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Influence of Management Commitment in the Implementation of Hotel Environmental Management Practices and its Effect on Business Sustainability among Hotels in Tanzania

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ABSTRACT: This study aimed to assess the influence of management commitment in the implementation of hotel environmental management practices and its effect on business sustainability among hotels in Tanzania. Studies have shown that management commitment plays a significant role in the implementation of hotel Environmental Management Practices (EMPs). Based on that argument, two hypotheses were formulated as follows; Firstly, Management commitment influences the implementation of environmental management practices. Secondly, Implementation of environment practices have effects on hotel business sustainability. The study was conducted in two cities namely: Arusha and Dar es Salaam whereby a structured questionnaire with Likert scale range from 1 to 5 was used to collect information from the sample 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 both hypotheses were accepted that is, Management commitment has a positive influence on the implementation of the EMPs with highly significant at $p<0.000$. Also, the implementation of EMPs has a positive effect on hotel business sustainability strongly significant $p<0.000$. Therefore, the implications to industry managers and expertise are: first, hotel managers' commitment plays a pivotal role in the EMPs implementation. Second, the implementation of EMPs in hotels serves as a vehicle in achieving hotel business sustainability. This contributes to a body of knowledge by showing that an environmental factor is a major external component that affects business sustainability in organizations like hotels. Moreover, the study has enlightened that, a hotel manager stands a strategic role in managing the organization based morals and values that address the interest of a bigger segment of its stakeholders. The study recommends future research on further study of water conservation especially on reducing water for showering and bathtubs. It was concluded that commitment of hotel managers in the implementation of EMP plays a pivot role in the sustainability of hotel business in Tanzania.

KEYWORDS: Hotel business, Management commitment, Sustainability.

INTRODUCTION

Implementing environmental management practice in hotels requires managers to have a clear understanding on environmental issues in regards to business sustainability of organizations (Ayuso, 2006). Ustad, (2010) points out that managers should have good understanding of the Environmental management system (EMS) so that they can implement environmental management practices. The sustainability in the hotel industry could be achieved if management implements the pro–environment management and customers are aware of environment issues (Dharmesti, 2015). In addition to that, in implementing environmental management, manager's knowledge, perception and values are central issues for interpreting the environmental decision making process (Ayuso, 2006). The engagement of firms in the environmental sustainability has been considered to be valuable in terms of savings and maintain reputation (Gutiérrez *et al.*, 2015). Likewise, proactive environment strategy favours organizational competitiveness Stegerean *et al.*, (2014). There are several studies that advocate for hotel firms to engage in environmental sustainability as a means of increasing competitive advantage. (Erdem & Tetik, 2013 and Samarasighe *et al.*, 2015)

If this is the case, then, today's hotel manager's commitment in implementing the environmental management practices is not optional but rather a core aspect, as the future of businesses depend on it (Reed and Reed 2010). Gupta and Sharma (1996) indicated that environmental management is the management principal in which executive's company covert the natural resources into better

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output. This means that manager should take the management of environment issue crucial as marketing, human resource and finance management in managing the business. Thus, hotel manager should ensure that the environmental management strategy become part of the entire business strategy and budgeted and action plan drawn for. This will provide the means of integrating in the daily operations, as well as ensuring that monitoring and evaluation is covered (Houdré, 2008).

The integration of environmental issues in daily operations should be by establishing policies; objectives and an action plan to ensure that resources are available for implementation. For example, in the case of food and beverage businesses, environmental issues can be integrated into menu planning, purchasing, and storage, cooking and selling of the cooked food. In the planning of menus, dishes that favor use of local ingredients from the community around the establishment may be implemented. By doing so, managers will promote partnership with external stakeholders by supporting the communities, (Mungai and Irungu, 2013).
Purchases of hotel supplies can based on the green purchasing where suppliers are advised to comply with green practices, government regulations, environmental certification codes and traditions and norms of the local community. Many authors have suggested that purchasing consider 3R3E, meaning reuse, reduce, recycle, ecological, economical and equitable (Fukey and Isaac, 2014). Smith and Perks (2010), in their research conducted in South Africa concluded that, the use of green supply chain might result into an increased market share and profitability despite higher production costs. Also, (Chen and Chen, 2012) in their study conducted in Taiwan reported that green purchasing is the key aspect to reach standards of green business.
The hotel may also consider using fresh items as compared to frozen and refrigerated one to avoid the release of gases that affect the ozone layer. While many scholars have advocated the use of green purchasing, it has also pointed out that management skills and knowledge, and lack of an economic justification in terms of performance have become barriers (Zhu *et al.*, 2004). This study echoed the previous results by (Bohdanowicz and Martinac, 2003), that some of the European Chain Hotels were reluctant to be involved in the environmental initiatives. Such action could negatively affect their customers' conform and satisfaction. In addition, Dhankar and Raheja (2015) pointed out that, availability of environmentally friendly products, costs and their perceived low quality has often been seen as a barrier.

Food preparation will not be a problem if the green purchasing practices will be strictly be adhered to, and this is because some of the food items can be delivered as ready to cook. However, the management should ensure that separation of wastes in the kitchen is well monitored since most of the wastes are produced during the process of cooking and its preparations. Separation of wastes will ensure the task of disposing is correctly done and reduce chances of disposing it inappropriately. The hotel manager may integrate environmental aspects during cooking by ensuring the use of renewable energy, energy-serving appliances and cooking food as ordered. The use of, self - switched off equipment to minimize the energy loses when cookers are not in use. Proper portioning of ordered food is important to reduce the amount of food left in the plate to be thrown into rubbish bins. The hotel managers should also consider the use of technology in all transactions in the restaurant such as digital pads for waiters.
When the hotel managers ensure that the environment management policy has been integrated each step of food and beverage operations systems, it become easy for monitoring, evaluation and also re-designing of the system so as to have long term sustainability rather than short term (Mungai and Irungu 2013).

