

GREENWASHING IN FINANCIAL TECHNOLOGY: AN EXAMINATION OF THE INFLUENCE OF CUSTOMER TRUST ON CONSUMER LOYALTY IN NIGERIA

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ABSTRACT

In previous researches, the connections between customer perception of greenwashing and loyalty have been considered, but many have overlooked the potential mediating effect of customer trust. This particular investigation endeavours to address a notable gap in existing literature through an in-depth exploration of the intersection between the fintech industry and green-washing. This research investigates how perceived green-washing, through customer trust, impacts customer loyalty toward fintech companies in Nigeria. 314 valid and completed questionnaires were received from both male and female fintech company customers using an online questionnaire with a five-point Likert-type scale. Results revealed a significant, albeit modest, positive impact of perceived green-washing on Customer Loyalty (CL), largely driven by the influence of Customer Trust (CT). Secondly, CT plays a positive mediation effect in this relationship. These research findings contribute to existing literature by emphasizing the role of CT as a mediating factor. In practice, this study suggests that financial technology companies should prioritize creating and nurturing trust to enhance CL through transparent communication, ethical business practice as well as clear and accurate environmental claims.

Keywords: Green-washing, Customer Trust, Customer Loyalty, Financial Technology Companies.

INTRODUCTION

Financial Technology (fintech) refers to those companies that engage in technology utilization to deliver their financial services in a more innovative way. Fintech companies offer various types of financial services such as processing payments like Pay-pal and operating trading platforms. Lee and Shin (2018) noted that fintech companies have revolutionized conventional financial services through the incorporation of digital platforms^[30]. These platforms streamline a wide array of financial activities, ranging from payments and lending to wealth management and blockchain-based transactions. According to Pata et al. (2024), fintech has effectively facilitated inclusion and levelled the playing field for financial services^[36]. In today's rapidly evolving digital landscape, Fintech companies have replaced the existing institutions^[14] (Chueca & Ferruz, 2021). The primary goal of these companies is to establish financial ecosystems that are more efficient, and customer-centric^[5] (Arner, Barberis, & Buckley, 2016).

The Fintech industry has seen substantial growth in revenue and market size over the past decade. Recently, reports show that the overall fintech market value stood at \$110.57 billion in 2020 with the expectation that it would reach \$698.48 billion by 2030, which will be growing annually by 20.3%^[4] (*Fintech Technologies Market Size, Share and Analysis | 2030*). The rapid expansion is driven by advancements in technology, positive change in consumer adoption of digital financial services, and movement towards a more digital economy.

Revenue growth of this industry can be largely attributed to its success in attracting and retaining loyal customers. Customer loyalty is essential for long-term profitability, as loyal customers tend to keep using a company's services, recommend them to others, and provide valuable feedback for improvement. In a fiercely competitive environment like fintech, nurturing a steadfast customer base is vital for the perpetuation of expansion as well as ensuring a stable revenue stream.

Greenwashing can be detrimental to customer loyalty as indicated by previous research. For example, a study by Terra Choice in 2010 revealed that when customers perceive a company as engaging in green-washing, their trust in the company is eroded, resulting in diminished customer loyalty^[41]. Another study by Chen and Chang in 2013 emphasized that greenwashing hurts customer

trust, weakening the relationship thereafter between the customer and the company^[11]. According to Famularo (2023), there is an increasing societal demand for greater transparency from companies regarding their digital technology practices, oversight, and impacts^[18]. Therefore, regulatory authorities should provide a reward and punishment strategy to reduce green washing practices.

Does customer loyalty be affected by perceived greenwashing, this subject remains a key concern for most research studies. Companies that practice greenwashing can easily lose customer loyalty^[16] (Delmas & Burbano, 2011). Another study conducted by Chen, Lin, and Chang (2014) discovered that greenwashing practice not only erodes the trust that the customers have but also diminishes their loyalty directly particularly in sectors like fintech where the significance of trust is high enough to make a difference in the customer behaviour^[13].

Trust is vital for customer loyalty, and understanding its mediating role is crucial. This study explores how greenwashing affects customer loyalty in the fintech industry through customer trust. It aims to offer insights into countering the negative impacts of greenwashing and improving customer retention strategies.

