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THE ROLE OF TRUST AND WILLINGNESS IN GREEN BANKING BEHAVIOUR: EVIDENCE FROM AN EXTENDED TAM FRAMEWORK

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ABSTRACT DOI No: 10.36713/epra22401 Article DOI: https://doi.org/10.36713/epra22401

To address the global demand for sustainable development, green banking has now become an imperative strategic drive for banks. This research examines the determinants of behaviors in the adoption of green banking services by expanding the Technology Acceptance Model (TAM) with such constructs as trust, willingness, awareness, perceived usefulness, and ease of use. The main aim is to evaluate the role these factors play in moulding customer willingness and subsequent adoption of green banking, thus filling a key gap in previous research that underemphasised the effect of trust and willingness in the TAM model. A quantitative design was adopted, and data was collected through a structured questionnaire of 339 long-term customers of five prominent public sector banks operating in Karnataka. Structural Equation Modeling (SEM) was used to verify hypothesized relationships. The findings indicate that willingness to adopt is the strongest predictor of green banking adoption, and that trust acts as an important mediating variable impacted by perceived usefulness, ease of use, and awareness. The findings have implications for policymakers in banks, who need to emphasize trust and customer awareness to speed green banking adoption. This study contributes to the body of thought in sustainable finance and green technological ecosystems' behaviour intention.

KEYWORDS: ***Green Banking, Trust, Willingness to Adopt, Technology Acceptance Model, Sustainable Finance***

1. INTRODUCTION

Concerns about climate change now occupy the headlines, and many people look toward banks for proof that finance can still be part of the solution. Analysts group those hopeful moves under the term-green banking-an umbrella for loans, screens, and policies that deliberately favour low-carbon projects. Recent studies have begun to track whether everyday customers really embrace those offers; Hasan and colleagues put a fine point on it in 2022 by calling the practice a push for environmentally sustainable development. Researchers need workable models, and the Technology Acceptance Model, or TAM for short, usually fills that slot. Marikyan and Papagiannidis updated the model in 2024, noting that it was originally designed for office software rather than home mortgage apps. Yet even the revised TAM still leaves two important pieces on the floor-trust and willingness-because psychologists warn that those are what keep people from switching to greener banks.

Trust occupies the spotlight when users consider whether to jump aboard eco-friendly banking, and plenty of researchers label that brand of faith green trust. The feeling links the public perception of a bank's environmental stewardship to the customers eventual pledge of loyalty (Chen & Chang, 2013; Wu & Long, 2024). Observations from the field confirm that when users trust a green fintech offering, their worry about hidden risks shrinks and their belief in the firm's planet-friendly promises grows stronger (Kumar et al., 2023; Zhang et al., 2023). The current burst of digital innovation is fanning the flames of that dynamic, pushing green products into the limelight and putting the heat on trust to steer peoples' actual choices and shape a thriving market for sustainable finance (Susan & Pan, 2024). In markets where accurate information is scarce, that same trust turns into a prized strategic resource for banks hoping to cement enduring ties with customers (Ibe-Enwo et al., 2019; Pawar & Munuswamy, 2022).

Willingness, or simply a person's readiness to act on behalf of the environment, plays a decisive role in green banking. Customers who express such readiness lean on three guiding forces: the gravity of their ecological worries, the pull of personal moral standards, and the visible backing offered by banks themselves (Majeed & Rasheed, 2025; Jain et al., 2025). Recent surveys also reveal that top managers endorsement, the day-to-day usefulness of green products, and customers baseline ecological awareness sharply alter how much people

want to participate (Newton et al., 2024; Sharma & Choubey, 2022). In one telling example, the strength of a banks green reputation lined up neatly with customers sense of practical advantage, underscoring how moral impulse must co-exist with functional need (Intani et al., 2023; Thapliyal et al., 2025).

Scholars now argue that trust and willingness should be folded into the classic Technology Acceptance Model to capture the full emotional and situational web behind green-finance choices (Srivastava et al., 2013). Doing so, researchers believe, will sharpen the model's ability to forecast actual behavior and, at the same time, fill a critical gap in studies of environmentally oriented banking practice (Xie et al., 2024). Still, field studies that put these two variables front and centre within the TAM framework are surprisingly rare, especially in emerging markets where digital innovation and ecological pressure are happening at almost the same speed (Mir et al., 2025; Mishra, 2023).

This inquiry examines how personal trust and situational willingness combine to influence green banking habits, framed within a broadened Technology Acceptance Model. By anchoring the analysis in recent scholarly theories and field observations, the project hopes to clarify the ways private attitudes and public policies work together to encourage sustainable financial conduct.

