International Journal of
Entrepreneurial Development, Education and Science Research
p-ISSN: 2360-901X | e-ISSN: 2360-9028

IJEDESR

February, 2019
Vol. 5, No. 1

Systems Quality and Environmental Sustainability of Nigerian Tourist Sites: An Operations Management Challenge

[1]Ndu, Eugene Chigozie &
[2]Ajao, Azeez Olamilekan
[1]Department of Hospitality Management and Tourism, Faculty of Management Sciences, University of Port Harcourt
[2]Operations Department, Unity Bank Plc. Lagos, Nigeria

Abstract

The challenge of environmental sustainability in Nigerian tourist sites has become a daunting challenge to tourism operations managers. This study sought to ascertain the relationship between system quality (dimensioned by system reliability, system efficiency, system flexibility and system privacy) and environmental sustainability (measured by clean energy and green space); and using same to proffer lasting solutions to the environmental sustainability challenge. Four hypotheses guided the study. Survey design was adopted; with a sample of 328 respondents drawn from 55 tourist sites in the South-South and South-East zones of Nigeria. Data were analysed using mean and standard deviation techniques; as well as the structural equation modelling techniques. Results showed good model fit for the measurement models and significant direct relationships for the structural models. It was concluded that system quality is an antecedent of environmental sustainability; and the dimensions thereof are good predictors of environmental sustainability. Though the result showed that the dimensions of systems quality have a moderate predictive power of 37%, 25%, 26% and 14% respectively on environmental sustainability, the study recommended that operations managers should endeavour to design and re-design operation systems in such a way that the system can be relied upon for guaranteed environmental sustainability. Tourist managers are also advised not only to strictly adhere to government environmental policies and laws but as well encourage their employees and visitors to do same.

Keywords:
Clean Energy, Green Space, Systems Design, Systems Efficiency, Systems Reliability, Structural Equation Modelling.

Corresponding Author:
Ndu, Eugene Chigozie

Background to the Study

In recent years, the increasing concerns for climate and environmental change, coupled with poverty, inequalities between societies as well as the anxieties occasioned by social inequalities have put environmental sustainability (ES) under the spotlight (Giovannoni and Fabietti, 2013, p 21). This has led to the formation of sundry institutions, organizations that make policies and global initiatives like Sustainable Development Solutions Network – SDSN of the United Nations established in 2012, as well as practitioners (KPMG, 2011) and academics (Joseph, 2012) with increased attention given to environmental sustainability issues across the globe. Resultantly, organizations especially the operations management teams are faced with the challenge of ensuring that their operations comply with relevant regulations. Due to this growing pressure from national and international regulations, and from society in general, business organisations are gradually being compelled to adopt the principles of environmental and social responsibility as part of their strategies, structures and systems of management (Werbach, 2009). This has resulted to the emergence of a sort of 'sustainability rhetoric' in the mission statements, internal codes and external reporting systems. However, Gond, Grubnic, Herzig and Moon (2012) argued that in most cases, this rhetoric only was used in the attempt to reconstruct the eroded legitimacy of companies and did not necessarily involve the actual participation in the pursuit for environmental sustainability. Otherwise, such active participation and implementation would call for organizations to change their current systems and practices so as to accommodate a concrete and strategic drive in pursuit of sustainability (Hopwood, 2009). For example, in the manufacturing and information technology sectors, operations managers unceasingly seek to design latest operations systems that support the sustainability of the global environmental space. Also, the reduction of pollution and environmental degradation is a major systems challenge of the Oil and Gas sector and has been a major theme of discussion in the Niger Delta. Leaders of the tourism industry should not be left out in this race. Therefore, an integrated systems approach to the notion of environmental sustainability especially as it pertains to tourism, is inevitable. In response to this challenge, tourism operations managers have adopted different strategies in a bid to proffering solution to this global menace; especially, as it pertains to tourism operations. This study is an attempt to to link the environmental sustainability challenge to the quality of tourist site systems.

In today's globalized world, tourism has become an essential activity of modern-day living probably because it serves as a major source of foreign exchange earnings to many economies. Tourism has not only generated employment opportunities across the globe, it is also a major economic strength of countries whose major economic performance index relies heavily on it. Other nations pursuing economic diversifications can as well grow their economy thereby. Ekundayo and Abutu (2015, 2) described it as an essential activity for the sustainable development of nations due to its direct effects on many other sectors of the economy such as economic, social, cultural and educational sectors of the national societies; as well as on their international relationships. Tourism according to United Nations World Tourism Organization (UNWTO) is one of fastest growing industries of the world as it recorded 1.235 billion international tourist arrivals in 2016 which amounts to about 3.9% growth rate from what was obtainable in the previous year

(United Nations World Tourism Organization [UNWTO], 2017). Theobald (2005), espoused that this upward trend of tourism is likely to subsist despite the dynamic nature of global business environment. The report further revealed that international tourism receipts stood at US$1.22 trillion representing a 2.6% growth rate in real terms, while international tourism exports in 2016 stood at US$1.4 trillion, averaging US$ 4billion a day; and accounting for 7% of world's exports; while in terms of gross domestic product (GDP), the sector accounted for 10% of global GDP; as well as 10% of global job creation in 2016. In Nigeria, there is a huge potential for tourism as the country have over 7000 national and community tourist destinations whose benefits remain untapped (Yusuf & Akinde, 2015). Also, the growing population of the country which is over 200 million indicate that the demand for tourism will continue to rise as people tend to move from one place to the other in search of leisure and other activities.

These reports indicate that tourism can stimulate sustainable economic development and growth (Akpan and Obang, 2012; Ekundayo and Abutu, 2015; Haghkah, Ebrahimpuor, Hamid, and Abdul-Rasid, 2011; Zamfir and Corbos, 2015). However, beyond economic gains, there are imminent implications of growing tourism activities on the environment. These factors are sparingly put to spotlight in recent studies. Scholars continually emphasise on tourism economic potentials without commensurate attention on its environmental consequences. It is disheartening to observe that despite the remarkable reports on the enormous contributions of tourism on economic prosperity, the discourse on its potential effects and benefits to a greener and sustainable environment among scholars remain obscure. Moreover, even if some exist, they are mostly studies domiciled in countries outside Nigeria; thereby orchestrating the need for this study which sought to examine and possibly establish the relationship between systems quality of Nigerian tourist sites and environmental sustainability.