The same procedure is also applicable in the accommodation business where environmental management may be integrated from reservation, registration, room cleaning, and guest occupying the room to checkout. The environmental management practices may be integrated in reservation, registration and checkout operations by the use of technology. Introduction of Hotel Information System (HIS) brought relief to hotel managers in terms of the amount of money spent in printing out documents related to these activities. Currently, a customer can perform many operations without paper printing. Also transactions for the entire guest cycle is kept in the system and printed at the checkout point, hence, avoiding daily printing and minimize the use of paper and printers' ink thus saving the environment.
Guest rooms are areas where the environment management practices need to be implemented. The use of power, water, chemical and production of wastewater have big impact in the environment. To minimize such impact the hotel manager should establish a policy, which will guide room attendants and guests. Automatic light off and on switches, low voltage bulb should be used to reduce energy consumption. In the case of water, guests can be requested to use shower as opposed to bathtub. Also the low volume toilet sink can be used to save water in the toilet. Hotel managers may choose to use biodegrading soap, which is not harmful to the environment and other living organism. The hotel guests may also be asked to minimize the laundries, to save the environment

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through conservation of water and minimal amount of chemical disposed to the environment. However, when implementing these practices should be taken with care as some of the practices may not be acceptable to the guest. Millar and Baloglu (2008) found that the use of refillable shampoo and soap dispensers, as well as the use of low flow showerheads were not accepted to the guests. Therefore, basing on the above review, this study basically focuses on investigating hotel managers' willingness to implement environmental management practices. Also the study will seek to find out in which circumstances, managers are supposed to have full commitment towards environmental management practices. From this discussion two hypotheses were developed.

H_1.Management commitment influence implementation of environment management practices
H_2 Implementations of environment practices has effects on the hotel business sustainability

STUDY THEORY

The study adapted a stakeholder theory of corporate management and business ethics that addresses moral and values in managing an organization. It identifies and models groups or persons with legitimate interest in the corporate activity. The stakeholders' theory describes, evaluates and recommends methods by which managers can safeguard the interests of those groups (Donaldson and Preston, 1995). The Stakeholder theory took consideration of environmental factors as one of the major external changes, which affected the business environment of the organization in 1960s' (Fontaine *et al.*, 2006). The stakeholder theory has been used as the study framework because of the fact that, it recognizes the issue of environmental management in business operations.

Taking care of the environment in running operations of the hotel is one of the approaches through which a company can build contracts with its stakeholders. The aspect of environmental management in running the company's business is clearly elaborated when considering the relationship between stakeholder theory and corporate social responsibility. The way businesses involve shareholders, employees, customers, surrounding community, suppliers, governments, Non-government organizations and other stakeholders is key features of corporate social responsibility concepts (Fontaine *et al.*, 2006).

MATERIAL AND METHODOLOGY

This study adopted a descriptive research design to obtain information concerning the current status of the phenomena and to describe what exists in regard to conditions in a situation. The study was conducted in three to five stars category in two cities 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 were hotel managers and supervisors. The questionnaire comprised of closed questions. The questionnaire consisted of constructs that were measured by items developed to operationalize the constructs. The items developed based on the literature review of similar studies conducted over the world. These studies include; (Saenyanupap, (2011) hotel manager attitudes toward environmental sustainability practices; Tzschentke, et al., (2008) going green decisional factors in small hospitality operations; Jeong and Jang, (2010) effects of restaurant green practices: which practices are important and effective; Chen and Chen (2012) advantages of green management for hotel competitiveness; Hsieh, (2012) hotel companies' environmental awareness and commitment; Safshekan, (2014) the effect of environmental policy by considering the mediating role of customer satisfaction and loyalty.

The list of hotels 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 were purposively sampled from each hotel thus totaling up four hundred (400) respondents. Self-administration method was used in collecting information from the respondents.

FINDINGS PRESENTATION

Findings of the data analysis were presented through tables, charts and intensive scripts. In this study 266 questionnaires were returned out of the 400 questionnaires that equates to 66.5%, which is quite acceptable for inference Fincham (2008), Baruch & Holton (2008). In the 266 of returned questionnaires 11 (4.2%) had missing value, a List wise deletions method was used remove the missing data (Tha, 2014). The Mean method was used to clear outlier (Tabachnick & Fidell, 2007), Data normality was checked and kurtosis ranged from 1< to 3 which acceptable (Brown, 2006).

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To reduce the number of variables into smaller manageable ones, the exploratory factor analysis (EFA) was performed. The Principal Factor Analysis (PFA) was chosen instead of Principal Component Analysis (PCA) (Field, 2000). To produce a better estimate of factors among correlated latent variables Oblique rotation was used as opposed to orthogonal rotations (Fabrigar *et al.*, 1999). The KMO was 0.894, which is meritorious, which means that inter-items 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 (Table 1) for this study was significant at P <0.000 which indicate for factor analysis and data was suitable for analysis and the communalities. Table (Table 2) showed that 5 items had value between 0.3 - 0.4; but (Child, 2006) suggested that only item with score below 0.2 should be removed. For that case, the five items were retained as it shows in scree plot (Figure 1). The discriminatory validity was attained as correlation matrix table indicated absence of variables correlation and multicollinearity (Table 5). The extraction was performed using Principal Axis factoring with an Oblimin with Kaiser Normalization's rotation.

