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PROACTIVE PERSONALITY AND EMPLOYEES' GREEN BEHAVIOUR IN FEDERAL UNIVERSITY DUTSIN-MA, KATSINA STATE

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ABSTRACT: Environmental sustainability in organizations has gained increasing attention, with employees' green behaviour (EGB) emerging as a critical factor in achieving sustainability goals. This study examines the effect of proactive personality on EGB, focusing on three dimensions: initiative-taking (INT), change orientation (CO), and persistent in goal achievement (PGA). Conducted at Federal University Dutsin-Ma (FUDMA), Nigeria, the study is grounded in Trait Activation Theory (TAT) and Self-Determination Theory (SDT). A quantitative approach was adopted, utilizing survey data from 370 teaching and non-teaching staff selected through purposive sampling from a population of 3,413. Descriptive statistics and multiple regression analysis were employed to assess the strength of relationships between proactive personality traits and EGB. Findings reveal that initiative-taking ($t = 9.532$, $p = 0.000$), change orientation ($t = 5.023$, $p = 0.001$), and persistent in goal achievement ($t = 2.231$, $p = 0.001$) significantly and positively influence EGB. The model explains 67.1% of the variance in EGB (Adjusted $R^2 = 0.671$), demonstrating the substantial role of proactive personality traits in fostering eco-friendly behaviours such as waste reduction, energy conservation, and sustainability advocacy. Based on these findings, the study recommends organizational support, incentives, and sustainability training programs to reinforce pro-environmental behaviours. The study contributes to theory by extending proactive personality research to environmental behaviour and offers practical insights for policymakers and administrators to integrate green initiatives into institutional policies.

Keywords: Employee Green Behaviour; Proactive Personality; Initiative-Taking; Change-Orientation; Persistence in Goal Achievement

INTRODUCTION

In recent years, the global emphasis on environmental sustainability has underscored the critical role of employee green behaviour (EGB) in organizational settings. Zhang et al. (2024) define EGB as employees' intentional actions aimed at minimizing environmental harm, which not only enhance ecological conditions but also shape individual and institutional sustainability attitudes. Organizations striving for sustainable development acknowledge that employees' proactive participation in eco-friendly practices significantly contributes to environmental performance and corporate social responsibility initiatives (Han et al., 2024).

Employees who engage in green behaviours serve as catalysts for broader sustainability efforts, fostering a culture of environmental responsibility within their workplaces. This involvement

facilitates resource conservation, ensures regulatory compliance, and enhances corporate reputation (Nguyen et al., 2023). Additionally, research suggests that EGB strengthens an organization's sustainability framework and enhances its public image (Amini et al., 2024).

Within the Nigerian context, universities play a crucial role in promoting sustainability by incorporating green initiatives into their academic curricula, research activities, and operational frameworks. The establishment of sustainability centres and the inclusion of environmental studies in academic programs represent key steps toward cultivating ecological responsibility (Centre of Excellence for Sustainable Environment and Social Inclusion, n.d.). However, challenges such as inadequate funding, infrastructural deficits, and limited awareness continue to impede the full implementation of these sustainability measures (Odia, 2020).

Despite growing interest in sustainability within Nigerian universities, there remains a gap in empirical research investigating the determinants of EGB in these institutions. In particular, the influence of individual personality traits on EGB remains underexplored. Since proactive employees are more likely to take initiative in environmental activities, it is essential to examine the role of proactive personality dimensions—initiative-taking, change orientation, and persistence in goal-achievement—in shaping EGB within higher education institutions.

To address this gap, this study poses the following research questions:

1. How does initiative-taking influence employee green behaviour in Nigerian universities?
2. What is the effect of change orientation on employee green behaviour?
3. To what extent does persistence in goal- achievement impact employee green behaviour?

Theoretically, this research contributes to the limited body of literature on personality traits and EGB by examining how specific proactive personality dimensions influence employees' environmental behaviours within the university setting. Practically, the findings can inform the design of training programs and institutional policies that encourage sustainability-driven behaviours among university staff and students. From a policy standpoint, insights from this study may aid in developing institutional strategies aimed at fostering a culture of sustainability within Nigerian universities.

By exploring the relationship between proactive personality traits and EGB, this study provides actionable insights to enhance environmental sustainability efforts in higher education institutions.

Hypotheses of the Study

Based on the research objectives, the following hypotheses are proposed:

H_{01}: There is no significant relationship between initiative-taking and employees' green behaviour at Federal University Dutsin-Ma, Katsina State.

H_02: There is no significant effect of change orientation on employees' green behaviour at Federal University Dutsin-Ma, Katsina State.

H_o3: There is no significant relationship between persistence in goal achievement and employees' green behaviour at Federal University Dutsin-Ma, Katsina State.

LITERATURE REVIEW

This section reviews the concepts of employees' green behaviour and proactive personality.

