The Effectiveness of SAP Information System: The Case at a Tourism Based Organization in Belize

Aaron Gentle
University of Belize
St. College Street, West Landivar,
Belize City, Belize
2018118611@ubstudents.edu.bz

Alma Urbina
University of Belize
St. College Street, West Landivar,
Belize City, Belize
2018118038@ubstudents.edu.bz

Brian Guardado
University of Belize
St. College Street, West Landivar,
Belize City, Belize
2015112650@ubstudents.edu.bz

Rony Espinoza
University of Belize
St. College Street, West Landivar,
Belize City, Belize
2018118523@ubstudents.edu.bz

Abstract

Although a substantial amount of research has been conducted on Information Success models, minimum research has been carried out to address the conceptualization and measurement of IT management software success within an organization in Belize. This study provides an empirical test of an adoption of Delone and McLean IS success model in the context of IT management software. The model consists of six dimensions: Information quality, system quality, service quality, use, user satisfaction and perceived net benefit. In addition, complementary technology and computer self-efficacy were added to measure the IT management software success within organizations. The findings provide several important implications for IT research and practice. This paper concludes by discussing the limitations of the study, which can be addressed in future research.

Keywords: Enterprise Resource Planning, Information System Model, Information Technology, SAP, Process Quality Management method

Introduction

Organizations have recently been investing in Systems, Application and Products (SAP) for the support of different business functions mainly in tracking customer and business interactions (Rouse Margaret). The need to work more effectively and efficiently is on the possibilities of implementing SAP. The importance of this research is to investigate SAP as a whole and the components, leading the business to a better direction. SAP ERP software has two main module category functional and technical module such as: human capital management (HCM), Production Planning (PP), Material Management (MM), Project System (PS), Sales and Distribution (SD), Plant Maintenance (PM), Financial Accounting (FA),

Controlling (CO). The technique module of SAP contains: Business Intelligence (BI), Business Warehouse (BW), SAP NetWeaver, SAP HANA etc (John Reed, 2000).

aThe software of SAP was selected in order to conduct a deep investigation as to how the system works in Belize, in particular at the Belize Tourism Board. The only way the software can be known out there is if someone takes the time out to study the software and see it's pros and cons and see how it can improve the day to day operations of the business. For those organizations adopting SAP without having proper knowledge, the current findings provide a roadmap to follow in order to avoid making critical, but often underestimated, project management mistakes (Samuel Yang, 2009). Thus, we attempt to develop a theoretical framework that describes this distribution along the SAP project processes.

The literature review on SAP suggests that, overall, the importance of introducing SAP is to: reduce administrative costs, increase collaboration, better analysis, improve decision making, improve productivity, happier customers, improve inventory and plant management (Harini, 2018), thus helping SAP to become more strategic, flexible, cost-efficient, and customer and employee -oriented. Additionally, SAP does not only have one software version, it is important for businesses to be vigilant towards which software works best for them. The versions that the software has are as follows: SAP R/1 System RF, SAP R/2 Mainframe System, SAP R/3 Enterprise Edition 1.0 A, SAP R/3 Enterprise Edition 2.0, SAP R/3 Enterprise Edition 3.0, SAP R/3 Enterprise Edition 4.0 B, SAP R/3 Enterprise Edition 4.3, SAP R/3 Enterprise Edition 4.5 B, SAP R/3 Enterprise 4.6 C, SAP R/3 Enterprise Edition 4.6 F, SAP R/3 Enterprise Edition 4.7, SAP ERP Central Component (ECC) 5.0, SAP ERP Central Component (ECC) 6.0, SAP enhancement package 1 for SAP ERP 6.0 Business All-in-One (Shalesh Visen, 2018).

The (SAP) software provides a portal which enables managers, employees and other people an end to end solutions for financials, manufacturing, logistics, distribution and other information which is necessary for managing the organization. The only way an organization can have the best service from SAP is if they purchase the original (SAP) ERP. If the original is being purchased then the employees can have access relevant information and data, conduct analyses, make decisions and communicate with others and they can do this with a click of the mouse (McIntosh Kathy, 2019). Many business people think that by implementing the cheap (SAP) ERP they will receive the same features, but no, only with the original software the business can benefit. Additionally, all business owners or personnel who use the software know that through SAP they can plan, schedule, track, monitor etc which helps to improve value added work (Gargeya; Brady, 2005).

This paper describes the results of a research project that seeks to contribute to understanding the success of SAP implementation projects. Here, our goal is to understand the implementations and the processes of SAP. Hence, the overall objective of this study is to investigate if and how (SAP) in the organization of BTB in general, and in Belize in particular can develop and validate a (SAP) software successful model based on the DeLone and McLean (2003) model.

The rest of the paper is structured as follows: First, we review the development of (SAP) as a success or unsuccessful model. Second, studies based on past investigation of the implementation (SAP). Third, the methods, measures, and results of the study are presented. Finally, theoretical, empirical and managerial implications and directions for future research are discussed. The validated (SAP) moderate successful model can serve as a foundation for positioning and comparing (SAP) success research, and can provide managers who use the software with a useful framework for evaluating (SAP) success. Finally, some conclusions and further work are included.

Literature Review

ERP is a business process management software that allows an organization to use a system of integrated applications to manage the business and automate many back office functions related to technology, services and human resources by providing a total, integrated solution for the organization's information-processing needs (Nah, Lau, Kuang (2001.When looking at the Belize Tourism Board (BTB) which is a legislated body designed to govern, enhance and promote the Belize tourism product. BTB undertakes numerous strategic initiatives as well as the implementation of tourism policies to address the changing

needs of the tourism industry.The Belize Tourism Board is a statutory body within the Ministry of Tourism that functions as a strategic partner between government and the private sector to develop, market and implement tourism programs that fulfil the emerging needs of our local industries and international tourism marketplace for the benefit of Belize and Belizeans. BTB(Belize Tourism Board) uses an integrated ERP software called SAP which allows businesses to track customer and business interactions. SAP is known for its Enterprise Resource Planning (ERP) and data management programs. SAP is a Systems, Applications and Product software. Since large organizations like BTB spend large amounts of money in these softwares, it is crucial for them to analyze the success of their softwares and evaluate them in order to adjust their processes.

