

Factors Influencing Implementation of Environmental Management Practices among Hotels in Tanzania

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Abstract: *This study aimed to identify factors that influence implementation of environmental management practices among hotels in Tanzania. Basing on previous studies, five factors that were vital in the implementation of the hotel Environmental Management Practices (EMPs) were acknowledged as management commitment, business competitiveness, governmental regulation, employees training and hospitality industry awareness. The study was conducted in two cities Arusha and Dar es Salaam whereby structured questionnaire with likert scale range from 1 to 5 was used to collect information from the sample size of 400 managers and supervisors of hotels. SPSS software was used for data entry and AMOS software version 23 was used to analyze multivariate analysis and Structural Equation Modeling (SEM) was used to test the hypotheses. The findings indicated that, management commitment affects positively implementation of EMPs in hotel, with significance $p < 0.05$; likewise business competitiveness effects positively the implementation of EMPs in hotel with significance $p < 0.05$. In addition, employees training on EMPs has significant positive effects on the implementation of EMPs in the hotel at $p < 0.001$; also, implementation of hotel EMPs has significant positive effects on hotel business sustainability at $p < 0.001$. Therefore, the implications to industry managers and expertise are: first, hotel managers' commitment is vital for the successful EMPs implementation. Second, training of employees on implementation of EMPs is crucial in achieving business sustainability. Third, there is relationship between business competitiveness and implementation of EMPs. Fourth implementing EMPs is crucial for sustainability of hotel business. This contributes to body of knowledge by coming with guiding framework on how the hotel could implement EMPs. The main limitation of this is lack of generalizability of the finding in Tanzania. The study recommends future research in game parks and beaches, as these are visitors' main attraction in Tanzania.*

Keywords: Implementation, environment management practices, hotels and Tanzania.

Introduction

Various studies that have been conducted in the hotel industry and environmental management, revealing how environmental management issues contain effects in the sustainability of the hotel industry (Nidumolu *et al.*, 2009). Studies conducted in 1998 shows that 90% of the guests would prefer to stay in the hotel that cares environment (Martineau, 2011). Most of corporate bodies consider environment as a factor in their choice of venues for meeting (Mensah, 2006). Mungai and Irungu (2013) noticed that overseas visitors along Kenya Coast were willing to pay a higher rate for an environmental friendly hotel. Also Kamar (2013) observed that, quality and environmental management system has positive effect to financial performance of hotels.

Together with efforts to research on environmental management in hotel industry, most of these studies have based on the outcomes of implementing the environmental management practices rather than the drivers that make managers seek to achieve sustainability. These outcomes include; achieving financial goal (Kamar, 2013; Alzboun, 2014) non-financial benefit and competitive advantage (Zaiton, Syamsul, Kasimu, and Hassan, 2016; Pereira- Moliner *et al.*, 2014), regulatory compliance, building image and cost reduction (Oliver, Naar and Harries, 2015; Hays and Ozretic-Došen, 2014; Kasimu, Zaiton and Hassan, 2012; Kola - Lawal *et al.*, 2014), ecological saving and public relation (Bonilla-Prego, Najera and Font, 2010).

However, Siti-Nabiha *et al.*, (2010) suggested that, it is essential to identify what drives the adoption of environmental management practices and; understand the benefits of these practices on hotel sustainability as would stimulate hoteliers to become more environmentally conscious and ensure the industry's sustainability in the future. Tourism industry in Tanzania continued to be the largest foreign earning after gold earning fell significant due to prices of gold in the world market (Ihucha, 2015). The tourists' arrival made the country earn USD 2.23 billion in 2016, 11% increase than 2015, which was USD 2.01 billion (Qorro, 2017).

The increase in tourists arrival is steady as the figure in 2017 and 2018 were promising, data from the Ministry of resources and tourism show that number of tourists arrival in 2018 were 1.5 million compared to 1.3 million in 2017 (Mirondo, 2019). During that period the revenue collection increased from USD 2.3 billion in 2017 to 2.4 billion USD in 2018, this increase is 7.2% from the previous collection (Mirondo, 2019). This is evidence that every effort should be directed to hotel industry to ensure that environmental management practices are adhered to in order to assure growing sector the possibility of sustainability. Therefore, this study identifies factors influencing implementation of environment management practices among

hotels in Tanzania. The environment management and organization business operations is linked by Triple Bottom Line approach (TBL), which was first coined by John Elkington as a means of measuring the sustainability in business operations in 1993 (Elkington, 2004). Slapper and Hall, (2011) named it as pillars of sustainability with three Ps (people, planet and profit) "Profit" means profit enjoyed by shareholders to consider the net economic benefit to society. "People" relates to the health and wellbeing of people impacted by the activities of an organization "Planet" refers to the wellbeing of the natural environment. Triple Bottom line approach emphasizes the importance of delivering sustainable economic value to shareholders, by focusing on the generated bottom line profit (Slapper & Hall, 2011). The approach considers that for the longer-term sustainability of a firm, the firm performance on environmental and social must equally be same as economic performance. Therefore, the sustainability of the hotel business depends largely on how organization ensures that profit, people and planet benefits equitably from the successfulness of the business.

From that understanding, the environmental management is the company strategic issues, which requires managersto commit resources to be successful. This meant that management commitment is the internal political support to faster cooperate environmental strategy (Reynolds, 2013). Currently in the hospitality industry sustainability has become top agent to issue hotel managers (Pramano *et al.*, 2014).