Concept of Employees' Green Behaviour

The conceptualization of employee green behaviour has been explored from multiple scholarly perspectives, each offering a unique dimension to understanding how employees contribute to environmental sustainability in the workplace.

To begin with, Task-Related Green Behaviour encompasses environmentally friendly actions embedded within an employee's formal job responsibilities. For example, a facilities manager ensuring the installation and maintenance of energy-efficient systems directly enhances an organisation's sustainability objectives (Kim et al., 2023).

Beyond mandated roles, employees may engage in Voluntary Green Behaviour, which involves discretionary efforts that go beyond job requirements. Such actions include initiating a workplace recycling program or participating in environmental awareness campaigns, and demonstrating a personal commitment to sustainability (Chen & Wu, 2022).

Closely related to voluntary actions, Eco-Initiative refers to proactive endeavors where employees propose and implement innovative ideas aimed at improving an organization's environmental performance. This could involve advocating for the transition to renewable energy sources or devising waste-reduction strategies (Zhang & Li, 2022).

Furthermore, Eco-Civic Engagement captures an employee's participation in organizational activities dedicated to environmental responsibility. Serving on a sustainability committee or leading green training sessions for colleagues exemplifies this form of engagement, reinforcing an organization's collective commitment to eco-friendly practices (Ahmad et al., 2023).

Lastly, Green Advocacy represents efforts where employees actively champion environmental initiatives within their workplace. This may involve encouraging peers to adopt sustainable habits or lobbying for stronger organizational commitments to environmental policies (Nguyen et al., 2024).

In the context of this study, employees' green behaviour is conceptualized as discretionary actions that employees undertake beyond their formal duties to support environmental sustainability, highlighting the role of personal initiative in fostering a greener workplace.

Concept of Proactive Personality

Proactive personality is the tendency to take initiative, seek opportunities, and create positive change in one's environment (Akkermans, 2023). Unlike reactive approaches, proactive individuals anticipate challenges and address them early (The-Definition.com, 2023).

These individuals drive innovation by challenging norms and implementing improvements, thus becoming agents of change (Liu et al., 2022; Zhou et al., 2022). For this study, proactive personality refers to the inclination to anticipate and shape one's environment, a critical trait for fostering innovation and achieving success in dynamic settings.

Initiative-Taking

Frese and Fay (2001) define initiative-taking as proactive, self-starting behaviour aimed at overcoming obstacles and achieving goals. It involves independent action and responsibility (Kohli & Sharma, 2022). Brockner et al. (2022) view it as a means of improving systems, while Kukreja et al. (2023) emphasize its role in ambiguous situations.

For this study, initiative-taking is defined as identifying opportunities and taking decisive action to drive innovation and growth despite uncertainties.

Change Orientation

Change orientation focuses on adapting to trends and disruptions to maintain competitiveness (Manu, 2022). It includes supporting innovation and fostering a culture of continuous improvement (Smith et al., 2022; Li & Zhou, 2023). Davis (2023) highlights leaders' role in promoting strategic change.

For this study, change orientation is defined as a proactive attitude toward embracing and driving change to ensure adaptability and growth.

Persistence in Goal Achievement

Persistence involves sustained effort toward goals despite setbacks, emphasizing resilience and long-term focus (Berkeley Well-Being Institute, 2022; Locke & Latham, 2022). It reflects a commitment to achieving meaningful outcomes (Duckworth et al., 2022).

For this study, persistence refers to unwavering effort and adaptability in overcoming challenges to achieve objectives.

Theoretical Framework for the Study

This study integrates Trait Activation Theory (TAT) and Self-Determination Theory (SDT) to provide a comprehensive theoretical foundation.

Trait Activation Theory (TAT)

Trait Activation Theory (TAT), proposed by Tett and Burnett (2003), posits that personality traits manifest in behaviour when triggered by relevant situational cues. In the context of this study, employees with a proactive personality—characterized by initiative-taking, change orientation, and persistence goal orientation—are more likely to engage in green behaviour when workplace conditions activate their pro-environmental disposition.

For instance, organizational sustainability policies, green leadership, and environmental management systems serve as activating stimuli that encourage proactive employees to engage in green workplace behaviours. These individuals are likely to seek opportunities to implement eco-friendly initiatives, advocate for sustainability policies, and contribute to organizational environmental efforts. Thus, TAT helps explain why some employees actively engage in environmental sustainability while others remain passive despite having the same organizational resources.

Self-Determination Theory (SDT)

Self-Determination Theory (Deci & Ryan, 1985) provides further insight into how intrinsic motivation fuels employees' engagement in discretionary green behaviours. The theory distinguishes between autonomous motivation (driven by personal values and interest) and controlled motivation (driven by external pressures or rewards).