The problem of this study stems from the increasing tension on global environmental issues and scepticism about the possibility of reducing industrial pollution significantly which propelled the UN to refer to these problems as an obstruction to development (Kidd, 1992, p. 16). The environmental sustainability concept has been popularly referred to as the relationships between men and nature. It involves the maintenance of a stable resource base, avoidance of over-exploitation of renewable resource systems or environmental sink functions and depletion of non-renewable resources only to the extent that adequate investment is made in substitutes (Jonathan, 2000). It also comprises the maintenance of biodiversity, atmospheric stability, and other ecosystem functions that are not ordinarily classified as economic resources. It equally entails the conservation and management of resources, particularly non-renewable ones or those that are vital to life support; while requiring action for the minimization of land, water and air pollution; as well as the conservation of bio-diversity and natural heritage (UNEP and WTO, 2005). The primary focus of sustainability is the environment (John, 1999); which involves protecting both the physical and natural environment. Environmental sustainability requires an in-depth thought on the ecosystem and as well recognises that man is an important element within the ecosystem. Moreso, the need for environmental

sustainability has further been stressed by the dynamic nature of the environment especially in this 21st century. It is however unbelievably puzzling that despite the emphasis on environmental sustainability, little has been done by relevant government authorities and tourist sites owners cum managers to design and re-design quality systems that support the sustainability of the Mother Nature. Though the growing pressure from national and international regulations and from society in general, has compelled business organisations to adopt the principles of environmental and social responsibility as part of their strategies, structures and systems of management (Werbach, 2009). However, this as noted earlier has only resulted to the emergence of a sort of 'sustainability rhetoric' in the mission statements, internal codes and external reporting systems. Gond et al (2012), however argued that in most cases, this rhetoric only was used in the attempt to reconstruct the eroded legitimacy of companies and did not necessarily involve the actual participation in the pursuit for environmental sustainability. This challenge could be as a result of the lacuna in literatures to establish the relationship between system quality and environmental sustainability. Business organisations most especially tourist sites have not seen the urgent need, and benefits of designing and re-designing environmentally friendly systems. Thus, the need for this study to investigate the subject matter and call for organizations to change their current systems practices so as to accommodate a concrete and strategic drive in pursuit of sustainability (Hopwood, 2009).

The aim of this study therefore, is to investigate the relationship between systems quality and environmental sustainability of tourist sites in Nigeria; and use the findings to proffer lasting solutions to environmental sustainability challenge in Nigerian tourist sites. Specifically, the objectives of the study were to establish the possible impact of the dimensions of systems quality which are Systems Reliability, Systems Efficiency, Systems Flexibility and Systems Privacy on the measures of Environmental Sustainability which are Clean Energy and Green Space of tourist sites in Nigeria. Based on these identified dimensions, it was hypothesized that:

- **H_0:1** There is no significant relationship between Systems Reliability and environmental sustainability.
- **H_0:2** There is no significant relationship between Systems Efficiency and environmental sustainability.
- **H_0:3** There is no significant relationship between Systems Flexibility and environmental sustainability.
- **H_0:4** There is no significant relationship between Systems Privacy and environmental *sustainability.*

It is expected that this study will contribute to the staple of knowledge on the subject matter. It will also enlighten readers on environmental sustainability issues and how to mitigate it using systems quality. The government, policy makers and regulatory agencies / institutions will equally find this study's outcome (especially, the findings and recommendations) as an authentic framework for policy making, implementation and monitoring. Tourist site managers and other interested parties can use this study to gain deeper insights on the quality of their systems and how to design their systems to reflect

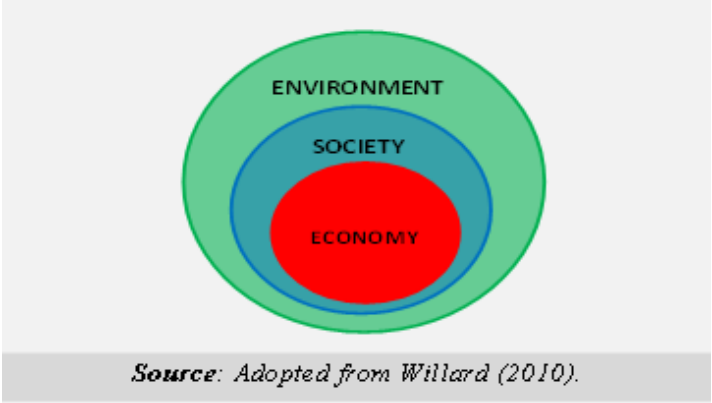
the desired quality. They will also learn the importance of adopting the systemic approach in the management of their organizations. The study equally addressed the need for tourism systems in Nigeria to measure up to international standards and possibly be at par with global benchmarks. By so doing, it stressed the need for tourist site operators (operations managers) to adopt global best practices in designing their systems for good service delivery; so that maximum value can be derived from them; without neglecting their impact on environmental sustainability.

Theoretical Underpinning

The underlining theory for this study is theory of sustainability**.** The theory of sustainability proposed that tourism industry should embrace 'clean and green' tourism, which means that tourist sites should as much as possible ensure that their operations add to sustainable development. This can be achieved only if tourist sites in Nigeria can design their service systems in a manner that will guarantee the environmental sustainability of their different localities. Therefore, for the Nigerian tourism industry to achieve a foreseeable environmental sustainability, there is need for each tourist destination to consistently embrace the theory of sustainability with emphasis on environment. Dwyer, Edwards, Mistilis, Roman, and Scott (2009) asserted in this direction that tourist sites must endeavour to conform with the theory and principle of sustainability, if they would achieve any visible development.

The society exists in the (physical) environment, while the economy not only needs the resources in the environment to thrive, but is also determined and ran by the stakeholders that exist in the environment. Using the picture of the planet earth, Willard (2010) argued that Earth which forms the human environment exists naturally and is not linked with any other source. This implies that there is a limit to which it can absorb the activities of mankind in the event of overflow of damage. According to Willard (2010), we must not exceed the planet's carrying capacity. The cluster of individuals within specific segments of the environment makes up the society and who in turn, determines the method and means of ownership and distribution of resources (Economy). The central theme of sustainability is to create a balance between man and nature such that the activities of man will guarantee reasonable benefit without hindering that of the future. Primarily, it was focused on the unceasing existence of the ecosystem (Daly, 1973, 1974, 1991; Alexander, 1994; Basiago, 1999). Thus, the theory of sustainability advocates that operations managers design a smooth operations system whose quality and major components will benefit the present generation without posing any threat to the welfare of future generations.

Figure 1: The Three-Nested-Dependency Circles Model of Sustainability



***Source**: Adopted from Willard (2010).*

The application of sustainability theory in this discussion is to simplify the organizational leadership's challenge of the Nigerian tourist sites, while calling to question their operations management capabilities. Ostensibly, the leadership challenge here is that of keeping the organization within the space of acceptable state; which must be economically sound, socially acceptable, administratively prudent, politically feasible, wider-system friendly and most importantly environmentally sustainable (Siriram, 2011). One possible way of achieving this height of environmental sustainability is anchored on quality systems; hence this study which focused on establishing the relationship between system quality (SysQ) and environmental sustainability as viewed from the lens of operations management.