However, it has been said that manager does not see the values of environmental management in relation to their business, which slow the speed of caring of environment (Dhankar & Raheja, 2015). Therefore, in the country which has serious agenda on environmental management have imposed regulation so as to influencemanagement decision (Padilla, 2012). The regulations range from penalties to incentives, for example, burning public institutions and organizations not to hold meetings in the hotels that do not have environmental management system in place or imposing tax reduction for importation of low use energy equipment (Doyle, 2012).

Studies have shown that the growing environmental consciousness in the industry could be attributed to governmental regulation (Kuunder *et al.*, 2013; Mensah, 2006). Organizations that have implemented EMPs have realized competitive advantage where by hotel reputation, company popularity and brand effect have gone up. In that case managershave agreed that marketing green hotel is the powerful weapon in promotion of hospitality business (Chen & Chen, 2012). Awareness has prompted impacts to the company operations, to extent that, most hotel firms have become proactive in the implementation of the environmental management

practices (Mensah, 2006). Which justify important of hospitality industry to be aware of environmental management and ensure management of the organizations are engaging stakeholders in planning and communication so as to promote sustainability (Mokhtar & Deny, 2014). Important stakeholder group that needs to engage is employees that perform daily activities. It should clearly be noted that environment management practices cannot be separated from the daily activities thus its implementation goes laterally with normal operations of the hotel business. A good example is switching off the hot plate after use, which is one way of conserving energy. The practice occurs while the cook is preparing the meal for a guest. Therefore hotel managers believe that success of environmental management practices can achieve by entire employees' effort (Chen & Chen, 2012). Fukey and Isaac (2014) insist that employees need to be trained and educated to be eco-friendly. Zengani, *et al.*, (2013) echoed that, in Zimbabwe, managers had ideas that training session should be conducted to increase awareness on green practices among hotel staff. During training the benefit of the green practices can be communicated with employees hence encourage their green participation (Kim 2009)

The above discussed factors influence on the implementation of EMPs that brings effects to the sustainability of the hotel business. The practices that could be implemented include; energy saving (Oliver *et al.*, 2015) water saving (Molina- Azorin *et al.*, 2009) green purchasing (Bonilla - Prego *et al.*, 2013) solid waste management (Ondieki, 2013) and information sharing through website and social media (Deale, 2013). The outcome of implementing environmental management practices is sustainability of industry and hotel business in general (Molina - Azorin *et al.*, 2009). The sustainable hotel business means, an increase in market share, business performance improve (Safshekan, 2014); and profit maximization and shareholders' wealth rise.

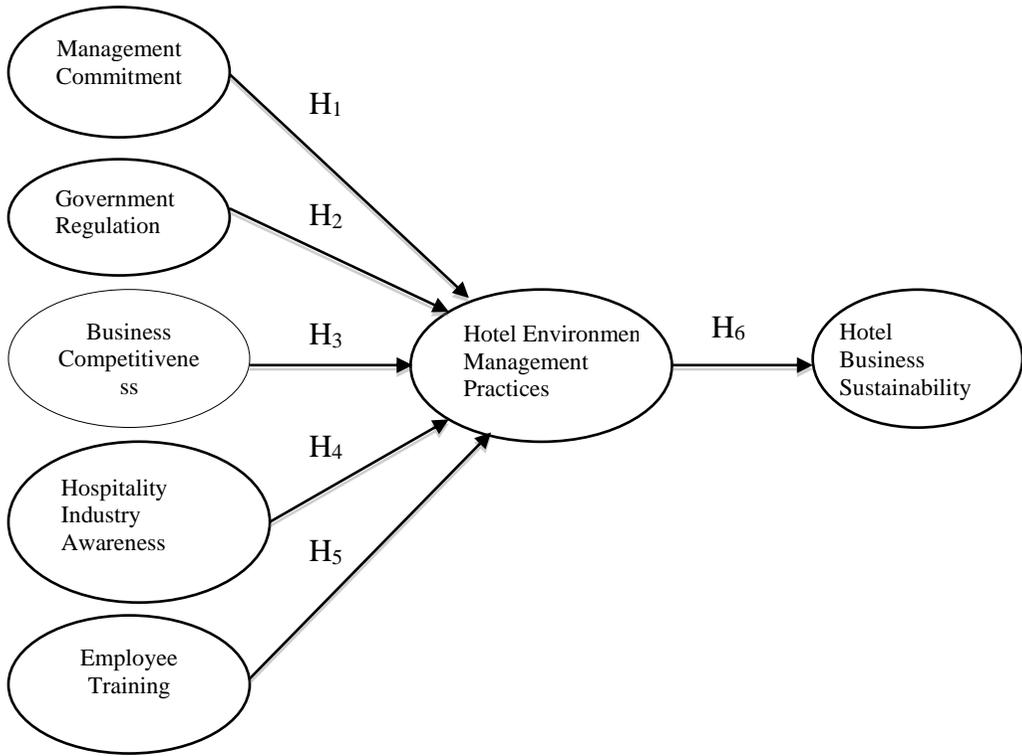


Figure 1. The study theoretical Model

Studies have shown that implementation of environmental management practices plays a pivot role in ensuring sustainability of the hotel business. Rao & Holt (2005) conducted study in four South East Asian countries: Philippines, Indonesia, Malaysia and Thailand, and noted that good environmental performance save cost significantly, improve productivity and reduce the cost of operation and lead to competitive edge. Relatedly, Hay & Ozretic - Došen (2014) noted that green environmental philosophy communicated by hotel to customers and local community adds values to their service and has positive impact to tourist destination. Therefore, the study theoretical model was presented in Figure 1.

