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ABSTRACT

This study was set to model Green eBusiness adoption among SMTEs in Tanzania, right from sourcing, operations, and to end-of-life-management. The study employed the use of Structural Equation Modeling (SEM) to analyze quantitative data collected from 240 respondents selected from 80 SMTEs in Dar es Salaam, Kilimanjaro, Arusha, and Zanzibar, who were in operations for at least three years. Although there were twelve hypotheses formulated, only seven hypotheses (with constructs Self-Efficacy, Effort Expectancy, Facilitating Conditions, Coercive Pressures, Intention to Use both to commitment and to Green eBusiness, and Commitment towards Green eBusiness adoption) were revealed significant. Others (with constructs Performance Expectancy, Organizational Support, Green Entrepreneurial Attitude, Normative Pressure, and Mimetic Pressure) were deemed insignificant and thus rejected. These findings imply that, if a firm is to adopt Green eBusiness, the technology behind it has to be easy to use, which inculcate an individual's self efficacy to use Green eBusiness, drivers that influence Intention to Use. On the other hand, the presence of Facilitating Conditions is important to persuade the new adopters, while, the existence of Coercive Pressure is important in order to reinforce the "green" behaviors related to use of IT and E-Business in general.

Keywords

Green eBusiness; Adoption; Small and Medium Tourism Enterprises; SMTEs; Tanzania.

INTRODUCTION

Emerging sustainability concerns have recently received attention across the sectors (Graci & Dodds, 2008; Taylor, 2008; Siebennhüner and Arnold, 2007). Businesses are urged to be green by substituting toxic materials with non-toxic materials and non-sustainable practices/processes with more sustainable ones. Similar attention is currently rising with ICT use. As ICTs use energy too, then the ever-growing data amounts and performance expectations towards ICT as well as the migration of paper-based tasks to electronic data processing will, if unchecked, continuously increase energy demands and waste streams, thereby raising global environmental impact (Lamb, 2009;

Webber and Wallace, 2008; Velte et al., 2008; Harris, 2008). Also to be considered are increasing costs for electricity (Baroudi et al., 2009). IT's unchecked consumption of power is threatening the financial resources of the organizations it serves and is quite literally putting an ultimately unsustainable burden on the earth (Baroudi et al., 2009). One of the ways in which organizations can reduce their carbon footprint and lessen their harmful environmental impact is through the adoption of environmentally friendly IT practices. Such practices are frequently referred to as Green IT. Masele and Marx-Gómez (2012) introduced Green eBusiness as a term referring to the use of ICT (software and/hardware) in an energy efficient and ecological way for business transaction (production, customer focused, and internal control management) processes. They (ibid.) argue that Green eBusiness is not only a cost cutting strategy but that it is also a way towards firms' acceptability by environmentally conscious customers, vendors, governments, and communities. Baroudi et al. (2009) add that, "It may also be the shortest path to economic savings and the overall health of an organization." Yet, they (ibid) caution that becoming green is not an overnight issue, and that it is just the beginning of a process of achieving true sustainability.

A number of approaches are underway to turn SME ICT use green. However, unless the factors to turn the SMEs green in developing countries are well explored, the journey to this fight may always end in vain. Attempts to search for a comprehensive model that can outline possible courses of action or to present ideas or thoughts are on the pick. But, unlike the existing adoption models' contexts in which resources are private, the environment is a public resource with implications for how users approach technological systems intended to enhance its sustainability (Melville, 2010). Studies (such as Dedrick's, 2010; Melville, 2010) called for a body of IS empirical research to study the factors influencing adoption of green technologies and practices. It is therefore imperative to consider comprehensive determinants for Green technologies adoption given the environmental threats posed by ICT usage for business transactions. A model needs to be formulated that can answer the study's main research question, "What is it that makes some SMTEs adopt and Use energy efficient and Green eBusiness applications and not others?"

The study is guided by two specific objectives:

- To examine the pull and push factors towards energy and Green eBusiness applications among SMTEs;
- To examine the relative importance of determinant factors involved in the adoption of Green eBusiness application in SMTEs.

LITERATURE REVIEW

Theoretical Perspectives

A number of models have been advanced to explain the adoption of Green technologies. These include the Green IT Adoption Model (GITAM) by Molla (2008), which posits that the technological, organizational, and environmental contextual variables, dynamic Green IT readiness dimensions, and strong order Green IT drivers can predict the intention, breadth, and depth of Green IT adoption. Molla and Abareshi (2011) advanced another model referred to as the Green IT Motivational Perspectives model drawing from a motivational theory where by eco-efficiency, eco-responsiveness, eco-effectiveness, and eco-legitimacy attributes were included. Nonetheless, eco-legitimacy did not pass the construct validity test. Chen et al (2008) used Institutional Theory to explain the pollution prevention, product stewardship, and sustainable development policies and practice respectively in Green IT and Green IS. The Organizational Capability model by Kuo and Dick's (2009) explains that Green IT efforts are motivated by employees' sense of social responsibility within adaptable organizations rather than by issues of economics and technologies.

Eladwiah and Rahim (2013) examined the Green IT capability activities from the theoretical lens of environmental-based capabilities as suggested in Natural Resources Based View (NRBV). Yet the models in advance are not comprehensive, and, depending on the situation, Molla and Abareshi (2011), advised researchers to either use the models and hypotheses developed in future studies either on their own or in combination with other perspectives. Yet research indicates that the importance and uncertainty of Green IT and the extent of its implementation differs to every organization (Schmidt et al. 2010). It is thus obvious that it will differ across sectors and contexts. According to Schmidt and Kolbe (2011), every organization will attempt to encourage different behaviors. This means that the emphasis will differ even more between larger firms and small and medium firms. Besides, all these attempts are from developed countries, with little research (e.g., Dick and Max, 2011) conducted in developing countries.

In this regard and in an attempt to come up with a comprehensive model to explain Green eBusiness adoption in developing countries and in Tanzania in particular, this study decides to start from scratch back with three popular technology adoption models: the Unified Theory of Acceptance and Use of Technology (UTAUT), the Technological, Organizational, Environmental (TOE) model, and the Institutional Theory. Though each model is considered powerful in expressing technology adoption, each could not explain green eBusiness adoption in its isolation. For example, although UTAUT and TOE are rich models in explaining innovation adoptions, Green eBusiness calls for a more comprehensive model to unify the primary and secondary characteristics of the four key domains of adoption: technological, managerial, organizational, individual, and institutional elements.

The TOE model (Tornatzky and Fleischer, 1990) is challenged by Bose and Luo (2011), who assert that it does not provide a concrete model to describe the factors that influence the organizational adoption decision despite being primarily used to study the adoption of innovations. It rather provides taxonomy for classifying adoption factors in their respective context. Thus, a more comprehensive model needs to be formulated. The UTAUT model by Venkatesh et al (2003), however, with its postulation on two direct determinants of use - Intention to use (influenced by performance expectancy, effort expectancy, and 'social influence) and facilitating conditions moderated by gender, age, experience, and voluntariness of use (Venkatesh et. al., 2003) - is for several contexts regarded as a comprehensive model (validated by 70% of its variance explained) is also criticized in reference to green technology adoption studies. Given contextual differences between private and public resources - in which resources including Information Systems are private and the environment is a public resource with implications for how users approach technological systems intended to enhance its sustainability - may be different (Melville, 2010). Thus, the inclusion of enforcement pressures resulting from regulatory or legislative policies to reinforce the behavior becomes important.

The Institutional theory, with its focus to explaining why organizations look alike after starting out differently, instigates that certain ways of thinking and doing become accepted practices or embedded in institutions (Scott, 1987). However, the instigation of external pressures - mimetic, normative and coercive (DiMaggio and Powell, 1983) - as the only authoritative guidelines for social behavior raises censures as well. Although these pressures are considered important factors to drive green information systems practices, examination of environmental technologies adoption with Institutional Theory alone ignores other important factors such as individual, technological, and managerial influences, which may hold interesting results for organizational Green IT adoption. Thus, this study merged the three models while avoiding overlaps and repetitions among the models' constructs to form a Green eBusiness Acceptance Model (GEBAM). In this conceptualized model, important constructs are considered and repetitions are limited. Table 1 summarizes the areas of models' emphasis and important missed aspects that, if included, would make a conceptualized model a better candidate to explain Green eBusiness adoption.