Employees with a proactive personality are intrinsically motivated to take initiative, embrace change, and persistently pursue environmentally sustainable actions. Their engagement in voluntary green behaviours, eco-initiatives, and green advocacy is often self-driven rather than merely responding to external regulations. Organizations that foster a sense of autonomy, competence, and relatedness in sustainability efforts will likely enhance the intrinsic motivation of proactive employees to champion green behaviours.

Integration of Theories in the Study

By integrating Trait Activation Theory (TAT) and Self-Determination Theory (SDT)**,** this study posits that employees with proactive personalities are more likely to engage in green behaviours when workplace environments provide the necessary activation cues (as per TAT) and when intrinsic motivation drives their commitment to sustainability (as per SDT).

This theoretical framework offers a dual perspective:

1. TAT explains the situational conditions that activate proactive individuals' engagement in green behaviours.
2. SDT highlights the motivational factors that sustain and reinforce their commitment to sustainability initiatives.

Thus, this study advances the understanding of how and why proactive employees engage in green behaviour, contributing to both theoretical discourse on workplace sustainability **and** practical strategies for fostering a green organizational culture.

Review of Empirical Studies

Research exploring the direct relationship between proactive personality and employees' green behaviour is relatively limited. However, existing studies provide valuable insights into how proactive personality influences environmentally friendly actions in the workplace. For instance,

A literature review by Nguyen et al. (2024) in Vietnam's education sector identified proactive personality as a key predictor of green behaviour. The study emphasized the need for future research to explore this relationship in diverse cultural contexts, suggesting that proactive individuals are more likely to engage in environmentally friendly behaviours across various settings.

A study by Kim et al. (2023) in the South Korean manufacturing sector examined how proactive personality affects task-related green behaviour. The researchers surveyed 350 employees and used Structural Equation Modeling (SEM) for data analysis. The findings revealed that individuals with proactive personalities are more inclined to engage in environmentally friendly tasks, especially when they exhibit high levels of employee engagement.

In Pakistan's banking sector, Ahmad et al. (2023) examined how proactive personality influences green behaviour through green commitment. Surveying 400 bank employees and analyzing the data using SEM, the study found that proactive personalities enhance green behaviour by fostering a strong commitment to environmental goals, with organizational support further strengthening this relationship.

In the Chinese hospitality industry, Chen and Wu (2022) investigated the role of intrinsic motivation in mediating the relationship between proactive personality and voluntary green behaviours. The study surveyed 280 hotel employees using a mixed-methods approach and analyzed the data through regression analysis. Results indicated that employees with proactive personalities are more likely to initiate and participate in voluntary environmental initiatives, driven by their intrinsic motivation.

Zhang and Li (2022) focused on the information technology sector in China to explore the mediating role of eco-initiative between proactive personality and green behaviour. With a sample of 310 IT professionals, the study utilized hierarchical linear modelling for data analysis. The research concluded that proactive individuals are more likely to take eco-initiatives, which in turn lead to increased green behaviours in the workplace.

Furthermore, Farooq et al. (2021) explored the moderating role of green transformational leadership in the relationship between proactive personality and employee green behaviour in Pakistan’s banking sector. Analysing data from 380 employees using hierarchical linear modelling, the study found that green transformational leadership strengthens the positive effect of proactive

personality on green behaviour. This suggests that leadership commitment to sustainability plays a crucial role in motivating proactive employees to engage in environmentally responsible actions.

In the hospitality industry, Fawehinmi et al. (2020) examined the role of green training in enhancing employee green behaviour in Malaysia. With a sample of 320 hotel employees, the study used regression analysis to determine that proactive employees benefit more from green training programs, as they are inclined to apply the knowledge gained to implement eco-friendly workplace practices. This study highlighted the importance of employee development programs in reinforcing the proactive personality-green behaviour link.

Tian and Robertson (2019) explored the mediating role of environmental passion in the relationship between proactive personality and pro-environmental behaviour in the U.S. manufacturing sector. Surveying 450 employees and utilizing structural equation modelling (SEM), the study revealed that proactive individuals are more likely to engage in green behaviour when they possess a strong passion for environmental issues. This underscores the importance of intrinsic motivation in fostering sustainability-oriented workplace behaviours.

Wang and Peng (2018) conducted a study across multiple industries in China to examine how a pro-environmental passion climate influences employees' green behaviour. Using a sample of 873 employees, the study employed regression analysis to establish that workplaces fostering a strong environmental passion climate encourage employees with proactive personalities to engage in sustainability initiatives. The findings suggest that an organizational culture that prioritizes environmental values enhances the impact of proactive personality on green behaviour.

A review of prior empirical investigations reveals that much of the existing literature linking proactive personality and employees' green behaviour is disproportionately conducted outside Nigeria. Studies from countries such as Vietnam, South Korea, Pakistan, and China (e.g., Ahmad et al., 2023; Chen & Wu, 2022; Kim et al., 2023; Nguyen et al., 2024; Zhang & Li, 2022) dominate the field, reflecting a geographical bias and underscoring the need for localized research.

