

GREEN BANKING INITIATIVES AND CONSUMER PURCHASE BEHAVIOUR: EVIDENCE FROM URBAN CUSTOMERS IN PUNJAB

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ABSTRACT

The growing concern for climate change and sustainability has heightened the need for eco-friendly practices across industries, including the financial sector. Green banking has emerged as a strategic approach that integrates environmental responsibility into banking operations and services. This study examines the influence of green banking initiatives on consumer purchase behaviour among urban customers in Punjab, India. Using a descriptive research design, data were collected from 580 respondents across leading public and private sector banks. The study considered four dimensions of green banking initiatives, namely Service Trust and Reliability, Utility and Performance, Eco Benefit Awareness and Social Influence, as independent variables. Consumer purchase behaviour was assessed through three constructs, namely Decision Convenience, Trust Driven Adoption and Service Assurance. Reliability analysis confirmed strong internal consistency across all constructs. Regression results revealed that green banking initiatives significantly and positively affect consumer purchase behaviour, with Utility and Performance and Eco Benefit Awareness acting as key drivers. The findings indicate that green banking enhances operational sustainability while strengthening customer trust, service assurance and convenience, thereby fostering loyalty. The study contributes to the literature on sustainable banking by providing empirical evidence of consumer responses to green initiatives and offers practical insights for banks to align environmental strategies with customer expectations.

Key Words: Green Banking, Consumer Behaviour, Sustainability, Service Assurance, Trust and Reliability.

INTRODUCTION

The urgent imperative of the twenty-first century is to adopt environmentally sustainable practices. Environmental consciousness and proactive measures to protect the environment have gained paramount significance in contemporary society. We are confronting numerous environmental issues in the present context. Climate change is the foremost irritant. Greenhouse gas emissions exacerbate climate change by modifying the environment and inducing global warming. Numerous industries are actively investing in environmentally sustainable projects and adopting green initiatives to mitigate such problems. The banking sector is essential for the global progress of sustainable development. The concept of “green banking” has emerged as an essential tool for tackling the challenges of sustainable development. Generally, banks adversely affect the environment through their daily operations by utilising unneeded paper, squandering water, leaving electrical devices powered, adding unnecessary lighting, and participating in other imprudent practices.

Customers that are apprehensive contend that banks should implement sustainable practices in their daily operations (Islam et al., 2014). Consumers assert that banks demonstrating environmental responsibility will maintain elevated ethical standards. Currently, consumers require environmentally sustainable financial services and products from conventional banks (Arnsperger, 2014; Rahman and Barua, 2016). Given the circumstances, it is time to address concerns beyond financial profit, including environmental conservation and planetary sustainability. The initial measure in this regard is the adoption of green banking rules, which can provide new opportunities by considering client perspectives.

Concept of Green Banking

Any type of banking that benefits the environment is referred to as “green banking” (Narang, 2015; Lalon, 2015; Silva, 2015 & Sindhu, 2015, Malliga 2016). Businesses engaged in green banking operate in a way that contributes to the total decrease of both internal and external carbon emissions (Narang, 2015). Green banking encompasses various elements such as green operations, environmentally friendly financing, and green marketing. Numerous contemporary banks support eco-friendly, technology-driven green banking efforts both domestically and internationally (Silva, 2015). The concept of “green banking” is associated with the three Ps: profit, planet, and people (Susanto, 2015). Green banking, according to Das and Islam (2013), is the reduction of carbon emissions from banking operations through the adoption of environmentally friendly measures. This can be done in two ways, firstly, the green transformation should take place by embracing automation of working methods and efficiently using renewable energy; and secondly, the banking activities should support environmentally responsible projects in order to foster green initiatives.

The Background and Development of Green Banking

Racing the genesis of green banking is difficult because financial institutions invested in ecologically friendly projects before the term was used. Although ATMs were widely implemented earlier in India, the actual transformation towards environmentally friendly banking began in 2005. The first worldwide green bank opened in Eustis and Clermont, Florida, in February 2009 as a community bank that promoted environmental and social responsibility. The State Bank of India (SBI), the largest public sector bank in India, emerged as a pioneer in green banking by adopting stringent sustainability standards and implementing significant initiatives.