Therefore, in this section we establish the theoretical foundation and conceptualization of an ERP success based on prior BPMS success studies.In their attempt to structure the multitude of variables associated with the diversity of BPMS success, most business has some form of an information system in their business process. While some companies can go out and find an information system that can satisfy all their needs, other companies need to invest bigger money into creating a system that will meet their functional needs. Due to the huge investment in these systems, companies realized they need to find out if their system is successful or not (Delone, McLean & Petter, 2012).

While several empirical studies explicitly tested the relationships among the variables identified in the original Delone and McLean model which originally had 5 constructs, other researchers had criticized Delone and Mclean's model and suggest that there are major gaps in the model (Seddon, 1997; Garrity and Sanders, 1998; Ballantine et al, 1996). Some of the strongest criticism focused on the lack of service quality among its variables. Accordingly, in response to a call from other researchers who tested and discussed the legitimate model, and due to the advent and growth of Internet-based applications, DeLone and McLean decided to add service quality to their new model as an important dimension of IS success, noting "especially in the e-Commerce environment where customer service is crucial" (DeLone and McLean, 2003:27). In the 10 year updated Delone and McLean model they identified that Information System has six success variables which are system quality, information quality, use, user satisfaction, individual impact and organizational impact (McLean & Petter, 2009). Delone and Mclean (1992) had analysed, but did not empirically test, more than 100 empirical papers containing IS success measures that had been implemented in businesses between 1981 and 1988. Delone and Mclean had argued that there was little relevance in calculating input variables like user participation or IT investment with respect to IS, if the dependent or output variable, IS success or IS effectiveness, could not be evaluated with similar accuracy. They also provide a model for categorizing the multitude of IS success measures that have been used and reported in the prior literature, According to Grover et al, (1996), the exploration of IS success has been significantly shaped by Delone and Mclean's IS Success Model. A core characteristic of the Delone and Mclean model is that user satisfaction is considered as an IS success variable, and is incorporated in their IS success model as an antecedent of Individual Impact.

Delone and Mclean (1992) made many important contributions to our understanding of IS success. First, they provide a model for categorizing the multitude of IS success measures that have been used and reported in the prior literature, According to Grover et al, (1996), the exploration of IS success has been significantly shaped by Delone and Mclean's IS Success Model. In developing countries like Belize ERP is in its early stages. Inadequate IT infrastructure, governmental policies, small size of companies, lack of IT/ERP experience, and low IT maturity seriously affect the adoption decision (Zhenyu Huang,2001). In developing countries most information systems are either successful or result in failure. There are two categories of success/failure. The first category is subjectivity of evaluation—viewed from different perspectives, one person's failure may be another's success (Lyytinen & Hirschheim, 1987; Sauer, 1993).

The second category is the timing of evaluation— today's IS success may be tomorrow's IS failure, and vice versa. The high failure rate of ERP implementation calls for a better understanding of its critical success factors (Somers et al., 2000).In case study document "ERP implementation failures in China: Case studies with implications for ERP vendors" sought possible reasons for major international ERP vendors not being able to dominate Chinese ERP Market. Taking an ensemble view of technology, it conceptualized ERP systems as being embedded in complex social contexts, such as heavily influence ERP implementation and use. Based on this conceptualization, it contended that a historical perspective and a social-cultural perspective can offer a rich understanding on ERP implementation in China. From a

historical perspective, the paper describes China's ERP evolution and compares it with ERP evolution in Western Countries. From the social-cultural perspective, five cases in which foreign ERP vendors have failed in their Chinese implementations are presented and analysed. Eight factors are identified which have contributed to ERP failure (Yajiong Xue, 2005).

As far as Delone and Mclean's model, system quality identified with the technical level, data quality identified with the semantic dimension, and is use, user satisfaction, and individual impact identified with the adequacy effectiveness-influence level. Delone and Mclean's model takes Shannon and Weaver's hierarchy levels as the establishment for demonstrating system quality furthermore, data quality as drivers of IS use and user satisfaction. At that point Delone and Mclean connected Mason's contentions to display use and user fulfillment (reaction to utilization of its output) as forerunners of individual effect (impact of information on conduct) and organization impact. The significant limitations found in previous researches were the level of usage in the appropriate IS because participants would partake in survey entries and would have not had the level of usage on the IS as other participants . This would then later on yield misleading results. For this corresponding research only participants that are highly involved in IS usage will be used in the aim of retrieving appropriate and precise data over the IS.

Methodology of the Study

Construct Measurement

The aim of this research is to figure out the factors that contribute to the success or failure in implementing SAP. To ensure that the scales are valid, measurement scales for the quantitative data collection were obtained from previously verified instruments. The additional methodology involved analyzing past articles for information related to companies who have accessed SAP software in their business.

The information quality construct was measured by a six-item scale with certain modifications to fit the specific context of SAP. The information quality seeks to collect information from the participant whether or not BTB SAP software provides the actual information that they need, and if the system is constantly up to date. A four–item scale was adopted and refined to measure the system quality construct.

The system quality construct seeks to ask participants if BTB SAP software is easy to use and if it is user-friendly. Another four-item scale was used to measure the Complementary technology quality which was adopted by (Teece, 1988). The complementary technology quality attempts to seeks answers if the internet connection is reliable to access the software and if the devices, they have can access the software adequately. Computer Self-Efficacy Measure was used as a ten-item scale construct. The scale was used by (Compeau, D. R., & Higgins, C. A. (1995). The computer self-efficacy asks participants to demonstrate how confident they are when using the software. Service quality construct was measured using a four–item scale which was adopted and refined from instruments used by Chang et al (2009).