The exploratory factor analysis produced seven (7) factors accounting for the variance 62.422%, providing the unique pattern matrix loading (Table 3) (Field 2000). The extraction produced the Total Variance Explained (Table 4) indicated Guttmann- Kaiser Rule was adhered as all Eigenvalues were larger than one and total variances should account for more 62% (Rietveld & Van Hout, 1993). After Exploratory Factor Analysis, the Confirmatory Factor Analysis (CFA) was performed and produced measurement CFA model (Figure: 2) with chi-square X^2 419.785 at *df* 277 *p*-value 0.000 CMID/DF =1.515 other indices GFL, TLI, CFI and RMSEA value were 0.886, 0.933, 0.943and 0.045 with significant of p<0.000 indicating that model was fit (Smith, 2000). The analysis showed that all variable loading of 0.5 and above (Table 6)

Four (4) constructs attain required of AVE >0.5 according (Awang, 2011) however three (3) Management commitment, water management and Sharing Information on conservation education had value below 0.5 (Table 7). This can also be accepted according to Huang *et al.*, (2013) as long as composite reliability (CR) is above 0.6 (Table 9). 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 above 0.6 (Table. 8) (Hair *et al.*, 2010). The Structural SEM model for the study (Figure 3) was constructed and hypotheses were tested after rearranging the overall measurement CFA model. After running the system, the results that were obtained were: Chi-squares (X^2) 456.756, degree of freedom *(df)* 292 probability level (*p*-value) 0.000, CMIN/DF 1.564, GFI 0.874, TLI 0.927, CFI 0.934 and RMSEA 0.047. The values of indices obtained indicated strong model fitness. (Tables 9) indicates the results of hypothesis testing and it showed that were significant at significant at $p< 0.000$. This result illustrated as follow: From the two developed hypotheses were:

H1: Management commitment influence positively implementation of environment management practices.

Management commitment has positive influence on implementation of the hotel EMPs and highly significant at p<0.000

H2: Implementations of environment practices has positive effects on the hotel business sustainability.

The implementation of hotel EMPs has positive effects on hotel business sustainability strongly significant p<0.000

DISCUSSION OF FINDINGS AND IMPLICATIONS

The management's commitment is one the most important aspect in the implementation of hotel environment management practices. The power vested on managers in deciding what should be done when performing operational activities of the hotel makes them sine qua non actors in the success on sustainability programs. From this perspective this study developed two hypotheses of which the findings were discussed under them. The hypothesis was management commitment has influences on the implementation of EMPs and Implementations of EMPs has positive influence on the hotel business sustainability. The findings indicate that management's commitment has significant positive influence on what managers should implement. This findings corresponds to Wachira, (2015) findings that, there is positive relationship between hotel management commitment and application of green

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practices. Similarly, Reynolds (2013) argued that commitment from the top levels of an organization is a powerful internal tactic that supports corporate environmental strategy. Likewise, Pramano *et al.,* (2014) adds that, maintenance of the sustainability in the hospitality industry is the top agenda of hotel managers.

The indicators showed that, commitment of managers was notably significant on giving priority to environmental training to employees, which had loading of 0.84 (Table: 11). Training the employees on the implementation of EMPs simplifies the work of integrating environmental management practices into the hotel operations and also make all involved parties in the implementation aware, which in turn makes sustainability programs to be successful (Tzschentke, et al., 2008).

The findings pointed that managers' commitment was significantly important in ensuring that monitoring of environmental management performance, which loads at 0.76. The performance monitoring ensures that, environmental policy has integrated in each step of hospitality operations from front office, rooms, restaurants and kitchen. When the system is not working it become easier to re-design to ensure long-term sustainability (Mungai and Irungu, 2013).

The presence of environmental management committees (loaded 0.58) in hotels was also a significant aspect of managements' commitment in ensuring sustainability of hotel business (Ambardar and Gupta, 2015). In addition to that, the findings showed that hotel manager's commitment should focus on the technology usage in business activities (loaded 0.52). Mungai & Irungu, (2013) advised that, managers should consider the uses of technology in all transactions of hotel operations. The findings noted that commitment of the managers should focus on ensuring establishing environmental policy in the hotel (loaded 0.596). From this point, it is clear that managers' commitment plays a great role in ensuring sustainability. Sucheran (2013) confirmed that more than 98% of the hotel managers had concern with future sustainability of the business. Therefore, findings of this study become an eye opener to the hotel managers on what area they should concentrate so as to ensure that sustainability of the hotel business is attained.

Secondly, it was hypothesized that implementation of environment management practices has positive effects on the hotel business sustainability. The findings narrated that the implementation of EMPs has positive effect on hotel business sustainability with strong significant at $p<0.000$. The relationship between environment management practices and business sustainability was significantly positive with loading of (0.676). This finding corresponds with studies of Leonidou et al., (2013) which noted that, implementation of EMPs protects natural resources and saving cost significantly improves productivity and reduce the cost of operation and lead to competitive edge.

The indicators for business sustainability had loaded above 0.65. The highest loaded indicator was increase guests' satisfaction (loaded 0.763) that concurred with Perera and Pushpanathan (2015).These findings showed that implementing the green marketing strategy creates competitive advantages to hotels through enhancing level of customer satisfaction. This is a lesson to hotel managers; instead of taking environmental management as an optional strategy, they should make it a mandatory, hence, business sustainability. Likewise, improving brand image loaded by 0.74, the finding supported the previous findings by Pramano et al., (2013) that implementation of EMPs improves brand image and better relationship with the local community. Several authors have advocated caring of environment as a strategy of reducing production cost, proper utilization of resource and gaining competitive edge (Weng et al., 2015) and brand improvement is the way of gaining competitive edge over other competitors in the industry. Therefore, industry managers should always include sustainability ingredient in their branding plan and programs.