It installed solar-powered ATMs, promoted paperless banking, adopted energy-efficient systems, and developed distant wind energy projects. Gurusamy and Vengatesan (2014) recognise SBI as a green banking leader. Green banking was first adopted in Nepal by Laxmi Bank, which focused on internet banking and mobile money services to reduce customer-counter delays and improve accessibility. Clean Energy Development Bank and Sanima Bank also financed hydropower and solar energy projects, boosting the region’s energy reduction initiatives (Mehta and Sharma, 2016).

LITERATURE REVIEW

The purpose of this study is to increase knowledge of the factors influencing consumer

purchasing behaviour as well as involvement with green banking initiatives. The study draws the assumption that it is necessary to comprehend the elements that affect the adoption of green banking practices.

Dimensions Encouraging Green Banking Initiatives

In this study, four dimensions of green banking initiatives, namely Service Trust and Reliability, Utility and Performance, Eco Benefit Awareness, and Social Influence, are considered as independent variables to examine their impact on customer buying behavior.

Service Trust & Reliability

Agrawal et al. (2009) examined how consumer satisfaction with e- banking's various features affected their overall level of happiness with the service. Value proposition had the least impact on overall e-banking satisfaction, whereas consumer satisfaction with security and trust had the biggest impact.

Utility & Performance

It reflects the effectiveness of green banking initiatives in serving customers and supporting sustainability. Banks' green products and services, such as eco-friendly loans and paperless banking primarily influence customer adoption and financial performance (Mehta & Sharma, 2016; Subedi & Bhattarai, 2024).

Eco-Benefit Awareness

Chang and Fong (2010) asserted that a company's environmental image is a pivotal aspect affecting consumer happiness. Moreover, contemporary clients are acutely cognisant of the adverse environmental consequences associated with banking activities (Hossain et al., 2015).

Social Influence

Shampa and Jobaid (2017) identified a correlation between the characteristics of green banking and customer happiness, with customer satisfaction as the dependent variable and security and trust, ease of use, value creation, and environmental and social concerns as the independent variables.

Drivers Propelling Adoption of Green Banking Initiatives

The study draws the assumption that it is necessary to comprehend the elements that affect the adoption of green banking practices. Prior studies, including Ahmad et al. (2013) and Islam et al. (2014), have identified several drivers that shape the adoption of green banking initiatives. These factors serve as a foundation for developing relevant assumptions in the context of Green Banking Initiatives and Consumer Purchase Behaviour among urban customers in Punjab.

Decision Convenience

It the extent to which the acceptance of green banking practices (GBP) is influenced by customer behavior (Bukhari, Hashim, & Amran, 2021). Agrawal (2009) examined three primary factors affecting overall consumer satisfaction with technology-driven financial services, namely value proposition, convenience and ease of use, and security and trust.

H₁: There is significant relationship between green banking initiatives and Decision Convenience.

Trust Driven Adoption

It refers to the degree to which consumer trust is restored by green banking initiatives. According to Sharma and Choubey (2022), respondents thought that green banking initiatives improved the perception of the green brand, which in turn increased trust. Agrawal (2009) identified three critical elements i.e. value proposition, convenience and usability, and security and trust that impact total customer satisfaction with technology-driven financial services. The literature on four constructs including green brand image, green brand equity, green brand trust, and green purchase intention was also summarised by Sharma (2023), who discovered a positive correlation between them, with green trust acting as a partial mediator in the relationship between green brand image and green brand equity.

H₂: There is significant relationship between green banking initiatives and Trust Driven Adoption

Service Assurance

It denotes the reliability and trust a client associates with the quality and provision of a service. Tiruneh (2017) analysed the significance of service quality dimensions such as tangibility, reliability, responsiveness, assurance, and empathy in affecting customer satisfaction. The research revealed that empathy exerted the most significant influence.