The service quality seeks to collect information whether or not the organization assist staff members when they are having trouble using the software. In this research, user satisfaction is an evaluative judgment regarding SAP experience. This construct was measured with a four-item scale from Seddon and Yip (1992). The user satisfaction seeks to ask participants if they are satisfied with the software BTB is using. Use was measured by a four-item measure adapted from previous studies (Balaban et al., 2013; Rai et al., 2002). The basic information use seeks to ask is whether the participant depends too much on the software or not, and if they are knowledgeable about the software.

The SAP perceived benefits are basically seeking to receive information if BTB SAP system helps to achieve the organization's overall goals and if it helps to improve their job performance. This was operationalized by a six-item scale adopted from (Alshibly, 2011; Tansley et al, 2001). All the items were measured using a 7-point Likert Scale with anchors ranging from strongly agree (7) to strongly disagree (1). After the measurement variables were developed, the face validity of these variables was tested. One IT lecturer reviewed the measurement variables. In addition, 3 UB MIS student practitioners reviewed the measurement variables and provided feedback on the length and clarity of each item. Table 1 presents the research constructs and related survey items used for measurement of each of these constructs.

Construct	Survey Questions	Source
Information Quality	IQ1: Belize Bank's Spiceworks system provides information that is exactly what you need IQ2: Belize Bank's Spiceworks system provides information you need at the right time IQ3: Belize Bank's Spiceworks system provides information that is relevant to your field of work IQ4: Belize Bank's Spiceworks system provides sufficient information IQ5: Belize Bank's Spiceworks system provides information that is easy to understand IQ6: Belize Bank's Spiceworks system provides up-to-date information	Bailey and Person (1983)
System Quality	SQ1: Belize Bank's Spiceworks system is easy to use SQ2: Belize Bank's Spiceworks system is user-friendly SQ3: Belize Bank's Spiceworks system provides high-speed information access. SQ4: Belize Bank's Spiceworks system provides interactive features between users and the system	Bailey and Person (1983)
Complementary Technology Quality	CTQ1: The device (desktop, laptop, mobile device) you normally use to access Belize Bank's Spiceworks system is adequate CTQ2: The device (desktop, laptop, mobile device) you normally use to access Belize Bank's Spiceworks system has a fast and reliable internet connection CTQ3: The speed of the Internet connection used to access Belize Bank's Spiceworks is adequate. CTQ4: The reliability of the Internet connection used to access Belize Bank's Spiceworks is adequate.	Bailey and Person (1983)
Service Quality	SV1: The support staff keeps Belize Bank's Spiceworks system software up to date SV2: When users have a problem Belize Bank's Spiceworks system support staff show a sincere interest in solving it SV3: Belize Bank's Spiceworks system support staff respond promptly when users have a problem SV4: Belize Bank's Spiceworks system support staff tell users exactly when services will be performed	Bailey and Person (1983)

User Satisfaction	US1: You have a positive attitude towards Belize Bank's Spiceworks system Atlantic Bank's Online system function. US2: You think that Belize Bank's Spiceworks system is useful US3: Belize Bank's Spiceworks system has met your expectations US4: You are satisfied with Belize Bank's Spiceworks system	Bailey and Person (1983)
Use	U1: Your frequency of use of Belize Bank's Spiceworks system is high U2: You depend upon Belize Bank's Spiceworks system U3: You were able to complete a task Belize Bank's Spiceworks system even when there was no one around to tell you what to do. U4: You have the knowledge necessary to use Belize Bank's Spiceworks system.	Bailey and Person (1983)
Perceived Net Benefits	NB1: Belize Bank's Spiceworks system helps you improve your job performance NB2: Belize Bank's Spiceworks system helps you save time and costs NB3: Belize Bank's Spiceworks system helps the organization achieve its goal NB4: Overall, using Belize Bank's Spiceworks system enhances your productivity NB5: Overall, using the Spiceworks enhances recruitment and performance management	Bailey and Person (1983)
Self- Efficacy	I could complete my job using the Belize Bank's Spiceworks systems: CSE1: if there was no one around to tell me what to do as I go. CSE2: if I had never used an information system like it before. CSE3: if I had only the information system manuals for reference. CSE4: if I had seen someone else using the information system before trying it myself. CSE5: if I could call someone for help if I got stuck. CSE6: if someone else had helped me get started. CSE7: if l had a lot of time to complete the job for which the information system was provided. CSE8: if I had just the built-in help facility for assistance.	Bailey and Person (1983)

	CSE9: if someone showed me how to do it first. CSE10: if I had used similar information systems before this one to do the same job.	

Table 1: Measurement items for Questionnaire

Sampling and Data Collection

The method of the research sampling is "simple random sampling method" which gives the researchers to use their own judgment to select participants in an equal manner in the organization. Out of the 40 questionnaires distributed to the IT Department, 30 usable questionnaires were returned, yielding a response rate of 94.3 percent, which is considered acceptable.

The respondents' characteristics is presented in Table 2. Female participants represented a Slightly higher percentage of the completed sample (approximately 60%) compared to males Participants (approximately 40%). Forty six percent of the participants were aged 25-35 years. The completed sample was composed of well-educated individuals. The participants were mostly between five to ten years of experienced at BTB. Approximately 26% of the participants had more than fifteen years' work experience in using computers at BTB.

Characteristics	**Participants**	**Percentage**
Work Experience		
<5	6	20%
5-10	14	46.70%
11-15	2	6.70%
>15	8	26.70%
Degree		
High School and less	1	3.33%
Diploma	6	20%
Bachelors	19	63.33%
Associate	4	13.33%

Table 2: Characteristics of Respondents

Research model and hypothesis

This study proposes a comprehensive model of the Systems, Applications and Products (SAP) which suggests that Information quality, system quality, complementary technology quality, system quality, service quality, user satisfaction, use, perceived net benefits and self-efficacy are success variables in the (SAP) software.