Theory	Emphasized factors	Specific items emphasized	Missing vital Aspects
UTAUT	Technological	Performance expectancy and effort expectancy	Regulative/legislative, psychological, and social factors
	Social influence	Pressure to gain legitimacy and group approval	
	Environmental	Facilitating conditions	
TOE	Technological	Type, perceived advantage, and ease of use	Managerial/individual factors
	Organizational	Organization turnover, size, centralization, formalization, presence of innovation, etc.	
	Environmental	Market structure and characteristics, competitors, accessibility to the resources, facilitating conditions, and government regulations	
Institutional Theory	Coercive pressure	Regulative and legislative pressures	Managerial/individual and technological factors
	Mimetic pressure	Frequency or outcome-based mimetic pressures	
	Normative pressure	Pressure to gain social approval or legitimacy	

Table 1: Models' emphasis factors, Specific items, and important missing Aspects

SMEs Characteristics that Influence their Approach towards Environmental Issues

Characteristically, all SMEs are considered to be resources and information poor, with ownership and management often being concentrated on the same hands. As such, an entrepreneur must play a key role in the enterprise based on his personal preference in decisions about investments and business strategies. General perception of SMEs with respect to environmental issues includes extra costs rather than benefits. Drawing examples from tourism, Helmersson, Malander, and Lunell (2010) noted that SMTEs who are severely affected by their capital constraints face high risks of illiquidity, have limited access to capital markets, and are seen as unfavorably dependent on their generation of internal funds to grow. In addition, they are risk averse, an aspect that hinders them from adopting financially costly, time-consuming, and risky technologies (Sundgaard, 1996; Buhalis & Main, 1998; Braun, 2002; Moran, 2002). This means that any support must be towards the development of less risky technologies and the implementation of measures that at least partially offset these risks, such as subsidies, leasing contracts, bank guarantees, and infrastructural support. Studies (such as Porter and van der Linde, 1995; Noci and Vergandi, 1999; Hoevenagel, et al., 2007; Lee, 2008; Mallett et al., 2011) point out the importance of appropriate policies and regulations to guide and shape the green adoption process. They can directly or indirectly increase the pressure on SMEs to improve their environmental performance. Directly, governments can tighten up environmental legislation. They may include development of codes of standards, product labeling, and mandatory energy efficiency targets and energy audits (Price et al, 2009). The indirect way is for governments to stimulate other stakeholders pressure SMEs to include introducing Green public procurement policies as well as influencing customers for green uptakes (Mallett et al., 2011).

The Proposed GEBAM Model

In the proposed GEBAM model, all proposed determinant factors are categorized based on their attributes. Significant additional factors examined in both theoretical and empirical literature are integrated in the model. Last, to simplify and clarify the research model, a schematic Green eBusiness Adoption Model (GEBAM) as presented in Figure 1 is drawn to represent the comprehensive research model.

The proposed GEBAM model consists in their irrespective combinations of: the technological (effort and performance expectancy), organizational (commitment, organizational support, and

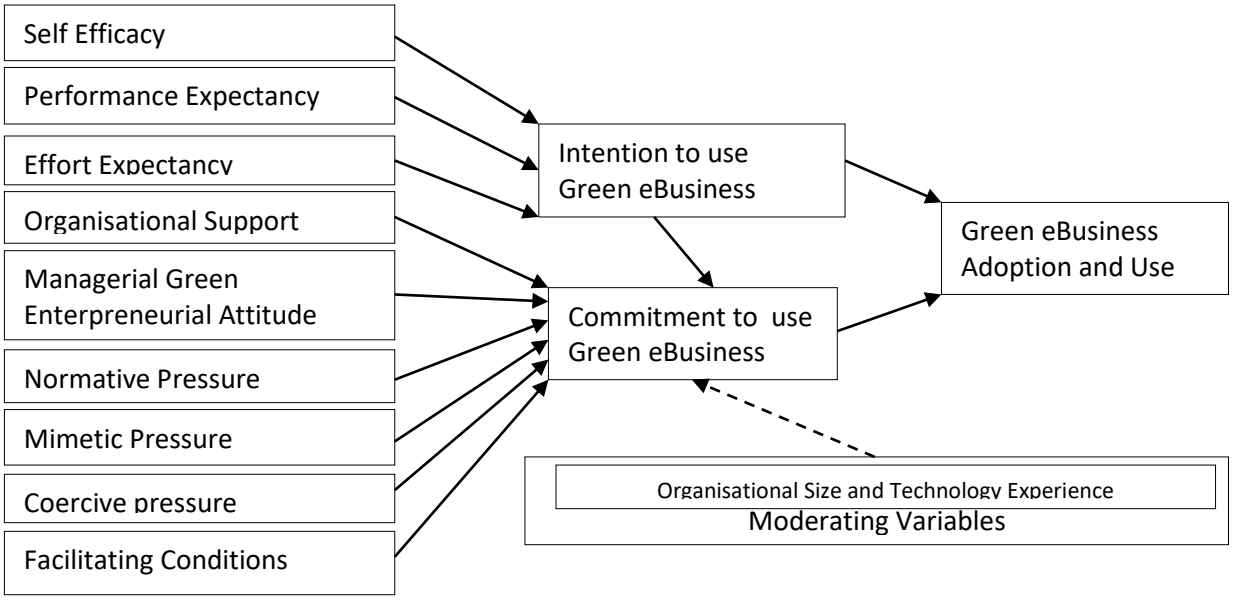

Figure 1: Comprehensive research Conceptual Model

organizational size), external environment (normative pressure, mimetic pressure, coercive pressure, and facilitating conditions), and managerial factors (technological experience, green entrepreneurial attitude, self-efficacy, and intention to use).

Organizational size and technological experience are treated as moderating variables to commitment towards Green eBusiness use. Self-efficacy, effort expectancy, and performance expectancy are postulated to influence intention to use Green eBusiness. Organizational support, managerial green entrepreneurship, normative pressures, mimetic pressures, coercive pressures, facilitating conditions, and intention to use are hypothesized to influence commitment to Green eBusiness adoption. Intention to use and commitment are in turn hypothesized to influence Green eBusiness adoption and use among SMTEs in developing countries. Adoption in turn could be manifested in the sourcing/designing, operations and end-of-life management's policy, practices, and technology systems in place (as shown by dotted lines) within the adopting SMTEs in the study area. Figure 1 summarizes the scenario. These factors are subject to validation with Structural Equation Modeling (SEM), which this study adopts for the analysis.

METHODOLOGY

The study was undertaken to 240 respondents from 80 SMTEs in Dar es Salaam, Zanzibar, Kilimanjaro, and Arusha. This study employed the survey method. The questionnaire was designed to use 5 point Likert Scale (ranging from strongly disagree to strongly agree) to collect data for this study. The collected data was then analyzed using the Structural Equation Modeling Multivariate (SEM) Data analysis technique with the aid of the SPSS- AMOS 20 program.

SEM was chosen due to its capabilities to combine aspects of factor analysis and multiple regressions (Hair et al., 2006; Teo (2009). SEM's capabilities are summed-up by Hair et al. (2010), who distinguished SEM from other multivariate techniques by three characteristics: estimation of multiple and interrelated dependence relationships, an ability to represent unobserved and observed concepts in these relationships and account for measurement error in the estimation process, and defining a model to explain the entire set of relationships. It was thus useful to use SEM in this conceptualized relationship (Figure 1) between independent, intermediate, and dependent variables, which other multivariate analysis techniques fail to do (Teo (2009).

Both reliability and validity were verified in order to see that the instrument was first able to generate the same results in repeated trials and secondly to assess the extent to which the instruments measured what it was purported to measure (Carmines and Zeller, 1979; Bernard, 2000). The motivation to do this emanated from Nduguru (2006), who asserts that reliable and valid data is the outcome of a reliable and valid instrument. Hair et al. (2006) adds that reliability and validity are associated with measurement error, and thus properly addressing them significantly reduces measurement error. Internal consistency reliability - a commonly used psychometric measure in assessing survey instruments and scales (Nunnally, 1978) - was used to indicate how well the different items measured the same concept. Internal consistency was measured by computing coefficient scores for Cronbach's alpha (Tabachnick & Fidell, 2007; Hair et al., 2006). A Cronbach alpha ranging from 0.776 and above (as stipulated in Table 2) was obtained, indicating that the measurement instrument was reliable enough (Hair et al. 2010).

