable to the Treasury Department.

Conclusion

The main aim of this research *is to determine the benefit and value that SmartStream Systems add to the success of Treasury Department which resulted to be successful.* Thus, in order to conduct a complete evaluation, it was compared to DeLone–McLean model of information systems success. This model of information success includes six main features which are: Information Quality, System Quality, Service Quality, User Satisfaction, Use and Perceived Net benefits. However, the researcher felt that using these six main features would narrow the research, therefore, two other components which are the Complementary Technology Quality and Computer Self Efficacy were added. Now using these eight features, questionnaires were developed to conduct the research and obtain accurate information which would prove the hypothesis to be true.

Due to the fact that this is the main information system used by the Government of Belize in all of their public Departments. It is of utmost importance for the information to be accurate and efficient. The public sector is very dependent on this system in order to view or project the economy of Belize. Governmental agencies and officials highly depend on this system in order to make critical decisions regarding the economy.

In order to fully analyze the information system, some hypotheses were developed which will eventually guide the direction of the research. The following hypothesis:

> H1. Information quality will positively impact user satisfaction.
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> H2. System quality will positively impact user satisfaction.
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> H3. Service quality will positively impact user satisfaction.
>
> H4. Use will positively impact user satisfaction.
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> H5. Information quality will positively impact use.
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> H9.Use will positively impact perceived net benefit.
>
> H10.Complementary technology quality will positively impact system use.
>
> H11. Complimentary Technology Quality will positively impact User Satisfaction
>
> H12. Complimentary Technology Quality will positively impact Use.
>
> H13.Computer Self Efficacy will positively impact Use.

In order to test if the hypothesis were true or not, a quantitative analysis was done in the form of questionnaires whereby the overall results gathered proved that all of the hypotheses are true. Nevertheless, it must be noted that the overall results illustrate the results of the majority of people who answered the questionnaire and there were few employees who were neutral to low level. This goes to prove that the different governmental departments need to do some ground work as it pertains to some employees. In spite of the results, it can be seen that the SmartStream System in Belize is effective and very useful to most employees.

The only downfall with these results obtained would be the fact that the questionnaires were mostly answered by the Staff of Belize City Sub Treasury Department. Therefore, it can be said to some extent that the result speaks mainly on behalf of that department. It would have been very nice to distribute evenly across the different departments countrywide in order to obtain a more accurate reflection. However, the distribution of questionnaires was beyond our control since it was delivered to Sub Treasury for distribution.

In brief, the research did measure t*he benefit and value that SmartStream Systems add to the success of Treasury Department* using appropriate methodology for collecting required data. These data were compared to literature and have proven all hypothesis to be true. Therefore, it can be said with maximum accuracy that the implementation and use of the SmartStream System in the Sub Treasury Departments does add substantially to the benefit and success of the department.

Limitations

The research was successful as it served its purpose which was to measure the success of the SmartStream system at Treasury Department, Belize. However, there were limitations faced along the way. Time played a major role in the research. The researchers were faced with limited time as we only had 5 weeks to complete this research. This type of research can be vigorous and very time consuming. Another limitation faced the sample size, 30 current working employees at Treasury Department in three main branches, namely, Corozal, Orange-Walk and Belize City, this sample size may not represent the entire population. Therefore, the conclusion may be misleading and not represent the true opinion of all employees at Treasury Department.

The final limitation was not using the program of SPSS. This program is designed to assist in research papers and be effective with quantitative research. Due to limited time, the group was not able to operate the program and utilize it. Moreover, though limitations were encountered, the study provides beneficial information in regards to the success of SmartStream System at Treasury Department, Belize.

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Appendix A

Questionnaire I – "Finance and Accounting of Smart Stream System" (Treasury Department)

Purpose

This questionnaire asks for information about your experience with Treasury Department Smart Stream System and how effective it is to you as a user. We would like to measure the use of the enterprise financial system and the effectiveness and efficiency it has been to employees in completing their duties and its effects on the department's performance.

Please answer the questions in relation to your personal experience. Your individual responses to the questionnaire will be strictly confidential.