2. SIGNIFICANCE OF THE STUDY

Heightened public awareness of ecological risk, paired with mounting pressure to meet carbon-reduction targets, has catapulted the financial sector to centre stage in the green transition. Green banking blends conventional lending with climate-minded criteria and overlays the entire offering with digital conveniences-such as paperless statements and eco-offset options. Even so, take-up is spotty; many customers in emerging markets remain reluctant, handicapped by uneven digital literacy, variable trust in fintech systems, and often patchy understanding of what sustainability entails (Mishra, 2023; Majeed & Rasheed, 2025). Pinpointing the precise levers and barriers that govern this hesitance is urgent for scholars but equally for policymakers who wish to calibrate incentives.

Several well-known theoretical frameworks-Like the Theory of Planned Behavior, the Unified Theory of Acceptance and Use of Technology, and the older Technology Acceptance Model-have been pressed into service to explain why customers say yes to green or smartphone-driven banking products (Jain et al., 2025; Majeed & Rasheed, 2025). Where most inquiries lean on tidy variables such as perceived usefulness or the ease of a service, the literature still skims over messier feelings like trust and the nervous sensation of risk (Hasan et al., 2022; Belanche et al., 2012). That gap matters in green banking, because people naturally worry whether a lenders environmental promises are real and whether a climate-friendly app will be more of a headache than a help (Chen & Chang, 2013; Zhang et al., 2023).

At its core, consumer trust settles questions about whether a financial product can live up to its green promises. Researchers variously trace that faith back to cues such as the firm's public reputation, its record on disclosure, and the advertised environmental profile of each service (Ibe-enwo et al., 2019; Susan & Pan, 2024). In digital markets, however, worries about data leaks and the sheer strangeness of new technology deflate enthusiasm overnight. Empirical surveys pin much of that hesitation on the visible chance-misstep we label perceived risk (Kumar et al., 2023; Xie et al., 2024).

Yet most of the existing literature keeps these ideas apart, preferring side-by-side comparisons to full-blown system models. A notable exception-which still leaves user willingness outside the frame-pops up in the recent study (Pawar & Munuswamy, 2022; Newton et al. 2024). A persistent gap in the extant literature is striking researchers have seldom applied an adjusted version of the Technology Acceptance Model (TAM) to the emerging field of green banking, even though the original framework has passed through countless studies on general technology use (Marikyan & Papagiannidis, 2024). Trust, perceived risk, and customer willingness almost never appear beside the customary measures of usefulness and ease. Meanwhile, consumers today are bombarded with bold environmental claims and fresh digital-banking features, and that information overload inevitably complicates their adoption choices (Lee et al., 2025; Thapliyal et al., 2025). This study therefore asks a simple but pointed question: how do perceived usefulness, ease of use, trust, and psychological risk shape a customer's willingness to accept green-banking services? The research draws on the expanded TAM to merge theoretical ideas with lived behavioral patterns. A well-grounded answer should help banks design greener offerings that ordinary people deem credible, and it could also steer regulators toward policy tools that coax broader adoption of environmentally friendly finance (Mir et al., 2025; Sharma & Choubey, 2022).

3. CONCEPTUAL FRAMEWORK & HYPOTHESIS DEVELOPMENT

Environmental sustainability now sits at the forefront of policy debates, and banks have begun marketing green products in response. To make sense of why ordinary customers decide to sign up, researchers often reach for updated versions of the Technology Acceptance Model. This paper tests an alteration that adds trust, ease of use, usefulness, and simple awareness of the green offer-the same building blocks found in earlier TAM studies but dressed up for ecological finance (Marikyan & Papagiannidis, 2024). By folding in those psychological and situational pieces, the framework aims to ground the familiar TAM numbers in the messier world of climate-linked money choices.

Willingness to go green sits at the intersection of thought and action and usually tips the scale toward clicking a download button. Earlier work suggests it acts like a bridge, linking positive attitude surveys to the messy moment when a consumer hands over account details, and that connection is strongest when personal ethics line up with risk beliefs (Xie et al., 2024; Pawar & Munuswamy, 2022). People who already feel ready to recycle their dollars tend to seek out banks promising lower carbon footprints, which tells us that internal resolve can matter as much as any incentive the institution offers (Hasan et al., 2022; Majeed & Rasheed, 2025). In short,

willingness shows up repeatedly as a standout predictor of whether the green product gets used or just shelved.