H₃: There is significant relationship between green banking initiatives and Service Assurance

METHODOLOGY OF THE STUDY

Research Methodology

A descriptive research design was used for this study. Therefore, an attempt was made to explore the factors of Green Banking initiatives that influenced customers' buying behavior. The questionnaire, developed from previous literature, measured the relevant constructs using a 5-point Likert scale where respondents provided their opinion. The responses were taken from a sample constituting 580 urban respondents from Punjab, encompassing leading public sector and private sector banks. Punjab State was divided into three regions, Malwa, Majha, and Doaba. From Malwa, Ludhiana District was selected; from Majha, Amritsar District; and from Doaba, Jalandhar District, as they represented the most populous districts with the highest urban proportion according to the Punjab State Profile (2011).

Reliability Statistics

It is essential to verify the internal reliability of the instrument since multiple items relate

to a single construct (Bryman & Cramer, 2005). Cronbach's alpha was used, with all constructs exceeding 0.7, aligning with the recommended threshold (Sekaran, 2000; Hair, 2006).

All independent variables have Cronbach's alpha values above 0.7 as indicated in Table 1, indicating good internal consistency. Service Trust & Reliability (.903), Utility & Performance (.895), Eco-Benefit Awareness (.802), and Social Influence (.764) are reliable. This makes the study's instrument highly reliable for measuring the desired constructs.

Table 1	
RELIABILITY VALUE OF INDEPENDENT VARIABLES	
Constructs	Cronbach Alpha
Service Trust & Reliability	.903
Utility & Performance	.895
Eco-Benefit Awareness	.802
Social Influence	.764

The Cronbach's alpha values for all constructs are above 0.7 as detailed in Table 2, confirming acceptable internal consistency. Decision Convenience (.809) shows strong reliability, while Trust Driven Adoption (.781) and Service Assurance (.721) indicate good reliability. Overall, the scale is reliable for assessing these constructs.

Table 2	
RELIABILITY VALUE OF DEPENDENT VARIABLES	
Constructs	Cronbach Alpha
Decision Convenience	.809
Trust-Driven Adoption	.781
Service Assurance	.721

DATA ANALYSIS AND RESULTS

Green Banking Initiatives and Consumer Purchase Behaviour Evidence from Urban Customers in Punjab is examined in this study, where the independent variables are Service Trust and Reliability, Utility and Performance, Eco Benefit Awareness, and Social Influence, and the dependent variables are Decision Convenience, Trust Driven Adoption, and Service Assurance. The primary objective was to analyze the extent to which green banking initiatives influence customer purchasing patterns. For this purpose, the analysis involved evaluating adjusted R^2 , ANOVA, and regression coefficients. Regression analysis further contributed by quantifying the strength and direction of relationships between the constructs, identifying significant predictors of customer behaviour, and validating the robustness of the proposed relationships formulated under hypotheses 1 to 3.

Relationship of Green Banking Initiatives with Decision Convenience

The Table 3 presents the key results of the regression model with Decision Convenience as the dependent variable. The R value of 0.690 indicates a strong positive correlation between the predictors Social Influence, Service Trust and Reliability, Eco Benefit Awareness, and Utility and Performance and Decision Convenience. The coefficient of determination R^2 shows that the model explains approximately 47.6 percent of the variance in Decision Convenience, while the adjusted R^2 value of 0.472 confirms the model's goodness of fit by accounting for the number of predictors included. These findings suggest that the predictors collectively exert a

significant influence on Decision Convenience and that the model provides a reliable explanation and prediction of this construct.

Table 3 MODEL SUMMARY (ENTER METHOD): PREDICTORS OF DECISION CONVENIENCE				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.690 ^a	0.476	0.472	0.59581
a. "Predictors": (Constant), Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance				

The ANOVA table as detailed in Table 4 provides important information on the statistical significance of the regression model in predicting Decision Convenience. The regression component shows a highly significant F statistic of 127.614 with a corresponding p value of 0.000. This confirms that the regression model is statistically significant and that the predictor variables collectively exert a meaningful influence on Decision Convenience. Overall, the ANOVA results demonstrate that the model is a strong and reliable predictor, with the variability in the dependent variable substantially explained by the combined effect of the predictors.