Similarly, findings indicated that implementation of EMPs improve financial gain (loaded 0.733). This supports the findings by González and León (2001), which reported that financial benefits results from being green. Punitha and Rasdi (2013) narrated that improvement in the financial gain is a major concern when managers think of implementing EMPs because financial gain is translated into the rise of shareholders' wealth of which is a motivation for EMP implementations. These findings shed clear light to managers in the hospitality industry that EMP is the tactic to improve financial gain.

Correspondingly, enhancement of employee satisfaction came out strongly in the current study (loaded 0.733). Managers believed that implementation of EMPs improve sustainability through enriching employees' satisfactions. This is congruent to findings by Kirk (1998), who reported that managers employ environment management practices because the action improves profitability and improve employees' satisfaction. Further, Dhankar and Raheja (2015) reported that higher employees' retention rates exist where

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the green ethics and prominent are adhered. These findings implied that employees enjoy caring for environment when performing their daily activities thus managers must at any cost champion for green practices in their hotels.

EMPs implementation, improves relationship with local community with loading of 0.68, (Alcorn and Curtis 2016), which indicated that managers were satisfied in implementing green practices because they feel that they are giving back to the community. In addition, Hay and Ozretic – Došen, (2014) maintained that green environmental philosophy communicated by hotels to customers and local community adds value to their service and has positive impact to tourist destination. These findings inform the managers that employing EMP in hotels is a necessary step in building relationships with the local community. Building relationship with local community creates assurance of business sustainability and fulfills the philosophy of triple bottom line.

RECOMMENDATION AND CONCLUSION

This contributes to body of knowledge by showing that environmental factor are major external components that affect the business sustainability in organizations like hotels. The study has enlighten that, hotel managers play a strategic role of managing organizations based on moral and values that address the interest of bigger part of its stakeholders The study recommends further study on water conservation especially on reducing water for showering and bathtubs. It was concluded that commitment of hotel managers in the implementation of EMP plays pivotal role in sustainability of hotel business in Tanzania

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TABLES AND FIGURES

Table 1:KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.894
Bartlett's Test of Sphericity	Approx. Chi-Square	4472.846
	df	595
	Sig.	.000

Table 2: Communalities

Variables Code	Variables description	Initial	Extraction
MC1	ensure environmental policy is in place	.421	.411
MC4	ensure environmental management practices is in place	.339	.313
MC5	perceives that the environmental friendly practices lower quality	.383	.387
MC7	a presences of environmental management committees in hotel	.596	.696
MC8	a presence of environmental management officer in hotel	.540	.533
WM1	in place water conservation program policy	.427	.391
WM3	implements linen re-use policy	.494	.496
WM4	Install water efficient appliance	.627	.590
WM5	installs low- flow showerheads	.472	.462
WM6	implements water efficient gardening programme	.553	.532
WM7	educates customers and staff on how to conserve water	.606	.658
SW6	recycles toners cartridges	.636	.702
SW7	recycled newspaper	.611	.698
SW8	uses recycled paper	.566	.597
SW10	install recycled bins	.582	.533
ES3	uses of energy saving light bulbs	.391	.396
ES5	reviews energy bills to monitor consumptions	.554	.565
ES6	uses of energy – efficient appliance	.634	.621
GP3	purchase of recycled products	.509	.493
GP4	donate used equipment	.528	.623
GP8	preference is given to purchase recycled packaging	.510	.562
GP9	purchase of supplies, products, and condiments in bulk	.516	.454
SIE1	hotel websites content contains information on environmental conservation;	.557	.525

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SIE2	uses social media to spread environmental conservation issues to customers	.599	.631
SIE3	inform customers on environmental policies implemented by hotel	.666	.680
SIE4	trains customers on environmental conservation through media	.660	.616
SIE5	participates into environment conservation local events	.540	.442
SB1	reduces operational costs;	.405	.316
SB2	improves relationships with local communities;	.545	.509
SB3	gain in market share;	.574	.470
SB4	improve financial gain;	.616	.586
SB5	improve brand image;	.640	.615
SB6	enhances employee satisfactions;	.550	.579
SB7	increases guests' satisfaction and	.625	.557
SB8	gaining stakeholder's confidence	.530	.494

Table 3: Pattern Matrix

Variable code	Variable descriptions	Factor						
		Sustainability of business	Solid waste management	Management commitment	Sharing of information on environmental conservation	Water Management	Energy saving	Green purchasing
MC1	ensure environmental policy is in place			.536				
MC4	ensure environmental managements practices is in place			.523				
MC5	perceive that the environmental friendly practices low quality			.626				
MC7	a presence of environmental committee in hotel			.822				
MC8	a presence of environmental management officer in hotel			.689				
WM1	in place water conservation program policy					-.426		
WM3	implement linen re use policy					-.618		
WM4	install water efficiency appliance					-.487		
WM5	Install low flow showerheads					-.666		
WM6	Implement water efficient gardening progamme					-.636		
WM7	educate customers and staff on how to conserve water					-.795		

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SW6	recycles toner and cartridges	.774			
SW7	recycles newspaper	.802			
SW8	uses recycled paper	.630			
SW10	install recycles bins	.451			
ES3	uses of energy – saving light bulbs			-.515	
ES5	reviews energy bills to monitor consumptions			-.583	
ES6	uses of energy – efficient appliances			-.571	
GP3	purchase of recycled products				-.609
GP4	donate used equipment				-.765
GP8	preference is given to purchase recycled packaging				-.686
SIE1	hotel websites content contains information on environmental conservation;		.594		
SIE2	uses social media to spread environmental conservation issues to customers		.807		
SIE3	inform customers on environmental policies implemented by hotel		.740		
SIE4	trains customers on environmental conservation through media		.715		
SIE5	participates into environment conservation local events		.438		
SB2	improve relationships with local communities	.563			
SB3	gains in market share	.614			
SB4	improves financial gains	.731			
SB5	improve brand images	.771			
SB6	enhance employee satisfactions	.755			
SB7	increase guest satisfactions	.734			
SB8	gain of stakeholders confidence	.629			

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 14 iterations.