Trust emerges as a cornerstone of customer choice in the green banking sector, shaping how borrowers and depositors react to ecological pledges. When lenders trumpet sustainability yet delivers little visible proof, doubt naturally blooms (Chen & Chang, 2013; Ibe-enwo et al., 2019). A clientele that believes the bank truly intends to protect the planet-and that it can secure their data-is noticeably quicker to open an account or submit a loan application. Multiple recent studies confirm that this confidence translates into deeper engagement and a greater appetite for green products (Zhang et al., 2023; Susan & Pan, 2024; Lee et al., 2025). The verdict remains clear: higher levels of trust lift the adoption rate of eco-focused financial services.

Trust does not float in a vacuum; it relies heavily on ordinary usability markers outlined in the Technology Acceptance Model. When software is straightforward and navigation feels almost instinctive, inexperienced users are much less shy about staking their money online (Belanche et al., 2012; Srivastava et al., 2013). Observers note that systems which marry simplicity with an eco-brand message come across as honest and dependable (Kumar et al., 2023). The same pattern recurs in mobile and internet banking inquiries, where frictionless displays repeatedly boost consumer certainty (Namho & Kwon, 2009; Mir et al., 2025). Perceived usefulness-the feeling that a particular platform actually makes life, or business, run a little smoother-remains a solid pillar of trust formation. When shoppers sense that a green banking app chops seconds off a payment or trims kilometers off their carbon tally, skepticism tends to yield to confidence in the system Wu and Long 2024; Lee et al 2025. That immediate sense of utility acts as a quick litmus test for the banks eco-promises, cementing customers faith in the institutions claims Thapliyal et al 2025; Jain et al 2025.

Awareness of green banking is no less important. If consumers dont even know that these climate-minded products exist, they are unlikely to entertain them, let alone place their trust in them Sharma and Choubey 2022. Research shows that public education, plain-spoken disclosures, and aggressive marketing clear away that fog of ignorance, allowing people to see what, precisely, the bank says it is doing for the planet Intani et al 2023; Newton et al 2024. When these pieces are taken together-perceived usefulness, trust, and awareness-an integrated picture of customer behavior around sustainable finance begins to emerge. Blending core Technology Acceptance Model (TAM) dimensions with the newer ideas of willingness and eco-conscious knowledge allows scholars and practitioners to map adoption patterns with uncommon clarity. Drawing from the earlier theoretical discussion and a synthesis of recent scholarship, five testable hypotheses have been crafted to steer the forthcoming data collection:

Hypotheses1: Willingness to Adopt Green Banking has a significant positive effect on the Adoption of Green Banking.

Hypotheses 2: Trust in Green Banking has a significant positive effect on Willingness to Adopt Green Banking.

Hypotheses 3: Perceived Ease of Use has a significant positive effect on Trust in Green Banking.

Hypotheses 4: Perceived Usefulness has a significant positive effect on Trust in Green Banking.

Hypotheses 5: Awareness of Green Banking has a significant positive effect on Trust in Green Banking.

Together, these propositions are designed to put the proposed extended technology acceptance model to an empirical test, investigating how behavioral attitudes, psychological securities, and information exposure interact to shape the uptake of eco-friendly financial services.

4. METHODS AND MATERIALS

The current investigation relies on a strictly quantitative blueprint, which suits the goal of pinning down cause-and-effect links within an expanded Technology Acceptance Model (TAM) lattice. Responses come from 339 clientele drawn from five public-sector banks in Karnataka-State Bank of India, Canara Bank, Punjab National Bank, Union Bank of India, and Bank of Baroda-each customer holding an account for at least five years. Such longevity guarantees that participants are well-acquainted with the full suite of both traditional and green banking offerings. Purposive sampling pinpointed these veteran accountholders to keep the evidence directly relevant to questions about eco-friendly service uptake. Structural Equation Modeling (SEM) then tackled the hypothesis suite, handling the tangled web of constructs that smaller methods often strain to contain; SPSS did the legwork on preliminary diagnostics. Measurement model checks established whether each indicator was pulling its weight, with the Fornell-Larcker Criterion shipped in to double-check discriminant sharpness. Predictive heft was gauged by R and Q metrics, and the final structural map was augmented by importance-performance matrices to give managers a straightforward picture of which drivers matter most on the ground.