Furthermore, the review highlights a sectoral disparity, as the majority of existing research focuses on industries such as retail, hospitality, healthcare, construction, banking, and manufacturing, with little attention given to the educational sector (e.g., Ahmad et al., 2023; Chen & Wu, 2022; Kim et al., 2023; Nguyen et al., 2024; Zhang & Li, 2022). Further emphasizing the lack of context-specific research in Nigeria's academic institutions.

Additionally, there is a noticeable gap in the Nigerian-context literature examining the direct effect of proactive personality on employees' green behaviour. While research on pro-environmental behaviour in Nigeria has explored factors such as green human resource management practices (Alam et al., 2023), sustainability integration in universities (Odia, 2020), and environmental knowledge management (Yusuf et al., 2023), no known studies have explicitly investigated how employees' proactive personality influences their engagement in green workplace behaviours.

This gap underscores the need for empirical inquiry into how individual differences, particularly proactive personality, shape employees' environmental attitudes and behaviours in Nigerian

workplaces. Addressing this gap would enhance contextual relevance, offering insights into the psychological drivers of sustainability efforts within Nigerian organizations. This study, therefore, contributes to the literature by bridging this knowledge gap and extending the theoretical discourse on proactive personality and green behaviour in a developing economy context.

Conceptual framework

The conceptual framework presented below serves as a critical foundation for this study, illustrating the hypothesized relationships among key variables. The independent variable (IV), proactive personality, is operationalized through three distinct dimensions: initiative-taking, change orientation, and persistence in goal achievement. The dependent variable (DV) is employees' green behaviour, which reflects workplace sustainability actions and environmentally responsible conduct.

This framework posits that a proactive personality fosters eco-conscious behaviour, as individuals who take initiative, adapt to change, and persist in goal attainment are more likely to embrace and sustain green practices in the workplace.

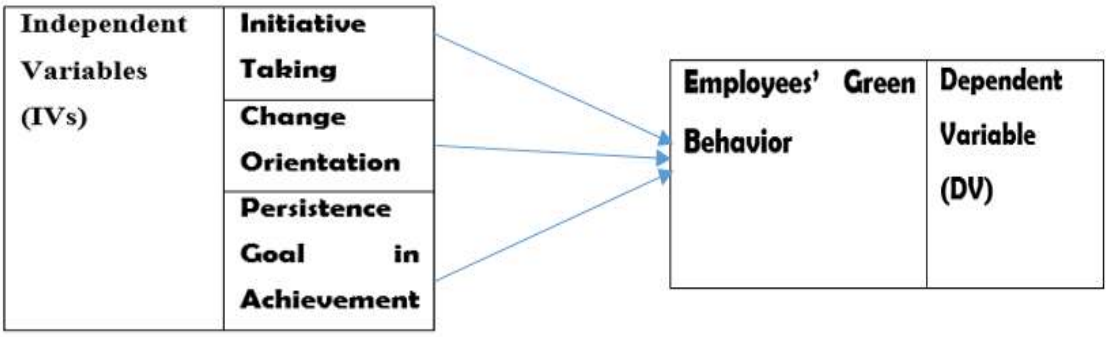


Figure 2.1. Conceptual Framework for the study (Culled from extant literature)

METHODOLOGY

This study adopts a cross-sectional descriptive survey design because data collection was done at a single point in time. According to Swain (2008), a descriptive survey design is used to gather data about a population when the goal is to provide a systematic, factual, and accurate description as much as feasible. Furthermore, the researchers believes that this design is appropriate since it eliminates the possibility of manipulating and controlling the population sample.

Based on information from the institution's outlook mail as at 3rd November, 2024, the study's population consists of 3,413 workers (both teaching and non-teaching staff) at the Federal University Dutsin-Ma, Katsina State. To determine the sample size, the Yamane (1967) formula

for sample size determination was adopted due its sophistication in determining the minimum sample size from a known population as shown below:

$$n = \frac{N}{1 + N(e^2)} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

Where:

n= Minimum Sample Size

N= Population

1 =constant

E= margin of error (0.05)

Thus, substituting the population and the margin of error into the formula gives:-

$$\frac{N}{1 + N(e^2)}$$

$$= \frac{3{,}413}{1+3{,}413\,(0.05^2)}$$

$$= \quad 358$$

The calculation using Yamane's formula suggests a minimum sample size of 358 for this study. Purposive sampling strategies was applied in selecting participants. According to Patton (2002), purposive sampling is an effective strategy for identifying and selecting information-rich cases that offer the greatest insight into the research problem. Therefore, only staff of the university who were present within the premises and in their offices were utilized. Furthermore, online questionnaire was sent to various staff what Sapp groups. However, due to the challenge of accessing the sample frame, the simple random sampling technique could not be used, as it was nearly impossible to have all 3,413 staff members available in one place for sampling or to get the entire list of the staff in the institution. Despite their drawbacks, the use of non-probability sampling approaches is justified in this context.