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Table 4: Total variance Explained with eigenvalues (AVE)

Factor No:	Factor description	Initial Eigenvalues			Rotation Sums of Squared Loadings
		Total	% of Variance	Cumulative %	Total
1	Sustainability of Business	10.640	30.401	30.401	6.587
2	Solid Waste management	2.520	7.199	37.600	4.578
3	Management commitments	2.291	6.546	44.146	4.457
4	Sharing of information on environmental conservation	2.136	6.103	50.249	5.593
5	Water management	1.644	4.697	54.946	5.903
6	Energy saving	1.509	4.312	59.258	4.045
7	Green purchasing	1.107	3.164	62.422	3.366
8		.968	2.764	65.186	
9		.914	2.613	67.799	
10		.854	2.441	70.240	
11		.782	2.235	72.474	
12		.719	2.053	74.528	
13		.682	1.948	76.476	
14		.621	1.774	78.250	
15		.599	1.710	79.960	
16		.561	1.603	81.563	
17		.528	1.508	83.071	
18		.504	1.439	84.510	
19		.491	1.402	85.912	
20		.449	1.282	87.194	
21		.439	1.254	88.448	
22		.431	1.231	89.679	
23		.402	1.147	90.826	
24		.394	1.127	91.953	
25		.365	1.041	92.995	
26		.322	.919	93.913	
27		.307	.876	94.790	
28		.286	.816	95.606	
29		.263	.752	96.358	
30		.243	.695	97.053	
31		.238	.679	97.732	
32		.224	.639	98.371	
33		.208	.594	98.965	
34		.195	.558	99.523	
35		.167	.477	100.000	

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Table 5: Factor Correlation Matrix

Factor	Sustainability of Business	Solid waste management	Management commitments	Sharing of information on environmental conservation	Water management	Energy saving	Green purchasing
Sustainability of Business	1.000	.286	.317	.415	-.399	-.351	-.204
Solid Waste management	.286	1.000	.171	.252	-.384	-.294	-.363
Management commitments	.317	.171	1.000	.373	-.296	-.281	-.164
Sharing of information on environmental conservation	.415	.252	.373	1.000	-.360	-.258	-.345
Water management	-.399	-.384	-.296	-.360	1.000	.334	.227
Energy saving	-.351	-.294	-.281	-.258	.334	1.000	.055
Green purchasing	-.204	-.363	-.164	-.345	.227	.055	1.000

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

Table 6: Regression Weights for CFA Model

Variable Code	Variables description	Regression line	Constructs	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
MC8	a presence of environmental management officer in hotel	<---	Management commitment	1.185	.133	8.920	***	.755
MC7	a presence of environmental management committee in hotel	<---	Management commitment	1.337	.143	9.346	***	.841
MC5	perceives that the environmental friendly practices low quality	<---	Management commitment	.944	.126	7.484	***	.585
MC4	ensure environmental management practices is in place	<---	Management commitment	.781	.114	6.837	***	.520
MC1	ensure environmental policy is in place	<---	Management commitment	1.000				.599
WM6	Implement water efficient gardening progamme	<---	Water management	1.079	.132	8.164	***	.712
WM5	install low-flower heads	<---	Water management	1.096	.153	7.173	***	.584

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WM3	implements linen re- use policy	<---	Water management	1.297	.157	8.263	***	.729
WM1	in place water conservation program policy	<---	Water management	1.000				.601
SW7	recycles newspaper	<---	Solid waste management	.887	.089	9.978	***	.671
SW8	use recycles paper	<---	Solid waste management	1.000				.813
SW10	install recycles bins	<---	Solid waste management	.914	.085	10.772	***	.733
ES5	reviews energy bills to monitor consumption	<---	Energy saving	1.338	.148	9.031	***	.765
ES3	uses of energy saving light bulbs	<---	Energy saving	1.000				.598
ES6	uses of energy efficiency appliances	<---	Energy saving	1.349	.143	9.435	***	.857
GP4	donates used equipment	<---	Green purchasing	1.000				.786
GP3	purchase recycled products	<---	Green purchasing	.846	.084	10.045	***	.718
GP8	preference is given to purchase recycled packaging	<---	Green purchasing	.788	.077	10.227	***	.739
SIE5	participate in environmental conservation local events	<---	Sharing information Environmental Conservations	1.000				.693
SIE3	inform customers on environmental policies	<---	Sharing information Environmental conservation	1.022	.126	8.097	***	.672
SIE2	uses social media to spread environmental conservation issues to customers	<---	Sharing information Environmental conservation	.919	.122	7.563	***	.619
SB7	increase guest satisfactions	<---	Sustainability of Business	.213	.036	5.926	***	.764
SB6	enhance employees satisfaction	<---	Sustainability of Business	.215	.037	5.865	***	.736
SB5	improves brand images	<---	Sustainability of Business	.224	.038	5.869	***	.738
SB4	improves financial gain	<---	Sustainability of Business	.219	.037	5.851	***	.731
SB2	improves relationship with local communities	<---	Sustainability of Business	.170	.030	5.756	***	.692