Table 4 ANOVA (ENTER METHOD): PREDICTORS OF DECISION CONVENIENCE						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	181.208	4	45.302	127.614	.000 ^b
	Residual	199.861	563	0.355		
	Total	381.069	567			
a. “Dependent Variable”: Decision Convenience						
b. “Predictors”: (Constant), Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance						

The coefficients in the regression model as illustrated in Table 5 provide insights into the impact of each predictor on Decision Convenience. Service Trust and Reliability ($\beta = 0.193$, $p = 0.000$), Utility and Performance ($\beta = 0.213$, $p = 0.000$), Eco-Benefit Awareness ($\beta = 0.199$, $p = 0.000$), and Social Influence ($\beta = 0.204$, $p = 0.000$) all have significant positive effects on Decision Convenience. These results indicate that all predictors contribute meaningfully, with Utility and Performance being the strongest driver, while Eco-Benefit Awareness, Service Trust and Reliability, and Social Influence also exhibit substantial positive relationships with the dependent variable.

Table 5 COEFFICIENTS (ENTER METHOD): PREDICTORS OF DECISION CONVENIENCE						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.128	0.110		1.161	0.246
	Service Trust & Reliability	0.193	0.018	0.332	10.860	0.000
	Utility & Performance	0.213	0.018	0.363	11.886	0.000
	Eco-Benefit Awareness	0.199	0.018	0.347	11.360	0.000
	Social Influence	0.204	0.018	0.346	11.305	0.000
a. "Dependent Variable": Decision Convenience						

Relationship of Green Banking Initiatives with Trust-Driven Adoption

The table 6 presents the regression model with Trust-Driven Adoption as the dependent variable. The correlation coefficient R is 0.736, representing a strong positive relationship between the predictors (Social Influence, Service Trust and Reliability, Eco-Benefit Awareness, Utility and Performance) and Trust-Driven Adoption. The coefficient of determination (R^2) of 0.542 shows that the model elucidates approximately 54.2% of the variance in Trust-Driven Adoption, demonstrating a significant overall impact of the predictors.

The adjusted R^2 value of 0.538 accounts for the number of predictors and confirms the model's goodness-of-fit. These outcomes indicate that the regression model effectively explains and predicts Trust-Driven Adoption, emphasizing the substantial effect of the independent variables.

Table 6 MODEL SUMMARY (ENTER METHOD): PREDICTORS OF TRUST DRIVEN ADOPTION				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736 ^a	0.542	0.538	0.58082
a. "Predictors": (Constant), Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance				

The ANOVA table provides essential information on the statistical significance of the regression model in predicting Trust-Driven Adoption, as detailed in Table 7. The model's regression component shows a highly significant F-statistic of 166.360 with a corresponding p-value of 0.000. This indicates that the regression model is statistically significant and that the predictor variables collectively have a substantial impact on Trust-Driven Adoption Singh, (2015).

Table 7 ANOVA (ENTER METHOD): PREDICTORS OF TRUST DRIVEN ADOPTION						
	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	224.487	4	56.122	166.360	.000 ^b
	Residual	189.929	563	0.337		
	Total	414.415	567			
a. "Dependent Variable": Trust-Driven Adoption						
b. "Predictors": (Constant), Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance						

The Coefficients table as illustrated in Table 8 provides detailed insights into the influence of each predictor variable on Trust-Driven Adoption. The constant in the model is 0.076 ($p = 0.478$). Among the predictors, Service Trust & Reliability ($\beta = 0.184$, $p < 0.005$), Utility & Performance ($\beta = 0.349$, $p < 0.005$), Eco-Benefit Awareness ($\beta = 0.163$, $p < 0.005$), and Social Influence ($\beta = 0.137$, $p < 0.005$) all show significant positive effects on Trust-Driven Adoption. Utility & Performance emerges as the key driver, while Service Trust & Reliability, Eco-Benefit Awareness, and Social Influence also demonstrate strong positive relationships, highlighting their substantial role in shaping customers' trust-driven adoption behavior.