5. ANALYSIS & INTERPRETATION

Table-1 Demographic characteristics of the Study

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	198	58.4%
	Female	141	41.6%
Age Group	18–30 years	74	21.8%
	31–45 years	122	36.0%
	46–60 years	98	28.9%
	Above 60 years	45	13.3%
Educational Qualification	Undergraduate	81	23.9%

	Graduate	137	40.4%
	Postgraduate	94	27.7%
	Others (Diploma/Professional)	27	8.0%
Occupation	Government Employee	76	22.4%
	Private Sector Employee	104	30.7%
	Self-Employed/Business	83	24.5%
	Retired	38	11.2%
	Others (Students, Homemakers, etc.)	38	11.2%
Monthly Income	Below ₹25,000	97	28.6%
	₹25,000–₹50,000	121	35.7%
	₹50,001–₹75,000	74	21.8%
	Above ₹75,000	47	13.9%

Source: *Field Survey*

Figure-1 Analysed Model for the Study (Via: SmartPLS)

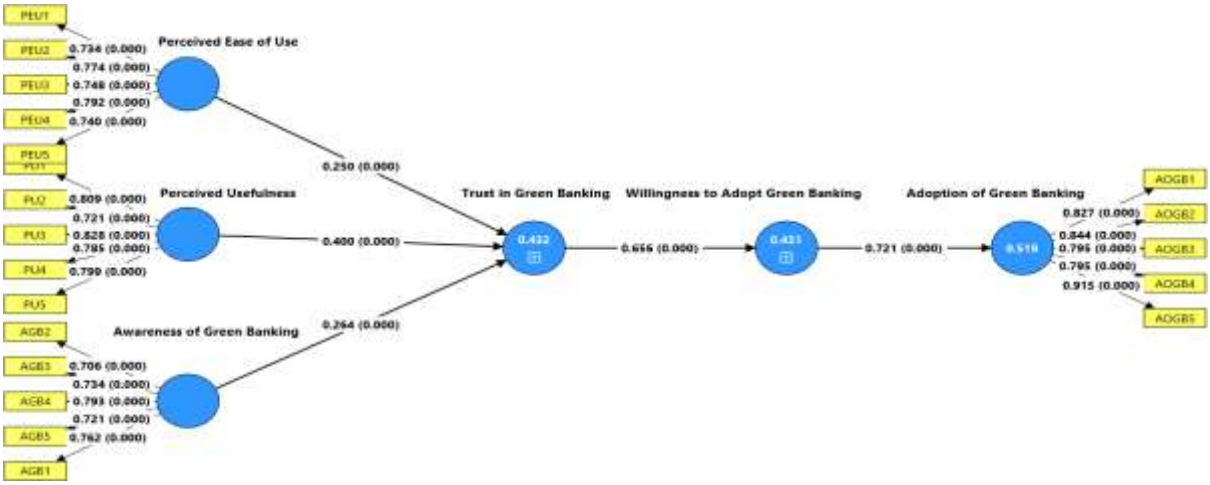


Table -2 Measurement Model Assessment – Loadings, Reliability, and Convergent Validity for Green Banking Constructs

Construct	Item	Details	Loading
Awareness of Green Banking	AGB1	I am aware of what green banking means in the context of sustainable finance.	**0.762**
	AGB2	I know that my bank offers environmentally friendly (green) banking services.	**0.706**
	AGB3	I have seen advertisements or information promoting green banking.	**0.734**
	AGB4	I am informed about how green banking contributes to environmental sustainability.	**0.793**
	AGB5	I can differentiate between green banking and traditional banking services.	**0.721**
Cronbach's alpha = 0.798, CR = 0.80, AVE = 0.553			
Adoption of Green Banking	AOGB1	I currently use green banking services provided by my bank.	**0.827**
	AOGB2	I have switched to digital/green alternatives like e-statements and paperless banking.	**0.844**
	AOGB3	I prefer green banking over traditional branch-based services.	**0.795**
	AOGB4	I regularly use eco-friendly banking services such as mobile apps and e-bills.	**0.795**
	AOGB5	I participate in green banking programs or incentives offered by my bank.	**0.915**
Cronbach's alpha = 0.892, CR = 0.894, AVE = 0.699			

