p.ISSN: 2655-2647 e.ISSN: 2655-1470



Green Management Practices and Organisational Efficiency in a Higher Institution

Oladele Thomas Oyetunde¹, Oyenuga Michael Oyedele², Adoga Gloria Jaccinta³

¹Department of Business Administration, Army University, Biu, Borno State, Nigeria

^{2,3}Department of Business Administration, Entrepreneurship and Marketing, Faculty of Management Sciences, Veritas University, Abuja, Nigeria

tomie4real@yahoo.com oyenugam@veritas.edu.ng, gloriaadoga@gmail.com

Abstract

The seventeen United Nations Sustainable Development Goals have become an umbrella which houses many organisational functions and indeed the issue of sustainability has become a major force to be reckoned with in today's world. One of the ways to become sustainable is by going 'green', hence this study set out to evaluate the effects of green management practices on the organizational efficiency in a higher institution. With three other sub-objectives, the study evaluated the effect of green management policy on organisational efficiency, examined the effect of green technology on organisational efficiency and evaluated the effect of green waste management on the organisational efficiency of Veritas University using the Sustainability Theory as its anchor. One hundred and ninety-nine members of staff out of the three hundred and ninety-six formed the sample of the study and they were able to respond to questions using questionnaire as the research instrument. The data analysis technique used for this study was regression and correlation analysis using SPSS with hypotheses tested at 5% level of o=significance. From the findings of the study, it was discovered that the institution employed green policy, green technology, and green waste management and cumulative influence of all green management policy and green technology significant at 5% while green waste management is significant at 10%. Finally, the study concluded that management of higher institutions should increase their engagement in environmentally friendly policies in order to have a more positive impact on the community, which will boost productivity and employee performance.

Keywords green management; green policy; green technology; green waste management; organisational



efficiency

I. Introduction

For organisations to survive in any competitive environment, they are expected to improve the quality of their product and services at a better rate than business rivals do. In such an environment, organisational efficiency is a vital element for continuous improvement in product and service quality (Garlatti, Fedele, Iacuzzi, & Costa, 2019; Sözbilir, 2018). In other words, organisational efficiency is a significant indicator by which the profitability of organisations is measured (Ghosh, Gupta, Chattopadhyay, Banerjee, & Dasgupta, 2016). Organisational efficiency is concerned with the optimal use of resources consumed to accomplish a task or produce goods and services (Ritala, Huotari, Bocken, Albareda, & Puumalainen, 2018). It focuses on processes, policies, and strategies, which are required to guarantee that the use of scarce resources is achieved by continuous, cost reduction and sometimes going green (Javanmard & Hasani, 2017).

Budapest International Research and Critics in Linguistics and Education (BirLE) Journal
Volume 6, No 3, August 2023, Page: 276-290
e-ISSN: 2655-1470 (Online), p-ISSN: 2655-2647 (Print)
www.bircu-journal.com/index.php/birle

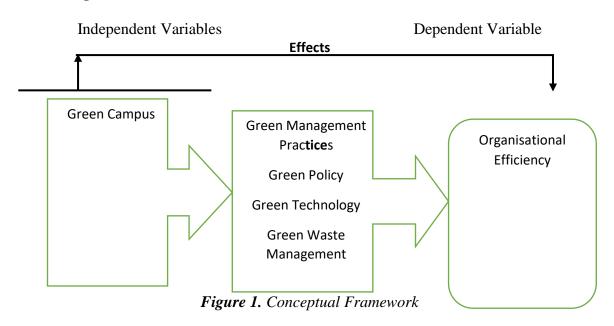
email: birle.journal@gmail.com

The term "green management" was coined at the turn of the twentieth century in response to growing need for economic development. Its origin in modern times can be traced to the middle of the 1960s and it is time for managers to adapt to the "greening" phenomenon and adopt them into its ideology and practice (Čekanavičius, Bazytė, & Dičmonaitė, 2014). It incorporates sustainable operational procedures, product and material sourcing, labor practices, and shipping techniques, as well as the utilization of renewable resources, and it makes itself accountable for the human resource side of its operations. (Fields & Atiku, 2019).