The model provides an insight on relationship of different variables that influence the implementation of the hotel environmental management practices. Five variables which are; government regulation, management commitment, business competitiveness, employees training and hospitality industry awareness on environmental protection have been used to formulate the six research hypotheses as follows:

- H₁: Management commitment influence positively implementation EMPs in the hotel
- H₂: Government regulation has influence in implementation of EMPs in the hotel
- H₃: The business competitiveness has positive effects implementation of EMPs in the hotel
- H₄: Hospitality industry awareness on EMPs influences positively the implementation EMPs in the hotel
- H₅: Employees training on EMPs have positive effect implementation EMPs
- H₆: The implementation of hotel EMPs has positive effect on sustainability of hotel business.

Methodology

This study adopted descriptive research design to obtain information concerning the current status of the phenomena and to describe, "what exists" with respect to conditions in a situation. The study was conducted in two cities, which are Dar es Salaam and Arusha because these cities are considered as hubs for tourism in Tanzania.

The study used structured questionnaire to collect information from the respondents who are hotel managers, supervisors and others senior staff. The questionnaire made up of questions that were closed. The questionnaire consisted of constructs that were to be measured by items that have been developed to operationalize the constructs. The items were developed based on the literature review of similar studies, which have been conducted over the world. These studies include; (Saenyapap, (2011); Tzschentke, *et al.*, (2008); Jeong and Jang, (2010); Martineau, (2011); Chen & Chen (2012); Hsieh, (2012); Safshekan, (2014).

The list of hotels with three to five stars category was obtained from the Ministry of Natural Resource and Tourism Registration book (2015). Thirty (30) and twenty (20) hotels were purposively sampled from Dar es Salaam and Arusha respectively. From the sampled hotels, eight (8) respondents including; General Managers and Departmental Managers, Chefs, Housekeepers, Maintenance Managers and Training Manager and human resources Managers were purposively sampled from each hotel thus totaling up four hundred (400) respondents. The purpose sampling was used as study required respondents with key information. Self-administration method was used in collecting information from the respondents.

Findings and Discussion

Findings of data analysis were presented through tables, charts and comprehensive scripts. Out of the 400 questionnaires 266 were retained which is equal to 66.5% that is quite acceptable for inference Fincham (2008), Baruch & Holton (2008). In 266 of returned questionnaires 11 (4.2%) had missing value, a Listwise deletions method was used remove the missing data (Thank, 2014). The Mean method was used to clear outlier (Tabachnick & Fidell, 2007), Wu (2009). Data normality was checked and kurtosis ranged from 1 to 3 which acceptable (Brown, 2006).

The exploratory factor analysis (EFA) was performed in order to reduce number of variables into smaller manageable one. The Principal Factor Analysis was preferred to Principal Component Analysis (Field, 2000). To produce a better estimate of factors among correlated latent variables Oblique rotation was used as oppose to orthogonal rotations (Fabrigaret *al.*, 1999). The KMO was 0.856, which is meritorious, which mean that inter-item correlations were explained by attained communalities factors (Pallant, 2005). Tables were produced which includes KMO, measure of sampling adequacy and Bartlett's Test of Sphericity, Factor Loading Table, Total Variance Explained with Eigenvalue, Patterns Matrix and Factor Correlations Matrix.

The Bartlett's test of Sphericity for this study was significance at $P < 0.001$ which indicate for factor analysis and data was suitable for analysis and the communalities table showed that value of all items was above 0.4, which is good (Field, 2005). The discriminatory validity was attained as correlation matrix table indicated absence of variables correlation and multicollinearity. The extraction was performed using Principal Axis factoring with an Oblimin with Kaiser Normalization's rotation.

Total of 16 factors were produced with variance accounted for less than 70%. Twenty (20) cross-loaded and insufficient loaded factors were dropped. The exploratory factor analysis was re run and 11 factors accounting for the variance 70.661% produced, providing the unique pattern matrix loading (Table 1) (Rietveld & Van Hout, 1993; Field, 2000).

Table 1: Factors Loading Pattern Matrix

Variables	Factor								
	Employee Training	Business competitiveness	Water management Energy saving management	Government regulation	Solid waste management	Green Purchasing	Hospitality industry awareness	Management commitment	Sharing of information on environmental conservation
MC1: ensures environmental policy is in place								.496	
MC4 ensures environmental management practice is in place								.835	
MC5 perceives that the environmental friendly practices low quality								.489	
MC7 a presence of environmental management committee in hotel								.991	
MC8 a presence of environmental management officer in hotel								.663	
GR3 organization demands certification of green practices to hold a meeting in your hotel				.925					
GR4 availability financial incentives to encourage green practices				.438					
GR5 waives of development fees to hotel for green practice development				.580					
GR6 receive a cash incentives to hotel for achieving certification of green practices				.944					
BC1 marketing strategies incorporate of hotel sustainability aspects		.579							

BC2 utilizes green cuisine concept to promote the food and beverage service	.779	
BC3 sources food ingredients within the local community	.860	
BC4 practices corporate social responsibility	.836	
BC5 rises of numbers of guests that demand green life style	.796	
BC6 use green practices to lower operational costs	.730	
HIA1 includes environmental issues in marketing material		.741
HIA2 communicates environmental efforts to stakeholders		.822
HIA3 participate in environmental conservation meetings		.880
HIA4 educates guests on environmental management issues		.759
ET4 benefits employees with profit of success of the green practices;	.728	
ET5 trains environmental conservation culture to new employee;	.570	
ET6 briefs employees daily on environmental management issues;	.579	
ET7 incentives outstanding employee in green practices;	.584	
ET8 includes environmental management concept in recruitment criteria.	.579	
WM1 in place water conservation program policy	.996	
WM2 educate guests on water conservation	.977	
WM3 implements linen re-use policy	.927	
WM5 installs low-flow showerheads	1.000	