Perceived Ease of Use	PEU1	I find green banking services easy to learn and operate.	**0.734**
	PEU2	Interacting with green banking platforms does not require a lot of mental effort.	**0.774**
	PEU3	It is easy for me to become skilful at using green banking services.	**0.748**
	PEU4	The processes involved in green banking are clear and understandable.	**0.792**
	PEU5	Using green banking services is straightforward and convenient.	**0.74**
Cronbach's alpha = 0.815, CR = 0.822, AVE = 0.574			
Perceived Usefulness	PU1	Using green banking services improves the overall efficiency of my banking tasks.	**0.809**
	PU2	Green banking helps me save time when conducting transactions.	**0.721**
	PU3	I find green banking to be a beneficial alternative to traditional banking.	**0.828**
	PU4	Green banking services are useful for managing my finances effectively.	**0.785**
	PU5	Green banking contributes positively to environmental conservation.	**0.799**
Cronbach's alpha = 0.848, CR = 0.852, AVE = 0.623			
Trust in Green Banking	TR1	I believe green banking platforms are secure for financial transactions.	**0.745**
	TR2	I trust the privacy of my data when using green banking services.	**0.749**
	TR3	My bank is reliable in handling green banking transactions responsibly.	**0.759**
	TR4	I feel confident in the integrity of the bankâ€™s green banking systems.	**0.717**
	TR5	Green banking services are trustworthy for long-term financial use.	**0.736**
Cronbach's alpha = 0.795, CR = 0.795, AVE = 0.55			
Willingness to Adopt Green Banking	WAGB1	I am willing to try out green banking services offered by my bank.	**0.913**
	WAGB2	I plan to shift to green banking as a regular part of my financial activities.	**0.865**
	WAGB3	I am interested in adopting green banking in the near future.	**0.84**
	WAGB4	I would recommend others to use green banking services.	**0.839**
	WAGB5	I intend to explore more about green banking offerings.	**0.715**
Cronbach's alpha = 0.891, CR = 0.901, AVE = 0.701			

Source: *SPSS*

The measurement model results shown in Table 2 indicate that six key latent variables-supporting Awareness of Green Banking, Adoption of Green Banking, perceived ease of use, perceived usefulness, trust in Green Banking, and the eventual willingness to adopt each score well on psychometric grounds. Standardized factor loadings remain comfortably above the 0.70 benchmark for every item, a threshold that conventionally marks strong indicator reliability. Within these same datasets,

Cronbach's alpha coefficients range between 0.795 and 0.892, signalling that the scale items behave consistently enough over repeated samples. Composite reliability metrics echo this point, since every computed value exceeds the 0.80 cutoff often used to gauge internal structural health. Looking at convergent validity, average variance extracted for all constructs stays above the 0.50 guideline, with figures clustered between 0.55 and 0.701. Of note, the willingness-to-adopt and adoption measures yield higher AVE estimates-0.701 and 0.699-respectively-suggesting they explain consumer intent more than proportionately. When taken together, the various reliability and validity indices show that the measurement model holds up both empirically and theoretically. That solid groundwork makes it justifiable to import these same constructs into the structural equation model that will explore what drives people to intend to use and adopt green banking services.

Table-3 Discriminant Validity Assessment Using Fornell–Larcker Criterion

Construct	AOGB	AGB	PEU	PU	TR	WAGB
Adoption of Green Banking	**0.836**					
Awareness of Green Banking	0.338	**0.744**				
Perceived Ease of Use	0.335	0.36	**0.758**			
Perceived Usefulness	0.291	0.263	0.187	**0.789**		
Trust in Green Banking	0.532	0.459	0.419	0.516	**0.742**	
Willingness to Adopt Green Banking	0.721	0.387	0.393	0.429	0.656	**0.837**

Source: *SPSS*

Table 3 summarizes a test of discriminant validity based on the Fornell-Larcker guideline, a threshold that many researchers still cite. Its diagonal, which is bolded for visibility, shows the square root of the Average Variance Extracted for every latent variable. According to the rule, that diagonal figure must exceed any off-diagonal entry in the same row-or, put more colloquially, a latent trait must outscore its neighbours. The numbers speak for themselves and yield a clean bill of health. Take, for example, Adoption of Green Banking, whose AVE-root registers as .836; side correlations with Trust in Green Banking (.532) and with Willingness to Adopt Green Banking (.721) fall well below that benchmark. Respective roots for Awareness of Green Banking (.744), Perceived Ease of Use (.758), Perceived Usefulness (.789), Trust in Green Banking (.742), and, finally, another look at Willingness to Adopt Green Banking (.837) mirror the same pattern and thus stay comfortably distinct from one another. That consistent margin among the measures keeps multicollinearity at bay and preserves the idea that each construct is tapping a separate slice of the theoretical pie. Put simply, the variables are statistically different, they make theoretical sense standing alone, and they will not gum up the structural paths that follow.