Construct	Number of Items	Composite Cronbach's Alpha
Organizational Support	4	.895
Entrepreneurial Attitude	4	.786
Eco-Commitment	4	.898
Self-Efficacy	2	.812
Performance Expectancy	3	.807
Mimetic Pressures	3	.833
Coercive Pressures	3	.863
Normative Pressures	3	.842
Effort Expectancy	4	.862
Facilitating Conditions	3	.912
Intention to use	3	.877
Green eBusiness Adoption	8	.855

Table 2: Cronbach alpha values for Reliability test

On the other hand, validity of the instrument was tested using three known techniques: content validity, construct validity, and convergent validity.

Content or logical face validity was tested to see whether the measures represented the meaning of the concepts and how professionals agreed that the scale logically appears to measure the concepts (Hair et al., 2006). To do that, three techniques were used: three professionals were provided with the instrument to see that the scale logically appeared to measure the concepts; questionnaires were translated from the English language to Swahili and then retranslated back to English in order to ensure that translation was correct, and then both versions of the questionnaire were used depending on respondents' language convenience; and a pilot study was conducted on 30 companies in Dar es Salaam, the results of which helped to improve the questionnaire and ensure that the scales were able to capture the intended information (Mbura, 2007) contently and contextually.

The construct validity of the scale was tested to measure variables that are theoretically being measured. To ensure this, the study employed questions used in previous research, though modified to fit the context of the current study. Adopting the questions ensures more efficiency for validity and reliability (Kessy, 2010) than developing new questions, provided that the researcher can still collect the data needed to answer research questions and meet the objectives (Saunders et al, 2003). This is because these questions are already tested for validity. The variables used were drawn from theories and empirical studies related to the study's problem.

Convergent validity was tested to examine the correlation between constructs and was confirmed if the items loaded stronger on their associated factors than on other factors. To do that, a factor analysis was used. Burns and Grove (2005) explain that factor analysis is particularly useful for

examining the relationships between large numbers of variables, disentangling them, and identifying clusters of variables that are closely linked together. A factor analysis was thus applied to assess the factor loading using principal components, so as to extract maximum variance from the items. The outcome was rotated using Varimax rotation under and a cut-off point of 0.50 was used for cross-loadings (loading exceeded 0.50). The items that didn't load strongly on the intended factors were dropped and were not considered in subsequent analysis. Table 3 details.

Constructs	Definitions of Constructs	Citations	Questions/Statements	Factor Loadings
Self-Efficacy	…judgment of one's ability to use a technology to accomplish a particular job or task.	Compeau & Higgins (1995 p.192)	1. SELF_EFFIC1- I could complete the job using the computer application if I could call someone for help if I got stuck	0.828
			2. SELF_EFFIC2- I could complete the job using the computer application if I had used similar applications before this one to do the same	0.856
Performance Expectancy	...the degree to which an innovation is perceived as better than the idea it supersedes in enabling them perform their job	Louho, Kallioja and Oittinen, 2006; Venkatesh et al., (2003); Sophonthummapharn, (2008); Molla (2009)	1. PERF_EXPCT1- Using Green eBusiness applications would enable my firm to gain and maintain competitive advantage	0.707
			2. PERF_EXPCT2- Using Green eBusiness applications would enable my firm to differentiate our products/services	0.598
			3. PERF_EXPCT3- Using Green eBusiness applications would enable my firm to improve its corporate social responsibility (CSR)	0.705
			4. PERF_EXPCT4- Using Green eBusiness applications would enable my firm to save resources (time and money) due to reduced commuting and paper works	0.735
Effort Expectancy	...the degree of ease or difficulty associated with the use of the system	Sophonthummpharn, (2008); Rogers (2003); Venkatesh et al., (2003); Dulle and Minishi-Majanja (2011)	1. EFFORT_EXPT1- I believe that learning how to use Green eBusiness application is easy for me	0.607
			2. EFFORT_EXPT2- I believe that it is easy to get Hardware and software for Green eBusiness application to do what the firm want to do	0.735
			3. EFFORT_EXPT3- It would be easy for me to become skillful at using the Green eBusiness system	0.629
			4. EFFORT_EXPT4- I would find the Green EB system easy to use	0.579
Organisational Support	... the extent to which a company helps employees using a particular technology or system	Ming-Horng Weng and Chieh-Yu Lin, 2011	1. ORGN_SUPPORT1-Top management encourages employees to learn green practices	0.693
			2. ORGN_SUPPORT2 - Our company provides resources for employees to learn green practices	0.699
			3. ORGN_SUPPORT3 - Our company provides rewards for employees' green behavior	838
			4. ORGN_SUPPORT4 -Top management can help employees when face green problems	0.820
Managerial Green Enterpreneurial Attitude	…the extent to which one perceives entrepreneurial behavior and its consequences as valuable, beneficial and favorable.	Molla et al. (2009); Lee and Kozar (2008) and Kranz et al. (2010). Al-Qirim, 2005; Sophonthummpharn (2008); Kangaharju (2000); Georgellis (2000).	1. ATTITUDE1- We tend to support/purchase technologies when the expected returns are certain	0.803
			2. ATTITUDE2- We are open to risk and do not perceive new methods, procedures and information as threatening	0.727
			3. ATTITUDE3- We are always ahead of others in generating ideas on new products and performing riskiness dimension services	0.670
			4. ATTITUDE4- We normally make sure that what we do is economically, socially and environmentally sustainable	0.641
Normative Pressure	…the need to be accepted by others/community surrounding and to make a favorable impression on them.	Dulle and Minishi-Majanja (2011); Kafatis et al (2009) and Celuch et al (2007); Bakan (2005); Molla et al (2009)	1. NORMATV_PRESR1- People who influence my behavior would think that I should use Green eBusiness system 0.764	
			2. NORMATV_PRESR2- People who influence my behavior would be pleased if I use	0.792
			3. NORMATV_PRESR3- Friends and colleagues that are important to me would think that I should use the Green eBusiness system	0.723
Mimetic Pressure	...standard organizational response to uncertainty when the course of action is unclear. Results to mimicking	Molla et al (2009); DiMaggio et al. (1983); Sophonthummpharn, (2008); Lu (2002	1. MIMETIC_PRESR1- The overall operational practices in the industry pressure me to adopt Green eBusiness applications	0.703
			2. MIMETIC_PRESR2- Green EB uptake by more organizations pressures us to implement Green eBusiness	0.764
			3. MIMETIC_PRESR3- Competitors' actions pressures us to implement Green eBusiness	0.678

Coercive Pressure	...pressure driven by both formal and informal forces exerted by other organizations, upon which an organization relies. It can be induced or imposed.	DiMaggio et al. (1983); Kilbourne et al. (2002); Chen et al (2010)	1. COERCV_PRESR2- The existence of strict government regulations on responsible IT pressures us to adopt environmentally and friendly eBusiness applications	0.635
			2. COERCV_PRESR3- The existence of strict government regulations on sourcing environmental friendly ICT pressures us to adopt green eBusiness	0.612
			3. COERCV_PRESR4- The existence of strict government regulations on discarding e-wastes force us to adopt environmentally friendly end of life management practices	0.617
Facilitating Conditions	... degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system	Venkatesh *et al,* 2003; Dulle and Minishi-Majanja (2011); UNCSD, 1999; Hoevenagel et al, (2007); Infate and Smirnova, (2009)	1. FACILTNG_COND1- We have the necessary resources for using Green eBusiness in my work	0.595
			2. FACILTNG_COND2- The government have placed good infrastructure and support for the implementation of Green EB	0.720
			3. FACILTNG_COND3- The government provides incentives for those implementing Green EB	0.698
			4. FACILTNG_COND4-The government promises to subsidize the cost for investing in Green EB	0.709
Commitment	…willingness to give one's time and energy to something that one believes in, or a promise or firm decision to do something that it must do or deal with, that takes its time	Grugg and Mills (2001); Chen et al (2008); Info~Tech (2007); Molla (2009)	1. COMMITMENT1- We have a policy and/guidelines on Employees use of IT in an energy efficient manner	0.800
			2. COMMITMENT2- We have a policy and guidelines on managing electronic wastes (end of life management)	0.757
			3. COMMITMENT3- We have a policy and/guidelines on shifting to green sources of energy use of IT to reduce carbon footprint	0.784
			4. COMMITMENT4- We have a policy and/guidelines on Environmentally friendly ICT purchasing	0.820
Intention to Use	…individual's intent to use something as a commitment to engage in a specific behavior	Fishbein & Azjen, (1975) and Cooper & Zmud, (1990)	1. INT_TO_USE1- I plan to continue to use ICT applications that are green in one's business-	0.865
			2. INT_TO_USE2- I plan to use Green eBusiness applications in future	0.839
			3. INT_TO_USE3- I plan to use Green eBusiness applications often	0.859
Green eBusiness Adoption	…the stage in which a Green IT/E-Business is selected for use by an individual or an organization. It is the choice to acquire and use a Green eBusiness invention or innovation which involves a decision between fixed costs of adoption against the benefits expected	Hall & Khan (2003); Beal, et al (1957); Ozanne, et al (1971); Molla et al (2009)	1. GEB_ADOPTN1- We prefer ICT suppliers that have green track records	0.771
			2. GEB_ADOPTN2- We optimize printing through shared printers-	0.556
			3. GEB_ADOPTN3- We give weight to environmental considerations in ICT procurement	0.741
			4. GEB_ADOPTN4- Our organization engage with a professional service provider regarding Green eBusiness	0.790
			5. GEB_ADOPTN6- We put off data computers, data centers and other systems when not in use even if not told to do so	0.609
			6. GEB_ADOPTN7- Our organization recycle consumable equipments	0.723
			7. GEB_ADOPTN8- Our organization reuse items (paper, computers and related facilities) in more than once	0.795
			8. GEB_ADOPTN13- We perform sever virtualization and consolidation	0.741
Organizational Size	…Firm's resources, measured by computers/servers number possessed	Molla et al. (2009)	1. Number of employees the company have 2. Company's total capital investment 3. Number of the following facilities possessed by the firm: Desk top Computers; Laptop computers; Printers; Servers; Scanners; Other IT resources	N/A
Technological Experience	…the period of time an individual has been using the technology in question.	Venkatesh et al (2000) ; Kim and Malhotra (2005); Sophonthummpharn (2008)	1. How long have you been using the Internet? 2. How often do you normally use the Internet? 3. How would you rate yourself in term of Internet knowledge and skills? 4. What type of internet communication does your enterprise use? 5. If your firm have a website, what is website? 6. Which data are exchanged between the enterprise and other ICT systems outside the enterprise?	N/A