Literature Review

The growing attention and importance of systems quality stems from the contribution of the services sector to the global economy. Thus, construct of tourism development (albeit, the sustainable form), falls within the purview of services development and services marketing. These draw largely from the engineering and operations management disciplines of service systems engineering / management (Sprague, 2007). It encompasses service systems development and design, service system dynamics and systems quality; or as Medina-Borija, Nerlove and Wang (2014) called it, service science. At the global level, focus has shifted to the service economy (Spohrer, Maglio, Bailey and Gruhl, 2007, 71); based on the service–dominant logic (S-D logic) proposed by Vargo and Lusch (2004); which stresses the importance of understanding the creation of value in business. S-D logic advocates that essentially, all providers are service providers; and should know how value is created in service systems and how to respond to evolving market and societal conditions (Vargo and Lusch, 2004). This has led to a growing attention on the construct of systems quality – Sys Q (Akter, Wamba and D'Ambra, 2016); which has been defined as "user's judgment of, or impression about, a service system's overall excellence or superiority" (Akter *et al*, 2016, p. 2). Thus, systems quality may be seen as the worthor value attached to the offerings provided by a service system in the value co-creation process. Ndu and Umoh (2018) in their study 'system quality and

economic sustainability of Nigerian tourist sites: a leadership challenge for operations managers' explained that the quality of a tourist systems can be evaluated by the perceived satisfaction derived by the customers during patronage. Their definition of System Quality (SysQ) as 'the reflection of how users perceive the service systems of tourist sites' share similar explanation with Akter *et al.*, (2016) and Delone (2003). SysQ is regarded as the system users' perceptions of the technical level of a service delivery system in the tourist site. It specifies the system user's impression or judgment of the overall excellence or superiority of the service system. The dimensions adopted for the study include system reliability, system efficiency, system flexibility and system privacy (Akter et al, 2016; Delone, 2003; Nelson, Todd and Wixom, 2005; Parasuraman, Ziethaml and Berryl, 2005).

System reliability connotes the perceived extent of dependability of a tourist system. It explains the level of trust consumers have in tourist systems to provide assurance of continuous dependable services even in the future (Ndu and Umoh, 2018; Delone, 2013; Parasuraman et al., 2005) especially in delivering what it had promised to deliver. System efficiency specifies the extent to which the service system can be easily used (Parasuraman, et al, 2005). System flexibility is the ability of a service system to satisfy the unique needs of varying users without compromising quality**.** It measures the extent to which the service system is adaptable to different user needs and changing service conditions (Akter et al, 2016; Delone, 2003; Nelson et al, 2005; Parasuraman et al, 2005). Lastly, explains the ability of a service system to secure the privacy needs of customers. For example, in medical tourism Akter et al (2016) and Parasuraman et al (2005) explained that quality systems must to a very large extent protect the privacy of the patient's health information. However, in this study, it has been adapted to mean a reflection of the extent to which the service system provides some level of privacy of the tourist's identity or confidentiality to the user who so desires (Ndu and Umoh, 2018).

Environmental Sustainability

The word sustainability connotes the "ability to sustain" a phenomenon. In other words, it is commonly referred to as sustainable development, which is development that meets the present needs of humans without jeopardizing or compromising the ability of future generations to meet their own needs (United Nations World Commission on the Environment and Development [WCED], 1987, 42). In the tourism industry, sustainable tourism development came into limelight by the fusion of the principles/ideologies of sustainable development and tourism (Zamfir and Corbos, 2015). According to UNWTO, the development of sustainable tourism entails meeting the present needs of tourists and the host communities. In the words of Tosun (1998, 596), it entails all forms of tourism developments that make notable contributions to, or at least, do not oppose the indefinite maintenance of development principles without jeopardizing or compromising the ability of coming generations to meet their own needs and desires. Accordingly, sustainability responds to the need of tourists, industry and local communities by taking into account the present and future impacts of tourism with regard to the environmental, social and economic perspectives (Minciu, Popesu, Padurean, Hornoiu and Balteratu, 2010, 85). However, this study is focused on environmental sustainability.

Environmental Sustainability connotes tourism systems development that makes optimal use of environmental resources that constitute a key element in tourism development, sustaining vital ecological processes and engendering the conservation of natural heritages and available biodiversity (UNWTO, 2004). The identified themes include renewable energy consumption, environmental conservation as well as treatment of water and wastes to international standards. This act of integrating the environment, policies and development strategies require the establishment of formidable service systems with reputable quality to drive and catalyse the process of realizing the STD goals. Moreover, since the tourism industry is a service oriented one (Al-Ababneh, 2017), it possibly will need quality service systems to ensure the achievement of desired goals and objectives (Cristea, 2009). The identified measures of environmental sustainability for this study were clean energy and Green space.

Clean Energy: This defines the extent to which tourist sites generate power from alternative renewable energy sources such as solar power, hydro energy, wind energy, biomass energy etc. These sources of energy are considered clean energy since they are sourced from natural resources and their health and environmental implications are minimal (Garba, Abubakar, Suleiman, and Bashar 2019). In fact, John and Tony (2006), Guney and Onat (2008), and Liqun and Zhixin (2009), all argued in their separate studies that renewable energy is clean, environmentally costless and limitless. They all had a common summary in their studies that renewable energy does not cause environmental pollution.

Green Space: These are areas in the tourist destinations mapped out for green parks, wetlands, lake, forest and other eco systems. Although there are some tourist attraction sites that are purely for eco-tourism, the call or green space in Nigerian tourist sites cannot be overemphasized. Sustainability Management School (2018) posited that green space is fundamental to sustainability especially in the urban areas. This position was also supported by World Health Organisation (2018) estimates which showed that "physical inactivity linked to poor which is linked to poor walk ability and lack of access to recreational activity accounts for 3% of global deaths". This implies that the availability of green space in tourist sites can reduce world mortality rate by 3%. The availability of green space can improve health and wellbeing of tourists as well as aid the treatment for mental illnesses (Sustainability Management School 2018). For the purpose of this study, these two measures are contributory to environmental sustainability as a whole. Thus to simplify the scope of the study, they will be absorbed using structural equation modelling.

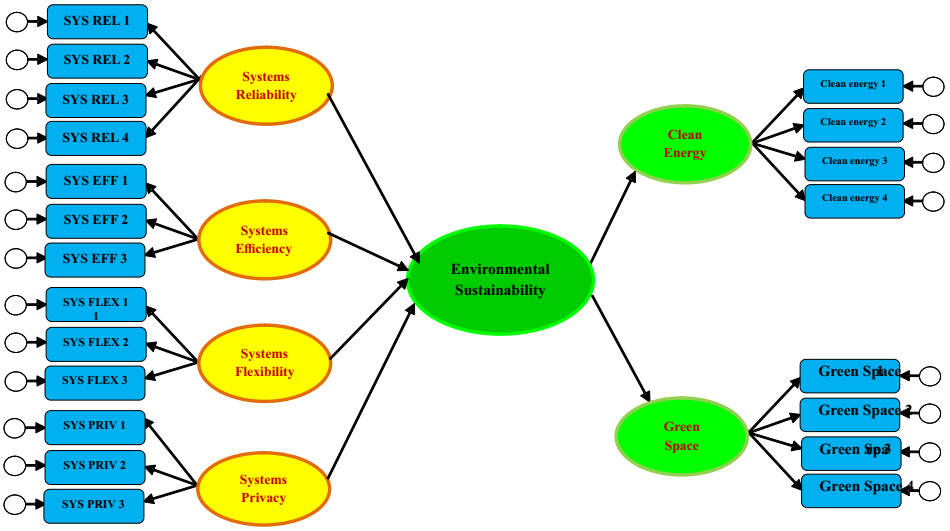
Empirical Literature of Systems Quality and Environmental Sustainability