LITERATURE REVIEW

Instances of Green-washing in Various Industries

The term greenwashing came up in the year 1980s and later gained wide acceptance to refer to the act of engaging in misleading or exaggerating environmental claims to attract environmentally sensitive customers^[15] (Dahl, 2010). The practice of greenwashing, which includes making misleading claims about environmentally friendly products or services by companies, has been witnessed in different sectors. As an example, H&M's Conscious Collection in the fashion sector was criticized for promoting clothing lines that meet only minimal environmental standards in the name of sustainable clothing. The brand's sustainability claims were accused of being exaggerated without enough evidence to support the claims^[8] (Caniato et al., 2012). This also happened when Volkswagen's Diesel-gate company claimed to be marketing an environmentally friendly diesel engine but in reality, appeared to violate emissions standards^[39] (Rhodes 2016). Similarly, instances of greenwashing occurred as evidenced by Wilk, (2020) in the food and beverage industry where the Coca-Cola Company was accused of marketing products that significantly contributed to plastic waste but claimed that their products were

environmentally friendly^[42]. All the instances highlighted here, prove the existence of greenwashing practices and how customers are misled by such practices. Greenwashing practices can significantly erode trust and customer loyalty especially customers who are more environmentally sensitive.

Customer trust is an important element, which hinges on the relationship between a company and its customers, and it is, established when customers perceive a company as honest, reliable, and dedicated to fulfilling its commitments. Morgan and Hunt (1994) emphasized that trust is the foundation of enduring customer relationships and is pivotal in cultivating customer loyalty^[33]. A study has suggested that trust is established through (1) a belief that the seller has no incentive to deceive, (2) a belief that the website incorporates safety measures, (3) providing a standard interface, (4) which is also user-friendly^[20] (Gefen et al., 2003). Chaudhuri and Holbrook (2001) highlighted that trust cultivates a greater inclination to interact with a brand and to recommend it to others^[10]. Conversely, when trust is undermined, customers are more likely to defect to competitors, resulting in a loss of loyalty. This is especially pertinent in industries where sustainability significantly influences customer decision-making.

Customer loyalty is defined by the extent to which customers choose to sustain a long-term relationship with a company. ^[22]Ibrahim (2022) notes that^[31] Leong and Sung (2018) underscore the essential nature of loyalty as a primary goal for all businesses. Gaining customer loyalty presents unique challenges, particularly for companies in the service industry. Studies have demonstrated that loyal customers are not only more inclined to make repeat purchases but also to advocate for the brand.

The Effects of Greenwashing on Customer Loyalty and Trust

Many research studies have investigated how greenwashing affects customer loyalty. Greenwashing negatively affects customer loyalty, it significantly erodes trust and customers feel disappointed when they perceive it^[12] (Chen & Chang 2013). Customers are more inclined to change to companies that appear to be more trustworthy in terms of their environmental claims and sustainability efforts than the companies they perceive to engage in greenwashing practices. Greenwashing negatively diminishes brand image which invariably reduces customer loyalty^[25] (Jahdi & Acikdili 2009). It is believed that customers who perceive greenwashing practices by a company are likely to stop patronizing the brand and may likely not recommend the brand to others.

Customer trust is greatly affected by greenwashing practices. The trust which customers have in the company easily diminishes when the customers perceive greenwashing practices by the company. Laufer (2003) highlighted the challenging task of rebuilding customer trust when it is broken, customers keep in mind, the negative thoughts they had about a company in their future dealings^[29]. According to Leonidou et al. (2013) when customers perceive greenwashing practices by a company, the company is likely to lose their trust even if the company makes genuine claims about their environmental and sustainability efforts^[32]. This indicates that perceived greenwashing practice has a lasting effect on the minds of customers and it is difficult to overcome. A further investigation conducted by Eko et al. (2024) revealed that the marketing effectiveness of the majority of financial technology firms in Nigeria is significantly and positively influenced by green financial services, green digital marketing, and electronic banking^[17].

Research has demonstrated that when customers develop trust in a company, they exhibit brand loyalty and continued patronage, as trust diminishes the perceived risk of engaging with the company^[19] (Gefen, 2002). Confidence is also crucial in shaping customer satisfaction, which in turn affects their loyalty^[21] (Gustafsson et al., 2005). In the fintech sector, where customers often entrust sensitive financial information, the element of trust holds particular significance. The proposed variables' interactions are shown in *Figure 1*