Table 3: Operationalization of Variables and Constructs

ANALYSIS

Structural Model Analysis

In this study, the final GEBAM Model was generated and analyzed after a series of analyses of alternative basic models added with individual moderating variables. Firm size and Technological Experience to commitment towards Green eBusiness adoption. As can be observed from Figure 2, the GEBAM model size and Technological Experience falls well within the threshold level for goodness of fit whereby it exhibits suitable values of CMIN/DF, CFI;TLI, IFI, and RMSEA at 1.445, 0.910, 0.901, 0.912, and 0.055 respectively. Thus, the model is concluded to have good fit and qualifies for further hypothesis testing. Figure 2 and Table 4 summarize the analysis.

As indicated in Table 5, the generated model strongly supports seven hypotheses out of twelve. The conclusion is based on criteria by Chin (1998) and Hoe (2008) that standardized paths coefficients (γ) should be at least 0.2 in order to be considered significant and meaningful for discussion. As in Table 6, the results in constructs' respective brackets indicate the extent of influences: self-efficacy (γ = 0.245, p=0.040, CR=2.058), and effort expectancy (γ = 0.236, p= 0.047, C.R=1.986) to Intention to use. Coercive pressure (γ = 0.412, p=0.003, CR=2.992), facilitating conditions (γ = 0.279, p<0.018, CR=2.369), Intention to Use (γ = 0.213, p=0.049, CR=1.927) to Commitment, and Intention to use (γ = 0.569, p<0.001, CR=3.636), and Commitment (γ = 0.851, p<0.001, CR=8.281) to Green eBusiness adoption are positive and significant. On the other hand, the results of the model show that although Performance Expectancy (γ =0.010, p=0.940, CR=0.075) regressed positively its influence with Intention to Use was not significant. The same was with Mimetic Pressure (0.054, p=0.672, CR=0.423), Green Entrepreneurial Attitude (γ =0.082, p= 0.449, C.R=0.757), Organizational Support (γ = 0.052, p=0.561, CR=0.581) and Normative Pressure (γ = 0.014, p=0.904, CR=-0.120), which also regressed positively with Commitment but their relationships indicated non-significant positive relationships. The model was moderated by Technology Experience and Size (number of servers) at a (γ =0.086, p=0.181, CR=1.333) and (γ =0.072, p=0.261, CR=1.125) respectively, which together indicated a positively though no significant effect on being eco-friendly Commitment.

Path			Estimate	S.E.	C.R.	P	Label	Standardized Regression Weights:
Int_T_Use	<---	Self_Effc	.131	.064	2.058	.040	par_27	.245
Int_T_Use	<---	Effo_Exp	.260	.131	1.986	.047	par_28	.236
Int_T_Use	<---	Perfo_Exp	.013	.177	.075	.940	par_29	.010
Man_Commit	<---	Orgn_Suprt	.046	.080	.581	.561	par_30	.052
Man_Commit	<---	Mime_Pres	.065	.154	.423	.672	par_31	.054
Man_Commit	<---	Coercv_Pres	.417	.139	2.992	.003	par_32	.412
Man_Commit	<---	Normtv_Pres	.017	.143	.120	.904	par_33	.014
Man_Commit	<---	Facilt_Cond	.239	.101	2.369	.018	par_34	.279
Man_Commit	<---	Int_T_Use	.225	.082	1.927	.049	par_36	.213
Man_Commit	<---	Ent_Attd	.174	.230	.757	.449	par_37	.082
Man_Commit	<---	Technological_Experience	.014	.010	1.333	.182	par_89	.086
Man_Commit	<---	Number of Servers	.076	.067	1.125	.261	par_90	.072
GEB_Adopt	<---	Man_Commit	.790	.095	8.281	***	par_35	.851
GEB_Adopt	<---	Int_T_Use	.918	.253	3.636	***	par_88	.569

Table 4: Regression Weights for Basic Model (Number of Server and Technological Experience)