WM7 educates customers and staff on how to conserve water	.511	
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SW2 donating of food remains to the needy		-.458
SW4 uses two-sided printing standard practice in business		-.701
SW5 uses two-sided copying standard practice in business;		-.757
SW6 recycles toner cartridges;		-.667
SW7 recycles newspaper;		-.930
SW8 uses recycled paper;		-.545
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ES1 in place energy management policy	.882	
ES2 uses of solar energy	.717	
ES3 uses of energy-saving light bulbs	.789	
ES5 reviews energy bills to monitor consumption	.980	
ES6 uses of energy-efficient appliances	.514	
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		.488
GP3 purchases of recycled products;		
GP4 Purchases of used equipment;		.928
GP5 purchases of Energy Star appliances;		.855
GP6 informs suppliers that hotel prefer eco-friendly products;		.951
GP7 preferences given to environmentally responsible suppliers;		.956
GP8 preference is given to purchase recyclable packaging;		.493
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		.488
SIE2 uses social media to spread of environmental conservation issues customers		

SIE3 inform customers on environmental policies implemented by hotel;	.928
SIE4 trains customers on environmental conservation through media	.855
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SB2 improves relationships with local communities;	.574
SB3 gains in market share;	.600
SB4 improves financial gain;	.734
SB5 improves brand image;	.765
SB6 enhances employee satisfactions;	.761
SB7 increases guests' satisfaction	.778
SB8 gain of stakeholder's confidence	.663
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Table 2: Total Variance Explained

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% Of Variance	Cumulative %	Total
1. Employee training	12.388	21.733	21.733	6.138
2. Business competitiveness	5.862	10.285	32.017	4.918
3. Energy saving management	4.251	7.457	39.475	5.526
4. Water management	3.625	6.359	45.834	5.944
5. Government regulation	2.927	5.135	50.969	4.735
6. Solid waste management	2.724	4.779	55.748	5.230
7. Green purchasing	2.346	4.116	59.864	6.181
8. Hospitality industry awareness	1.820	3.193	63.057	4.058
9. Management commitment	1.595	2.797	65.854	5.640
10. Sustainability of business	1.532	2.687	68.541	6.567
11. Sharing of information on environment conservation	1.209	2.120	70.661	3.036
12	.968	1.698	72.360	
13	.907	1.591	73.951	
14	.835	1.465	75.416	
15	.811	1.423	76.839	
16	.743	1.304	78.142	
17	.724	1.270	79.412	
18	.682	1.196	80.608	
19	.632	1.108	81.717	
20	.613	1.075	82.791	
21	.584	1.024	83.815	
22	.558	.979	84.794	
23	.530	.929	85.723	
24	.515	.903	86.626	
25	.479	.840	87.466	
26	.467	.819	88.285	
27	.459	.805	89.090	
28	.452	.792	89.882	
29	.423	.743	90.625	
30	.399	.699	91.325	
31	.383	.672	91.997	
32	.356	.625	92.622	
33	.342	.601	93.222	
34	.332	.582	93.804	
35	.299	.524	94.328	
36	.278	.488	94.816	
37	.263	.461	95.277	
38	.257	.451	95.728	
39	.247	.433	96.162	
40	.229	.401	96.563	
41	.227	.397	96.960	
42	.218	.383	97.343	
43	.188	.330	97.672	
44	.183	.322	97.994	
45	.156	.273	98.267	
46	.151	.265	98.533	

47	.129	.227	98.760
48	.125	.220	98.980
49	.118	.206	99.186
50	.106	.186	99.372
51	.096	.168	99.540
52	.073	.128	99.668
53	.064	.113	99.781
54	.058	.103	99.884
55	.034	.060	99.944
56	.023	.041	99.984
57	.009	.016	100.000

The extraction produced the Total Variance Explained (Table 2) indicated Guttman- Kaiser Rule was adhered as all Eigenvalues were larger than one and total variances should account for 70% - 80% (Rietveld & Van Hout, 1993). After Exploratory Factor Analysis, the Confirmatory Factor Analysis (CFA) was performed and produced CFA model (Figure 2) with chi-square χ^2 705.912 at 449 p-value 0.000 CMID/DF =1.415 other indices GFL, TLI, CFI and RMSEA value were 0.865, 0.951, 0.956 and 0.040 with significant of $p < 0.001$ indicating that model was fit (Smith, 2000). Table 3, shows the loading of the attributes and its significances.