Information Quality was measured in terms of accuracy, timeliness, completeness, relevance, and consistency (Delone & McLean, 2003). Information Quality has shown to be an important success factor when investigating overall SAP success (Mckinney et al., 2002). System quality considers and was measured in terms of ease-of-use, functionality, reliability, flexibility, data quality, portability, integration, and importance (McKinney et al., 2002). Service Quality covers dimensions such as responsiveness, reliability, assurance, empathy to measure service quality (Pitt et al., 1995). User Satisfaction is considered to be one of the most important measures when investigating overall SAP success (Alishibly, 2014).

The (SAP) perceived net benefit can be defined as an achievement of a firm's objective for using the (SAP) software and the achievement of end user related objectives from using them. This measures the

perceived individual and organization benefits that employees gain when using SAP. These benefits cover aspects like task performance, job efficiency, quality improvement, cost savings, expanded markets, incremental sales, and reduced search cost, time savings (Alishibly, 2014). Different individuals or stakeholders may have different opinions as to what constitutes a benefit to them (Delone & McLean, 2003). According to Delone and McLean (2003), researchers need to clearly and carefully define stakeholders and the context in which IS success or net benefits are to be measured.

This study focuses mainly on the perspective of the employee, and uses the eight updated IS Success dimensions: Information quality, system quality, service quality, system use, user satisfaction, perceived net benefit, complementary technology quality and computer self-efficacy.

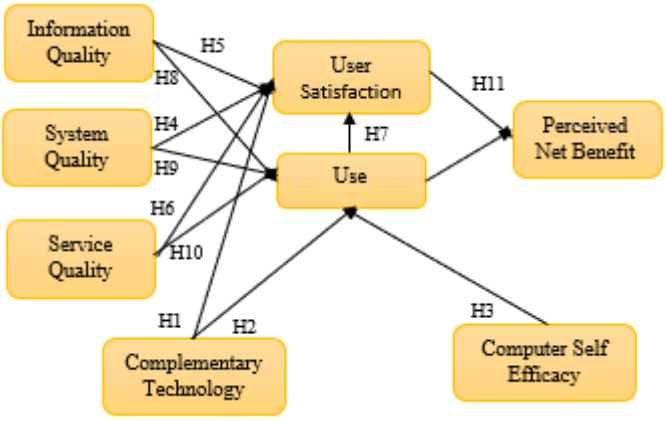

Figure 1. Modified Research Model

The hypothesized relationship between IT Management software system success variables are based on the theoretical and empirical work developed by Delone and McLean (2003). Delone and McLean (2003) suggests that the updated success model needs further development and validation before it could serve as a basis for the selection of appropriate IS measures. Accordingly, the hypothesized the following 12 hypotheses tested:

H1. Complementary Technology Quality will positively impact User Satisfaction

H2. Complementary Technology Quality will positively impact Use.

H3. Computer Self-Efficacy will positively impact Use

H4. System Quality will positively impact 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 Benefits

H12. Use will positively impact Perceived Net Benefits.

Figure 1 illustrates our research model including the hypothesized relationships between the magnitude of TRI, TAM, and actual use of technology.

Data Analysis

Seven histograms and a bar chart is used to show the averages results of the data gathered at the Belize Tourism Board. Questionnaire was used to collect our data. The questionnaire was given to. The validation of the questionnaires is not tested by this research study, but it test the average responses of the employee based on their view of the successfulness of the system that they use. With 1 representing the sense of strong disagreement and 7 representing strong agreement, the results deduced are as follows:

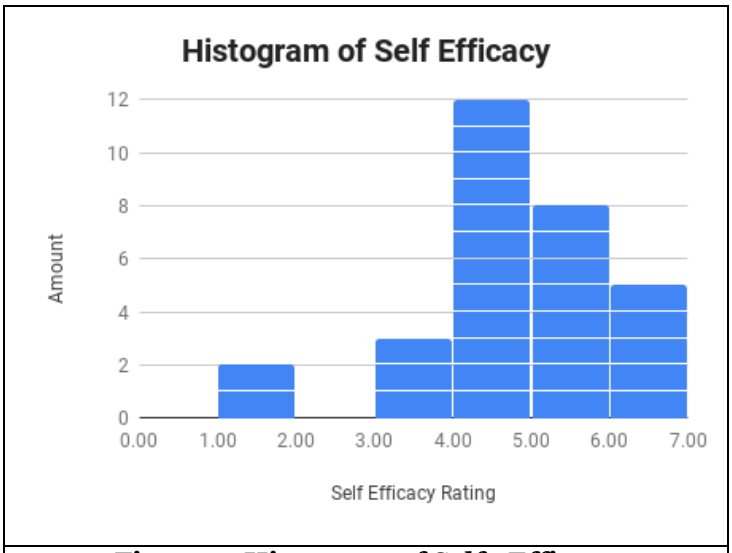

Figure 2: Histogram of Self - Efficacy

Self-efficacy is the level of competence that users believe that they have over their computer system. Figure 2 displays these results: of our thirty participants, two chose 2 and three chose 5. This would be likely due to the new recruits which might not have had much exposure to the specific software that they are using at BTB. The majority of the results were from 5 - 7. Five was the highest with twelve participants choosing it.