Table 7: Average Variance Extracted (AVE) for the Measurement Model

Construct	Items Code	Item descriptions	λ	λ^2	$\Sigma \lambda^2$	N	AVE ($\Sigma \lambda^2$/n
Management Commitment (MC)	MC8	a presence of environmental management officers in hotel	.755	0.570025	2.248732	5	0.449746
	MC7	presence of environmental management committee in hotel	.841	0.707281			

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	MC5	Observes that environmental friendly practices lower quality	.585	0.342225			
	MC4	ensures environmental management practices is in place	.520	0.2704			
	MC1	ensures environmental policy is in place	.599	0.358801			
Water Management (WM)	WM6	implement water efficient gardening programme	.712	0.506944	1.740642	4	0.43516
	WM5	install low flow showerheads	.584	0.341056			
	WM3	implement linen re use policy	.729	0.531441			
	WM1	in place water conservation programme policy	.601	0.361201			
Green Purchasing (GP)	GP4	donates of used equipment	.786	0.617796	1.679441	3	0.559814
	GP3	purchase of recycled produces	.718	0.515524			
	GP8	preference is give to purchase recyclables packaging	.739	0.546121			
Sharing of Information on Environmental Conservation (SIE)	SIE5	participate in environmental conservations local events	.693	0.480249	1.314994	3	0.438331
	SIE3	inform customers on environmental policies implemented by hotel	.672	0.451584			
	SIE2	uses of social media to spread environmental conservation issues customers	.619	0.383161			
Energy saving (ES)	ES5	Reviews energy bills to monitor consumptions	.765	0.585225	1.677278	3	0.559093
	ES3	uses of energy saving light bulbs	.598	0.357604			
	ES6	uses of energy – efficient appliance	.857	0.734449			
Solid Waste management	SW7	recycles newspaper	.671	0.450241	1.648499	3	0.5495
	SW8	uses recycled paper	.813	0.660969			
	SW10	install recycled bins	.733	0.537289			
Sustainability of Business (SB)	SB7	increases guests satisfactions	.764	0.583696	2.683261	5	0.536652
	SB6	enhanced employee s satisfactions	.736	0.541696			
	SB5	improves brand images	.738	0.544644			
	SB4	improves brand images	.731	0.534361			
	SB2	improves relationship with local communities	.692	0.478864			

Table 8: Composite Reliability for the measurement Model

Construct	**Σ ʎ**	**(Σ ʎ) ²**	**Σ1 - ʎ²**	**(Σ ʎ) ² + (Σ1 - ʎ²)**	**(Σ ʎ) ² / (Σ ʎ) ² + (Σ1 - ʎ²)**
Management Commitment	3.3	10.89	2.751268	13.64127	0.798313
Water management	2.626	6.895876	2.259358	9.155234	0.753217
Green purchasing	2.243	4.915089	1.320559	6.235648	0.788224

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Sharing of information on environmental conservations	1.984	5.031049	1.685006	6.716055	0.749108
Energy saving	2.22	3.936256	1.322722	5.258978	0.748483
Solid waste management	2.22	4.9284	1.351501	6.279901	0.784789
Sustainability of business	3.661	13.40292	2.316739	15.71966	0.852622

Table 9: Regression Weights for Structural Model

Variable Code	Variable	Regression line	Construct	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
EMP	Environmental Management Practices	<---	Management Commitment	.474	.070	6.777	***	.571
SB	Sustainability of Business	<---	Environmental Management Practices	.658	.089	7.430	***	.679
ES	Energy Saving	<---	Environmental Management Practices	1.119	.122	9.193	***	.794
SW	Solid waste management	<---	Environmental Management Practices	1.000				.702
SIE	Sharing information on environmental conservation	<---	Environmental Management Practices	1.000				.816
WM	Water management	<---	Environmental Management Practices	.792	.113	6.987	***	.754
GP	Green Purchasing	<---	Environmental Management Practices	.850	.146	5.809	***	.501
MC8	a presence of environmental management officer in hotel	<---	Management Commitment	1.000				.759
MC7	a presence of environmental management committee in hotel	<---	Management Commitment	1.123	.094	11.961	***	.840
MC5	perceives that, the environmental friendly practices low quality	<---	Management Commitment	.790	.091	8.681	***	.582
MC4	ensure environmental management practices is in place	<---	Management Commitment	.656	.085	7.732	***	.520
MC1	ensure environmental police is in place	<---	Management Commitment	.837	.094	8.897	***	.596
WM1	in place water conservation program policy	<---	Water management	1.000				.600

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Variable Code	Variable	Regression line	Construct	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
WM 3	implement linen re-use policy	<---	Water management	1.299	.157	8.247	***	.729
WM 5	install low-flow showerheads	<---	Water management	1.098	.153	7.168	***	.584
WM 6	Implement water efficient gardening progamme	<---	Water management	1.081	.133	8.152	***	.713
GP3	purchase of recycled products	<---	Green Purchasing	1.000				.719
GP4	donates used equipment	<---	Green Purchasing	1.181	.120	9.855	***	.786
GP8	preference is given to purchase recyclable packaging	<---	Green Purchasing	.927	.096	9.662	***	.737
SIE5	participate in environmental conservations local events	<---	Sharing Information on environmental conservation	1.000				.714
SIE3	inform customers on environmental policies implemented by hotel	<---	Sharing Information on environmental conservation	.960	.116	8.273	***	.651
SIE2	uses of social media to spread environmental conservation issues customers	<---	Sharing Information on environmental conservation	.870	.113	7.716	***	.604
ES6	uses energy - efficiency appliances	<---	Energy Saving	1.000				.861
ES5	reviews of energy bills to monitors consumptions	<---	Energy Saving	.984	.082	12.011	***	.762
ES3	use of energy – saving light bulbs	<---	Energy Saving	.736	.079	9.328	***	.596
SW7	recycled newspaper	<---	Solid Waste management	1.000				.657
SW8	uses recycled paper	<---	Solid Waste management	1.146	.106	10.829	***	.809
SW10	install recycled bins	<---	Solid Waste management	1.071	.104	10.263	***	.746
SB2	improve relationship with local communicates	<---	Sustainability of Business	1.000				.693
SB4	improves financial gain	<---	Sustainability of Business	1.287	.125	10.308	***	.733
SB5	improves brand image	<---	Sustainability of Business	1.320	.127	10.400	***	.740