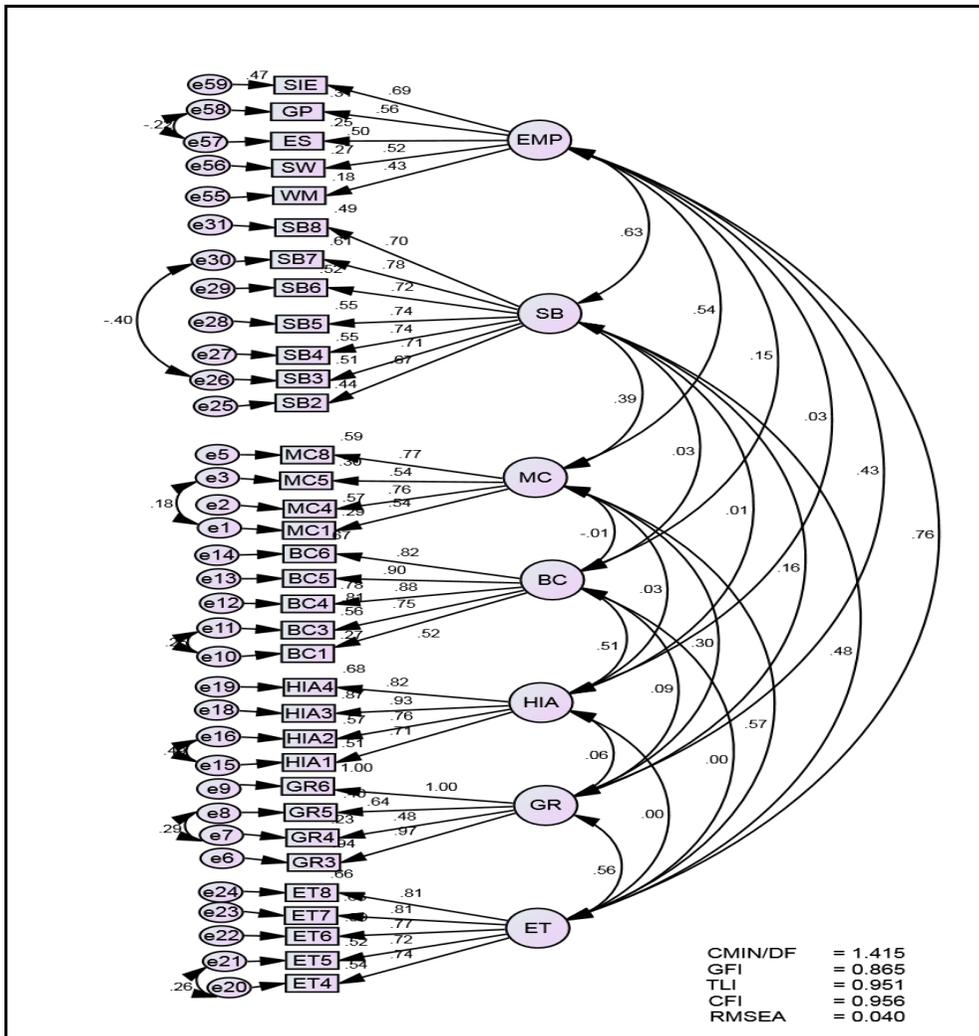


Figure 2: Confirmatory Factor Analysis Model

Table 3: Regression Weight for the Overall CFA Measurement Model

	Variables	Regression line	Factor	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
BC1	marketing strategies incorporates of hotel sustainability aspects	<---	Business competitiveness	1.000				.863
BC2	utilizes green cuisine concept to promote the food and beverage service	<---	Business competitiveness	1.008	.041	24.547	***	.939
BC3	sources food ingredients within the local community	<---	Business competitiveness	1.003	.048	20.919	***	.907
BC4	practices corporate social responsibility	<---	Business competitiveness	1.001	.045	22.218	***	.932
BC5	rises of numbers of guests that demand green life style	<---	Business competitiveness	1.037	.048	21.739	***	.923
BC6	use green practices to lower operational costs	<---	Business competitiveness	1.065	.045	23.539	***	.955
SB2	improves relationships with local communities;	<---	Sustainability of business	1.000				.682
SB3	gains in market share;	<---	Sustainability of business	1.305	.131	9.931	***	.718
SB4	improves financial gain;	<---	Sustainability of business	1.310	.128	10.229	***	.723
SB5	improves brand image;	<---	Sustainability of business	1.268	.126	10.076	***	.711
SB6	enhances employee satisfactions;	<---	Sustainability of business	1.302	.124	10.534	***	.748

	Variables	Regression line	Factor	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
SB7	increases guests' satisfaction	>---	Sustainability of business	1.303	.119	10.964	***	.785
SB8	gain of stakeholder's confidence	>---	Sustainability of business	1.015	.100	10.148	***	.717
GR3	organization demands certification of green practices to hold a meeting in your hotel	<---	Government regulation	1.000				.968
GR4	availability financial incentives to encourage green practices	<---	Government regulation	.482	.057	8.531	***	.476
GR5	waives of development fees to hotel for green practice development	<---	Government regulation	1.210	.131	9.231	***	.778
GR6	receive a cash incentive to hotel for achieving certification of green practices	<---	Government regulation	1.288	.138	9.354	***	.806
HIA1	includes environmental issues in marketing material	<---	Hospitality industry awareness	1.000				.785
HIA2	communicates environmental efforts to stakeholders	<---	Hospitality industry awareness	1.022	.064	16.056	***	.862
HIA3	participate in environmental conservation meetings	<---	Hospitality industry awareness	1.074	.055	19.517	***	.900
HIA4	educates guests on environmental management issues	<---	Hospitality industry awareness	1.096	.058	19.023	***	.992
MC1	ensures environmental policy is in place	<---	Management commitment	1.000				.571
MC4	ensures environmental management practice is in place	<---	Management	.810	.123	6.609	***	.514

	Variables	Regression line	Factor	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
MC5	perceives that the environmental friendly practices low quality	<---	Management commitment	.986	.136	7.239	***	.582
MC8	a presence of environmental management officer in hotel	<---	Management commitment	1.274	.147	8.659	***	.774
ET4	benefits employees with profit of success of the green practices;	<---	Employees training	1.000				.744
ET5	trains environmental conservation culture to new employee;	<---	Employees training	.914	.069	13.210	***	.739
ET6	briefs employees daily on environmental management issues;	<---	Employees training	1.047	.086	12.228	***	.789
ET7	incentives outstanding employee in green practices;	<---	Employees training	1.096	.092	11.881	***	.777
ET8	includes environmental management concept in recruitment criteria.	<---	Employees training	1.150	.096	12.024	***	.785
WM	Water Management	<---	Environmental management practices	1.000				.592
SW	Solid waste management	<---	Environmental management practices	1.072	.161	6.674	***	.526
ES	Energy saving Management	<---	Environmental management practices	1.020	.155	6.585	***	.524
GP	Green purchasing	<---	Environmental management practices	1.233	.193	6.406	***	.506
SIE	Sharing Information on Environmental conservations	<---	Environmental management practices	1.241	.155	8.008	***	.680

Most of the constructs attain required of AVE >0.5 according (Awang, 2011) however two (2) construct management commitment and environmental management practice had value below 0.5, this can also be accepted according to Huang *et al.*, (2013) (Table 4). The construct validity test was achieved as all model fit indices were at required level. The correlation between all constructs was lower than 0.9 hence discriminant validity achieved (Tharenous *et al.*, 2007). The composite reliability was achieved, as value was 0.6 (Hair *et al.*, 2010).