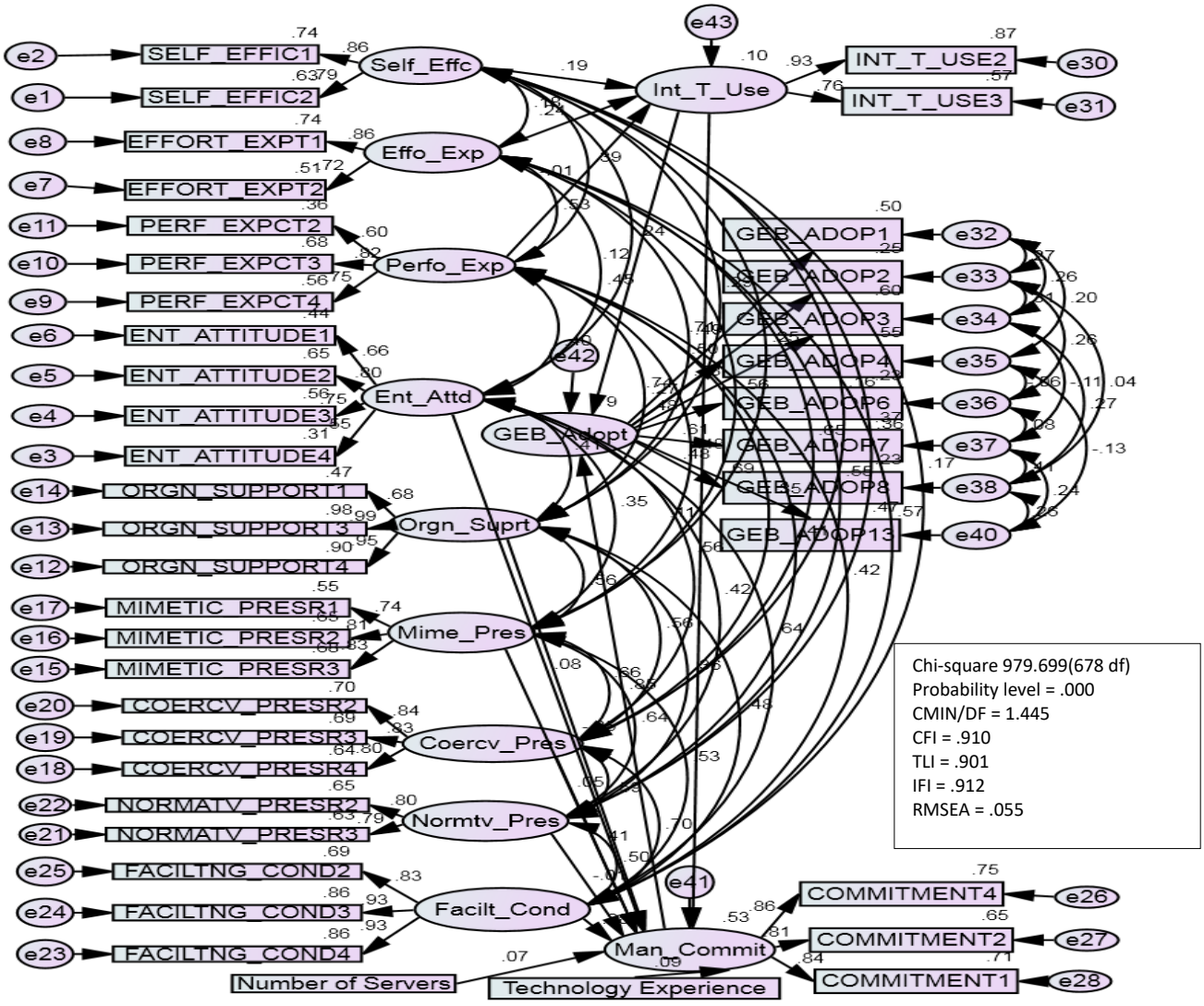

Figure 2: The Basic Model_ Size and Technological Experience

The path shows that, when Intention to Use Green eBusiness goes up by 1 standard deviation, Green eBusiness adoption goes up by 0.569 standard deviations. On the other hand, the effect of Commitment to Green eBusiness adoption is expressed by the path (γ =0.851, p (***) that is < 0.001; CR=8.281), showing that, when eco-Commitment goes up by 1 standard deviation, Green eBusiness adoption goes up by 0.851 standard deviation.

It also indicated that when Self-Efficacy goes up by 1 standard deviation, Intention to Use Green eBusiness goes up by 0.245 standard deviations. It also indicates that when Effort Expectancy goes up by 1 standard deviation, Intention to Use Green eBusiness goes up by 0.236 standard deviations. The results further indicate that when Coercive pressures goes up by 1 standard deviation, Commitment towards Green eBusiness adoption goes up by 0.412 standard deviations. When Facilitating Conditions goes up by 1 standard deviation, Commitment towards Green eBusiness adoption goes up by 0.279 standard deviations when Facilitating Conditions goes up by 1 standard deviation, Commitment towards Green eBusiness adoption goes up by 0.279 standard deviations and lastly, when Intention to Use goes up by 1 standard deviation, Commitment towards Green eBusiness adoption goes up by 0.213 standard deviations

On the other hand, the combined effects of moderating variables (Size and Technology Experience) produced the best goodness of fit. The result of analysis indicates that following coefficients for size

(γ = 0.072, p<0.261, CR=1.125) meaning that a proportional change in a 1 standard deviation of Organizational Size in terms of number of servers corresponds to a 0.072 increase in standard deviation of Commitment towards Green eBusiness adoption. Nonetheless, though its contribution is positive, this study reveals an insignificant effect attributed by Organizational Size in terms of number of server on Green eBusiness adoption. A similar trend was found in the effect of moderating variable "technological experience" which resulted in γ = 0.086, p<0.182, CR=1.333. This implies that a proportional change in a 1 standard deviation of organizational technology experience corresponds to a 0.086 increase in standard deviation of the commitment towards Green eBusiness adoption. Thus, the influence of technology experience on commitment to Green eBusiness adoption in this study was insignificant. Yet, it is positive indicating that 1 standard deviation of technology experience corresponds to a 0.086 increase in standard deviation of Commitment towards Green eBusiness adoption. This model thus is an alert of importance of technology experience as an ingredient for Green eBusiness adoption, especially with the growth in firm size measured by the number of servers of the small and medium firms.

Hypothesis	Path	P-Value	Remarks		
			Direction	Significance	Acceptance
H1	Self_Effc→ Int_T_Use	0.040	Positive	Significant	Accepted
H2	Effo_Exp→ Int_T_Use	0.047	Positive	Significant	Accepted
H3	Perfo_Exp→ Int_T_Use	0.940	Positive	Not Significant	Rejected
H4	Orgn_Suprt→ Eco-Commit	0.561	Positive	Not Significant	Rejected
H5	Mime_Pres→ Eco-Commit	0.672	Positive	Not Significant	Rejected
H6	Coercv_Pres→ Eco-Commit	0.003	Positive	Very Significant	Accepted
H7	Normtv_Pres→ Eco-Commit	0.904	Positive	Not Significant	Rejected
H8	Facilt_Cond→ Eco-Commit	0.018	Positive	Significant	Accepted
H9	Green_Ent_Attd→ Eco-Commit	0.449	Positive	Not Significant	Rejected
H10	Int_T_Use→ Eco-Commit	0.049	Positive	Significant	Accepted
H11	Int_T_Use→ GEB_Adoptn	***	Positive	Very Significant	Accepted
H12	Eco-Commit→ GEB_Adoptn	***	Positive	Very Significant	Accepted

Table 5: A Summary of Hypothesis Testing using Basic Model_Size and Technology experience

Measurement Model Analysis

The measurement model relates measured variables to latent variables. Having sufficiently specified the measurement model, the other fundamental task was to test SEM for validity and reliability. The study considered the validity and reliability of both the measurements (indicator variables) and structural (path coefficients) in the model.

A confirmatory factor analysis (CFA) was followed to enable the researcher to perform an exact test of the measurement theory by specifying the correspondence between indicators and constructs (Hair et al., 2006) and test or confirm whether a theoretical measurement model was valid or not. A rule of thumb suggests standardized loadings with at least 0.5 and ideally 0.7 or higher indicate and confirms that the indicators are strongly related to their associated constructs and are an indication of construct validity. For reliability testing, the internal consistent reliability was tested. A Cronbach's alpha (α) greater than 0.70 was obtained indicating for the constructs' reliability.

Moreover, the statistical significance of each estimated coefficient was assessed in order to test the strength, co-efficiency score, significance, and direction of relationship of the measurement models. Higher loadings and significant estimates (p<0.01 or considerably p<0.05) as suggested by Hair et al. (2006) were passed and dropped as insignificant. Generally, findings indicate that all path coefficients between observed (manifest) variables and unobserved (latent) variables in the model were significant, as each path had a p< 0.05.

From Figure 2, Squared Multiple Correlations (R2) for each measured variables, which in CFA represent the extent to which a measured variable's variance is explained by a latent factor (i.e., how well an item measures a construct) are displayed by the model (Hair et al., 2006). The results show that predictors of Intention to Use explains 40.5% of its variance, Commitment explains 53.5 % of its variance, and the predictor of Green eBusiness adoption explains 79.2% of its variance. This evidences that the Basic Model Size is a, strong model. The matrices of construct correlations were useful in this assessment.

From the findings, the observed variables with significant probabilities had positive standardized regression weights greater than 0.50 an with exception only for GEB_ADOP2, GEB_ADOP6, and GEB_ADOP8, which had values of 0.498, 0.477, and 0.480, respectively, as can be observed in Table 6. It should also be noted that, all these indicator variables (with standardized regression weights less than 0.50 but higher than 0.40) are for the dependent variable, GEB Adopt. The study satisfies itself that most of the factor loading explaining the measurement model are adequate and accordingly demonstrate that the research constructs are very reliable (Rivard et al., 2006). Nonetheless, factor loadings inferior to 0.5 are not significant (see also Sraub et al., 2004; Hair et al., 2006). Although the results indicate that seeking model parsimony could lead to dropping the three insignificant items of GEB Adopt, this study retained them in order to maintain consistency among various tested models. This helps to see the changes and their impact across competing models (Tabachnick &Fidell, 2007 cited in Elly, 2010).

In this study, Green eBusiness adoption would by manifested during the sourcing, operational practices, and end-of-life-management. Sourcing was measured by the preference of ICT suppliers with green track records, the given weight to environmental considerations in ICT procurement, and by the organization engaging with a professional service provider regarding Green eBusiness. Operational practices were measured by putting off data computers, data centers, and other systems when not in use even if not told to do so; performing server consolidation and virtualization; and optimizing printing through shared printers. While end-of-life management was measured by organization recycling consumable equipment, organization disposing ICT in an environmentally friendly way, and, organization reusing items (papers, computers and related facilities) more than once. In the model, it can be seen that the respective error terms are co-variated, indicating that the items are highly depending on each other from sourcing, operational practices to end-of-life-management, in order to effect sustainable green eBusiness applications.