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Variable Code	Variable	Regression line	Construct	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
SB6	enhances employees satisfaction	<---	Sustainability of Business	1.257	.122	10.318	***	.733
SB7	increase guests' satisfactions	<---	Sustainability of Business	1.248	.117	10.666	***	.763

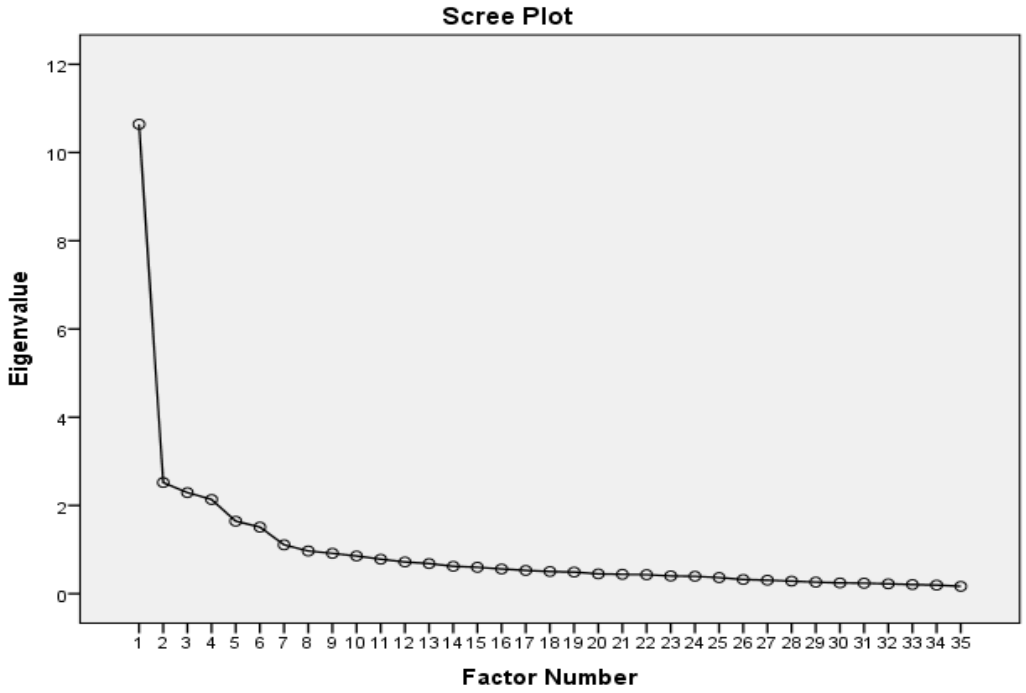

Figure 1: Scree Plot

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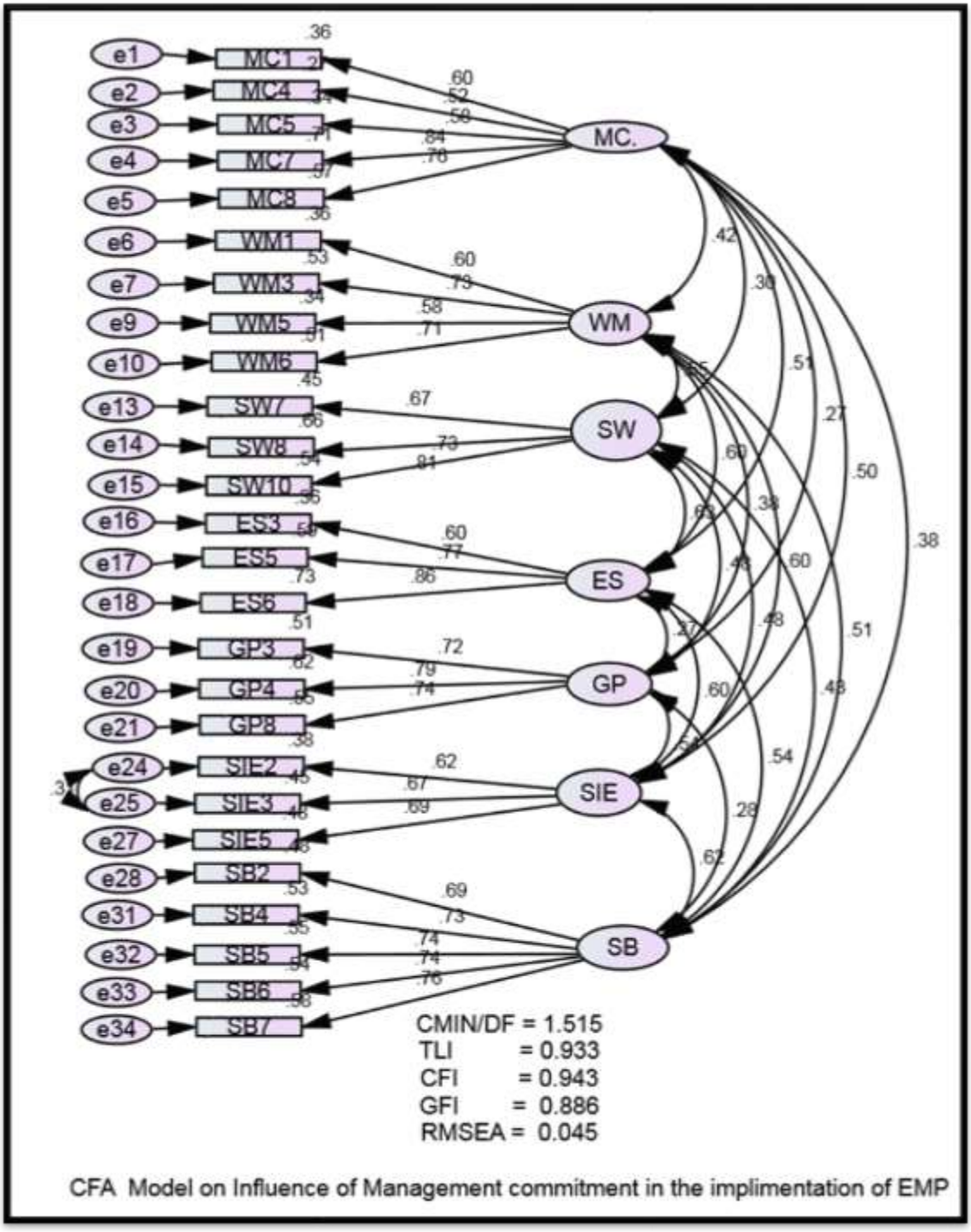