Table 4: Average Variance Extracted (AVE) for the Measurement Model

Construct	Variables	Λ	Λ^2	$\Sigma \Lambda^2$	N	AVE ($\Sigma \Lambda^2 / n$)
Business competitiveness (BC)	BC1	marketing strategies incorporates of hotel sustainability aspects	0.863	0.744769	5.081717	6
	BC2	utilizes green cuisine concept to promote the	0.939	0.881721		
	BC3	sources food ingredients within the local community	0.907	0.822649		
	BC4	practices corporate social responsibility	0.932	0.868624		
	BC5	risers of numbers of guests that demand green life style	0.923	0.851929		
	BC6	use green practices to lower operational costs	0.955	0.912025		
Sustainability of Business (SB)	SB2	improves relationships with local	0.682	0.465124	3.698252	7
	SB3	gains in market share;	0.718	0.515524		
	SB4	improves financial gain;	0.717	0.514089		
	SB5	improves brand image;	0.723	0.522729		
	SB6	enhances employee satisfactions;	0.748	0.559504		
	SB7	increases guests' satisfaction	0.785	0.616225		
	SB8	gain of stakeholder's confidence	0.711	0.505521		
	Government Regulations (GR)	GR3	organization demands certification of green	.968		
GR4		Availability financial incentives to encourage green practices	0.476	0.226576		
GR5		waives of development fees to hotel for green practice development	0.778	0.605284		
GR6		receive a cash incentives to hotel for	0.806	0.649636		

		achieving certification of green practices					
Hospitality Industry Awareness (HIA)	HIA1	includes environmental issues in marketing material	0.785	0.616225	3.153333	4	0.8
	HIA2	communicates environmental efforts to stakeholders	0.862	0.743044			
	HIA3	participate in environmental conservation meetings	0.9	0.81			
	HIA4	educates guests on environmental management issues	0.992	0.984064			
Management Commitments (MC)	MC1	ensures environmental policy is in place	0.571	0.326041	1.528037	4	0.4
	MC5	ensures environmental management practice is in place	0.514	0.264196			
	MC7	perceives that the environmental friendly practices low quality	0.582	0.338724			
	MC8	a presence of environmental management officer in hotel	0.774	0.599076			
Employee Training (ET)	ET4	benefits employees with profit of success of the green practices;	0.744	0.553536			0.6
	ET5	trains environmental conservation culture to new employee;	0.739	0.546121	2.942132	5	
	ET6	briefs employees daily on environmental management issues;	0.789	0.622521			
	ET7	incentives outstanding employee in green practices;	0.777	0.603729			
	ET8	includes environmental management concept in recruitment criteria.	0.785	0.616225			
	Environmental management practices (EMP)	WM	Water Management	0.592	0.350464	1.620152	
SW		Solid waste management	0.526	0.276676		5	
ES		Energy saving Management	0.524	0.274576			
GP		Green purchasing	0.506	0.256036			

	Sharing Information			
SIE	on Environmental conservations	0.68	0.4624	

The Overall SEM model for the study (Figure 3) was constructed and hypotheses were tested rearranging the overall CFA model. After running the system, the results that were obtained were: Chi-squares (X^2) 712.858, degree of freedom (*df*) 504, probability level (*p*-value) 0.000, CMIN/DF 1.414, GFI 0.864, TLI 0.951, CFI 0.956 and RMSEA 0.040. The values of indices obtained indicated strong model fitness. (Tables 5) indicate the results of hypothesis testing and it showed that two were significant at Significant at $p < 0.001$ and two significant at $p < 0.005$. This result illustrated as follow:

- H1: Management commitment affects positively implementation of the EMPs and was highly significant at $p < 0.005$
- H3: Business competitiveness affects positively the implementation of EMPs and was highly significant $p < 0.005$
- H5: Employees training on hotel EMP affects positively the implementation of EMPs and was strongly significant at $p < 0.001$
- H6: The implementation of EMPs has positive effect on hotel business sustainability and strongly significant $p < 0.001$