Contemporary discourse on the environment emphasizes protection, preservation and conservation; which are some of the main sustainability tenets. It involves maintenance of natural heritages, biodiversity, atmospheric stability, and other ecosystems especially those that are not renewable or are precious in terms of life support functions; as well as action to minimize pollution of air, land and water resources, (UNEP and WTO, 2005). Since service systems, their design and quality are somewhat intangible in nature and

highly opinionated; their link with environmental sustainability is not easily traceable. This may have accounted for the relative sparse literature on the relationship between the two constructs. Borrowing from the work of Vargo, Maglo and Akaka (2008) which theorised that service providers need to design resource constellations and systems that support customers and incorporate their resources in the value co-creation course. According to S-D logic, service systems are dynamic configurations of resources in which value is co-created and evaluated as "value-in-context" (Vargo *et al*, 2008). Such value-in-context is "uniquely derived at a given place and time; and is phenomenological determined based on existing resources… in service systems" (Vargo, 2009, p. 39). Similarly, Sousa and Cauchick Miguel (2015) employed their research which focused on exploring sustainability using a Product Service System (PSS) in a Brazilian tourist site and a qualitative analysis technique to compare water processing via the reverse osmosis water filtration system and the traditional bottled water in a Brazilian tourist site. The purpose of their study was to ascertain the quality of the PSS in use. The study found that water processing using reverse osmosis water filtration system is more competitive, satisfies customers' needs, and is relatively lower in environmental impact. The implication of their finding is that a quality system should among other things guarantee that water, waste and other resources are processed into international standards as a way of guaranteeing environmental sustainability. This agrees with Yunis (2004) and his team's (under the United Nations Environment Program [UNEP] of World Tourism Organization [WTO]) recommendation of conditions for ES as they apply to the treatment of water and waste. On his part, Muhanna (2006) used his study "Sustainable Tourism Development and Environmental Management for Developing Countries" which was intended to contribute to poverty alleviation in the rural communities of South Africa to explore the possibility of a quality tourism service systems relating positively with the preservation of natural environments. Based on the study, he confirmed the relationship and concluded that the conservation of cultural, built and natural environment is a very important motivation for the initiation of several tourism projects. He maintained that, some of these projects tend to discourage and deter the tourist site communities from unauthorized use/overuse of natural resources; as well as the integration of protected areas into development plans both at the local and regional levels.

Environmental protection is best achieved through synergized efforts; and ought not to be left for business entities to control. Specifically, they argued that environmental conservation and protection are the primary concerns of responsible governments and not essentially that of businesses. To these scholars, without strictly implemented government policies, through relevant regulatory agencies, mitigating environmental challenges will be a mirage. Apart from these, natural events like disasters and climate change just happen irrespective of human efforts at conserving the environment. The implication of these is that organizational activities like service systems quality or design have little or insignificant effect on the construct of environmental sustainability. These submissions need more empirical validations or otherwise; especially in our local environment. Based on the conceptual review, the operational framework for the study is presented thus:

Figure 2: Operational Framework of the Study Variables



Source: Researchers' Conceptualization, 2019

Methodology

The research design for this study was survey. This was adopted because it involved a snapshot selection of the elements of the sample from the population (Malcolm, 2003; Baridam, 2001).The study's population consisted of tourist sites in Nigeria cutting across the six geo-political zones (North East, North West, North Central, South East, South West and South-South) which according to Ayodele (2017) is 249 in number. However, for the ease of accessibility, only tourist sites in the South-South and South-East geo-political zones were considered for the study. From the data provided by Ayodele (2017), there are 60 of these tourist sites in these two regions; with only 49 of them being functional. Added to these were 6newly established tourist sites in the two regions that were not captured by Ayodele; making the accessible population a total of fifty-five tourist sites. All of these were integrated into the sample. Elements of the sample comprised both the management staff of the tourist sites, tourist site visitors and local residents. Specifically, using purposive sampling technique two (2) respondents were chosen from each tourist site. These include the operations manager and his assistant. Meanwhile the Cochran's (1977) formula which is used to ascertain sample size of an infinite population was also adopted to arrive at 275 tourists/residents. Thereafter, accidental sampling technique was used to select five (5) tourists/residents (Etikan, Musa and Alkassan, 2016). Thus seven (7) respondents were selected from each of the tourist sites to make a total of 385 respondents (7x55). Confirmatory Factor Analysis (CFA) was used to test and affirm the validity and reliability of the instrument; and has been duely reported in the analysis and result section of this work. Mean and standard deviation were used to perform the univariate analysis while Structural Equation Modelling (SEM) aided by IBM SPSS software, version 21.0. was used to execute the bivariate and further analyses.

Analyses and Results

For the purposes of the analyses, 385 copies of the questionnaire were administered; out of which 362 copies representing 94%were retrieved. Of this number, 328 copies found useable giving rise to a useable response rate of 85.20%. The threshold for the mean returns was based on Asawo (2009), who categorized the mean returns as follows: 1.0 - 2.0 (low), 2.1 - 2.8 (moderate), 2.9 - 3.5 (high) and above 3.5 (very high). Based on this categorization, the acceptable mean value for this study was set at 2.5 and above.

Table 1: Descriptive Statistics and Assessment of First Order Reflective Model of the

Construct	Item Scales	Mean	S.D	Loadings	C.R	AVE	Sq Root of AVEs
Systems Reliability		**3.162**	**.844**		**.933**	**.778**	**.880**
	This tourist site usually provides its services at the time it promised to do so.	3.41	1.191	.896			
	When customers have challenges, the staffs are not always sympathetic and reassuring.	3.32	1.180	.897			
	The system quality is dependable; as such, it guarantees customers' safety.	3.45	.976	.885			
	The records are not kept accurately.	2.56	.804	.849			
Service Efficiency		**3.395**	**1.043**		**.930**	**.808**	**.899**
	The system is simple to use.	3.41	1.191	.906			
	The system is not easy to use.	3.32	1.180	.905			
	The system is not well organized.	3.45	.976	.885			
System Flexibility		**3.4085**	**.81427**		**.804**	**.522**	**.722**
	The system can be adapted to meet a variety of needs.	3.61	.659	.806			
	The system can flexibly adjust to new demands and conditions.	3.10	.990	.801			
	The system is not versatile in addressing needs as they arise.	3.51	.915	.816			
System Privacy		**3.4278**	**.82491**		**.826**	**.614**	**.784**
	The system protects customer's personal information.	3.32	1.180	.746			
	The system does not share customer's information.	3.45	.976	.885			
	The system offers customers meaningful guarantee.	3.51	.915	.709			
Clean Energy		**3.364**	**.845**		**.961**	**.775**	**.881**
	There is existence of a development planning process including tourism.	3.40	.795	.908			
	The firm rely solely of Generator plant as alternative energy source	3.61	.794	.817			
	Power supply is mainly generated from natural energy like solar, hydro, wind etc.	3.05	.666	.984			
	Does the firm make use of energy saving gadget like energy saving bulbs, fans etc.	3.36	1.186	.806			
	The firm has inverter battery to save energy from renewable sources.	3.40	.795	.876			
Green Space		**3.388**	**.779**		**.802**	**.781**	**.884**
	The tourist site has space for trees, water parks and open green walkways	3.46	.649	.776			
	The facility has a serene space for family picnic.	3.09	.831	.893			
	The tourist site grows flowers for beatification	3.21	1.021	.915			
	The tourist sites prefer to use paintings, artificial flowers, graffiti etc. instead of growing flowers.	3.87	.693	.926			
	Number of tourists per square metre of this site is of int'l standard.	3.31	.749	.898			

Source: Extract from SPSS Output Based on Analysis, 2019

Table 1 details the descriptive statistics and analysis of the first-order reflective model of the constructs. Specifically, it shows the mean and standard deviation of all indicators of each variable's items of the constructs. The result reveals a consistent satisfactory (high) mean values, with the exception of indicator number 4 of systems reliability which reported a relatively low mean of 2.56; yet it is above the threshold. Thus, the result is considered applicable for the study. Similarly, the standard deviation boasts of high values; this connotes that the data points of the study are properly spread across the large data gathered for the study. This implies that the entire population of the study was adequately represented by the chosen samples (Dauglas and Marting, 2005; Mary, 2008).