Data collection was done using primary sources. According to Yusuf et al. (2024), primary data collection is popular, effective, and efficient, allowing respondents to provide answers to questionnaires at their convenience.

The questionnaire consisted of seven sections (A, B, C, D and E). The first section collected demographic data from respondents, while the subsequent sections gathered information on each

of the four study variables, i.e., three independent variables and one dependent variable. Multiple-choice questions were used to elicit information on respondents' demographic features such as gender, age group, highest educational qualification, and years of service. Additionally, a 5-point Likert scale ranging from "Strongly agree" (5) to "Strongly disagree" (1) was used to evaluate attitudinal statements regarding the variables under study. The 5-point Likert scale was chosen for its precision, ease of understanding, and flexibility of computation. To cover for the anticipated non-response bias and unreturned questionnaires, 10 percent was added to the figure of 358, in line with Israel (1992) suggestion, making a revised sample size of 394.

For data analysis, both descriptive and inferential statistics were used. Descriptive statistics, in the form of frequency tables and percentages, were employed for data presentation, while inferential statistics, specifically multiple regressions, were used to investigate the effect of proactive personality on employees' green behaviour.

The dependent variable (Employees' Green Behaviour) was regressed on the independent variables: Initiative -Taking, Change Orientation and Persistence in Goal Achievement using multiple regression model specified as follows:

$$EGB = b_0 + b_1INT + b_2CO + b_3PGA + \varepsilon \quad \ldots\ldots\ldots (1)$$

Where: EGB= Employees' green behaviour

b_0 = intercept,

b_1, b2, b3=Parameters or coefficient of the regression model,

INT =Initiative-Taking,

CO = Change Orientation,

PGA = Persistence in Goal Achievement,

e=error term.

Measurement of Variables

To measure the variables, the study employed validated scales tailored to capture the dimensions of proactive personality and employee performance. Specifically, the General Proactivity Scale (GPS) developed by Frese et al. (1997) was utilized to measure initiative-taking**,** emphasizing its role as a core facet of proactive personality. Similarly, the Personal Initiative Scale (PIS) by Frese et al. (1996) was adopted to assess the extent to which individuals actively drive change within their environments, aligning closely with the construct of change orientation**.** Additionally, the Proactive Work Behaviour Scale (PWBS)**,** developed by Parker and Collins (2010), was used to evaluate persistence, highlighting its significance as a proactive behaviour in workplace contexts. For the dependent variable, the Employee Green Behaviour Scale (EGBS) - Robertson & Barling

(2013, Adapted) was employed to measure employees' green behaviour comprehensively, ensuring consistency and reliability across the study's dimensions.

To ensure the validity of the questionnaire items, a pilot test was conducted with 40 employees of the Federal College of Education, Kano. This aligns with the 10 percent of the sample size recommended by Connelly (2008). Furthermore, a reliability test was conducted using Cronbach's alpha coefficients. Cronbach's alpha is widely adopted by many authors, including Olukotun et al. (2023). This study used the widely accepted criterion of a Cronbach's alpha of 0.70 as the minimum acceptable level for internal consistency (Gliem & Gliem, 2003).

Ethical Considerations

This study adhered to ethical research principles. Participation was voluntary, and informed consent was obtained from all respondents. Data confidentiality and anonymity were maintained throughout the research process.

RESULTS AND DISCUSSION

Out of the 394 distributed structured questionnaires, 380 were returned, resulting in a 97.4 percent response rate. After sorting out, 370 were deemed credible. This response rate exceeds the minimum sample size of 358 suggested by the Yamane formula for determining sample size. Therefore, the 370 valid responses are appropriate for analysis and discussion.

Diagnostic Tests

Diagnostic tests are conducted to ensure the outcomes are unbiased and to prevent violations of the fundamental assumptions of the regression model. This subsection covers the diagnostic tests performed, including reliability, normality, autocorrelation, heteroskedasticity, and collinearity tests.

To verify the internal consistency of the study scales, a reliability test using Cronbach's alpha was conducted. The results of the reliability test are shown in Table 1.

Table 1: Reliability Test using Cronbach Alpha

Variable	Cronbach'sAlpha	Number of Items
INT	0.765	5
CO	0.794	5
PGA	0.725	5
EGB	0.752	7

Source: Authors' Computation (2025)

According to Gliem and Gliem (2003), all variables reliability test displayed in Table 1, have Cronbach's alpha coefficients above the minimally acceptable level of 0.70. This indicates that the questionnaire instruments are suitable for measuring internal consistency.

Furthermore, the study assessed normality using skewness and kurtosis to ensure that the regression model's normality assumption was not violated. The normality test results are displayed in Table 2 below.