For example, in a university, the green campus is a site where ecologically conscious behavior and education coexist, and where environmentally conscious tenets are demonstrated via initiative and example (Abu Qdais, Saadeh, Al-Widyan, Al-tal, & Abu-Dalo, 2019) which can enhance recycling, limit energy use, and encourage purchase of products with low carbon footprints (Oyenuga, Marcus and Ahungwa 2023). Several dimensions of green management practices like green building, green energy, and green management have been operationalised (Skibińska, & Kott, 2015) however, this research focused on green policy management, green technology, and green waste management. Green policy management was chosen because nothing functions without a guiding rule and policy, also, any stable institution needs to have its foundation on a robust policy management system. Green technology and green energy are like Siamese twins. Green technology, which also goes by the name clean or environmental technology, is the utilisation of technology for developing products and systems that preserve the natural resources, and at the same time help reduce the negative impacts on the environment (Abu Qdais et al., 2019). Green waste management includes the promotion of the 4 R' of waste management, which is, Reduce, Reuse, Renew, and Recycle. The use of this 4R implementation is regarded as an alternative approach to traditional waste management practices existent in the school. Past studies have found that sustainable and green management influences educational facility performance (Oyeyoade, & Araloyin, 2019) and that positive relationship exists between the practices of green management and company performance (Amzi, 2019). However, far too little attention has been paid to the effects of green management practices on organisational efficiency especially in institutions of learning. It is clear that research into the effects of green management practices on organisational efficiency in Nigeria tertiary institutions is currently underexplored, and this has amounted to few literatures focusing on this area in Abuja, Nigeria. The implication of this is the lack of sustainability plan in the higher education sector of Nigeria as well as other sectors. It is based on the problem that this study intends to fill the gap, especially in an institution of higher learning.

II. Review of Literatures

2.1 Conceptual Review



2.2 The Concept of Green Management

Green management is a relatively new concept, and this has made it a bit challenging to come up with a befitting definition for the concept (Loknath and Abdul, 2017). Research on green management and green marketing(Oyenuga et.al 2023) has shown it as activities that produce products that are environmentally friendly thereby reducing negative effects on the environment (Nduji, Orji, Oyenuga & Oriaku C. 2023).

Environmental management and corporate sustainability have overtime been used jointly with green management. The two terms go beyond reducing waste and as such, accurately uphold the idea of green management. It deals with introducing and efficiently using innovation to gain sustainability, waste reduction, social responsibility, and competitive advantage through regular personal learning and development and this is incorporated into the daily running of the organisation in such a way that the goals of the organisation are catered for (Loknath et. al 2017).

2.3 The Concept of Green Management Policy

There is no generally accepted green management policy; this is because green practices are influenced by the nature of operational activities carried out in organisations as well as by the level of development in a nation. Hence, a green policy can best be described as organisational statements and vision to pursue sustainability and environmental management in its daily operations. The green policy of an organisation or institution reveals the amount of commitment the organisation is willing to make towards integrating eco-friendly or green practices in its operations. The content of a typical green management policy will include the following components:

- ▶ A statement revealing the amount of commitment an organisation is willing to make in the improvement of the quality of the environment.
- ▶ A succinct report on what the organisation intends to achieve following the implementation of the environmental goals as well as means to achieve the goals formulated.

- ▶ A declaration of willingness to prevent pollution and to improve continuously environmental performance.
- ▶ A show of interest in securing a safe and healthier environment for employees and members of the community where the organisation is situated.
- ▶ A declaration of approaches and actions the organisation is willing to adopt in meeting its commitments.

2.3 The Concept of Green Technology

Researchers have not agreed on the scope and appropriate conceptual justification of the meaning of green technology. This lack of consensus among scholars gave rise to several conceptual attempts available in works of literature. For some scholars green technology can take various forms, i.e., it can come to inform of a product, service or process which is engineered towards creating economic, environmental and social value through a reduction in resource and energy use as well as reducing ecological contamination (Marra, Antonelli, & Pozzi, 2017; Marra, Antonelli, Dell'Anna, & Pozzi, 2015)

Green technology has been associated with such phrases as cleaner technology, climate-smart, environmentally sound technology, and Eco-friendly technology(Mansour and Yassin 2022), climate-friendly, and low-carbon technology. Whichever be the case, the core element of green technology is its ability to bring out improvements in the quality of the environment and at the same time reduce negative environmental impacts (Schiederig, Tietze, & Herstat, 2014). The idea of green technology is aligned with the notion of green innovation (Jang, Park, Roh, & Han, 2015; Calza, Parmentola, & Tutore, 2017) and it is important for all stakeholders to be kept abreast on how well to get along with the technology which may be a new innovation (Oyenuga, *Andah, Marcus, & Agabi, 2019*) to some.