In addition to descriptive analysis, the table also shows how CFA was used to determine the convergent and discriminant validities. With this, we could ascertain the relationship between measurement variables and the latent variables. Since all the factor loadings for all the indicators exceeded the threshold of 0.5 and were significant at $p < 0.05$, it could be affirmed that these items related well to their constructs thus affirming the convergent validity. Meanwhile the composite reliability (CR) which shows high values of .933, .930, .804, .826, .961 and .802 for system reliability, system efficiency, system flexibility, system privacy, clean energy and green space respectively were adopted to establish the reliability of the study. All of these exceeded the .8 threshold mark (Fornell and Lacker, 1981) and the 0.7 mark for exploratory analysis (Nunnally, 1978). The respective average variance extracted (AVE) of .778, .808, .522, .614, .775 and .781 showed a high value relative to a threshold of above .50 as prescribed by Bagozzi and Yi (2012). Thus, the results were deemed satisfactory.

Table 2: Correlation Matrix

CONSTRUCT	SYR	SYE	SYF	SYP	Clean Energy	Clean Space
System Reliability (SYR)	.880					
System Efficiency (SYE)	.653	.899				
System Flexibility (SYF)	.383	.397	.722			
System Privacy (SYP)	.488	.321	.693	.784		
Clean Energy	.603	.439	.361	.412	.881	
Green Space	.686	.695	.444	.620	.678	.884

*The square root of the AVEs on the diagonal
Source: Extract from SPSS Output Based on Analysis, 2019

Table 2 represents the correlation matrix of the variables which reveals the extent to which each pair of the variables is linearly related to each other, while the values on the diagonal shows the square root of the AVEs. The values of the cross-loadings indicate that items have stronger relationships with their own constructs than that of others. Also, the square root of the AVEs on the diagonal confirms the discriminant validity of the constructs since it boasts of .880, .889, .722, .784, .881, .884; all of which are greater than their respective correlations i.e. ($\sqrt{AVE}$ > correlations). This implies that each of the constructs are distinct and are not made up of similar indicators. This established that the first order

measurement model is satisfactory and fit for testing the higher order measurement model as well as the structural model. The subsequent sections contain details of these analyses.

Further Analysis

Several goodness of fit estimates as shown in table 3 were also computed to buttress the model fit of the study.

Table 3: Goodness of Fit Tests

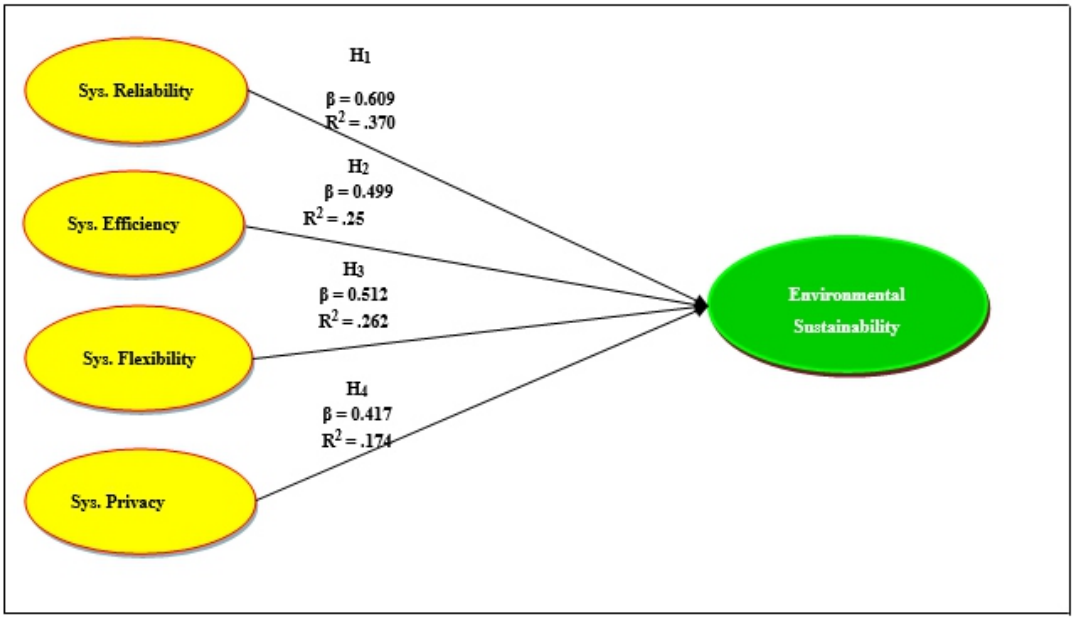
Goodness of fit Parameter Estimates	Result
Chi-Square X^2	X^2 (5) = 5.813 , P = 0.000
CFI	CFI = 0.875
GFI	GFI = 0.870
AGFI	AGFI = 0.849
TLI	TLI = 0.869
RMSEA	RMSEA = 0.05
SRMR	SRMR = 0.022

Source: Extract from SPSS Output Based on Analysis, 2019

Table 3 shows the output for the different goodness of fit tests. Principal among these is the Chi square (x^2) which is a widely used goodness of fit measure for estimating the degree of discrepancy between the observed and estimated covariance. The result showed a x^2 value of 5.813 with a degree of freedom (d f) of 5. This is quite satisfactory at the significant level of 0.05. However, Bagozi and Yi (2012) observed that Chi Square suffers a major criticism of being influenced by sample size. This necessitated the use of other indices to corroborate our result and further establish the model's practical fit. These include comparative fit index (CFI) which is an indicator of relative non-centrality estimate for independence model discrepancy. This analysis showed a value of 0.875 which satisfied the benchmark of from 0 to 1. In fact, the result shows a better fit due to its closeness to 1 (Bagozi and Yi, 2012; Cao, Mokhtarian and Handt, 2007). Other indices shown in the result include; goodness of fit index (GFI) which showed a value of 0.870; adjusted goodness of fit index (AGFI) which showed a value of 0.849; Tucker and Lewis index TLI (also known as the non-normed fit index NNFI) which showed a value of 0.869. All of these results showed satisfactory values as against the benchmark of values ranging from 0 to 1 (Bagozi and Yi, 2012; Chou and Kim, 2009; Wallgren and Hanse, 2007; Parra et al., 2006). The root means square error approximation (RMSEA) gave a value of 0.05 which satisfied the threshold of ≤ 0.06. Also, the SRMR (Standardized Root Mean Square Residual) showed a value of 0.022 which also satisfied the threshold condition of ≤ .08. These additional analyses further strengthen the previous ones; thereby establishing good model fit for the study.