			Estimate	S.E.	C.R.		P Label	Std regression Weights
Self_Efficacy2	<---	Self_Effc	1.000					.792
Self_Efficacy1	<---	Self_Effc	1.028	.165	6.212	***	par_1	.861
Man_Enterprenurial_attitude4	<---	Ent_Attd	1.000					.553
Man_Enterprenurial_attitude3	<---	Ent_Attd	1.681	.273	6.152	***	par_2	.747
Man_Enterprenurial_attitude2	<---	Ent_Attd	1.679	.265	6.347	***	par_3	.805
Man_Enterprenurial_attitude1	<---	Ent_Attd	1.211	.210	5.771	***	par_4	.665
Effort_Expectancy2	<---	Effo_Exp	1.000					.716
Effort_Expectancy1	<---	Effo_Exp	1.127	.144	7.838	***	par_5	.861
Performance_Expectancy4	<---	Perfo_Exp	1.000					.749
Performance_Expectancy3	<---	Perfo_Exp	1.043	.130	8.037	***	par_6	.825
Performance_Expectancy2	<---	Perfo_Exp	.765	.117	6.511	***	par_7	.598
Orgn_Support4	<---	Orgn_Suprt	1.000					.948
Orgn_Support3	<---	Orgn_Suprt	.948	.036	26.014	***	par_8	.989
Orgn_Support1	<---	Orgn_Suprt	.610	.057	10.747	***	par_9	.684
Mimetic_Pressure1	<---	Mime_Pres	1.000					.826
Mimetic_Pressure2	<---	Mime_Pres	.921	.089	10.350	***	par_10	.809
Mimetic_Pressure3	<---	Mime_Pres	.957	.102	9.398	***	par_11	.742
Coercive_Pressure1	<---	Coercv_Pres	1.000					.799
Coercive_Pressure3	<---	Coercv_Pres	.946	.087	10.910	***	par_12	.831
Coercive_Pressure2	<---	Coercv_Pres	1.018	.092	11.029	***	par_13	.839
Normative_Pressure3	<---	Normtv_Pres	1.000					.793
Normative_Pressure2	<---	Normtv_Pres	1.121	.139	8.039	***	par_14	.804
Facilitating_Conditions4	<---	Facilt_Cond	1.000					.925
Facilitating_Conditions3	<---	Facilt_Cond	1.021	.055	18.605	***	par_15	.926
Facilitating_Conditions2	<---	Facilt_Cond	.872	.060	14.556	***	par_16	.831
Commitment4	<---	Man_Commit	1.000					.864
Commitment2	<---	Man_Commit	.980	.083	11.848	***	par_17	.805
Commitment1	<---	Man_Commit	1.068	.084	12.685	***	par_18	.841
Intention_To_Use2	<---	Int_T_Use	1.000					.933
Intention_To_Use3	<---	Int_T_Use	.897	.187	4.805	***	par_19	.756
Green_ Business_Adoption1	<---	GEB_Adopt	1.000					.711
Green_ Business_Adoption2	<---	GEB_Adopt	.623	.099	6.273	***	par_20	.498
Green_ Business_Adoption3	<---	GEB_Adopt	1.004	.103	9.776	***	par_21	.776
Green_ Business_Adoption4	<---	GEB_Adopt	.941	.106	8.904	***	par_22	.738
Green_ Business_Adoption6	<---	GEB_Adopt	.585	.111	5.248	***	par_23	.477
Green_ Business_Adoption7	<---	GEB_Adopt	.822	.125	6.556	***	par_24	.608
Green_ Business_Adoption8	<---	GEB_Adopt	.560	.107	5.254	***	par_25	.480
Green_ Business_Adoption13	<---	GEB_Adopt	.919	.124	7.411	***	par_26	.689

Table 6: Standardized Regression Weights (Basic Model_Size and Technology Experience)

DISCUSSIONS

This study was designed to model factors (motivators and inhibitors) for Green eBusiness adoption among SMEs in developing countries. In that pursuit, it reviewed literature on the characteristics of

SMEs in relation to green adoption attitude and resource around their proximity. It also reviewed various theories on technology adoption (UTAUT and TOE) and public goods management (Institutional Theory). The review managed to set the founding base from which this study could execute its objectives. The organizational, managerial, technological, and external environmental factors were brought together and combined the Green eBusiness Adoption Model (GEBAM), from which 12 hypotheses were generated. Of them, self-efficacy, effort expectancy, and performance expectancy were postulated to affect Intention to Use. On the other hand, Organizational Support, Green Entrepreneurial Attitude, Normative Pressures, Mimetic Pressures, Coercive Pressures, Intention-to-Use, and Facilitating Conditions were postulated to positively affect Commitment. In turn, Intention-to-Use and Eco-Commitment were each hypothesized to affect Green eBusiness adoption and Use among SMTEs in developing countries.

The study's discussion is based on the main findings of data analyzed by SEM through SPSS-AMOS 20 to explain the motivators or inhibitors for Green eBusiness adoption including their standard regression weights. Furthermore, the influence of Organizational Size, Technological Experience, and the combined effects of Size and Technological Experience are presented. The loadings explain the extent to which each item's standard deviations will increase as Green eBusiness Adoption go up by one standard deviation. The discussion of the hypothesized variables and their performance in the study's model follows.

Self-Efficacy Effects

The results show a positive relationship between Self-Efficacy and Intention-to-Use Green eBusiness, the influence of which is significant. The findings as stipulated by this study indicate that self-efficacy has the path co-efficiencies of $\gamma = 0.245$, p=0.040, CR=2.058, meaning that a proportional change in a 1 standard deviation of Self-Efficacy corresponds to a 0.245 increase in standard deviation of the Intention-to-Use Green eBusiness. Previous studies (Zhao and Cziko, 2001; Teo, 2009; Teo and Koh, 2010) have indicated a positive relationship. The findings of this study are consistent with what Kulviwat et al. (2007) found, where a positive and significant relationship between Self-Efficacy and Intention-to-Use was shown. In the current study, although Green eBusiness (Green IT in general) was still a new terminology and thus not being practiced by most tour operators, there were some initial ground works in some companies whose top officials exhibited a high Self-Efficacy towards IT in general. In such companies, they had introduced the use of i-cloud and virtualization, initiatives that facilitated the storage of documents in smart phones, iPads, PCs, etc. Such applications enable one to access his/her stored information from the cloud through a virtual server at any time, thus enjoying real-time management of itinerary services.

Effort Expectancy

Regarding effort expectancy, the results of the analysis indicate a positive relationship between effort expectancy and Intention to Use Green eBusiness by: $\gamma = 0.236$, p=0.047, C.R=1.986, indicating that a proportional change in a 1 standard deviation of effort expectancy corresponds to a 0.236 increase in standard deviation of the Intention-to-Use Green eBusiness adoption. The p-value p=0.047 was found indicating a significant relationship between effort expectancy and intention to use Green eBusiness, while the C.R value indicates that the relationship is positive. A number of researchers have advised measures to be taken to improve technology perceived ease-of-use. These include making the technology available and affordable and providing orientation and training on how and why a certain technology is to be used. Agarwal et al. (2007) adds that costs need to be brought down to make services sufficiently attractive for wide-scale adoption. The fact is that compliances towards environment protection are an additional cost to businesses (Molla, 2008), and that it takes a longer period before it breaks even (Olson, 2008). This means that if the technology is available at relatively high prices, then it may totally demoralize any intentions towards adoption. Considering the resource poorness SMTEs' are subjected in, it is deemed important to ensure that Green Business

is less costly to be afforded by everyone. That is why article emphasizes the role of facilitating conditions. Davis (1989) found that training is a straightforward way to attacking the ease of use. Wolski and Jackson (1999) consider training a way to overcome resistance associated with perceived difficulty with technology use because it imparts new skills, knowledge, and insights (Edgcomb, 2002), which in turn can change attitude, increasing convenience and confidence to work with a particular technology. On the other hand, training is another way for creating a more productive and competitive workforce (Marshall, Mills and Olsen, 2008).