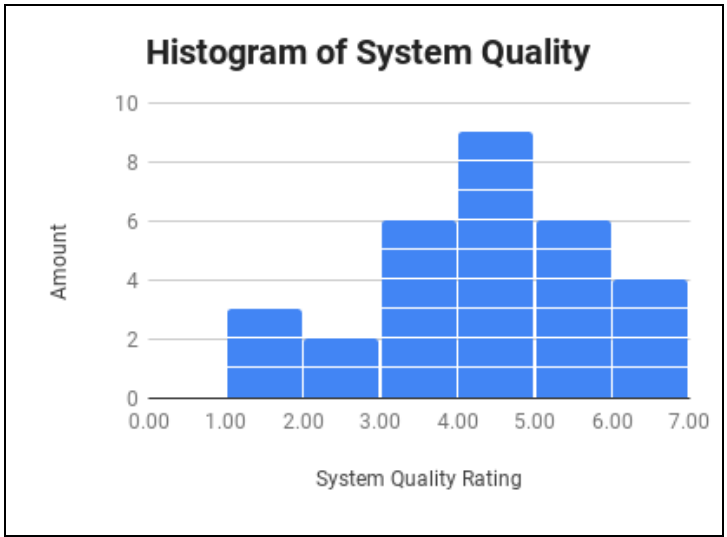

Figure 3: Histogram of System Quality

The system that is used at BTB is SAP. Here shows that the employees of BTB have mixed feelings about this program. This may be due to outdated versions of their system being used by some employees while others have updated versions. Some employees may have different types of computers where the processor is not optimal to run this program. On the positive side, nineteen employees (63%), more than half chose from 5 - 7. This information is graphically represented by figure 3.

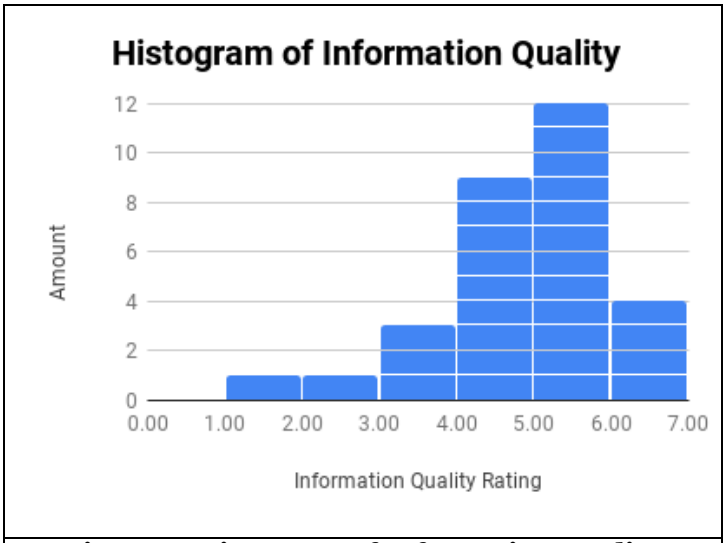

Figure 4: Histogram of Information Quality

Figure 4 reassures us that SAP provides quality information that is useful. While 4 of the participants indicated that it is not very useful (one 2 and one 3), and one indicated that it is 'okay' (one 4), majority of the employees (25 or 83%) indicated that SAP is provides 'top of the line' quality information once their data had been entered correctly.

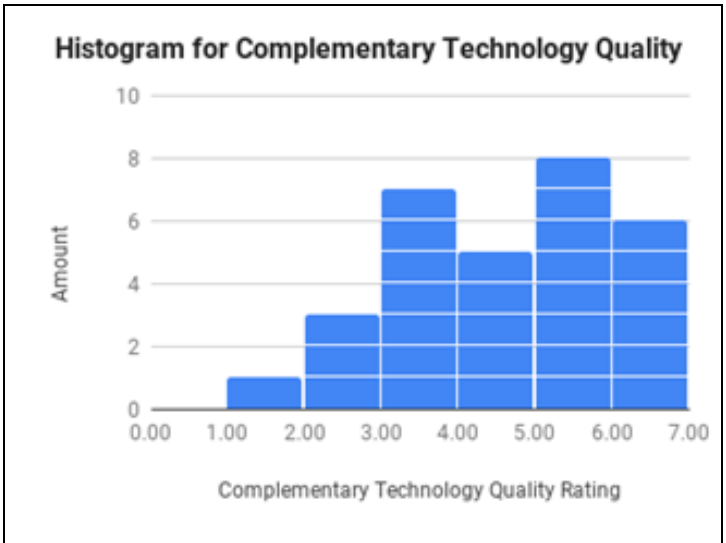

Figure 5: Histogram of Complementary Technology Quality

Satisfaction level with complementary counterparts, shown in figure 5, shows that the majority of

the software users from our sample is satisfied with the quality standard. Just 3 of the thirty participants show that they are displeased with the quality of the complementary technology.

Figure 6: Histogram of Service Quality

Based on figure 6, service quality, in the eyes of most employees is exceptional; it is possible that it exceeds their expectations. There is only 1 participant who begs to differ. This observation leads us to believe that IT maintenance is a priority at BTB.

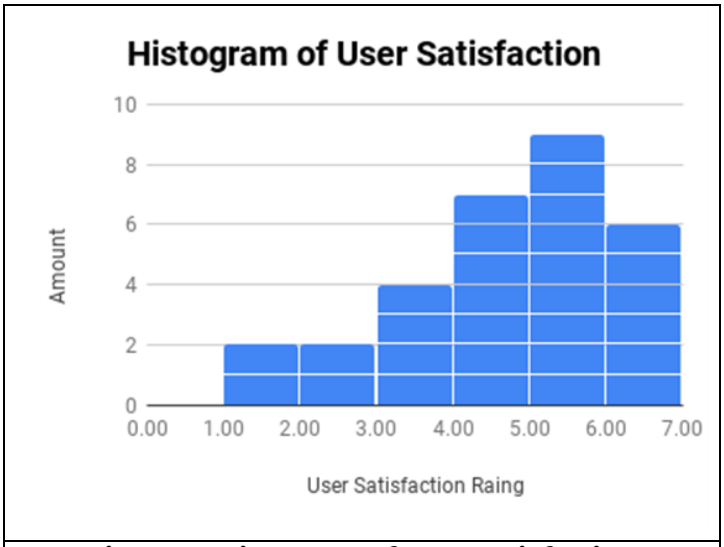

Figure 7: Histogram of User Satisfaction

Figure 7 shows the user satisfaction. 4 of the participants are not very satisfied with the system and 4 indicate that it is more or less okay. The others, 22 to be exact, look at SAP as a system that satisfies them; it fulfils the purpose that they use it for. It is possible that the 4 participants who do not find it satisfying work on computers that are not optimal to run the software.