Table -4 R^2 and Q^2 Predict Values for Endogenous Constructs

Endogenous Construct	R-square	Q^2predict
Adoption of Green Banking	0.519	0.173
Trust in Green Banking	0.432	0.421
Willingness to Adopt Green Banking	0.431	0.296

Source: *SPSS*

Table 4 lists the R-squared (R^2) and Q-squared (Q^2) values assigned to three core concepts: the actual use of green banking, the trust consumers place in it, and their overall readiness to embrace such services. In effect, the table summarizes how well-theory takes the wheel and steers real customer behavior. The R^2 reading of 0.519 for green-banking adoption shows that the predictors account for half of the changes people exhibit in practice. That substantial figure sits comfortably with the moderate-explains-moderate yardstick laid out by Hair and his colleagues in 2019. Trust in green banking and the willingness to adopt it yield almost identical R^2 scores of 0.432 and 0.431, neither of which drifts far from that same moderate threshold yet both signalling meaningful insight. When the Q^2 numbers join the conversation, the story gains a forward-looking twist; they check whether the model can forecast rather than just describe. A Q^2 of 0.173 for adoption, paired with 0.421 for trust and 0.296 for willingness, keeps all three figures above the zero point and therefore stamps the setup as predictively healthy. Of the trio, trust carries the day with the highest Q^2, suggesting its future behavior can be anticipated with striking confidence. The results converge on a single point: the model does more than account for a large slice of the variance in core variables; it also makes reliable predictions. That dual accomplishment highlights both its empirical strength and the fresh theoretical leverage it offers to scholars studying the uptake of green banking practices.

Table-5 Structural Model Assessment – Path Coefficients, Significance, and Effect Sizes

Hyp	Path	Beta	SE	t-value	p-value	Supported	f 2	Effect size
H1	WAGB -> AOGB	0.721	0.036	19.766	0.00	Yes	1.081	Large
H2	TR -> WAGB	0.656	0.031	20.968	0.00	Yes	0.757	Large
H3	PEU-> TR	0.250	0.039	6.435	0.00	Yes	0.095	Small
H4	PU -> TR	0.400	0.041	9.843	0.00	Yes	0.260	Medium
H5	AGB -> TR	0.264	0.041	6.451	0.00	Yes	0.102	Small

Source: *SmartPLS*

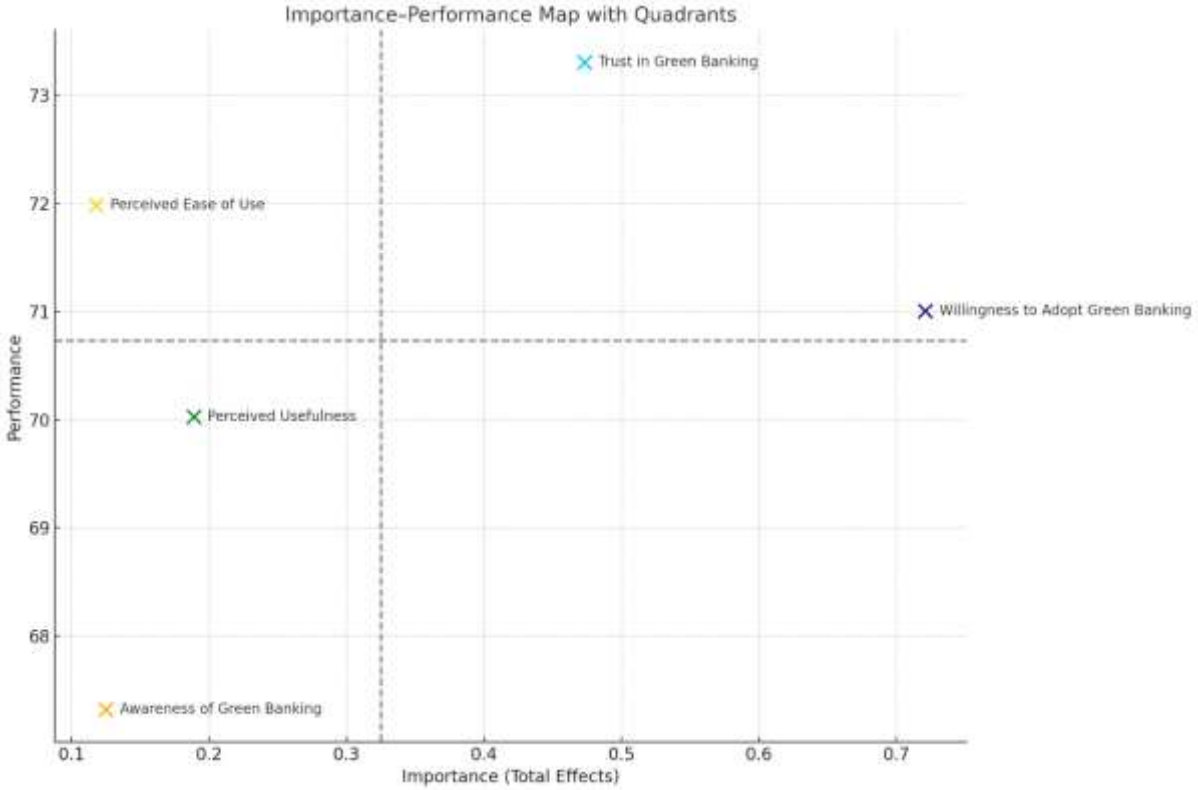
Table 5 assembles the estimates produced by the structural model, presenting each hypothesized path alongside its coefficient, standard error, t-statistic, p-level, and corresponding f^2 effect size. A uniform p-value of .000 signals that all examined pathways reach the conventional .01 threshold, providing strong statistical backing for the proposed linkages. The connection between Willingness to Adopt Green Banking and the actual Adoption (H1) claims the spotlight, characterized by a striking β of .721, a t of 19.766, and an f^2 of 1.081 that together frame intention as the principal driver of real-world uptake. Trust-in-Green-Banking influences Willingness to Adopt (H2) with equal intensity, yielding a coefficient of .656 and an effect size of .757, thus positioning confidence as an essential precondition of behavioral intent. Among the predictors of Trust itself, Perceived Usefulness (H4) carries a moderate yet meaningful weight, evidenced by β = .400 and f^2 = .260, suggesting that users' commitment hinges on the tangible benefits they associate with the eco-friendly bank service. Perceived Ease of Use (H3) and Awareness of Green Banking (H5) show statistically significant paths to trust, yet their effect sizes-f2 values of 0.095 and 0.102-underscore that their predictive power, though real, is modest. Together, these results lend empirical support to the study's conceptual model by highlighting that trust and customers' willingness to act are the chief mediators in the adoption chain. The structural links between psychological comfort and hard utility measures coincide with a very good model fit, reinforcing the framework's applicability to today's emerging-greenspace bank choices.