Structural Model and Findings

Figure 2: Structural Model of the Study



Source: Survey Report based on SPSS Output, 2019.

Interpretation of Structural Model Result

Figure 2 reveals the result of the hypotheses tested in the study. The result of first hypothesis boasts of a strong positive relationship between systems reliability and environmental sustainability with a standardized beta (β) of 0.609 at a 0.05 level of significance. However, the R^2 value of 0.370 revealed that systems reliability can only explain the variance in environmental sustainability to the extent of 37%; while 63% could be traced to other factors outside the scope of this study's model. The result for hypothesis two revealed a moderate direct relationship between system efficiency and environmental sustainability with a standardized beta (β) value of 0.499 at $p < 0.05$ significant level. However, the R^2 value of 0.25 revealed that systems reliability can only predict environmental sustainability to the tune of 25% while 75% could be linked to other factors outside the purview of this study. The third result shows standardized beta (β) value of 0.512 at the $p < 0.05$ level of significance. This denotes a moderate relationship between systems flexibility and environmental sustainability. However, R^2 value of 0.262 reveals that system flexibility can be used to explain the variance in ES only to the tune of 26.2% leaving the remaining 73.8% to other exogenous factors not accommodated in the model. Finally, the result emanating from hypothesis four depicts a low significant relationship between systems privacy and environmental sustainability with a standardized beta (β) value of 0.417 at 0.05 level of significance. Specifically, R^2 value of 0.174indicates that systems privacy can only predict environmental sustainability to the tune of 17.4% while 82.6% could be traced to other factors beyond the purview of this model. Table 4 gives a clearer summary and the structural path model of the study.

Table 4: Structural Path Modelling

Structural Model	Path Coefficient	Standard Error	t Statistic
Sys. Rel. →ES	0.609	0.141	19.006
Sys. Eff. →ES	0.499	0.037	29.743
Sys. Flex. →ES	0.512	0.125	11.560
Sys Priv. →ES	0.417	0.166	12.256

Source: Extract from SPSS Output Based on Analysis, 2019

Interpretation of the Structural Path Model

Table 4 summarised the structural path model of the analysis. This confirms the existence of a significant relationship between the constructs of the study (Systems Quality and Environmental Sustainability). The result revealed that "Sys. Rel. →ES" path is the sturdiest path with a beta value of 0.609 and standard error of 0.079. Conversely "Sys. Priv. → ES" shows the opposite; having a lowest path with a β value of 0.417 and standard error of 0.141. The minimal recorded standard error values of 0.141, 0.037, 0.125 and 0.166 (respectively), confirms the proper spread of the constructs. The implication of this spread according to Dauglas and Marting (2005), and Mary (2008) is that the entire population of the study was adequately represented by the chosen samples.

Discussion

It could be seen from the results of the analyses on the hypotheses that there is moderately low direct and significant relationship between the dimensions of system quality and environmental sustainability. Specifically, the result showed that system reliability, systems efficiency, systems flexibility and systems privacy could predict environmental sustainability merely to the tune of 37 %, 25%, 26% and 17.4% respectively. Possible explanation for this result is the fact that environmental issue is a global phenomenon. Since service systems, their design and quality are somewhat intangible in nature and highly opinionated; their link with environmental sustainability is not easily traceable. This may have accounted for the relative sparse literature on the relationship between the two constructs. Environmental protection is best achieved through synergized efforts; and ought not to be left for business entities to control. Specifically, Yunis (2004) and Muhanna (2006), argued that environmental conservation and protection are the primary concerns of responsible governments and not essentially that of businesses. To these scholars, without strictly implemented government policies, through relevant regulatory agencies, mitigating environmental challenges will be a mirage. Apart from these, natural events like disasters and climate change just happen irrespective of human efforts at conserving the environment. The implication of these is that organizational activities like systems quality or design have little effect on the construct of environmental sustainability. Another explanation for the result could be traced back to the data gathered from tourist sites in the cause of the study. This revealed that most of the Nigerian tourist destinations still heavily rely on electricity provided by government and they mostly resort to energy from generator plants as an alternative power source. This still leads to pollution in the facility; also the allocation of floor area in the facility for green space is mostly at the conceptual stage.

On the contrary, the work of Vargo, Maglo and Akaka (2008), theorised that service providers need to design resource constellations and service systems that support customers and incorporate their resources in the value co-creation course. It could be seen that these resource constellations comprise both tangible (operand) resources such as physical products, web sites or machines and intangible (operant) resources such as customers' knowledge and skills. Leaning on this paradigm, Lusch, Vargo and Tanniru (2010) have emphasized the dynamic aspect of service systems by introducing the notion of a "service ecosystem". This idea was also elaborated by Merz, He and Vargo (2009, 338) when they spoke of "…resource integrators that collectively function as an interdependent ecosystem to mutually create value, as perceived phenomenological (i.e. in context)". This service ecosystem concept is an attempt to link service system to environmental sustainability and need to be substantiated. Similarly, Sousa and CauchickMiguel (2015) employed their research which focused on exploring sustainability using a Product Service System (PSS) in a Brazilian tourist site and a qualitative analysis technique to compare water processing via the reverse osmosis water filtration system and the traditional bottled water in a Brazilian tourist site. The study found that water processing using reverse osmosis water filtration system is more competitive, satisfies customers' needs, and is relatively lower in environmental impact. The implication of their finding is that a systems quality (in this case PSS) should among other things guarantee that water, waste and other resources are processed into international standards as a way of guaranteeing environmental sustainability. This agrees with Yunis (2004) and his team's (under the United Nations Environment Program (UNEP) of World Tourism Organization (WTO)) recommendation of conditions for ENS as they apply to the treatment of water and waste. On his part, Muhanna (2006) used his study "Sustainable Tourism Development and Environmental Management for Developing Countries" which was intended to contribute to poverty alleviation in the rural communities of South Africa to explore the possibility of a quality tourism service systems relating positively with the preservation of natural environments. Based on the study, he confirmed the relationship and concluded that the conservation of cultural, built and natural environment is a very important motivation for the initiation of several tourism projects. He maintained that, some of these projects tend to discourage and deter the tourist site communities from unauthorized use/overuse of natural resources; as well as the integration of protected areas into development plans both at the local and regional levels.

Conclusion

This study sought to ascertain the relationship between SysQ (as dimensioned by system reliability, system efficiency, system flexibility) and environmental sustainability (ENS). The purpose was to establish if each of these dimensions had a significant relationship with ENS; giving rise to four hypotheses. The problem of the study stemmed from the growing pressure across the globe for a sustainable environment. It is no gainsaying that the mother-nature is being exploited beyond the rate at which it can regenerate. The resultant effect is not far-fetched across the globe with the daily increase of ozone layer depletion, flooding, unusual climate and weather change and increasing occurrence of natural disaster. All these are signs that human activities are telling on the sustainability

of our environment. This challenge has called for several policies and environmental laws across the globe. However even with these policies and laws in place, the environmental situation still grows worse over time. This lacuna necessitated the need for study of this magnitude. To have a deep grasp of this challenge, the study adopted a survey design with a sample of 328 drawn from a sample size of 55 tourist sites in the South-South and South-East zones of Nigeria; cutting across tourist site operations managers cum their assistants, as well as tourist site visitors and residents. The purposive and accidental sampling techniques were used in selecting these samples. Data were generated through a partially adapted instrument which was validated and tested for reliability via the CFA method; the results revealed that the levels of convergent and discriminant validities as well as high levels of reliability surpasses the minimum thresholds. The analyses were carried out using mean and standard deviation techniques; as well as the SEM techniques. The results showed good model fit for the measurement models and significant direct relationships for the structural models. Therefore, the study concluded that Systems quality is a good antecedent of environmental sustainability. Specifically, the dimensions of SysQ revealed an explanation of the variance in environmental sustainability to the tunes of 37% for system reliability, 25% for system efficiency, 26% for system flexibility and 14.7% for system privacy, leaving the rest to exogenous factors not accounted for in the model.