2.3 The Concept of Green Waste Management

Issues relating to waste management are among the pressing concerns of the 21st century. Waste is generated domestically and industrially daily without a correspondent increase in waste management systems and ranges from decomposable substances like food, fruits and vegetables, grasses, and other plant sources. It also includes such non-decomposable substances as plastics, papers, polythene, metals, batteries, and Air conditioners. A new variation of waste comprehensively called e-waste includes such items as mobile phones, computers, and other kinds of electronic gadgets (Ozbay, and Edurmusoglu, 2017).

The increasingly environmental challenges arising from pollution and the perceived inefficiencies in the traditional waste management system are among the factors that gave birth to the concept of green waste management. Green waste management, therefore, entails the adoption of green principles and practices in the management of waste which can be in form of digital tactics (Oyenuga, Akhaine, and Omale 2023). Green waste management approaches could sufficiently reduce the environmental impact of waste as allow for value creation from items that are already classified as waste. The idea of green waste management and consumer behaviour (Oyenuga, Ahungwa, and Onoja 2021) is aligned with the concept of sustainable waste management as both seek to increase access to opportunities for waste to be diverted from landfills

2.4 Sustainability Theory

Sustainability introduces a model line of thought, championed by long-term and strategic thinking, which has formed a subject of discus in research for the past few decades. Today, more and more emphasises has been placed on the need for people at

individual, and organisational level to incorporate sustainability as well as other environmental policies in the policy, ideologies and mission statements of their businesses, as well as in the daily execution of organisational procedures (Lozano, 2015).

The issue of sustainable and green operations is said to be economical, fair, and has friendly features. Sustainability is built around the three Ps, which stands for People, Planet, and Profit (3P). It is engineered towards seeking and proffering ways and strategies to strike a balance between all this 3P (Hage & Taruna, 2016). Bartlett (2015) defined it as ensuring that future generations are not hindered from meeting their needs. This implies that in as much as the present generations want to maximize their enjoyment and get all that life has in stock for them, they should do so with the mind that after them, there are many others that will still use the same facility and they also deserve to use it to the fullest. Sustainable development is such that resources, though limited, must be well managed so that both present and future generations have equal share (Akintoye & Opeyemi, 2014). Besides, Lele cited in Akintoye & Opeyemi, (2014) describes it as a new way of life where both rich and the poor, young and old have the responsibility to preserve the environment.

2.4 Empirical Review

The impact of green IT adoption on organizational performance was explored by Ainin, Naqshbandi, and Dezdar (2016). Sustainable development is a hotly disputed topic all around the world, and businesses are under increasing pressure to embrace more environmentally responsible methods. Green Information Technology (IT) practices are among the most fundamental, as most businesses use some type of IT to conduct their daily operations. The study's data were gathered through online survey questionnaires sent to 277 managers in charge of IT adoption at companies listed on the Tehran Stock Exchange. The results of structural equation modeling (SEM) revealed a positive association between Green IT practices and institutional pressure, as well as a positive relationship between Green IT practices and organizational performance.

Azmi, Musa, Abdullah, Othman, and Fam (2017) analysed the awareness of green technology in Malaysian. The study focused on the awareness of green practice which is concerted on organisational (Training Programme/TP), environment (Government Regulation & Policies/GRP), and specific context (Knowledge/KG). One hundred and eight questionnaires were retrieved out of 200 that were distributed. The results generated showed KG as the most influencing factor in the awareness of green practice owing to correlation analysis. It was anticipated from the study that green technology is to be well implemented when the individual knowledge understood the practices.

Osuga and Okello (2015) investigated the effects of waste management on the environmental performance of comply timber processing firm in Nakuru county, Kenya. The study was employed in Stakeholder's theory.

A correlational research design was used in this study. All staff in the production, procurement, accounting and finance, and marketing divisions contributed to the data collection. Structured questionnaires were presented to them. SPSS version 21 was used to code and analyze the data gathered. The independent and dependent variables were explained using descriptive statistical analysis, while the influence of sustainable procurement on environmental performance was tested using inferential statistical analysis and correlation analysis.

The findings revealed that waste management improves environmental performance. According to the report, organizations should have documented waste management policies in order to improve their environmental performance. Further research is needed to determine the involvement of the end consumer in the adoption of waste management systems and the improvement of an organization's environmental performance.