Facilitating Condition

The effect of facilitating condition on commitment to Green eBusiness was also positive and significant, demonstrated by $\gamma = 0.279$, $p<0.018$, CR=2.369. This means that a proportional change in a 1 standard deviation of facilitating conditions corresponds to a 0.279 increase in standard deviation of the commitment towards Green eBusiness Adoption. Considering the resources constraints SMEs face, this study thus argues that provision of facilitating conditions is inevitable in order to persuade green behaviors among tour operators. Besides is the notion that Green technologies are costly and lengthy investments, rendering SMTEs risk averse. Similar results have been found by other studies (Venkatesh et al, 2003; Schaper and Pervan, 2004; Garfield, 2005; Helaiel, 2009; Suhendra, Hermana and Sugiharto, 2009; Zhou, Lu and Wang, 2010; Dulle and Minishi-Majanja, 2011), who argue that facilitating conditions have an impact on the actual usage of particular technology. Facilitating conditions may include organizational and technical infrastructure in addition to financial incentives to support training and the provision of technological support (Venkatesh et al, 2003; Schaper and Pervan, 2004). Others include subsidies, grants, and low or no interest rate loans for energy efficiency investments (Mallett et al., 2011) and suitable policies. Financial incentives are considered important to assist with problems related to funding (Mallett et al., 2011). Haskin's (2009) study, for example, reveals that SMEs are subject to lower priorities in accessing investment funds offered by the regulatory authority. Comparatively, more emphasis has been given to the larger firms on ground that larger firms could realize more environmental and economic benefits to that of SMEs (Yu and Bell, 2007; Ministry of Industry and Trade Tanzania, 2002). A presence of high compliance and administrative costs has been hindering appropriate funding channels like banks from loaning capitals to potential SMEs (Ministry of Industry and Trade Tanzania, 2002). A provision of free or subsidized training on user skills is another important form of facilitation and it entails making users familiar with new technology hence confronting the ease of use factor and improving the self-efficacy among employees towards Green eBusiness technology. Boons and Wagner (2009) further emphasize the importance of the provision of right information on matters related to environment and ICT economic application effects. This will facilitate the provision of the clear link between ecological and economic performance such that SMEs can easily infuse environmentally friendly innovations and to attract and encourage them to participate with the global effort of transforming business into ecologically friendly operations. Nonetheless, in most developing countries, Tanzania included, training on green technologies is still unaffordable to most SMEs. This study, for example, recently came across an advert on three days training on "Improving the Energy Performance of Organizations based on ISO 50001" that was to be held in Dar es Salaam. In this training, a fee of USD 495 was to be charged per participant. While this is a good initiative towards green technologies awareness creation, it is expensive for most individuals unless otherwise sponsored. In this study, however, there was a blurred picture on the existence of facilitating conditions.

Coercive Pressure

This study had postulated that coercive pressure has an influence on an organization's commitment towards Green eBusiness adoption. That is, the higher it is, the more likely the organization dedicates itself towards being green in using E-Business. The results $\gamma = 0.412$, $p=0.003$, CR=2.992 indicate a

positive and a very significant relationship. This is because the measurement variable scores of 0.412 standardized regression weights is higher than the threshold value of 0.2, meaning that a proportional change in a 1 standard deviation of coercive pressure corresponds to a 0.412 increase in standard deviation of eco-green commitment by the management. The study suggests that coercive pressures are inevitable if commitment towards Green eBusiness adoption is to be inculcated for serving public interests. Nonetheless, although Green eBusiness was at its rudimentary stage, the role of Coercive pressures was acknowledged as very significant by the study's findings. The study thus suggests differing with Shrivastava (1995), who argued that institutionalization of stringent regulations to moderate business environments may impair competitiveness as it generates adverse liability in terms of high productivity cost.

The study also concurs with Porter and van der Linde (1995), who argued that strict environmental policies and regulations may only be detrimental in the initial phase of operation and that they are very useful in the long run. In this study, the slow pace of adoption can be explained to be caused by the fact that, although there is no ICT manufacturer in Tanzania and all ICT equipment including computers are being imported from outside, there was no regulation or green standards in place regarding the importation of ICT that considers environmental protection. According to OECD (2009), by setting environmental requirements for ICT procurement, it will not only reduce the environmental impact of acquired ICTs, but also will allow purchasing power to increase competition and innovation among ICT providers. Besides, there are no policies and regulations, and nowhere is it stated how Green IT technology would be managed in Tanzania. Thus whether to adopt or not, is dependent on the individual's sentiment towards the environment.

Intention to Use

This study had postulated two hypotheses regarding Intention to Use. The first postulated that Intention to Use affects positively the Commitment towards Green eBusiness adoption, while the other postulated to positively affect Green eBusiness adoption. The results indicate $\gamma = 0.213$, p=0.049, CR=1.927 and $\gamma = 0.569$, p=0.001, CR=3.636, for first and second postulations respectively. This implies that Intention to Use significantly affect both Commitment towards Green eBusiness adoption, and directly affects Green eBusiness adoption by SMEs. Impliedly, a proportional change in a 1 standard deviation of Intention to Use corresponds to a 0.213 increase in standard deviation of Commitment towards Green eBusiness adoption, while a proportional change in a 1 standard deviation of Intention to Use corresponds to a 0. 569 increase in standard deviation of Green eBusiness adoption. The results thus indicate a positive effect, and significant influences.

Although the concept has just recently introduced among firms in Tanzania, some operators demonstrated a very recommendable intention to use Green eBusiness for reducing costs of operations, such as saving energy, reduced hardware through sharing printers, switching off computers when not in, and using laptops instead of desktops. The actions were, however, haphazardly conducted and unplanned. Some managers were aggressive, calling for a cultural change in favor of environment protection. For example, one of the MD in one tour company in Arusha narrated, "papers are harmful than computers, because through papers trees are highly cut. Everything should be turned electronic." He further contends, "I believe in technology because with it you can get information at any time." He adds "people should not fear changes; instead they have to move with them." Two MDs from companies in Kilimanjaro and Arusha argued, "We don't print anything unless it is necessary to do so. The challenges we face are in some processes where one is forced to print out things like managing booking because suppliers require hardcopies". Another company was governed by a philosophy "Reduce, Reuse, Recycle. No/less printing" and used softcopies instead of hardcopies unless very necessary. They had a slogan which states "Never throw, because somebody would need it." In their end-of-life, the IT facilities were given to needy

people, including Internet cafes, schools, churches, etc. as charity, or kept in stores waiting for disposal.

Even more encouragingly, two companies had started using virtualization and i-cloud computing such that through the use of smart phones, iPads, and normal PCs, could conserve energy, cutting operational costs and conform for Corporate Social Responsibility (CSR). Some other tour companies visited in Kilimanjaro had started giving magnetic stickers to avoid printing several business cards to every tourist, which could be attached on any convenient place. An informant from one tour enterprise in Dar es Salaam proudly asserted that "It is our corporate brand to go green, and loving nature is our culture. We thus go with trend that keeps us being environmental friendly..." These and similar arguments suggest the presence of some intention to go green in some companies.

Eco-Commitment

With regards to commitment, the results of the analysis show $\gamma = 0.851$, $p<0.001$, CR=8.281, implying that a proportional change in a 1 standard deviation of eco-Commitment corresponds to a 0.851 increase in standard deviation of Green eBusiness adoption. This finding is consistent with what previous studies had found on technology usage. For example, in astudy on web cohesion and commitment towards intention to use Seo and Green (2007) found that the more committed to the website users were, the more likely they were to use the website. Elliot (2010) adds that group commitments are likely to be effective in settings where there is good group cohesion. In his study on, "fostering sustainable behavior," Elliot (2010) noted that public commitment saved significantly more energy than did households who were in the private condition. This is due to the individual's desire to be consistent. Thus, commitment is expected to positively affect users' intentions to continue using the Green eBusiness technology.

Nonetheless, although this study found existing number of initiatives in moving towards green as previously explained, a lot need to be done. For example Green behavior remains sorely dependent on environmental consciousness and the sentiment of a person in charge of procurement. Although tour operators expressed very touching sentiments, the majority (except three companies) had no written Green IT-related policies. The majority proclaimed to be having implied policies that are known and followed by everyone within the organizations. They however proclaimed to be abiding to general policies according to the responsible ministry. Nonetheless, Green IT was regarded as something new and not a priority. To this extent, the Green eBusiness processes revealed were limited to switching off computers in idle times, re-using papers, sharing printers, and prioritizing laptop usage over desktops. Virtualization, i-cloud, and the use of smart phones were in the launch of a very small percentage. Some companies had employed a private company to collect e-waste and other garbage. This is an indication that some commitments towards being green are emerging, including Green eBusiness adoption.