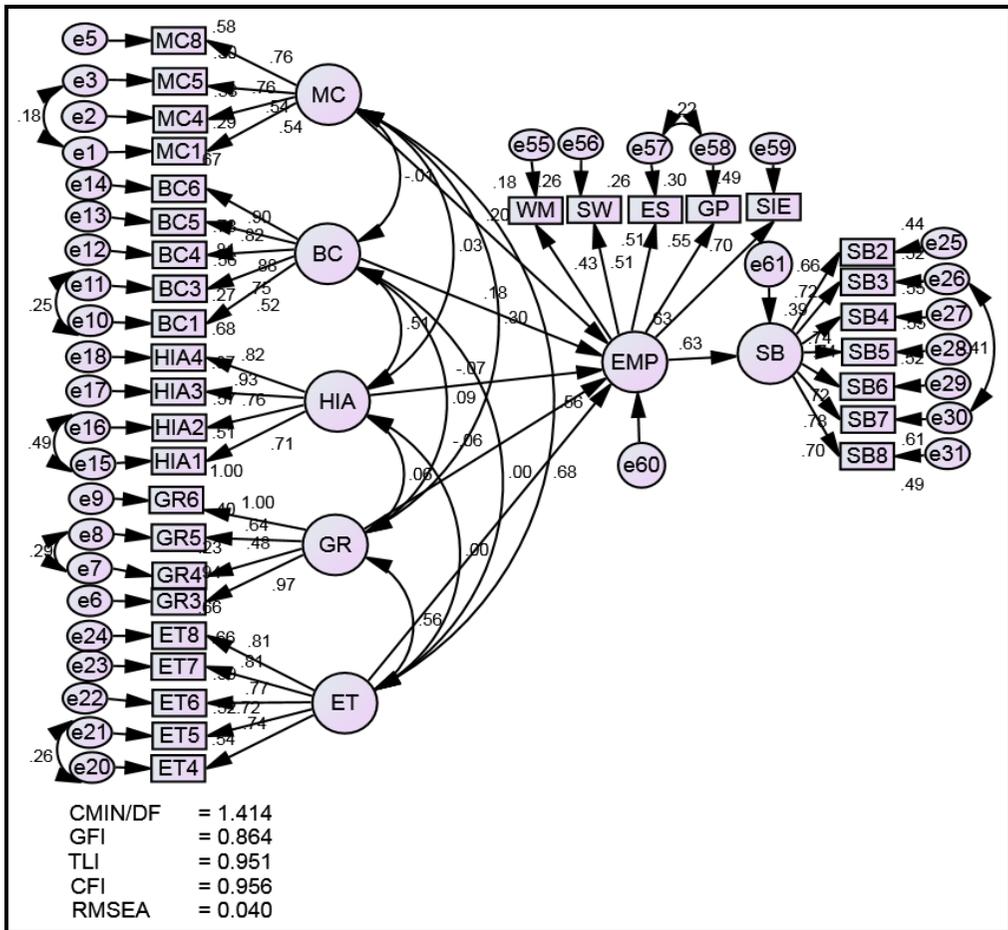


Figure 3: Overall Model for the study

Table 4: Regression Weights for Structural Equation Model

Variables	Regression n line	Factor	Unstandardized Parameter	S.E.	C.R.	P	Standardized Estimate
EMP Environmental management practices	<---	Management commitment	.829	.377	2.196	.028**	.196
EMP Environmental management practices	<---	Business competitiveness	.880	.375	2.324	.020**	.177
EMP Environmental management practices	<---	Hospitality industry awareness	-.202	.211	-.957	.339*	-.067
EMP Environmental management	<---	Governmental regulation	-.103	.126	-.823	.411*	-.058

Variables	Regression t-Statistic	Factor	Unstandardized Coefficients	S.E.	C.R.	P	Standardized Coefficients
practices EMP Environmental management practices	<---	Employee training	1.869	.382	4.888	***	.681
Sustainability of SB Business	<---	Environmental management practices	.150	.025	5.230	***	.628
Water WM management	<---	Environmental management practices	1.000				.428
Solid waste SW management	<---	Environmental management practices	1.421	.271	5.246	***	.510
Energy saving ES management	<---	Environmental management practices	1.125	.217	5.181	***	.508
Green purchasing GP	<---	Environmental management practices	1.765	.328	5.386	***	.548
Sharing of SIE information on environmental conservation	<---	Environmental management practices	.868	.145	5.984	***	.697
improves SB2 relationships with local communities;	<---	Sustainability of Business	1.000				.663
improves brand SB5 image;	<---	Sustainability of Business	1.384	.133	10.417	***	.743
enhances SB6 employee satisfactions;	<---	Sustainability of Business	1.295	.127	10.179	***	.723
increases guests' SB7 satisfaction	<---	Sustainability of Business	1.336	.125	10.690	***	.781
gain of SB8 stakeholder's confidence	<---	Sustainability of Business	1.021	.103	9.911	***	.701
Improves SB4 financial gain;	<---	Sustainability of Business	1.362	.131	10.407	***	.742
gains in market SB3 share;	<---	Sustainability of Business	1.305	.131	9.931	***	.718
sources food BC3 ingredients within the local community	<---	Business competitiveness	1.688	.183	9.206	***	.748
practices BC4	<---	Business	1.991	.226	8.794	***	.884

	Variables	Regression t-value	Factor	Unstandardized Coefficient	S.E.	C.R.	P	Standardized Estimate
	corporate social responsibility		competitiveness					
BC5	rises of numbers of guests that demand green life style	<---	Business competitiveness	2.097	.237	8.858	***	.902
BC6	use green practices to lower operational costs	<---	Business competitiveness	1.905	.224	8.521	***	.820
GR3		<---	Government regulation	1.000				.968
GR4	availability financial incentives to encourage green practices	<---	Government regulation	.482	.057	8.531	***	.476
GR5	waives of development fees to hotel for green practice development	<---	Government regulation	.629	.045	12.853	***	.636
HIA1	includes environmental issues in marketing material	<---	Hospitality industry awareness	1.000				.712
HIA2	communicates environmental efforts to stakeholders	<---	Hospitality industry awareness	1.049	.065	16.073	***	.755
HIA3	participate in environmental conservation meetings	<---	Hospitality industry awareness	1.313	.100	13.143	***	.931
MC1	ensures environmental policy is in place	<---	Management commitment	1.000				.543
MC4	ensures environmental management practice is in place	<---	Management commitment	1.490	.195	7.476	***	.759
MC8	a presence of environmental management officer in hotel	<---	Management commitment	1.322	.177	7.487	***	.764