Implication to Theory and Practice

This study's implication stems from the fact that it has proven that system quality in the tourism industry can be used to significantly foster environmental sustainability in Nigerian tourist destinations if properly engineered. Interactions with most tourist sites during the data gathering stage showed that most of the Nigerian tourist destinations still rely on electricity provided by government and they mostly resort generator plants as alternative power source; which further pollutes the facility and environment at large. This lends credence to the sustainability theory mantra which posits that 'clean and green' tourism is the way to go for environmental sustainability purposes. The theory avers that sustainability can be achieved if tourist sites in Nigeria design their service systems in a manner that will guarantee the environmental sustainability of their different localities.

In terms of the study's practical implication, it places the burden of ensuring environmental sustainability through system quality on the management of tourist sites. Specifically, the findings imply that significant improvement can be recorded in environmental sustainability if operations managers of Nigerian tourist sites chose to design and operatequality systems that are environmental friendly and sustainable. The relatively moderate relationship between the dimensions of system quality and environmental sustainability, imply that sustainability of the environment requires a synergistic effort from all stakeholders including the government, business entities, regulatory agencies, people groups and individuals. This notwithstanding, the duty of driving the process especially at the tourist sites still remains with the operations managers; who need to craft out ways of ensuring that the quality of their systems is such that engenders environmental sustainability; and that staff and visitors comply with standard operations procedures (SOPs).

Recommendations

Based on the findings and discourse so far, this study recommended that the application of the following propositions would help operations managers assuage the operations management challenges that tend to hamper environmental sustainability in the Nigerian tourist sites.

1. Operations managers should ensure that their systems are reliable enough to deliver what it is intended to deliver so as guarantee environmental sustainability. This can be achieved by ensuring that right from the conception stage of the tourist site, environmentally friendly practices such as eco-tourism parks, renewable energy, and natural water/environments are entrenched; and SOPs are maintained for guaranteed performance. Strict adherence to government policies, environmental laws regulatory agencies' supervisions can equally be helpful.
2. They should ensure the efficient running of their systems by making them user-friendly. Training and re-training of personnel/operators *viz-a-viz* maintenance of SOPs can equally be used to guarantee efficiency.
3. They should ensure that their system is adaptable to different user needs and changing service conditions. This can be achieved by ensuring that flexibility is entrenched in system right from its inception and design. Operations managers can also use job rotation principles and practices to ensure flexibility of personnel in operations.
4. They should ensure that their system provides a reasonable level of confidentiality to users who so desire. This can be achieved by avoiding unauthorised access to personal information of customers and ensuring that such information is confidentially stored in data bases that are not open to public scrutiny.

References

Akpan, E. I., & Obang, C. E. (2012). Tourism: A strategy for sustainable economic development in Cross River State, Nigeria, *International Journal of Business and Social Science, 3*(5), 124-129.

Akter, S., Wamba, S. F., & D'Ambra, J. (2016). Enabling a transformative service system by modelling quality dynamics, *International Journal of Production Economics.* Retrieved from http://dx.doi.org/10.1016/j.ijpe.2016.08.025 Al-Ababneh, M. M. (2014). Classifying Jordanian hotels based on their TQM implementation, *Dirasat Administrative Science, 41* (2), 482-496.

Al-Ababneh, M. M. (2017). Service quality in the hospitality industry, *Journal of Tourism and Hospitality*, *6*. doi: 10.4172/2167-0269.1000e133

Alexander, W. M. (1994). Humans sharing the bounty of the earth: Hopeful lessons from Kerala. *Proceedings of the International Congress on Kerala Studies, Kerala, India*, Aug. 27-29 1994.

Asawo, S. P. (2015). *Research methodology, data analysis using software and data interpretation*, Proceedings of workshop on 'Cultivating Research Culture for Academic Excellence'; Faculty of Management Sciences Seminar Series (1), University of Port Harcourt.

Ayodele, I. A. (2017). *Tourism: Gateway to good health and good life*, An inaugural lecture delivered at the University of Ibadan on 12th of October 2017. Ibadan, Nigeria: Ibadan University press.

Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation and interpretation of structural equation models, *Journal of the Academy of Marketing Science*, Doi: 10.1007/s11747-011-0278-x

Basiago, A. D. (1999). Economic, social, and environmental sustainability in development theory and urban planning practice, *The Environmentalist*, *19*, 145-161.

Cao, X., Mokhtarian, P. L., & Handy, S. L. (2007). Do changes in neighbourhood characteristics lead to changes in travel behaviour? A structural equations modelling approach, *Transportation*, *34*, 535–556.

Chou, J. S., & Kim, C. (2009). A structural equation analysis of the QSL relationship with passenger riding experience on high speed rail: An empirical study of Taiwan and Korea, *Expert Systems with Applications*, *36* (3, Part 2), 6945–6955.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed approaches* (*4th ed.)*, USA, Sage Publication Ltd.

Daly, H. E. (1973). *Towards a steady state economy*, San Francisco: Freeman.

Daly, H. E. (1974). The economics of the steady state, *American Economic Review*, *15* (21).

Daly, H. E. (1991). *Steady-state economics*, Washington DC: Island Press, 180.

Dauglas, G. M., & Marting, J. B. (2005). *Standard deviation and standards error*, BMJ, *331*(7521), 903. Doi: https://doi.org/10.1136/bmj-331-7521.903

Dwyer, L., & Kim, C. (2003). Destination competitiveness: Determinants and indicators. *Current Issues in Tourism, 6*(5), 396-414.

Garba, D., Abubakar, I., Suleiman, S., & Bashar, B. (2019). Renewable energy: Environmental Impacts and Economic Benefits for Sustainable Development, *International Journal of Engineering Research and Technology*, *22* (8). DOI: 10.17577/IJERTV8ISO80224

Gond, J., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability, *Management Accounting Research*, 23, 205–223.

Guney, I., & Onat, N. (2008). Technological status and market trends of photovoltaic cell industry, *WSEAS Transactions on Electronics*, *5*(7), 303-312.

John, D. R. (1999). Consumer socialization of children: A retrospective look at twenty-five years of research, *Journal of Consumer Research*, *26* (3), 183-213. Doi: 10.1086/209559

John, T., & Tony, W. (2006). *Renewable energy resources (2nd ed.)*, Taylor and Francis E-Library, New York: 85.