III. Research Methods

The population of this study comprised of academic and non-academic staff of Veritas University, Abuja in Nigeria which has a total population of 396 as of July 2021 with 216 and 180 academic and non-academic staff respectively (VUNA Human Resource Department, 2021). To arrive at sample size of 199, the researcher adopted Taro Yamane formula sampling technique. This study employed the use of cross-sectional research design while data analysis technique used for this study was regression and correlation analysis with hypotheses tested at 5% level of o=significance

3.1 Test of Hypothesis

H₀₁: There is no significant effect of green management policy on organisational efficiency of Veritas University Abuja.

Table 1. Green Management Policy

	Statements		SD	D	SA	A	SA	SUM	MEAN	STD
1	The management of my institution is	No	1	1	7	41	39	89	4.30	.759
	highly committed to environment-friendly policies	%	1.1	1.1	7.9	46.1	43.8	100		
2	Our institution is open to adopting new or	No		1	4	51	33	89	4.30	.610
	improves existing management system	%		1.1	4.5	57.3	37.1	100		
	with respect to									
	policies and practices									
3	Our management ensures that our	No		1	16	53	19	89	4.01	.665
	operation and service activities are	%		1.1	18	49.6	21.3	100		
	environment-friendly									
4	The management of our institution takes	No		10	16	44	19	89	3.81	.902
	initiatives to raise awareness about the	%		11.2	18	49.4	21.3	100		
	environmental issues									
	and impacts of									
	business operations									

Source: Research Data, (2021)

From table 1, respondents agreed that management of the institution is highly committed to environment-friendly policies and the institution is ready to adopt new or improves the status quo with respect to policies and practices as shown by the mean scores of 4.30 on GMP1 and GMP2 respectively. They also agreed that management ensures operation and service activities are environment-friendly and that the institution takes initiatives to raise awareness about the environmental issues and impacts of business operations. $H_{02:}$ There is no significant effect of green technology on organisational efficiency of Veritas University Abuja

 Table 2. Green Technology/ICT

	Table 2. Green Technology/101									
	Statements		SD	D	SA	A	SA	SUM	MEAN	STD
1	This institution uses	No		23	30	28	7	88	3.21	.927
	equipment that reduce							100		
	fuel consumption	%		26.1	34.3	31.8	8			
2	This institution has	No		2	22	45	20	89	3.93	.750
	electronic devices like							100		
	air conditioner, solar	%		2.2	24.7	50.6	22.5			
	panels, power saving									
	bulbs for conservation									
	of the natural									
	environment and									
	resources									
3	This institution has	No		17	37	26	9	89	3.30	.897
	made greater use of							100		
	green technology/ICT	%		19.1	41.6	29.2	10.1			
4	This institution uses	No	3	12	42	26	4	87	3.18	.856
	renewable energy	%	3.9	13.3	48.3	29.9	4.6	100		
5	This institution has	No	2	25	32	21	9	89	3.11	1.00
	through modern							100		4
	technology has green	%	2.2	28.1	36	23.6	10.1			
	infrastructures									
	(buildings)									

Source: Research Data, (2021)

In considering the institution's implementation of green technology, respondents were in agreement that the institution has electronic devices like air conditioners, solar panels, power saving bulbs for the conservation of the natural environment, and resources with a mean score of 3.93.

 $H_{03:}$ There is no significant effect of green waste management on organisational efficiency of Veritas University Abuja

 Table 3. Green Waste Management

	Statements		S	D	SA	A	SA	SUM	MEA	
			D						N	STD
1	This institution has	No	1	19	22	33	14	89	3.45	1.03
	proper pollution							100		3
	control and	%	1.1	21.3	24.4	37.1	15.7			
	Management									
2	This institution has	No		5	17	43	24	89	3.96	.831
	proper waste disposal	%		5.6	19.1	48.3	27	100		
3	The working	No		1	5	59	24	89	4.19	.581
	environment in this							100		
	institution is clean	%		1.1	5.6	66.3	27			
4	This institution takes	No		1	14	46	28	89	4.13	.710
	the hygiene and safety							100		
	of workers and	%		1.1	15.7	51.7	31.5			
	communities seriously									

Source: Research Data, (2021)

From the table above, respondents agree that the institution has proper waste disposal, working environment in this institution is clean and the institution takes the hygiene and safety of workers and communities seriously and work methods techniques and procedures in the past three years. The respondents also expressed their agreement with the statement that the institution has proper pollution control and Management with a mean score of 3.45.