Table 2: Normality Test

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
INT	370	0.864	0.118	1.524	0.213
CO	370	0.768	0.118	0.732	0.213
PGA	370	0.678	0.118	0.698	0.213

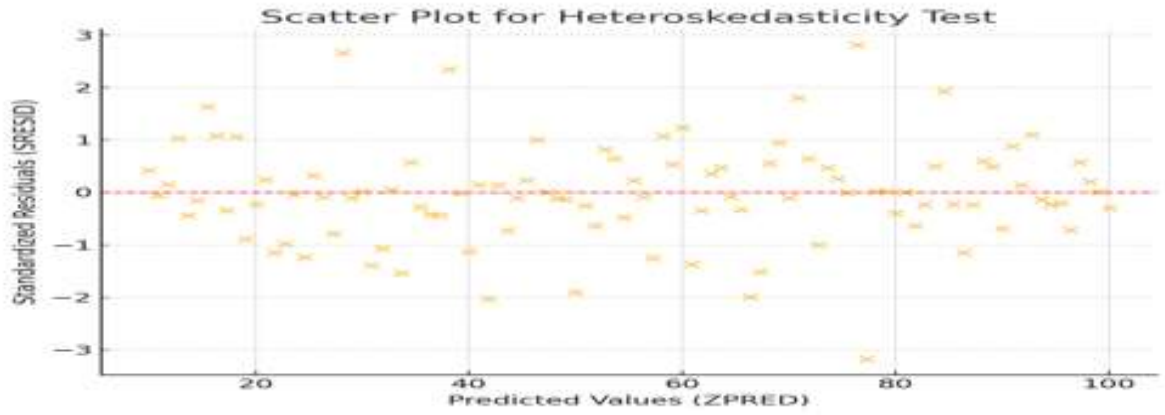
Source: Authors' Computation (2025)

None of the skewness or kurtosis values exceed two or seven, respectively, as shown in Table 2. According to Kline (2016), if these requirements are met, the variables in the regression model are assumed to be normal, indicating no violation of the normality assumption.

Furthermore, the Durbin-Watson (D-W) statistic was used to measure the results of the autocorrelation test. According to Field (2009), the D-W statistic of 1.724, which is close to 2, indicates that there is no serial autocorrelation issue in this study.

Heteroskedasticity contradicts one of the fundamental assumptions of a regression model, which is the existence of constant variance in the error term. To test for heteroskedasticity, the study used a scatter plot graph approach. The scatter plot displays the correlation between the residuals (SRESID) and the predicted values of the independent variables (ZPRED). The scatter plot in table 3 showed that the points did not follow any particular pattern, suggesting that the regression model does not contain heteroskedasticity.

Table 3: Heteroskedasticity Test



Source: Authors' Computation (2025)

In addition to testing for heteroskedasticity, the study conducted a collinearity test to ensure that the independent variables in the model do not have a correlation coefficient that is too high, which could be problematic (Achuku & Abubakar, 2023). Multicollinearity in a model can skew the regression findings, violating the regression assumption. Multicollinearity is defined as a high correlation among the explanatory variables in a model. The current study applied two widely used techniques for identifying multicollinearity: the variance inflation factor (VIF) and the correlation matrix.

Table 4: Correlation

		INT	CO	PGA
INT	Pearson Correlation	1	0.540**	0.408**
	Sig.(2-tailed)		0.000	0.000
	N	370	370	370
CO	Pearson Correlation	0.540**	1	0.502**
	Sig.(2-tailed)	0.000	0.000	0.000
	N	370	370	370
PGA	Pearson Correlation	0.408**	0.502**	1
	Sig.(2-tailed)	0.000	0.000	
	N	370	370	370

_Correlation is significant at the 0.01 level (2tailed)

Source: Authors 'Computation (2025)

Note: INT= Initiative-Taking; CO= Change Orientation and PGA= Persistence in Goal Achievement

From the correlation results in table 4, the correlation values between the explanatory factors indicate the strongest correlation of 0.540 at the one percent significance level, found between the initiative-taking and change orientation. According to Wooldridge (2015), multicollinearity is absent from the model since no two independent variables have correlation coefficients greater than 0.70. To further validate the correlation findings, the VIF was calculated and displayed in Table 5.

Table 5: Collinearity Statistics

Variable	Tolerance	Variance Inflation Factor
INT	0.518	1.935
CO	0.536	1.864
PGA	0.504	1.986

Source: Authors' Computation (2025)