Jonathan, M. H. (2000). *Basic principles of sustainable development*, Global Development and Environment Institute Working Paper, 04, Medford, USA: Tufts University. Retrieved from http://ase.tufts.edu/gdae

Joseph, G. (2012). Ambiguous but tethered: An accounting basis for sustainability reporting, *Critical Perspective Accounting*, 23, 93–106.

Kidd, C. V. (1992). The evolution of sustainability, *Journal of Agriculture Environmental Ethics*, *5*(1), 1–26.

KPMG (2011). *KPMG international survey of corporate responsibility reporting 2011*, Retrieved from http://www.kpmg.com/PT/pt/IssuesAndInsights/Documents/corporate-responsibility2011.pdf

Liqun, L., & Zhixin, W. (2009). A variable voltage MPPT control method for photovoltaic generation system, *WSEAS Transactions on Circuits and Systems*, *8* (4), 335-349.

Lusch, R. F., Vargo, S. L., & Tanniru, M. (2010). Service, value networks and learning, *Journal of the Academy of Marketing Science*, *38* (1), 19-31.

Malcolm, S. (2003). *Research methods in accounting*, London: Sage Publication.

Mary, L. M. (2008). Standard error: Meaning and interpretation, *Biochemia Mdeica*, *18* (9), 7-13. Doi: https://doi.org/10.11613/bm

Medina-Borja, A., Nerlove, S., & Wang, G. (2014). *Opportunities in engineering human-centered service systems,* A Report of ENG advisory committee meeting directorate for engineering, National Science Foundation.

Merz, M. A., He, Y., & Vargo, S. L. (2009). The evolving brand logic: a service-dominant logic perspective, Journal *of the Academy of Marketing Science*, *37* (3), 328-44.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book*, Sage Publications.

Minciu, R., Popesu, D., Padurean, M., Hornoiu, R., & Baltaretu, A. (2012). Commercialization of holidays in the protected natural areas – form of the sustainable development in tourism. *Commerce Contribution to Sustainable Development*, *12* (27), 83-98, Retrieved from www.researchgate.net/publication/46524074

Muhana, E. (2006). Sustainable tourism development and environmental management for developing countries, *Problem and Perspective in Management*, *4*(2), 14-30 Retrieved from www.businessperspectives.org

Ndu, E. C. & Umoh, G. I. (2018). System quality and economic sustainability of Nigerian tourist sites: A leadership challenge for operations managers, *European Journal of Hospitality and Tourism Research, 8* (2), 32 – 54.

Nelson, R. R., Todd, P. A., & Wixom, B. H. (2005). Antecedents of information and system quality: An empirical examination within the context of data warehousing. *Journal of Management Information System, 21,* 199-235. Retrieved from http://refhub.elsevier.com/S0925-5273(16)30219-5/sbref103

Parasuraman, A, Zeithaml, V., & Berry, L. L. (2005). Alternative scales for measuring services and quality, *Journal of Retailing*, *70* (1) 193-199.

Parasuraman, A., Zeithaml, V., & Berry, L. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality, *Journal of Service Research*, *7,* 213-233. Retrieved from http://refhub.elsevier.com/S0925-5273(16)30219-5/sbref117

Silverman, D. (2013). *Doing qualitative research: A practical handbook*, SAGE Publications Limited.

Siriram, R. (2011). A soft and hard systems approach to business process management, *System Research and Behvioural Science, 29* (1), 87 – 100. Doi: 10.1002/sres.1095

Sousa, T. T. & Cauchick-Miguel, P. A. (2015). Product-service systems as a promising approach to sustainability: Exploring the sustainable aspects of a PSS in Brazil. doi: 10.1016/j.procir.2015.02.025

Spohrer, J., Maglio, P. P., Bailey, J. & Gruhl, D. (2007). Steps toward a science of service systems, *Computer*, *40,* 71–77. Retrieved from http://refhub.elsevier.com/S0925-5273(16)30219-5/sbref143

Sprague, L. G. (2007). Evolution of the field of operations management. *Journal of Operations Management*, *25*, 219–238. Retrieved from http://refhub.elsevier.com/S0925-5273(16)30219-5/sbref144

Sustainability Management School (2018). Five examples of sustainable development, Retrieved from www.sumas.ch/5-examples-of-sustainable-development/

Theobald, W. F. (2005). *Global tourism* (3rd ed.), New York: Butterworth-Heinemann/Elsevier, 5–24.

Tosun, C. (1998). Challenges of sustainable tourism development in the developing world: The case of Turkey, *Tourism Management*, *22*, 289-303.

United Nation World Tourism Organization (2017). *Tourism: Key to development, prosperity and well-being*.UNWTO Tourism Highlights, (2017, Ed.). Retrived from https://www.e-unwto.org/doi/pdf/10.18111/9789284419029.

United Nations Environment Programme (UNEP) & World Tourism Organization (WTO). (2005). *Making tourism more sustainable: A guide for policy makers. Paris: United Nations Environment Programme*, Madrid: World Tourism Organization.

United Nations World Tourism Organization (2004). *Sustainable development of tourism Conceptual definition* (2004 ed.), Rome: Italy

United Nations World Tourism Organization (2004). *Sustainable development of tourism conceptual definition* (2004 ed.), Rome: Italy

United Nations World Tourism Organization. (2013). Spiritual tourism for sustainable development, *Proceedings of Ninh Binh City International Conference*, Madrid November 21–22. Retrieved from http://refhub.elsevier.com/S2211-9736(17)30077-6/rf0070

University of Southern California Libraries (2016). *Organising your social science research paper*, [Lecture note on Types of Research Designs]. Retrieved from https://www.libguides.usc.edu/content.php?=830098sid=818072

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing, *Journal of Marketing*, *68* (1), 1-17.

Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective, *European Management Journal*, *26* (3), 145–152.

Wallgren, L. G., & Hanse, J. J. (2007). Job characteristics, motivators and stress among information technology consultants: A structural equation modeling approach, *International Journal of Industrial Ergonomics*, *37* (1), 51–59.

Werbach, A. (2009). *Strategy for sustainability: A business manifesto*, Harvard Business, Boston, MA.

Willard, B. (2010). *Sustainability models [Web log post],* Retrieved from http://sustainabilityadvantage.com/2010/07/20/3-sustainability-models/

World Commission on Environment and Development (WCED). (1987). *Our common future: From one earth to one world*, Retrieved from http://www.un-documents.net/our-common-future.pdf

World Health Organization (2018). Urban Spaces. Retrieved from www.who.int/sustainable-development/cities/health-risks/urban-green-space/en

Yunis, E. (2004). *Sustainable tourism and poverty alleviation*, Paper presented at the World Bank ABCDE Conference-Europe. Brussels. 10th May, 2004.

Yunis, E. (2004*). Sustainable tourism and poverty alleviation*, Paper presented at the World Bank ABCDE Conference-Europe. Brussels. 10th May, 2004.

Yusuff, M., & Akinde, M. (2015). Tourism development and economic growth nexus: Nigerian experience, *Journal of Hospitality and Tourism Research*, *7* (4), 1-10. Retrieved from www.researchgate.net/publication/308795311

Zamfir, A., & Corbos, R. A. (2015). Towards sustainable tourism development in urban areas: Case study on Bucharest as tourist destination, *Journals of Sustainability*, *7*, 12709-12722.