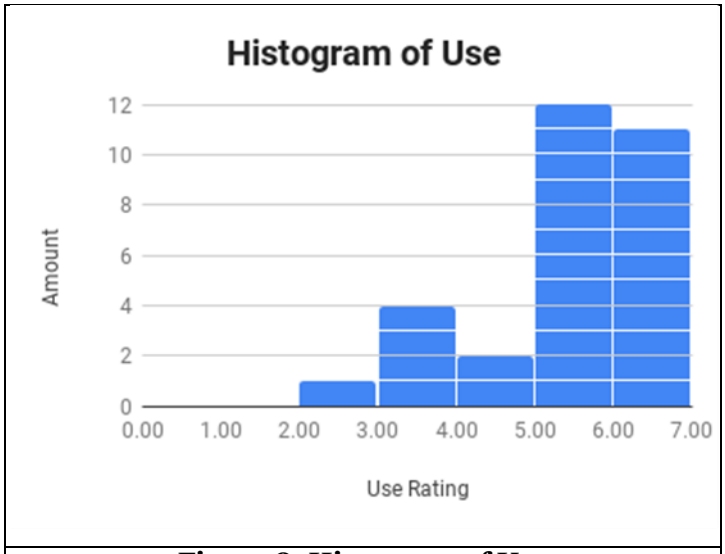

Figure 8: Histogram of Use

Figure 8 confirms that the SAP system is an important tool that needs to be used in order for most of the employees to complete their job. Additionally, this indicated that they are able to use the system for the purpose that they need it for. Only one employee indicated that his use of SAP was below average.

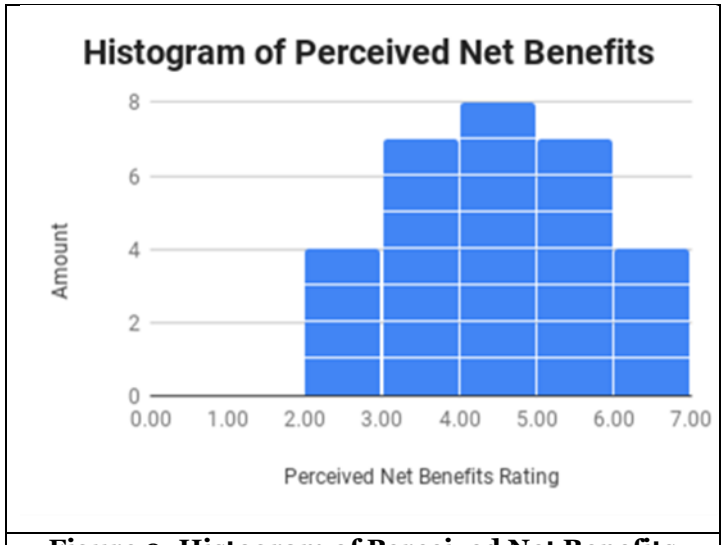

Figure 9: Histogram of Perceived Net Benefits

Figure 9 shows the net benefits that the participants perceived. 4 Participants indicated that, based on their perception that the net benefits of the system is below satisfactory. 7 participants rated it a little above average while the other 19 comprised of people that indicated that it was either satisfactory and met their expectations or exceeded their expectations.

Conclusion

Discussion

Our research was done to measure the successfulness of the SAP system used by Belize Tourism Board. The well known Delone and Mclean model, which looks at the elements that mainly contributes to the system implementation was used. This model can and is used to judge the successfulness of an information system. Additionally, the model was coupled with the idea of self-efficacy and complementary technology. Self efficacy helps to test the the employee's trust of himself/herself while complementary technology tests to see if the counterparts used in addition to the system is adequate or not; this further helps us to understand and may be the reason why the employee was productive or not. These two additional constructs look at user interaction.