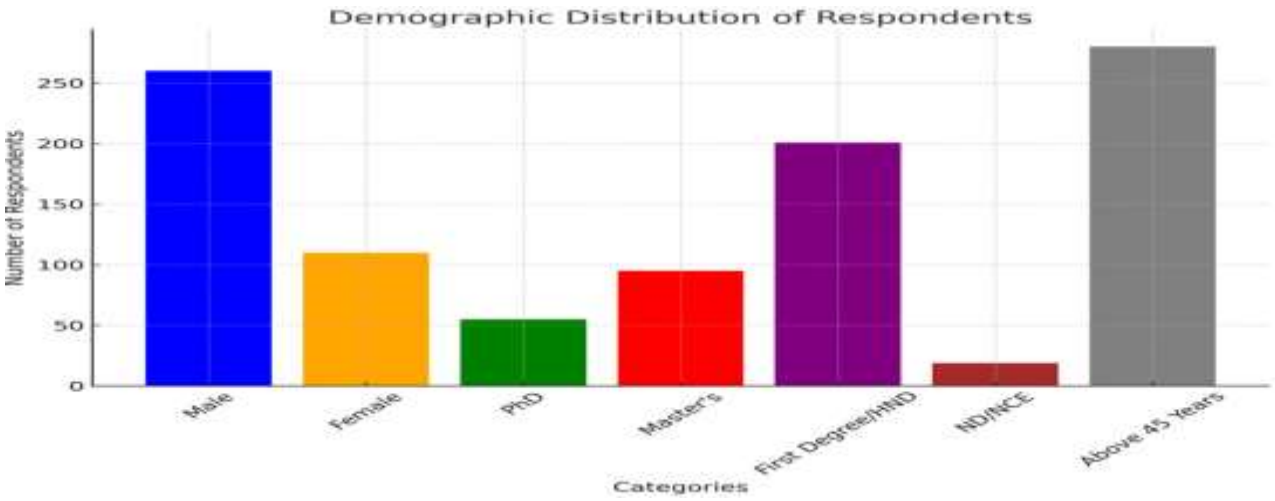
The result in Table 5 above shows that each independent variable's tolerance statistic is higher than 0.1 and that the corresponding VIFs are much lower than 10. According to Pallant (2005), these

two requirements indicate the absence of multicollinearity. This suggests that the VIF results validate and support the correlation's indication of the lack of multicollinearity.

Descriptive Analysis

This section covers the descriptive analysis of the respondents' demographic data.

Table 6: Descriptive Results



Source: Authors' Computation (2025)

According to the result of our descriptive statistics in table 6 above, most respondents, totalling 260 or 70.3%, are men. This is understandable given the cultural and religious views of the research region, where men are more likely to participate than women. The age distribution data shows that the majority of respondents are above 45 years old. This suggests that the respondents are mature, and it is expected that maturity would reflect in the quality of their responses, as more mature individuals are often believed to have a stronger sense of responsibility.

Additionally, the educational background of the respondents shows 55 or 14.7% hold a Ph.D., 95 or 25.7% have a master's degree, and 201 or 54.3% have a first degree or Higher National Diploma (HND). Furthermore, 19 respondents, or 5.3%, have at least a National Diploma (ND) or Nigeria Certificate in Education (NCE). This indicates that the majority of respondents have a high level of education, which is likely to enhance the quality of their responses.

Regression Analysis

As stated in the methodology, a regression technique was used to explore the effect of proactive personality on employees' green behaviour in Federal University, Dutsin-Ma, Katsina State. The regression results are presented in Table 7, which includes t-values, p-values, and the coefficients of the variables and constant.

Table 7: Summary of Regression Result

Variables/constant	Coefficients	t-values	p-values
Constant	8.787	8.634	0.000
INT	1.017	9.532	0.000
CO	1.010	5.023	0.001
PGA	0.711	2.231	0.001
R-square	0.671		
Adjusted R-square	0.673		
f-stats	262.003		
f-sig			0.000
D-W	1.724		

Source: Authors' Computation (2025)

The regression results in Table 7 reveal that Initiative -Taking (INT) has a positive significant effect on employees' green behaviour, as confirmed by the t-value of 9.532.

Similarly, the results show that Change Orientation (CO) has a significant positive effect on employees' green behaviour as indicated by the t-value of 5.023, which is significant at the 1 percent level.

Furthermore, the regression results in Table 4 indicate that persistence in goal achievement (PGA) has a positive and significant effect on employees' green behaviour, as evidenced by the t-value of 2.231, which is also significant at the 1 percent level.

DISCUSSION OF FINDINGS

Based on the regression analysis and hypothesis testing, the findings are discussed in relation to theoretical frameworks and real-world implications.

The first null hypothesis was rejected due to a large positive t-value (9.532), indicating a strong relationship between initiative-taking and employees' green behaviour. The p-value of 0.000 (less than 0.005) confirms statistical significance. The coefficient of 1.017 suggests that a 1% increase in initiative-taking leads to a 1.07% increase in employees' green behaviour, making it the most influential proactive personality indicator. This finding aligns with previous research (e.g., Fawehinmi et al., 2020; Tian & Robertson, 2019) and supports the Trait Activation Theory (TAT) (Tett & Burnett, 2003). In practice, organizations can leverage this insight by encouraging employees to proactively identify and implement sustainability initiatives, such as energy-saving strategies and waste reduction programs, without waiting for formal directives.