Table 4. Organizational Efficiency

	Statements		V	\mathbf{W}	N	G	VG	SUM	MEA	
			W						N	STD
1	Improvement in work	No	2	6	14	49	18	89	3.84	.903
	methods techniques and							100		
	procedures in the past	%	2.2	6.7	15.7	55.1	20.2			
	three years									
2	Development of	No	3	10	7	43	26	89	4.24	3.24
	competencies and skills							100		4
	of personnel during the	%	3.4	11.2	7.9	48.3	29.2			
	past three years									
3	Improvement in the	No		4	12	44	29	89	4.10	.798
	quality of services							100		
	during the past three	%		4.5	13.5	49.4	32.6			
	years									
4	Speed of providing	No	3	7	9	46	24	89	3.91	.995
	services in the past three							100		
	years	%	3.4	7.9	101	51.7	27			
5	Responsiveness to	No	1	5	6	41	36	89	4.19	.877
	students' needs in the							100		
	past three years	%	1.1	5.6	6.7	46.1	40.4			

Source: Research Data, (2021)

Table 4 shows that respondents were in agreement and consensus with all the statements that indicates organisational efficiency in the university. Specifically, they agree that in the past three years there has been improvement in work methods techniques and procedures, development of competencies and skills of personnel, improvement in the quality and speed of services delivery and improved responsiveness to students' need. Correlation Matrix

Table 5. Correlation between Green Policy and Organizational Efficiency

		GMP	OE
	Pearson Correlation	1	.266*
GMP	Sig. (2-tailed)		.012
	N	89	89
	Pearson Correlation	89 .266*	1
OE	Sig. (2-tailed)	.012	
	N	89	89

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data, using SPSS (2021)

Table five above shows the relationship between Green Policy and Organizational Efficiency. However, the result revealed a mild relationship between the variables with a correlation value of 0.266, the calculated p value (0.012) which is less than α level of significance (0.05), which shows that the relationship between Green Policy and Organizational Efficiency is significant, hence we reject the hypothesis.

Table 6. Correlation between Green Technology and Organizational Efficiency

		GTECH	OE
CTECH	Pearson Correlation	1	.259*
GTECH	Sig. (2-tailed)		.014
	N	89	89
OE	Pearson Correlation	.259*	1
OE	Sig. (2-tailed)	.014	
	N	89	89

^{*.} Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data, (2021)

The findings in the table above suggested that there was a correlation between Green technology and Organizational Efficiency (r=0.259). Since the p value of 0.014 is less that α value (0.05), we conclude that green technology has a significant correlation with organisational efficiency. The results shows that the relationship is mild and not so strong (r = 0.259).

Table 7. Correlation between Green Waste Management and Organizational Efficiency

	GWM	OE
Pearson Correlation	1	.487**
Sig. (2-tailed)		.000
N	89	89
Pearson Correlation	.487**	1
Sig. (2-tailed)	.000	
N	89	89

^{**.} Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data, (2021)

The results in above table 4.7 show the relationship between Green waste management and Organizational Efficiency. The results shows that the relationship between the variables with r =0.487 is moderate. Since the p value (0.000) is less than α level (0.01), we conclude that relationship between Green waste management and Organizational Efficiency is significant.

3.2 Regression Analysis

The regression analysis is based on the underspecified analytical model.

 $Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + e$

Where:

Y = composite measure of Organisational efficiency

 X_1 X_2 X_3 = Green Management Policy (GMP), Green Technology (GTECH), and Green Waste Management (GWM)

 b_0 = intercept of the regression model

 $b_1 b_2 b_3 = coefficient of the regression model$

e = error term. The results are discussed in tables 4.8, 4.9 and 4.10.

Table 8. Regression coefficient analysis **Regression Coefficients Table**

Mo	odel	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		В	Std. Error	Beta		
	(Constant)	.687	.792		.868	.388
1	GMP	.079	.199	.044	.400	.690
1	GTECH	225	.230	125	982	.329
	GWM	.966	.234	.548	4.119	.000

a. Dependent Variable: OE

Source: Regression Result Using SPSS

The regression table above shows the relationship between the components of green management practices and organisational efficiency. From the table, the estimated model is thus:

The established regression equation was:

 $Y = 0.687 + 0.044_1 + -.125_2 + 0.548_3 + E$

When all other independent variables are maintained constant, the beta values show how much each independent variable affects the dependent variable. The regression coefficients showed the effects of all the independent variables, Green Policy, Green Technology and Green Waste Management on Organisational Efficiency were tested for significance at alpha = 0.05. Significance occurs at p-values less than 0.05. The researchers were also able to determine the most influential predictor variables in the regression model using the t-statistics shown in table 8 above. The independent variable is a significant predictor of the outcome variable if the computed t-statistic is greater than the t critical (=0.05) value, and the greater the calculated t-statistic, the better the predictability of the variable. The study established that the effects of two of the independent variables, Green Policy and Green Technology on Organisational Efficiency is not significant; this is following the fact that the p value for both variables are greater than 0.05. Specifically, the Green Policy (p =0.690>0.05) and Green Technology (p=0.329>0.05). With this, we can accept the first and second null hypothesis of the study, which stated that there is no significant effect of green management policy on organisational efficiency of Veritas University Abuja, and there is no significant effect of green technology on organisational efficiency of Veritas University Abuja respectively. The influential and only significant predictor variable in the regression model was Green Waste Management with a t calculated value of 4.119 and a p value of 0.000<0.05. We therefore reject the third null hypothesis and conclude that green waste management has a significant effect on organisational efficiency of Veritas University Abuja.

Furthermore, the results shows that if all the other independent variables remain the same, a unit increase in Green Policy will result in a + 0.044 increase in Organisational Efficiency. Whereas, a unit increase in Green Technology, assuming all other factors are held constant will result in -.125 decrease in Organisational Efficiency and a unit increase in Green Waste Management will result in a 0.548 increase in Organisational Efficiency.

Table 9. Regression Model Summary

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497ª	.247	.220	.89366

a. Predictors: (Constant), GWM, GMP, GTECH

Source: Research Data, (2021)

From the regression summary in table 4.9 above, the R squared (R2) value of 0.247 shows that 24.7% of the organizational efficiency is explained by the components of green management practice used in this study. The remaining 75.3% is attributable to other factors that are not part of the model.

Table 10. ANOVA
ANOVA

Mo	del	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	22.213	3	7.404	9.271	.000 ^b
1	Residual	67.883	85	.799		
	Total	90.096	88			

a. Dependent Variable: OE

b. Predictors: (Constant), GWM, GMP, GTECH

Source: Research Data, (2021)

Table 10 shows the calculated F-value of 9.271, which is significant at 0.05 in the ANOVA findings. Fcritical (3, 85) = 2.712 at 0.05, according to the F-distribution table. As a result, the null hypothesis of zero regression coefficients is rejected, and the conclusion is that the regression model is truly predictive. Furthermore, this means that the regression model and the data are compatible, and thus regression analysis is justified.

IV. Discussion

The major finding of this research is that the green management in Veritas University Abuja has a significant relationship with the organizational efficiency during the period of the study. However, this relationship does not imply dependency among all the variables. Therefore, not all the independent variable had a significant effect on organizational efficiency.

The first hypothesis tested led to the first finding on whether or not green management policy has a significant effect on organisational efficiency of Veritas University Abuja. Though the correlation analysis showed significant positive relationship between the green management policy and organisational efficiency, the regression result showed that green management policy does not have a significant effect on organisational efficiency. This implies that the connection between environmental policies and organisational efficiency is such that environmentally friendly policies can promote the working condition in the university but may not necessarily lead to improved productivity. The finding gave answers to the first research question as well as met the corresponding research objective.

The second hypothesis tested gave the second findings of the study on whether or not Green technology has effect on organisational efficiency of Veritas University Abuja. The correlation analysis showed significant relationship between the Green technology and organisational efficiency, this means that various levels of organisational operation are linked to the adoption of Green IT practices. However, the regression analysis showed that the Green technology does not have a significant impact on the overall organizational efficiency. This can be attributed to the fact that the adoption of Green IT practices may not necessarily imply the full utilization of green technology for productive purposes. The finding gave answers to the second research question as well as met the corresponding research objective.

The third hypothesis of this study was tested which led to the third finding that Green Waste Management is related to Organisational Efficiency of Veritas University Abuja. It implies that sustainable environmental waste management strategies can foster a favourable and serene teaching and learning environment within and outside the university, which can lead to efficiency. This finding was supported by Jovita, Chibuzor, and Onyemachi (2019), according to them, green waste recycling has a positive and significant effect on cost and pollution reduction. The finding gave answers to the third research question as well as met the corresponding research objective.

Overall, the theory and findings of this work are very much related because it outlined factors related to organisational compliance with environmental standards. The model suggests that a corporation gains a competitive advantage over competitors by adopting excellence and leading edge, which was captured as state-of-the-art environmental management practices. The ultimate goal of sustainability in institution of learning is that educational systems can be organised in a sustainable way. This is based on the belief that institutions begin their quest to meet society's needs by being careful with waste management and producing environmentally friendly services; thus, policies aimed at protecting the natural environment can generate economic value for the firm.