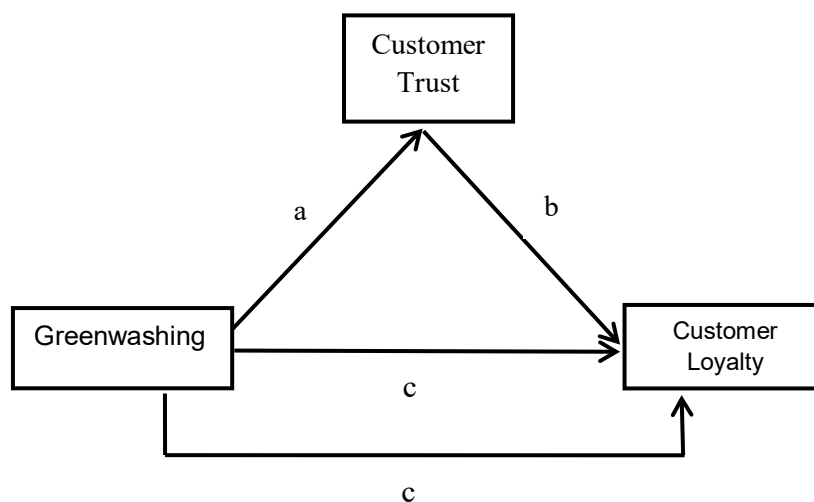


Figure 1 : Variables' interactions

The research model under consideration illustrates the pathways for mediation. The independent variable in this model is Greenwashing (X), the dependent variable is customer loyalty (Y), and the mediating variable is customer trust (M). The indirect effect of the mediator on Y is denoted by $a*b$, while C'

represents the indirect effect of X on Y considering the impact of the mediator, and C signifies the direct effect of X on Y without the mediator^[34] (Muhammad et al., 2021).

RESEARCH METHODOLOGY

This section highlights the methodology adopted by this research to investigate how greenwashing affects customer loyalty in fintech companies through the mediation effect of customer trust. Subsections in this methodology include the techniques used for sampling, the method of data collection, the measurement of construction and data the analysis procedure after the data screening.

Hypothesis

- H1 Perceived greenwashing significantly impacts customer trust in financial technology companies.
- H2 Customer trust has a significant positive impact on customer loyalty in financial technology companies.

Research Design

The research design is quantitative as such; all the data were primarily gathered from customers who use Fintec company's services through surveys. The same approach was applied to a similar topic by previous researchers like Rahman et al., 2015^[38]. This approach allows the study of relationships between two or more variables as well as enables researchers to make generalizations across a large population. This study centred towards capturing participants' views of greenwashing, and the degree of trust and loyalty that customers have toward financial technology firms.

Sampling Method

In this research, a non-probability sampling method is utilized, by applying convenience sampling to gather the data from 314 respondents from financial technology company users in Nigeria. The convenience sampling method enabled us reach to a specific population within the shortest possible time due to time constraints. 314 respondents are considered adequate to enable the construction of our research model.

Data Collection

This research used an online structured questionnaire designed to ensure the validity of the contents based on previous scales. This research adopted items as applied by earlier studies to measure how customers perceive

greenwashing, the level of customer trust and customer loyalty towards the fintech companies. This is to ensure an accurate representation of the variables. The participants were asked to rate their perceptions and express their levels of trust and loyalty. A five-point Likert-type scale was used, ranging from 5 (strongly Agree) to 1 (strongly disagree).

Evaluation of Constructs

Five items were used to assess greenwashing. These five items were considered adequate to measure the respondents' perception of greenwashing practices by the financial technology companies they use towards the environment. Customer trust was measured based on two items which were considered adequate to assess the participants' trust level in the financial technology companies when it comes to greenwashing practice. This study used three items to evaluate customer loyalty these items were considered adequate to assess the likelihood of the respondents to continue with the services of the fintech companies they use after they perceived greenwashing practices by the companies.

Data Screening

All missing data as well as uncompleted questionnaires were verified and removed thoroughly before the commencement of the data analysis. Furthermore, another step was taken to scrutinize the data set in order to identify outliers through descriptive statistics and box plots. This method was adopted following the recommendations of previous researchers such as ^[28] Kim & Kim (2016). The above measures were taken to prevent the impact of any outlier on the results and to ensure that the reliability of the findings is enhanced and busted.

Data analysis Procedure

Reliability as well as the validity of the construct are very essential before the commencement of any analysis. To test the internal consistency and reliability. A Cronbach's alpha coefficient was used, under a minimum of 0.70 which was considered adequate and acceptable by previous researchers ^[35] (Nunnally, 1978). A confirmatory factor analysis (CFA) was also conducted to validate the construct, focusing on the standardized factor loadings ^[23] (Hair et al., 2010). After the measurement model was validated, a regression analysis was conducted to enable us to investigate the relationships between green washing, customer trust, and customer loyalty. The analysis was carried out in two stages: first, we assessed the direct impact of green-washing on customer

loyalty; second, we applied Baron and Kenny's (1986)^[7] method to assess the mediating effect of customer trust.