Similarly, the second null hypothesis was rejected, as results indicate a positive and significant association between change orientation and employees' green behaviour at a 1% significance level. The t-value of 5.023 suggests a moderate relationship, with a coefficient of 1.01, meaning a 1% increase in change orientation results in a 1.01% increase in green behaviour. The p-value of 0.001

confirms significance. This finding highlights the role of adaptability in fostering sustainable workplace practices, consistent with Shen et al. (2018) and the Self-Determination Theory (Deci & Ryan, 1985). Employees with high change orientation tend to drive sustainability efforts by supporting green policies and adopting environmentally friendly technologies. Organizations should integrate sustainability training and change management programs to enhance employees' adaptability to eco-friendly initiatives.

Finally, the third null hypothesis was also rejected, as persistence in goal achievement showed a significant positive effect on employees' green behaviour. The t-value (2.231) indicates a strong positive relationship, and the p-value of 0.001 confirms statistical significance. The coefficient of 0.711 suggests that a 1% increase in persistence leads to a 0.71% increase in green behaviour. This aligns with Farooq et al. (2021) and reinforces the importance of self-regulation and goal-driven behaviour in sustaining environmentally responsible actions over time. Organizations should foster long-term commitment to sustainability goals by recognizing and rewarding employees who persistently engage in green practices.

The adjusted R-square of 0.671 indicates that initiative-taking, change orientation, and persistence in goal achievement explain 67% of the variation in employees' green behaviour, with the remaining 33% attributed to other factors. The model's fitness is confirmed by an F-statistic of 262.003, significant at the 1% level, reinforcing the robustness of the findings.

Conclusion and Recommendation

This study examined the impact of proactive personality on employees' green behaviour at Federal University Dutsin-Ma, Katsina State. Key proactive personality traits—initiative-taking, change orientation, and persistence—were analysed in relation to employee green behaviour, measured using the Employee Green Behaviour Scale (EGBS) by Robertson & Barling (2013, Adapted). The instrument's reliability was confirmed with a Cronbach's alpha of 0.752. Regression analysis demonstrated that all proactive personality dimensions significantly influenced employee green behaviour, with initiative-taking having the strongest effect, fostering critical thinking and innovation. Change orientation promoted flexibility and adaptability, while persistence contributed to sustained engagement in green practices. These findings underscore the crucial role of proactive traits in fostering an adaptive, innovative, and resilient green workforce.

Theoretical Contribution

This study contributes to the literature on environmental sustainability and workplace behaviour in several ways. First, it extends existing research by providing empirical evidence of the direct relationship between proactive personality and employee green behaviour. Second, it refines theoretical perspectives by deconstructing proactive personality into three dimensions—initiative-taking, change orientation, and persistence—offering a more granular understanding of their distinct contributions to sustainability practices. Third, the study has practical implications for organizations, highlighting the necessity of fostering proactive employee traits to enhance workplace sustainability efforts.

Practical Recommendations

In light of these findings, the following recommendations are proposed:

Organizational Strategies

1. Encouraging Employee Initiative: Organizations should foster an environment where employees feel empowered to take independent steps toward sustainability. Providing autonomy, recognizing employee-led green initiatives, and integrating sustainability into performance appraisals can further enhance initiative-taking.
2. Facilitating a Change-Oriented Culture: Employers should embed sustainability into corporate values by offering training programs, fostering open communication on green policies, and ensuring management support for sustainability transformations.
3. Setting Long-Term Sustainability Goals: Organizations should establish clear environmental objectives, encouraging employees to set personal and team-based green goals to ensure sustainability remains a long-term priority.

Policy Implications

4. Incorporating Proactivity into Hiring and Training: HR departments should integrate proactive personality assessments into recruitment processes and design training programs that nurture initiative-taking, adaptability, and persistence in goal achievement.
5. Developing Green HRM Policies: Organizations should implement human resource policies that reward green behaviours, such as sustainability performance incentives or eco-friendly workplace initiatives.

Research Directions

Despite its valuable contributions, this study has some limitations.

1. Potential Biases in Data Collection: The study relied on self-reported data, which may be subject to social desirability bias. To mitigate this limitation, future research should incorporate observational or peer-reported assessments.
2. Contextual and Sectoral Limitations: This study focused on a specific sector and geographic location, limiting the generalizability of the findings to other industries and cultural contexts. Cross-industry and cross-cultural comparisons would enhance the robustness of the findings.
3. Lack of Mediating and Moderating Variables: While this study established a relationship between proactive personality and green behaviour, it did not explore potential mediating or moderating factors that could further explain this relationship. Future research should investigate the influence of green HRM practices, transformational leadership, and organizational climate as potential mediators or moderators.
4. Short-Term Research Design: The study used a cross-sectional research design, which limits insights into long-term behavioural trends. Future studies should adopt longitudinal

methods to assess how proactive personality influences employee green behaviour over time.

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