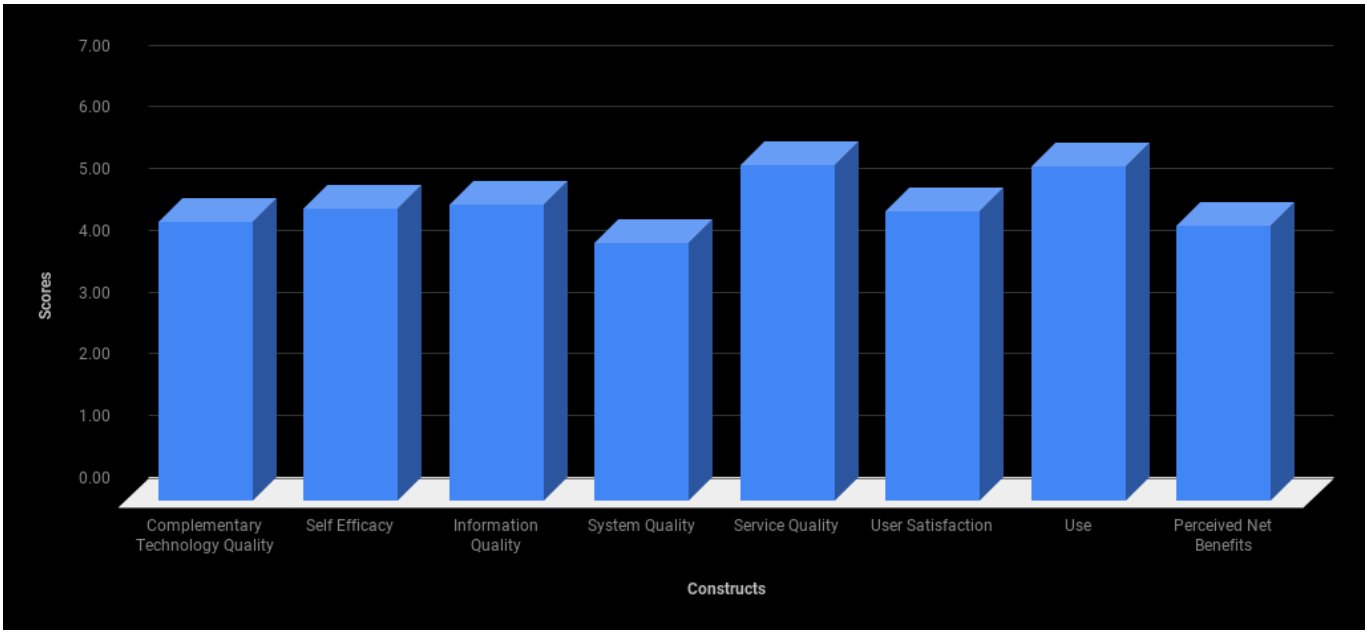

Figure 10: Results Average

In our research, we can conclude, since we selected participants from limited departments, that different employees may have different types of equipment. Some, may even be outdated. We see different response from various employees from these limited departments. However, the good news is that, the majority of the employees' perceived net benefits and user satisfaction are high. Yet, in the below figure, figure 10, after the system quality's 4.18 response, perceived net benefits was the second lowest with an average of 4.67. This shows us that one employee's satisfaction is important; in other words, one employee's dissatisfaction may affect the whole department which in turn affect the whole company. We concluded that a company should keep a close look in order to maintain all these constructs properly because although service quality, which sits at first place with a 5.43 average, the other constructs make it seem as if it does not have a positive impact on the company; all these constructs go hand in hand. When it is all said and done, it is important to remember that higher employee satisfaction is equal to higher production which is equal to a better function organization body.

Discussion, Limitations, and future research

Our research was done to measure the successfulness of the SAP system used by Belize Tourism Board. The well-known Delone and Mclean model, which looks at the elements that mainly contributes to the system implementation was used. This model can and is used to judge the successfulness of an information system. Additionally, the model was coupled with the idea of self-efficacy and complementary technology. Self-efficacy helps to test the employee's trust of himself/herself while complementary

technology tests to see if the counterparts used in addition to the system is adequate or not; this further helps us to understand and may be the reason why the employee was productive or not. These two additional constructs look at user interaction.

In our research, we can conclude, since we selected participants from limited departments, that different employees may have different types of equipment. Some, may even be outdated. We see different response from various employees from these limited departments. However, the good news is that, the majority of the employees' perceived net benefits and user satisfaction are high. Yet, in the below figure, figure 10, after the system quality's 4.18 response, perceived net benefits was the second lowest with an average of 4.67. This shows us that one employee's satisfaction is important; in other words, one employee's dissatisfaction may affect the whole department which in turn affect the whole company. We concluded that a company should keep a close look in order to maintain all these constructs properly because although service quality, which sits at first place with a 5.43 average, the other constructs make it seem as if it does not have a positive impact on the company; all these constructs go hand in hand. When it is all said and done, it is important to remember that higher employee satisfaction is equal to higher production which is equal to a better function organization body.

Limitations

When it comes to the limitations that were encountered, the major ones are: time, sample size, methods, and resource. The time that was allotted in order to investigate the information from the respondents was limited because there was a time frame regarding the number of weeks to develop the research. Moreover, the number of participants was another limitation because only a sample size of 40 participants were selected to complete the survey. Since a random simple sampling was utilized to select one organization from variety of businesses, this limited the generalizability of the results. However, since the employees that were going to partake in the survey were on a meeting when we arrived, the survey were handed over to the IT department at BTB, so the personnel distribute it to certain employees. This was a limitation because we had little control over the sampling process. Notwithstanding, resource was another limitation because we had no form of transportation to arrive at the destination of BTB.

Recommendation

A recommendation that could escalate the net perceived benefit from all employees is to engage the software in a way that all the employees are able to integrate it in their day to day task. If all employees at BTB know how to use the software SAP, then they will be more satisfied and be more productive at work. The results lead us to declare that SAP is a successful software system at BTB, however the organization needs to implement the system more in the institution.

The rundown of this study provides a structure for understanding SAP success. The detailed framework we have developed from theory and empirical research provides a foundation for future research.

References

Alishibly, H. H. (2014). Evaluating E-HRM Success: A validation of the Information Systems Success Model. International Journal of Human Resources Studies, 4.

Boynton, A. C., & Zmud, R. W. (1994). The Influence of IT Management Practice on IT Use in Large Organizations. MIS Quarterly/September, 299-318.

Compeau, D. R., & Higgins, C. A. (1995). Computer Self Efficacy: Development of a measure and Initial Test. MIS Quarterly, 19, 189-211.

Delone, W. H., & McLean, E. P. (2003). The Delone and McLean Model of Information Systems Success: A Ten-Year Update. Journal of Management Information Systems, 19, 9-30.

Ghobakhloo, M., & Tang, S. H. (2015). Information system success among manufacturers SMEs: case of developing countries. Information Technology for Development, 21, 573-600.

Heeks, R. (2002). Information Systems and Developing Countries: Failure, Success, and Local Improvisations. The Information Society, 101-112.

Karimi, J., Bhattacherjee, A., & Gupta, Y. P. (2000). The Effects of MIS Steering Committees on Information Technology Management Sophistication. Journal of Management Information Systems, 17, 207-230.

McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The Measurement of web-customer satisfaction: an expectation and disconfirmation approach. Information Systems Research, 296-315.
Miller, D., & Woodman, M. (2010). Software Engineering Systems as Services Using A Business-Focused Service Framework. Evaluation of Novel Approaches to Software Engineering, 1-6.
Petter, S., Delone, W., & McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. European Journal of Information Systems, 236-263.
Pitt, L., Watsin, R., & Kavana, C. (1995). Service Quality Measure: A measure of Information Systems effectiveness. MIS Quarterly, 173-187.
Poddar, E. (2017). Analysis on User Interface Aspects of Software Used by Commercial Banks in India. The XXIXth Annual Occupational Ergonomics and safety conference, 142-148.
Richard, B. F., & Mahfouz, A. Y. (2009). Strategic Integration of IT and Business Service Management. Communications of the IIMA, 9, 65-78.
Roztocki, N., & Weistroffer, H. R. (2011). Information Technology Success Factors and Models in developing and emerging economies. Information Technology for Development, 17, 163-167.
Schaupp, L. C., Fan, W., & Belanger, F. (2006). Determining Success for Different Website Goals. Proceedings of the 39th Hawaii International Conference on System Sciences, 1-10.
Seddon, P., Staples, S., Patnayakuni, R., & Bowtel, M. (1999). Dimensions of Information Systems success. Communications of The Association for Information Systems, 2-61.
Teece, D. J. (1988). Capturing Value from Technological Innovation: Integration, Strategic Partnering, and Licensing Decisions. Interfaces, 46-61.

Appendix

Questionnaire I – "Effects of SAP on Company's Performance" (Belize Tourism Board Employees)

Purpose

This questionnaire asks for information about experience with the use of SAP and how effective it is to you as a user. We understand that collected data that is vital to the business is entered into the SAP software. We would like to measure the effectiveness and efficiency of an employee utilizing the SAP software and its effects on the organization'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:	<25 ☐ 25-35 ☐ 36-45 ☐ 46-55 ☐ >55 ☐
Please indicate highest education level attained:	Masters ☐ Bachelors ☐ High School and less ☐ Diploma ☐
Please indicate your working experience:	<5 ☐ 5-10 ☐ 11-15 ☐ >15 ☐

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

2. Information Quality	**Disagree ----------Agree**
IQ1: BTB's Management Information System (SAP) provides information that is exactly what you need:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ2: BTB's Management Information System (SAP) provides information you need at the right time:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ3: BTB's Management Information System (SAP) provides information that is relevant to your job:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ4: BTB's Management Information System (SAP) provides sufficient information:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ5: BTB's Management Information System (SAP) provides information that is easy to understand:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
IQ6: BTB's Management Information System (SAP) provides up-to-date information:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
3. System Quality	**Disagree ----------Agree**
SQ1: BTB's Management Information System (SAP) is easy to use:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SQ2: BTB's Management Information System (SAP) is user-friendly:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SQ3: BTB's Management Information System (SAP) provides high speed information access:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SQ4: BTB's Management Information System (SAP) provides interactive features between users and system:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
4. Complementary Technology Quality	**Disagree ----------Agree**
CTQ1: The software on the device (desktop, laptop, mobile device) used to access BTB's Management Information System (SAP) is adequate:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CTQ2: The device hardware (desktop, laptop, mobile device) used to access BTB's Management Information System (SAP) is adequate:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CTQ3: The speed of the Internet connection used to access BTB's Management Information System (SAP) is adequate:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CTQ4: The reliability of the Internet connection used to access BTB's Management Information System (SAP)is adequate:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
5. Self-Efficacy	**Never ----------Often**

CSE-1: I could complete the job using BTB's Management Information System (SAP) if there was no one around to tell me what to do as I go along:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-2: I could complete the job using BTB's Management Information System (SAP) if I had never used an information system like it before:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-3: I could complete the job using BTB's Management Information System (SAP) if I had the MIS (SAP) manuals for reference:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-4: I could complete the job using the BTB's Management Information System (SAP) if I had seen someone else using the MIS (SAP) before trying it out myself:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-5: I could complete the job using BTB's Management Information System (SAP) if I could call someone for help if I got stuck:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-6: I could complete the job using BTB's Management Information System (SAP) if someone else has helped me get started:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-7: I could complete the job using BTB's Management Information System (SAP) if I had a lot of time to complete the job for which the MIS (SAP) was provided:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-8: I could complete the job using BTB's Management Information System (SAP) if I had just built-in help facility for assistance:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-9: I could complete the job using BTB's Management Information System (SAP) if someone showed me how to do it first:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
CSE-10: I could complete the job using BTB's Management Information System (SAP) if had used similar information systems before this one to do the same job:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
5. Service Quality	**Disagree ----------Agree**
SV1: The support staff keeps BTB's Management Information System (SAP) software up to date	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SV2: When users have a problem BTB's Management Information System (SAP) support staff show a sincere interest in solving it:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SV3: BTB's Management Information System (SAP) support staff respond promptly when users have a problem:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
SV4: BTB's Management Information System (SAP) support staff tell users exactly when servi be will be performed:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
6. User Satisfaction	**Disagree ----------Agree**
US1: You have a positive attitude towards BTB's Management Information System (SAP):	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
US2: You think that BTB's Management Information System (SAP) is useful:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
US3: BTB's Management Information System (SAP) has met your expectations:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
US4: You are satisfied with BTB's Management Information System (SAP):	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
7. Use	**Never ----------Often**
U1: Your frequency of use of BTB's Management Information System (SAP) is high:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
U2: You depend upon BTB's Management Information System (SAP):	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
U3: You were able to complete a task using BTB's Management Information System (SAP) even when there was no one around to tell you what to do:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
U4: You have the knowledge necessary to use BTB's Management Information System (SAP):	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
8. Perceived Net Benefits	**Never ----------Often**
NB1: Does the Management Information System (SAP) helps you improve your job performance:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB2: Does the Management Information System (SAP) helps the organization save cost:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB3: Does the Management Information System (SAP) helps the organization achieve its	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB4: Using the Management Information System (SAP) the assessment and training:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB5: Using the Management Information System (SAP) in my job increases my productivity:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
NB6: Overall, using the Management Information System (SAP) enhances recruitment and performance management:	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