Rejected Hypothesis

As was highlighted earlier, the five hypotheses were rejected following their failure to meet acceptance threshold levels. These include those postulated with constructs like performance expectancy, organizational support, normative pressure, mimetic pressure, and managerial green entrepreneurial attitude. Though their direction of influence were each positive, their influences to their respective dependent variables were insignificant where the p-values were greater than 0.1, while their path co-efficiencies were less than 0.2, and their C.R's were less than 1.96 (seen also Chin, 1998; Hoe, 2008). These rejections may be explained from what this study related largely to variation in factors related to managerial and organizational factors. For example, those organizations whose top management exhibited high magnitude, strength, and generalizability of self-efficacy also believed Green eBusiness could be easy to use and expressed a great commitment to their usage.

Across the firms, no differences in adoption was revealed to be caused either by facilitating conditions nor by coercive pressures, since both are external and depend mainly on the country's policies and available regulations and standards including their level of enforcements. Nonetheless, these were non-existent. Despite that fact that there was then no manufacturer of ICT in Tanzania and that everything was being imported, there was no policy on green ICT procurement, sourcing, importation, operations, and end-of-life management. Green IT processes were rather based on self-initiatives. This fact might explain why organizational support was found insignificant despite the applause from a number of studies about its role in influencing technology adoption. Green IT was a new phenomenon that, judging from this study's surveys and interviews, nobody seemed to care about. For example, a number of MDs from the visited tour operating firms argued that, "Green IT is not known here; someone may even wonder at you when mentioning such thing." Another one stated that "It is for the first time I am hearing this from you." A similar argument was given by an officer at the MNRT. These facts indicate that neither society, individuals, nor organizations could be in position to exert any pressure to anybody (within or outside the organization) to go green. Karanasios et al (2010) indicates that, given the early stage of diffusion of green data best practices, this may come as no surprise. This study revealed more or less similar with what Sugar et al. (2004) found, who also discovered an insignificant role of organizational support. They (ibid.) for example assert that technology adoption is a personal decision, and that it is uninfluenced by other people or the presence of resources or impediments surrounding their proximity.

Studies (Venkatesh et al., 2003; and Al-Qeisi, 2009; Dulle and Majanja (2011) have observed that "Unless use is mandated, none of the social influence constructs were significant in voluntary contexts." Yet, scholars (Schaper and Pervan, 2007; Suhendra, Hermana and Sugiharto, 2009) have observed contrary to Venkatesh et al (2003), who asserts that even under the involuntary situations, social influence significantly contributed to ICTs usage. As it was earlier indicated, this study found not only missing relevant environmental regulations to reinforce green behavior, but also the lack of implementation of the existing ones. Grewal et al. (2001) denotes that normative pressure might be of impact if organizational behavior were driven by anticipation to improve efficiency and attaining legitimacy as well as internal human, managerial, and technical efficiency. Winkler et al. (2008) also argued for the exclusion of not only normative but also mimetic pressures regarding them not a major factors in determining green practice.

It is probably for the same reason that mimetic pressure was also insignificant. Environmental protection was argued to be not a means to differentiate the services provided. Competition was based on costs to attract customers through good quality provision and charging relative lower prices for services offered than from competitors in order to win their customers. This was noted from respondents' explanations and from what they post in their websites to market their firms. It was further revealed that specification was only related to executable functions including bookings, reservations, and others, while no one mentioned in his specifications to relate to environmental aspects. In these kind of scenarios, where most of dealers are not practicing and unaware of what constitutes Green eBusiness, it is unimaginable to exert mimetic pressure from competitors. Thus, as they are all equally not informed on Green eBusiness, no pressure to go green was mentioned to come from competitors. This is in line with Karanasios et al.'s (2010) argument that reluctance is to be expected at early stages of the diffusion of green initiatives. It is hoped that more positive changes will come in the near future.

However, this study could not establish any connection between performance expectancy and Green eBusiness adoption. This finding can be probably explained that, since environmental technologies have more emphasized protecting the environment over the exact tangible benefits received by individual environmental firms, the available environmental technological performance expectancy might not be so appealing to firms. This is probably because, among others, one of many important firms' objectives is to recoup profit out of what is adopted. Consequently, where the technology has

more environmental benefits than economic gains, it may generally be considered more of a cost than a benefit, and hence considered less important by the firm. Atos Origin (2010) suggests that each driver behind the need for Green IT should express clear commercial objectives based on strong business arguments and measurable benefits. This is essential if any change is to be sustainable and have a long-term positive impact on the business and the environment. That "Going green" by SMTEs should not only serve the environment, but also enhance their reputation in the marketplace while reducing their operational costs and increasing efficiency to boost productivity and sustainable development. Catching messages should probably be added to the intended green technology packages promotions to persuade its adoption and to avoid any conflict that technology is for environmental protection aspects alone (Sugar et al., 2004).

A number of SMTEs were pessimistic to being first movers to new technologies like the Green eBusiness, implying that Green Entrepreneurship was still low. For example, when discussed with some MDs regarding this matter, they often argued that, "Often it is not a good idea to be the first mover in such new and risk technologies, as it may backfire on you." This evidences the SMTEs' managerial attitude towards risk averseness. There was also greater reluctance towards related ventures. This study suggests that, by having positive attitude, entrepreneurs in the tourism sector can easily exploit and tap into this emerging potential as an avenue for saving costs through the reduction of operational costs via reduction in energy, spaces materials consumption, and other remunerations from environmental protection.

Effects of Moderating Variables (Size and Technology Experience) on Commitment

The effect of the two moderating variables "Technological Experience" and "Organizational Size" though were revealed positive as analyzed in this study, which determined they were insignificant. Yet, the presence of both Size and Technological Experience to a certain extent modifies the original relationship between independent and dependent variables. There was a corresponding increase in commitment with increases in both technology experience and organization size measured by the number of servers. The positive influence exhibited is an alert that both organizational size and Technological Experience have implications on the firm's Green eBusiness adoption. While increases in organizational size (measured by number of servers) triggers for more Green eBusiness adoption, the presence of Technological Experience is important for a commitment towards Green eBusiness adoption. The findings are in line with other studies (such as Hrubovcak, et al., 1999; Elly, 2010) which opine that both organizational size and increases in technology experience have a critical impact on technology adoption because they give the firm ability to quickly and reliably design, develop, and deploy that new technology.

CONCLUSIONS AND IMPLICATIONS OF THE STUDY

Although, a combination of the UTAUT, TOE, and Institutional Theory to form a GEBAM model resulted in two main determinants: "Intention to Use" and "Commitment", and where in Self Efficacy, Effort Expectancy, Performance Expectancy as determinants for Intention-to-Use Green eBusiness adoption, and in Organizational Support, Green Entrepreneurial Attitude, Normative Pressure, Mimetic Pressure, Coercive Pressure, Facilitating Condition, and Intention-to-Use as determinants for commitment towards Green eBusiness adoption and use, only seven constructs out of twelve were revealed significant. These are Self-Efficacy, Effort Expectancy, Facilitating Conditions, Coercive Pressures, Intention to Use both to commitment and to Green eBusiness, and Commitment towards Green eBusiness adoption.

To a large extent, the claims of UTAUT, TOE, and Institutional Theory are conceptual, thus this study's empirical findings have a lot of theoretical and practical implications for policy and for the

firm add to the discussion on the factors that best predict Green eBusiness adoption among SMTEs in developing countries. That, if the Green eBusiness adoption is to be feasible among SMTEs in developing countries, then it has to be truly made ease to use (in terms of its learning time, and acquisition costs, availability and accessibility); and, there should be perception of usefulness to the individual firm. Moreover, clear information coupled with training will increase the understanding about what constitutes Green eBusiness, including its accrued benefits to both the environment and the firm. This will not only improve the self-efficacy of the firm, but it will also yield a green entrepreneurial attitude that may drive them to venture into Green eBusiness applications use.

Nonetheless, a need for facilitating conditions is emphasized in this study in terms of incentives, subsidies, levy reduction or total omission, and provision of loans with less/no interests at all and laying out of appropriate Green eBusiness infrastructure. This is because SMTEs, like all other SMEs, consider the adoption of any green technologies as costs than benefits due to the heavy capital required for investments whose payback periods are particularly lengthy. As was severally observed in this study, the majority of SMEs are characterized by resource constraints, which makes them very risk averse. Moreover, facilitating conditions must be coupled with presence of strict regulations that need to be applied to reinforce the expected green behavior. In doing so, intention to use will be high; a precursor which will stimulate commitment of firms towards Green eBusiness adoption, and together will eventually lead to actual Green eBusiness adoption and use among SMTEs in developing countries.

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