Figure 2: CFA Model on influence of Management Commitment in the Implementation of EMP
Chi-square = 419.785: Degrees of freedom = 277: Probability level = .000

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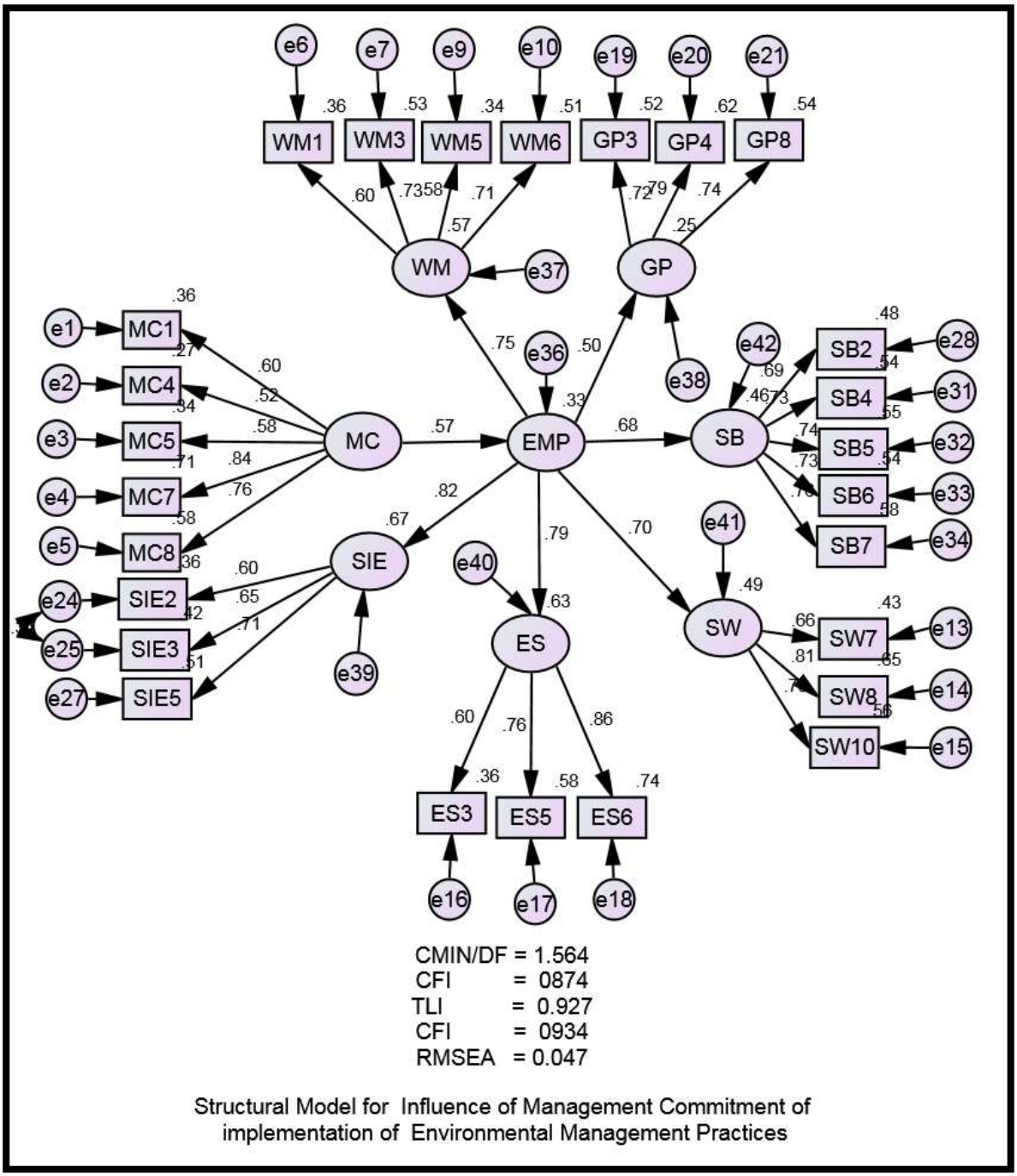

Figure 3: Structural Model for Influence of Management commitment on Implementation of Environmental management Practices

Chi-square = 456.754; Degrees of freedom = 292; Probability level = .000

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