V. Conclusion

Given the findings of this study, the following conclusions were made. Green management policies have mild significant impact on the organisational efficiency of Veritas University Abuja. This result was somewhat in line with our expectation, as environmentally friendly policies would lead to higher productivity and impact positively on the overall organisations performance. It was also concluded that Green Technology and ICT has little or no significant effect on the organisational efficiency of Veritas University Abuja. In theory, green infrastructure and environmentally friendly technology can improve operational efficiency and thus affecting performance.

Finally, it was concluded that Green Waste Management largely influences the organisational efficiency of Veritas University Abuja. This result was expected because the efficient waste management policies provide a serene environment for the school to operate thus it reduce conflict with the host community, thereby enabling a conducive environment of learning and work.

Recommendation

In line with the findings and conclusions of this study along the lines of the times, it is recommended that:

Management should cut down on waste generating practices. For instance, the amount of paper waste generated should be reduced by embracing e-learning, electronic filling, documentation and communications approaches. Other forms of solid and non-solid waste could also be effectively managed based on green waste management principles.

The management of Veritas University Abuja, Nigeria and indeed other universities should improve their participation in environmentally friendly policies to affect the community better, which will in turn improve organisational efficiency. Regulatory authorities should ensure participation and in compliance with the principles of sustainable development, that underpins the concept of environmental responsibility. These practices should be extended beyond the university to the community they are operating in. This will go a long way in improving a peaceful environment and performance in general.

The government should work closely with the educational institutions to support economic development and management of environmental responsibility dialogue with the business world and other stakeholders in determining common standards, reporting mechanisms, and the extent to which they should be responsible.

References

- Abu Qdais, H., Saadeh, O., Al-Widyan, M., Al-tal, R., & Abu-Dalo, M. (2019). Environmental sustainability features in large university campuses: Jordan University of Science and Technology (JUST) as a model of green university. International Journal of Sustainability in Higher Education, 20(2), 214–228.
- Ainin, S., Naqshbandi, M. M. & Dezdar, S. (2016). Impact of adoption of green IT practices on organisational performance. Journal of Quality and Quantity, 50 (5), 1929-1948.
- Akintoye, V. A., & Opeyemi, O. A. (2014). Prospects for Achieving Sustainable Development Through the Millennium Development Goals in Nigeria. European Sustainable Development, 3(1). https://doi.org/10.14207/ejsd.2014
- Azmi, F. R., Musa, H., Abdullah, A. R., Othman, N. A. & Fam, S. (2017). Analysing the awareness of green technology in Malaysia practices. Proceedings of Mechanical Engineering Research Day, 252-254.
- Calza, F.; Parmentola, A.; Tutore, I. (2017). Types of Green Innovations: Ways of Implementation in a Non-Green Industry. Sustainability
- Čekanavičius, L., Bazytė, R., & Dičmonaitė, A. (2014). Green business: challenges and practices. Ekonomika, 93(1), 74–88.
- Fields, Z., & Atiku, S. O. (2019). Collective Green Creativity and Eco-Innovation as Key Drivers of Sustainable Business Solutions in Organisations. In Green Business: Concepts, Methodologies, Tools, and Applications (415–439). IGI Global.
- Garlatti A.,Fedele P., Iacuzzi S. & Costa G.C, (2019). Coproduction and cost efficiency: a structured literature review. Journal of Public Budgeting, Accounting & Financial Management, 32(1), 114-135, https://doi:10.1108/JPBAFM-12-2018-0142
- Ghosh, R., Gupta, A., Chattopadhyay, S., Banerjee, A., &Dasgupta, K. 92016). CoCOA: a framework for comparing aggregate client operations in BPO services. In 2016 IEEE International Conference on Services Computing (SCC) 539-546. IEEE
- Hage T.&Dr. Taruna (2016). Green management: Road to sustainability & corporate efficiency. International Journal of Applied Research; 2(1): 586-590.
- Jang, E.K.; Park, M.S.; Roh, T.W.; &Han, K.J. (2015). Policy Instruments for Eco-Innovation in Asian Countries. Sustainability 12586–12614.
- Javanmard, H., & Hasani, H. (2017). The Impact of Market Orientation Indices, Marketing Innovation and Competitive Advantages on the Business performance in Distributer Enterprises. The Journal of Industrial Distribution & Business, 8(1), 23-31 https://doi.org/10.13106/ijidb.2017