RESULTS

Sample profile

It is worth noting that, all information of the participants is summarized in *Table 1*. Most of these respondents were male 78.7 % and 21.3 % female. Almost half of the participants (49.4 %) were in the age category of 28 and 37; followed by the category of 38 and 47 years (22.9 %). Almost all the participants in this research are Nigerian (97.8 %), and the remaining (2.2 %) are Nigerian. More than half of the respondents (57 %) are graduates with another significant number of post-graduates (28.7 %). 32.5 % of the respondents used Fintech company's services for more than 5 years with nearly 29 % of the respondents who use the services between 3 and 5 years.

<i>Demographic</i>	<i>Descriptive</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Gender</i>	Female	67	21.3
	Male	247	78.7
<i>Age</i>	18 – 27	63	20.1
	28 – 37	155	49.4
	38 – 47	72	22.9
	48 – 57	23	7.3
	Above 58	1	0.3
<i>Education</i>	Non-graduate	37	11.8
	Graduate	179	57
	Postgraduate	90	28.7
	PhD	8	2.5
<i>Nationality</i>	Nigerian	307	97.8
	Non-Nigerian	7	2.2
<i>Years of using Fintech</i>	Below 1 year	56	17.8
	1 - 3 years	66	21
	3 - 5 years	90	28.7
	Above 5 years	102	32.5

Table 1 : The Profile of Survey Respondents. (n = 314)

<i>Constructs</i>	<i>Items</i>	<i>Factor loading</i>	<i>Cronbach's Alpha</i>
<i>GW</i>	GW1	.549	.893
	GW2	.914	
	GW3	.892	
	GW4	.891	
	GW5	.826	
<i>CT</i>	CT1	.681	.73
	CT2	.719	
<i>CL</i>	CL1	.794	.814
	CL2	.815	
	CL3	.719	

Note. GW: Green-washing, CT: Customer Trust, CL: Customer Loyalty

Table 2 : Properties Of Item Measurements

		1	2	3
1	GW	1		
2	CT	.320	1	
3	Customer Loyalty	.327	.512	1

GW green-washing, CT customer trust

Note that, all coefficients were found to be statistically significant at $p < .05$

Table 3 : Construct Inter Correlations

Hypothesis Testing

The main idea tests if Perceived Green-washing affects how loyal consumers are to Fintech companies through the role of customer trust. The dependent variable CL was regressed on predicting variable GW through CT as the mediating factor to test the hypothesis. GW significantly predicted CL, $F(1,312) = 64.055$, $p < .001$, which indicates that the GW positively impacted CL due to a strong mediating effect of CT ($b = .122$, $p < .001$). These results have a positive impact on the CL. Furthermore, the R-square value of .292 indicates that the model accounts for 29.2% of the variance in customer loyalty (CL). It's important to note that factors other than GW and CT also have an impact on CL. A summary of the findings can be found in Table 4.

Additionally, this study carried out a thorough assessment of the coefficients to determine the impact of each factor on customer loyalty. H1 evaluates whether perceived green-washing has a significant impact on customer trust towards Fintech companies. Analysis results reveal that perceived greenwashing significantly influences customer trust ($B = .345$, $t = 5.962$, $p < .001$). This suggests that when customers form the perception that a company is greenwashing making misleading claims about their environmental practices their trust in the company decreases. The positive coefficient ($B = .345$) indicates that heightened perceptions of greenwashing correlate with increased distrust. The substantial t-value (5.962) and extremely low p-value ($p < .001$) confirm the statistical significance of this effect. Therefore, we can conclude that Hypothesis 1 (H1), which hypothesized that perceived greenwashing significantly impacts customer trust, is substantiated. H2 evaluates whether customer trust has a positive impact on customer loyalty towards fintech companies. Based on the analysis, it is evident that there is a strong positive correlation between customer trust and their loyalty towards Fintech companies ($B = .318$, $t = 10.528$, $p < .001$). This suggests that higher levels of customer

trust are linked to increased customer loyalty. The positive coefficient ($B = .318$) indicates that as trust levels rise, so does customer loyalty. Moreover, the high t-value (10.528) and very low p-value ($p < .001$) validate the statistical significance of this relationship. Therefore, there is clear support for Hypothesis 2 (H2).