Table- 6 Importance–Performance Values of Constructs Influencing Green Banking Adoption

Construct	Importance	Performance
Awareness of Green Banking	0.125	67.319
Perceived Ease of Use	0.118	71.984
Perceived Usefulness	0.189	70.028
Trust in Green Banking	0.473	73.308
Willingness to Adopt Green Banking	0.721	71.008

Source: *SPSS*

Figure -2 Importance–Performance Map with Quadrants for Green Banking Constructs



The importance-performance analysis summarised in Table 6 and visualised in Figure 2 lays bare the strategic topography around green banking uptake. Willingness to Adopt Green Banking sits at the summit, grabbing a substantial importance weighting of 0.721 and matching performance figure of 71.008. That combination marks it as the cornerstone lever decision-makers ought to push on next quarter and beyond. Trust in Green Banking tracks closely, earning a slightly lower importance reading of 0.473 but pinning down the highest performance score, a sturdy 73.308. The current execution of trust-building tactics is evidently working, so policymakers can afford to nurture that momentum for a while longer. By contrast, Perceived Usefulness reaches only 0.189 in importance yet still clocks a respectable 70.028 on the performance scale. Awareness of Green Banking, for its part, sinks to 0.125 for importance and 67.319 for performance. Together, those numbers park the two constructs squarely in the low-high, low-low quadrant, an oversight that cries out for remedial workshops, clear pamphleteering, and sharper messaging. Even small boosts to awareness and usefulness, once delivered, could ripple out to strengthen both trust and willingness in unexpected ways. Perceived Ease of Use reveals a curious picture: it sits at a relatively low importance score of 0.118, yet its performance rating soars to 71.984. This gap implies customers find the interface agreeable enough, but that comfort does not, by itself, tip the scale toward adoption. Maintain that impressive user-friendliness if only to keep satisfaction levels high. A broader strategy then emerges. Stakeholders should double down on the drivers that matter most-willingness and trust-while also lifting the weaker areas of awareness and perceived usefulness. That two-pronged push stands the best chance of making green banking truly resonate.

6. IMPLICATIONS OF THE STUDY

This inquiry sheds fresh light on how green finance might more swiftly take root in Indias public-sector banks. Practitioners can draw on the results to fine-tune marketing, training, and incentive schemes so that customers find the transition less daunting. From a theoretical standpoint the research pushes the Technology Acceptance Model forward by threading in consumer trust, willingness to act, and basic awareness as new pillars. That shift broadens the conventional TAM lens beyond ease of use and utility and embeds psychological and values-driven factors into the frame15-17. Strong links between willingness, trust, and actual uptake echo earlier work yet underscore the need for richer models in this emerging domain.