This suggests that customers' adoption behaviour is primarily shaped by perceptions of functional reliability and performance excellence, while trust in service quality, environmental benefits, and social networks' persuasive power boost their confidence and willingness to adopt.

Table 8 COEFFICIENTS (ENTER METHOD): PREDICTORS OF TRUST DRIVEN ADOPTION						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.076	0.107		0.709	0.478
	Service Trust & Reliability	0.184	0.017	0.303	10.622	0.000
	Utility & Performance	0.349	0.017	0.572	19.997	0.000
	Eco-Benefit Awareness	0.163	0.017	0.273	9.540	0.000
	Social Influence	0.137	0.018	0.222	7.782	0.000
a. "Dependent Variable": Trust-Driven Adoption						

Relationship of Green Banking Initiatives with Service Assurance

Table 9 presents the key details of the regression model with Service Assurance as the dependent variable. The value of R is 0.771, indicating a strong positive correlation between the predictors (Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance) and Service Assurance. The coefficient of determination (R-square) shows that the model explains approximately 59.4% of the variance in Service Assurance, demonstrating the significant overall impact of the predictors. The adjusted R-square value of 0.591 accounts for the number of predictors, confirming the model's goodness-of-fit. These results suggest that the regression model effectively explains and predicts Service Assurance, with the predictor variables exerting a substantial influence.

Table 9 MODEL SUMMARY (ENTER METHOD): PREDICTORS OF SERVICE ASSURANCE				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.771 ^a	0.594	0.591	0.49005
a. "Predictors": (Constant), Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance				

The ANOVA table as provided below in Table 10 presents essential information on the statistical significance of the regression model in predicting Service Assurance. The regression component shows a highly significant F-statistic of 205.645 with a corresponding p-value of 0.000. This indicates that the regression model is statistically significant, and the predictor variables collectively have a substantial effect on Service Assurance.

Table 10 ANOVA (ENTER METHOD): PREDICTORS OF SERVICE ASSURANCE						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	197.541	4	49.385	205.645	.000 ^b
	Residual	135.203	563	0.240		
	Total	332.745	567			
a. "Dependent Variable": Service Assurance						
b. "Predictors": (Constant), Social Influence, Service Trust & Reliability, Eco-Benefit Awareness, Utility & Performance						

The Coefficients table values as illustrated in Table 11 provides key information on how each predictor variable influences Service Assurance in the regression model. The constant value is 0.008, indicating the baseline level of Service Assurance when all predictors are zero. Service Trust & Reliability ($B = 0.121$, $p < 0.005$), Utility & Performance ($B = 0.258$, $p < 0.005$), Eco-Benefit Awareness ($B = 0.185$, $p < 0.005$), and Social Influence ($B = 0.251$, $p < 0.005$) all show significant positive impacts on Service Assurance. Among these, Utility & Performance emerges as the strongest driver, while Eco-Benefit Awareness, Service Trust & Reliability, and Social Influence also demonstrate substantial influence. These results indicate that all predictors collectively contribute to enhancing Service Assurance in the context of green banking initiatives.