<i>Hypotheses</i>	Regression Weights	B	T	p-value	Results
H1	GW CT	.345	5.962	.000	Supported
H2	CT CL	.318	10.528	.000	Supported
R	.122				
R change	.185				
F (1, 312)	64.055				

Table 4 : Regression Analysis Results

CONCLUSION AND DISCUSSION

Businesses always seek ways to improve their customer base, especially in non-banking institutions like Fintech companies where profitable customers contribute significantly to the overall financial performance (OFP) of those companies. Customer loyalty is of paramount importance which appears to be a reason most fintech companies try to retain and increase customer loyalty towards their services. While there are a limited number of studies that have explored the influence of customer perception of greenwashing towards customer loyalty through the mediation of trust, in academic literature, some studies have revealed a detrimental impact of greenwashing on customer loyalty. The study shows a significant positive impact of customer perception to greenwashing towards customer loyalty due to a strong influence of customer trust which appears to be a critical factor. This is in line with the previous studies (Delmas & Burbano, 2011)^[16]. Furthermore, the H2 found out that perceived green-washing has been identified as having a substantial influence on customer trust a factor that serves an important function in bridging the gap between perceived green-washing and customer loyalty. This hypothesis is also in line with the study of Laufer, W.S. (2003)^[29]. The findings suggest that, while customers would remain loyal towards fintech companies despite recognizing green-washing practices, Trust in these companies plays a significant role in shaping customer loyalty. Moreover, the presence of trust can mitigate the perceived influence of green-washing on customer loyalty, indicating that trust is a critical factor in maintaining customer loyalty.

Theoretical Implications

Given this research, it is essential to reflect on the consequences in both theory and in practice. Theoretical implications revolve around the contribution of this research to the current understanding of green-washing by showcasing its direct and indirect impacts on customer loyalty within the fintech industry. It expands upon current theories by emphasizing the significance of customer trust as a mediator, a topic that has not been extensively explored in the realm of financial technology firms. As per prior research, it is consistent with the critical importance of trust in consumer decision-making ^[11] (Chen & Chang, 2013). Current studies are examining the effects of green-washing (Abdullahi & Pandey, in press) on consumer trust and decision-making. This investigation will provide valuable insights into such an existing body of research by concentrating on the fintech sector. This research offers tangible evidence that reinforces the assertion that trust significantly contributes to the minimization of the adverse impacts of green-washing ^[29] (Laufer, 2003). The intermediary function of trust underscores the idea that, despite customers detecting green-washing practices, their loyalty can be preserved if the company has successfully established a strong foundation of trust.

Practical Implications

From the practical view of this study, Fintech companies have to prioritize the cultivation and sustenance of customer trust as a means to fortify customer loyalty, especially when they are involved in green-washing practices. Fintech companies should make it a priority to earn customer trust which appears to be more impactful in building customer loyalty. Considering how customer trust is significantly affected by greenwashing practices, this undermines the benefits derived by these fintech companies when they engage in deceptive environmental claims. Customer loyalty can be achieved when companies transparently communicate, ethically practice their business, and ensure that all their ecological claims are not misleading. It is believed that companies that invest in environmentally friendly initiatives are likely to gain a significant level of customer trust as well as loyalty, more especially in this era when customers develop concerns about how companies make environmental claims.

Recommendation

Financial technology companies should engage in ethical practices, as well as adhere to sustainability standards, especially in crucial sectors like fintech. Firms are to ensure accurate and not misleading environmental claims to avoid

accusations and loss of customer trust. Engaging in green marketing is essential for building customer trust and loyalty. Fintech companies should devise a means to receive feedback from their customers about areas for improvement regarding their environmental practices and try to address all issues raised by the customers accordingly. Fintech companies should stay informed about new policies and regulations related to environmental practices, this would help them avoid legal pitfalls as well as help in maintaining customer trust and loyalty. Additionally, these companies should focus more on making strategies with long-term benefits rather than just focusing on the short-term benefits which may eventually put the company at risk of losing customer trust. Lastly, fintech companies should create an avenue where customers are enlightened and provided with information on how to recognise greenwashing and how important genuine sustainability actions are in empowering them to make informed decisions.

Limitation for Further Studies

This study focused mainly on financial technology companies in Nigeria, the sample also centred on a specific demographic, which includes the majority of male representation than female, with individuals that attained higher education levels. Further studies could benefit by focusing on a more diverse sample, including respondents from different geographical regions as well as increasing the number of female representatives to enhance the overall relevance of the results. Future research could investigate the phenomenon of greenwashing in other sectors, such as technology or services, to facilitate comparisons with the findings and identify industry-specific trends. This research presents a snapshot of perceptions at a specific point in time. Future studies could undertake longitudinal research to gain deeper insights into the evolving perceptions of greenwashing, trust, and their long-term impact on customer loyalty. This research indicated that customer trust acts as a mediator in the connection between greenwashing and loyalty; however, it's essential to understand that trust is a complex concept affected by multiple factors. Future research could investigate additional potential mediators, such as corporate reputation or customer satisfaction. Additionally, the study treated greenwashing as a singular and uniform concept.

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