	Variables	Regression Coefficients	Factor	Standardized Coefficients	S.E.	C.R.	P	Standardized Estimate
ET4	benefits employees with profit of success of the green practices;	<---	Employee training	1.000				.738
ET5	trains environmental conservation culture to new employee;	<---	Employee training	.900	.066	13.064	***	.722
ET6	briefs employees daily on environmental management issues;	<---	Employee training	1.025	.087	11.841	***	.766
ET7	incentives outstanding employee in green practices;	<---	Employee training	1.158	.092	12.580	***	.814
ET8	includes environmental management concept in recruitment criteria.	<---	Employee training	1.195	.095	12.522	***	.810
BC1	marketing strategies incorporates of hotel sustainability aspects	<---	Business competitiveness	1.000				.522
HIA4	educates guests on environmental management issues	<---	Hospitality industry awareness	1.153	.092	12.426	***	.825
MC5	perceives that the environmental friendly practices as low quality	<---	Management commitment	.970	.138	7.034	***	.544
GR6	receive a cash incentives to hotel for achieving certification of green practices	<---	Government regulation	1.015	.022	45.514	***	1.000

*** Significant at $p < 0.001$, ** significant at $p < 0.005$, * Non significant Initially

it was postulated that five factors have influence on the implementation of hotel environmental management practice. These factors included management commitment (Chan & Wong, 2006; Saenyanupap, 2011) business competitiveness (Quinn 2011) employees training (Zengani *et al.*, 2013) and industry awareness, (Min, 2011; Mensah, 2006). The findings showed that factors that were influencing the implementation of the environment management practice among hotels in Tanzania include management commitment Dharmesti (2015), business competitiveness, Tan and Yeap (2012) and employees training (Zengani *et al.*, 2013).

The management commitments revealed that, use of technology in handling the hotel business activities was important (loaded by 0.75) meanwhile monitoring of environmental management performance (loaded by 0.75) was also crucial. The finding implied that managers should embrace technology in the execution of hotel activities (Mungai and Irungu, 2013) and monitoring of environment management performance is the key in ensuring sustainability of the business (Lakshmi 2002). The competitive advantage showed that implementing environmental management practices through green marketing strategy creates competitive advantage to hotel through enhancing level of customer satisfaction (Kim, 2012, Perera and Prishpanathar, 2015). While sourcing food ingredient from local community (loaded by 0.7) enhance sustainability (Kapiki 2012) also, practicing Corporate Social Responsibility (CSR) enhances sustainability (Punitha *et al.*, 2014).

Manager agreed that increase in the number of guests demanding green lifestyle (loaded 0.9) would influence the implementation of EMP (Han *et al.*, 2011; Ogbeide, 2012; Thao, 2017). However, this should be done in combination with sharing of information on environmental conservation through social media (loaded 0.73), informing customers on environmental policies (loaded by 0.82) and educating customer on environmental conservation through media (loaded by 0.81). The finding tells manager that informing the guests on what hotel does on environmental management play a positive role in attaining the sustainability goal. On the other hand, managers also agreed that implementation of green practices impact positively operational cost (loaded by 0.82). (Rao & Holt 2005) and also accepted that hotel can save money by implementing EMP (Mensah, 2004)

Training of employees on environmental management practices makes them to be ecofriendly (Fukey and Isaac 2014). Incentivizing outstanding employees in green practices (loaded by 0.72) and including environmental management in the recruitment criteria (loaded by 0.7) that confirm the previous study findings (Eldermerdash and Moustafa, 2013). In addition, training of new employees on environment conservation culture (loaded by

0.81) and briefing employees daily on environmental management issues (loaded by 0.7) is important aspect in attaining business sustainability (El Dief and Font, 2010). Further, findings indicated that profit of success of green practices should benefit the employees (Zengani *et al.*, 2013). Thus, this narrative substantiated that employees are the center of hotel business sustainability in the hospitality industry.

Lastly, managers agreed that implementation of EMPs brings about positive effect on hotel business sustainability as also been said by (Rao and Holt 2005; Molina – Azorin *et al.*, 2009; and Leonidou *et al.*, 2013). The identified positive effects were; increase guests satisfaction (loaded by 0.78) Kim 2012) improving brand image (loaded by 0.74) Pramano *et al.*, (2014) and Safshekan, (2014); financial gain (loaded by 0.74) enhancement of employee satisfaction (0.72) Dhankar and Raheja (2015) gaining market share loaded (0.71) Ekwueme *et al.*, (2013) and Ashraf (2013) gains of hotel stakeholder confidence (loaded by 0.7) Branco & Rodriguez (2007). Improving relationship with local community (loaded by 0.66) Alcorn & Curtis (2016) Hay & Ozretic Došen (2014).

Conclusion

This study has addressed three major issues in the sustainability of hotel business; these are commitment of manager in order to have successful EMP implementation in the hotel. Secondly, implementing EMP gives hotel business competitiveness advantages and environmental management strategy is as important as marketing strategy, financial and operational strategies. Third, managers should understand that, employees are important component in the formulation of hotel business sustainability strategy, without employees company will jeopardize itself. In addition, the benefits of sustainability in hotel business are incredible thus it is thoughtless to trade it with whosoever else. Theoretically, findings of this study supported that; environmental management is the key aspect in the pillar of sustainability as observed by Slapper & Hall, (2011).

From this, it was concluded that: Implementing environmental management practices in hotel in Tanzania bring about sustainability of business in the hotel industry. Second, awareness of environmental management among hotels in Tanzania is very low level and little; and coordinated at individual hotel level not at sector level.

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