Table 11						
COEFFICIENTS (ENTER METHOD): PREDICTORS OF SERVICE ASSURANCE						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.008	0.090		0.084	0.933
	Service Trust & Reliability	0.121	0.015	0.222	8.264	0.000
	Utility & Performance	0.258	0.015	0.471	17.512	0.000
	Eco-Benefit Awareness	0.185	0.014	0.344	12.798	0.000
	Social Influence	0.251	0.015	0.456	16.942	0.000
a. "Dependent Variable": Service Assurance						

DISCUSSION AND IMPLICATIONS

Discussion

This study's findings demonstrate that the four predictors of Green Banking Initiatives which includes Service Trust and Reliability, Utility and Performance, Eco-Benefit Awareness and Social Influence meaningfully enhance several aspects of customer purchasing behaviour, including Decision Convenience, Trust Driven Adoption, and Service Assurance. Each predictor had a large positive impact on Decision Convenience, demonstrating that customers favour banking services that are reliable, efficient, and connected with their environmental conscience. This finding relates with Agrawal (2009), who emphasized the influence of technology-driven financial services on consumer satisfaction, accentuating elements such as value proposition, convenience, and usability. All variables similarly exerted a positive influence on Trust Driven Adoption, so validating the idea that green banking practices enhance customer trust and loyalty. Sharma and Choubey (2022) noted that participants regarded green banking initiatives as enhancing brand trust and the general perception of the green brand. Agrawal (2009) underscored the importance of security, trust, and simplicity in promoting customer acceptance of novel financial services. Moreover, the predictors substantially influenced Service Assurance, suggesting that customers regard green banking services as reliable and expertly administered. Tiruneh (2017) similarly documented the essential impact of service quality dimensions such as tangibility, reliability, responsiveness, assurance, and empathy in influencing customer happiness. These outcomes together indicate that Green Banking Initiatives encourage ecologically responsible activities, enhance consumer trust, optimise banking experiences and encourage sustained engagement with financial institutions for long-term environmental sustainability.

Implications

According to the findings of this research, the most important aspects of green banking initiatives, which are Service Trust and Reliability, Utility and Performance, Eco-Benefit Awareness, and Social Influence, have a noteworthy impact on the purchasing behaviour of consumers. These aspects include Decision Convenience, Trust Driven Adoption and Service Assurance. The study adds to a better understanding of how various aspects of green banking programs influence the adoption of environmentally responsible banking practices by consumers by, among other things, presenting empirical evidence. The findings have a number of consequences that are of practical and relevant importance. These insights can be utilised by bank managers in order to build and implement green banking strategies that not only adhere to the preferences and expectations of customers but also support environmental sustainability. It is possible to increase consumer trust and inspire increased engagement in green projects by putting an emphasis on using environmentally friendly products, providing dependable services, and communicating openly about environmental activities. These findings can also be utilised by financial institutions in order to improve client engagement, better service delivery, and develop marketing strategies that emphasise the tangible and social benefits of green banking. Banks have the power to build long- term loyalty, inspire environmentally responsible behaviour, and make a meaningful contribution to broader environmental protection aims if they demonstrate a commitment to sustainability while also addressing the practical and ethical concerns of their customers.

CONCLUSION, LIMITATIONS AND FUTURE DIRECTIONS

Consumers are essential to any organisation, and their expectations significantly influence corporate tactics. This study illustrates that green banking initiatives namely Service Trust and Reliability, Utility and Performance, Eco-Benefit Awareness, and Social Influence substantially affect consumer purchasing behaviour, encompassing Decision Convenience, Trust Driven Adoption, and Service Assurance. The results demonstrate that banks using proactive and eco- friendly procedures can significantly improve consumer involvement and loyalty. By connecting eco-friendly initiatives with client expectations, banks can enhance trust, elevate service satisfaction, and promote sustainable banking practices. The sample size is for this present research only encompassed customer from selected public and private banks, which may limit generalizability. Further, only a few variables were considered, and data was collected from specific urban areas in Punjab, so results may differ across other regions or with additional factors. Thus, future research study in this context should endeavour to incorporate a broader and more heterogeneous sample across various states or regions to enhance generalisability. Incorporating additional variables, such as digital banking uptake, environmental awareness campaigns or socio-demographic influences, could enhance the comprehension of green banking behaviour. Comparative analyses between public and private banks or among urban and rural clientele, could yield more profound insights. Moreover, longitudinal research could evaluate the evolution of consumers' green banking behaviour over time, assisting banks in formulating sustainable policies for enduring involvement and environmental effect.

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