Instructions

This is a survey, not a test; there are no right or wrong answers. Please tick the boxes to mark your answers.

1. Background Information	Answers:
Please indicate your gender:	Male ☐ Female ☐
Please indicate your age:	>18 ☐ 25-35 ☐ 36-45 ☐ 46-55 ☐ >55 ☐
Please indicate highest education level attained:	PhD ☐ Masters ☐ Bachelors ☐ Associates ☐ High School ☐
Please indicate your working experience:	<5 ☐ 5-10 ☐ 11-15 ☐ >15 ☐
Please state your work title	

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

2. Information Quality	Disagree ------------------------------Agree
IQ1: Treasury's Smart Stream system provides information that is exactly what you need	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ2: Treasury's Smart Stream system provides information you need at the right time	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ3: Treasury's Smart Stream system provides information that is relevant to your duties	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ4: Treasury's Smart Stream system provides sufficient information	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ5: Treasury's Smart Stream system provides information that is easy to understand	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ6: Treasury's Smart Stream system provides up-to-date information	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
3. System Quality	**Disagree ------------------------------Agree**
SQ1: Treasury's Smart Stream system is easy to use	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SQ2: Treasury's Smart Stream system is user-friendly	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SQ3: Treasury's Smart Stream system provides high-speed information access	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SQ4: Treasury's Smart Stream system provides interactive features between users and the system	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
4. Complementary Technology Quality	**Disagree ------------------------------Agree**
CTQ1: The software on the device (desktop, laptop, mobile device) use to access Treasury's Smart Stream system is adequate	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CTQ2: The device hardware (desktop, laptop, mobile device) use to access Treasury's Smart Stream system is adequate	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

CTQ3: The speed of the internet connection use to access Treasury's Smart Stream system is adequate	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CTQ4: The reliability of the internet connection use to access Treasury's Smart Stream system is adequate	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

5. Service Quality — Disagree --------------------------------Agree

SV1: The IT personnel keeps Treasury's Smart Stream system software up to date	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SV2: When users have a problem Treasury's Smart Stream system IT personnel show a sincere interest in solving it	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SV3: Treasury's Smart Stream system IT personnel respond promptly when user have a problem	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SV4: Treasury's Smart Stream system IT personnel tell users exactly when servi will be performed	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

6. User Satisfaction — Disagree --------------------------------Agree

US1: Most of the users bring a positive attitude or evaluation towards Treasu Smart Stream system	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
US2: You think that the perceived utility about the Treasury's Smart Stream syst is high	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
US3: Treasury's Smart Stream system has met your expectations	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
US4: You are satisfied with Treasury's Smart Stream system	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

7. Use — Never --------------------------------Often

U1: The frequency of use of Treasury's Smart Stream system is high	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
U2: You depend upon Treasury's Smart Stream system	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
U3: I was able to complete a task using Treasury's Smart Stream system even when there was no one around to tell you what to do.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
U4: I have the knowledge necessary to use Treasury's Smart Stream system.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

8. Perceived Net Benefits — Never --------------------------------Often

NB1: Treasury's Smart Stream system helps you improve your revenue collection	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB2: Treasury's Smart Stream system helps the department save costs	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB3: Treasury's Smart Stream system helps the department achieve it's goals	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB4: Using Treasury's Smart Stream system improves the assessment and training	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB5: Using Treasury's Smart Stream system in the job increases my productivity	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB6: Overall, using Treasury's Smart Stream system enhances performance	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

9. Computer Self-Efficacy Measure — Disagree--------------------------------Agree

I COULD COMPLETE THE JOB USING THE INFORMATION SYSTEM…	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE1: if I had only the information system manuals for reference.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE2: if I had never used an information system like it before.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE3: if I had seen someone else using the information system before trying it myself.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE4: if I could call someone for help if I got stuck.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE5: if someone else had helped me get started.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

CSE6: if l had a lot of time to complete the job for which the information system was provided.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE7: if I had just the built-in help facility for assistance	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE8: if someone showed me how to do it first.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE9: if I had used similar information systems before this one to do the same job	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

Please return this survey to the person who gave you the form.

Thank you for your participation.