Managers charged with steering retail banking operations will find that trust sits at the heart of the customer-experience equation that allows green products to flourish. Transparent pricing, reliable service, and straightforward messaging lay that groundwork, as earlier researchers have noted (Zhang et al. 2023; Kumar et al. 2023). Crucially, the digital interface itself needs to feel safe before borrowers gamble their data on eco-friendly loans. At the same time, lenders can no longer ignore the optics; visible chart-topping ESG scores or paperless account setups signal environmental concern even before a brochure is opened.

Perceived usefulness and consumer awareness keep showing up in the statistical back row; they barely tip adoption scales on their own but do creep the trust meter in banks favour (Mishra 2023; Thapliyal et al. 2025). That opens a window for campaigns-podcasts, web clinics, colorful push-notices-that explain, say, how a carbon-offset mortgage works. The field evidence presented here should give policymakers,

sustainability advocates, and anxious bank boards a sensible playbook, especially in markets still building out broadband or warming up to the climate agenda.

7. FUTURE SCOPE OF STUDY

This study sketches a fresh portrait of green banking by weaving trust, willingness, and public awareness into a newly extended Technology Acceptance Model (TAM). That said, the canvas is still unfinished. Because data were gathered exclusively within Karnataka-s Verdict a T at- v public sector banks only-the generalizations remain regionally snug. Scholars could break the bounds by bringing private and cooperative lenders into the mix, or by shifting the field site to other Indian states, or indeed by setting up cross-country comparisons to see how geographic and institutional contexts twist consumer behavior. Longitudinal inquiry also lurks at the margins, waiting to show how patron habits might drift as environmental awareness deepens and as sharper policy sticks are applied. Adding extra levers such as peer pressure, baseline financial literacy, or plain old concern for the planet could, in principle at least, beef up the model's predictive muscle. Qualitative probes present another lane for exploration, since interviews and focus groups can chase the messy feelings and moral nudges that surveys often miss. Researchers should also track the role of nimble digital platforms and fintech gizmos, since mobile and online banking are sprinting ahead and may well propel green adoption even faster than brick-and-mortar setups. Research assessing how government incentives and regulatory frameworks steer green-banking practice can yield actionable insights for next-generation public-private collaborations. Because sustainability has now cemented its place at the core of corporate strategy, the opening for cross-disciplinary, multi-stakeholder inquiry in this field is both considerable and immediate.

8. POTENTIAL LIMITATIONS

Every academic inquiry, no matter how carefully crafted, must eventually reckon with its own shortcomings. In this case, the most glaring constraint lies in the modest dataset: only 339 patrons of a handful of public-sector banks scattered across Karnataka. That geographic focus makes it difficult to project the results onto customers in other states or even those banking with different institutional types. The snapshot nature of a cross-sectional survey further curtails the analysis, freezing behaviour at a single moment and thereby missing any later shifts in attitude or usage. Reliance on user self-reports opens another crack, since respondents may overplay the socially acceptable answers. A last limitation is theoretical; the study probes only a narrow selection of variables within an expanded Technology Acceptance Model, leaving other psychological and situational predictors to the side. Subsequent investigations will need to widen the sample, adopt longitudinal measurement, triangulate with third-party data, and broaden the list of constructs to strengthen both the validity and reach of the conclusions.

9. CONCLUSION

This research provides strong empirical examination of the behavioural processes driving green banking adoption through an expansion of the Technology Acceptance Model (TAM) with trust, willingness, awareness, and perceived risks. Withdrawing lessons from 339 customers of large public sector banks in Karnataka, the study highlights the core position of willingness to adopt and trust as essential antecedents of green banking adoption. Among the constructs examined, willingness emerged as the most influential driver, while trust was significantly shaped by perceived usefulness, ease of use, and awareness. The assessments of measurement and the structural model showed good reliability, validity, and explanatory power, validating the robustness of the conceptual framework. Also, the importance–performance analysis pointed out areas requiring strategic attention, such as awareness and perceived usefulness, which showed lower performance despite theoretical relevance. These findings present real-world implications for policymakers and banking institutions looking to promote sustainable banking. Although findings are contextually specific, they add to wider theoretical contributions in green consumer behaviour by bridging psychological frameworks with technological adoption theories. Overall, the research not only fills an important gap in green banking literature but also provides a base for subsequent research examining changing customer attitudes and institutional approaches towards sustainable banking.

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