- Jovita, O. U., Chibuzor, A. A. & Onyemachi, U. C. (2019). Green management and organisational effectiveness. Strategic Journal of Business and Social Science, 2 (2): 1-23.
- Loknath, Y. & Abdul Azeem, B. (2017). Green management- concepts and strategies. National conference on marketing and sustainable development.
- Mansour, M.H &Yassin A.A (2022) The Impact of Digital Education Skills on Basic School Teachers from Their Perspective in Irbid Governorate Britain International of Linguistics, Arts and Education(BIoLAE) Journal 4(2)107-122 https://doi.org/10.33258/biolae.v4i2.692
- Marcus, G.O, Oyenuga M.O & Ahungwa A.I(2020). Effects of Sales Promotion on Consumer Buying Behaviour of Food Seasoning Among Nigerian Households: A Case Study of Nestle Maggi Naijapot. Budapest International Research and Critics Institute Journal(BIRCIJournal)Vol.3(1),134-139.
- Marra, A.; Antonelli, P.; Dell'Anna, L.; &Pozzi, C. (2015). A network analysis using metadata to investigate innovation in clean-tech-Implications for energy policy. Energy Policy 86, 17–26.
- Marra, A.; Antonelli, P.; &Pozzi, C. (2017). Emerging green-tech specializations and clusters—A network analysis on technological innovation at the metropolitan level. Renew. Sustain. Energy Rev. 67, 1037–1046.
- Nduji R., Orji M., Oyenuga M & Oriaku C. (2023). Assessing e-business and organisational performance in Nigeria today: evidence from Jumia Ltd, Lagos. Britain International of Humanities and Social Sciences Journal 5(2), 81-92 https://doi.org/10.33258/biohs.v5i2.8977
- Ngniatedema, T. and Li, S. (2014). Green operations and organisational performance. International Journal of Business and Social Science, 5 (3): 50-58.
- Osuga, V. and Okello, B. (2015). Waste management and its effects on environmental performance of comply timber-processing firm in Nakuru County, Kenya. International Journal of Economics, Commerce and Management, 3 (6): 281-297.
- Oyenuga M.O, Marcus, G.O & Ahungwa A.I(2023). Do Consumers Care About Green Marketing Practices? Insight From A Developing Nation. Budapest International Research and Critics Institute Journal(BIRCIJournal) 6(3), (1424-1436) https://doi.org/10.33258/birci.v6i3.76655.
- Oyenuga M.O, Akhaine M. E, Omale S.A (2023). We need it: How Digital Marketing Tactics Influence the Purchasing Behaviour of Nigerian Millenials. Konfrontasi Journal: Culture, Economy and Social Changes, 10(2), 91-105 https://doi.org/10.33258/konfrontasi2.v10i2.275
- Oyenuga M.O, Ahungwa A.I, Onoja E. (2021). Effect of Brand Equity on consumer behaviour among students of Veritas University, Nigeria: A Study of Apple Smartphones. Marketing and Branding Research 8(2021) 48-64 https://doi.org/10.33844/mbr.2021.60329
- Oyenuga, M.O; Andah R.A; Marcus, G.O & Agabi, A.U (2019). Effects of Customer Relationship Management on Product Innovation in Nigeria. A Case Study of Xerox HS Nigeria Limited. American Journal of Theoretical and Applied Business. Vol.5(4), 113- 126. https://doi.org/10.11648/j.ajtab.20190504.15
- Oyeyoade, F.S., & Araloyin F.M.(2019): The Influence of Sustainability and Green Management Concepts on Educational Facility Performance in Nigeria Real Estate Management and Valuation, 27(2), 77-96 https://doi.org/10.2478/remay-2019-00177
- Ozbay, I., Mohammed M., & E. Durmusoglu, (2017). "Biodrying waste with high moisture content," Process Safety and Environmental Protection, 2017. 420-427.

- Ritala, P., Huotari, P., Bocken, N., Albareda, L., & Puumalainen, K. (2018). Sustainable business model adoption among S&P 500 firms: A longitudinal content analysis study. Journal of Cleaner Production, 170, 216–226.
- Schiederig, T.; Tietze, F.; & Herstatt, C. (2014). Green innovation in technology and innovation management—An exploratory literature review. R&D Management. 42, 180–192.
- Skibińska, W.,&Kott, I. (2015) The Challenges Of Contemporary Management Revista Economica 67(6)
- Sözbilir F. (2018) The interaction between social capital, creativity and efficiency in organizations, thinking Skills and creativity 27(3) 92-100 https://doi.org/10.1016/j.tsc.2017.12.006