
Adaption Of The Tam To Examine The Influence Of Perceived Ease Of Use And Perceived Usefulness On Green Banking Practices

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How to cite this article: Anam .S. Natalwala, Munira Habibullah (2024) Adaption Of The Tam To Examine The Influence Of Perceived Ease Of Use And Perceived Usefulness On Green Banking Practices. *Library Progress International*, 44(3), 20679-20684.

Abstract

Background: The practice of Green Banking is undergoing tremendous development, with a primary focus on incorporating sustainability factors into operational and commercial aspects of the banking sector. This study aims to analyse the Technology Acceptance Model and its impact on the adoption of Green Banking Practices, specifically focusing on the influence of Perceived Ease of Use and Perceived Usefulness.

Objective: To test the conceptual model to examine the influence of Perceived Ease of Use and Perceived Usefulness on Green Banking Practices.

Method: For the purpose of conducting the study, customers from private sector banks and public sector banks were selected. From these 250 customers were chosen for the study. The convenience sampling approach was employed for the same purpose. The data was analysed using SmartPls 4.

Conclusion: The study's findings and conclusions indicated that these observed outcomes performance expectancy have a significant impact on perceived ease of use and perceived usefulness.

Keywords: Banking Sector, Green Banking Practices, Technology Acceptance Model

Introduction:

In 1969, the notion of environmentally friendly practices acquired momentum, resulting in the formation of organisations such as the Environmental Protection Agency. Subsequently, internationally recognised organisations that include the International Finance Corporation and the US Green Building Council have arisen with the aim of advancing the cause of environmentally friendly development. Green Banking Council actively promote environmental sustainability (Durani, 2023). The banking sector is often recognised as one of the most ancient sectors globally. The first historical records of financial operations can be linked back to the year 2000 BC. Historically, the banking sector played a significant role within the capitalist framework. In a fashion that ensures private banks have complete control over the economy, the capitalist system is an economical framework that facilitates the generation and distribution of wealth. (Asim Ali Bukhari et al., 2019). Consequently, the banking industry is developing key indicators to assess the effectiveness of Green Practices, including energy consumption, carbon emissions, paper consumption, water consumption, solar energy production, green taxation, effectiveness, and profitability (Charan, A Dahiya, R Kaur, 2019). This study aims to address the following research question:

RQ: What relationship exists between external variables, perceived ease of use, perceived usefulness and actual system use in a Green Banking Practices?

The present study makes the following contributions: It provides link between external variables of Green Banking Practices, perceived ease of use, and perceived usefulness. It also includes data from customers of banks that has been studied in literature review

Literature Review and Hypothesis Development

(Shrivastava et al., 2019) It was discovered that the primary factor influencing customers' actual system use to use green banking is the risk involved, followed by the ease of use and usefulness of the products and services. (Hajar, 2024) mentioned green trust, (Rahman et al., 2023) mentioned environmental factors, and (Selvaraj, 2022) Green banking represents a preventative and competent strategy for considering long-term environmental responsibility, since financial institutions have proactively undertaken measures to encourage environmentally conscious investment practices (Mishra & Aithal, 2023). Including environmentally friendly methods into financial strategies is the goal of the Green Banking Revolution, which seeks to bring banks into line with a green mindset (Dr. Shilpa Sachdeva & Dr. Indrajeet Ramdas Bhagat, 2024). (Xie et al., 2024) examined autonomy theory, customer perceived value and technology acceptance model. (Bekmukhambetova & Németh, 2023) found that the perceived usefulness, perceived ease of use, and attitudes towards use are significant factors influencing the adoption and utilisation of Green Banking Practices.

Hypothesis

Following hypothesis were investigated as presented in figure 1:

- Environmental Factors has a positive relationship with Perceived Ease of Use.
- Performance Expectancy has a positive relationship with Perceived Ease of Use.
- Performance Expectancy has a positive relationship with Perceived Usefulness.
- Perceived Ease of Use has a positive relationship with Actual System Use.
- Perceived Ease of Use has a positive relationship with Perceived Usefulness.
- Perceived Usefulness has a positive relationship with Actual System Use.
- Trust has a positive relationship with Perceived Usefulness.

Research Methodology

The present study used the Technology adoption Model (TAM) as a conceptual framework to comprehend the adoption of technology and the various elements that influence perceived ease of use (PEOU) perceived usefulness (PU), actual system use (ASU). Empirical testing is employed to examine hypothetical relationships. The exploratory and descriptive research design was utilized to conduct the study. The researcher devised an internet-based survey utilising Google Forms and distributed it directly to the intended respondent pool. A total of 250 respondents were collected from the private and public sector bank customers'. A five point Likert Scale was used 1 indicating Strongly Disagree and 5 indicating as Strongly Agree. Smart PLS 4 was used for the analysis.

Results of Data Analysis

Reliability and Validity

The researchers employed Cronbach's alpha and composite reliability measures to conduct reliability assessments on the constructs. The reliability of all constructs surpassed the allowed threshold of 0.700. Each construct exhibited a Cronbach's alpha value that surpassed the established threshold of 0.700. The convergent validity was deemed adequate as the average variance extracted (AVE) exceeded 0.500. (Hair et al., 2019)

Table 1: Loading, Validity, and Reliability

| Construct | Loadings | Cronbach's α | CR | AVE |
|-----------|----------|---------------------|-------|-------|
| EF1 | 0.280 | 0.763 | 0.881 | 0.620 |
| EF2 | 0.901 | | | |
| EF3 | 0.894 | | | |
| EF4 | 0.890 | | | |
| ASU1 | 0.870 | 0.926 | 0.930 | 0.772 |
| ASU2 | 0.896 | | | |
| ASU3 | 0.870 | | | |
| ASU4 | 0.916 | | | |
| ASU5 | 0.838 | | | |

| | | | | |
|-------|-------|-------|-------|-------|
| PE1 | 0.921 | 0.867 | 0.921 | 0.722 |
| PE2 | 0.881 | | | |
| PE3 | 0.940 | | | |
| PE4 | 0.616 | | | |
| PEOU1 | 0.892 | 0.935 | 0.940 | 0.795 |
| PEOU2 | 0.822 | | | |
| PEOU3 | 0.915 | | | |
| PEOU4 | 0.924 | | | |
| PEOU5 | 0.902 | | | |
| PU1 | 0.911 | 0.934 | 0.939 | 0.835 |
| PU2 | 0.939 | | | |
| PU3 | 0.938 | | | |
| PU4 | 0.864 | | | |
| T1 | 0.883 | 0.917 | 0.918 | 0.751 |
| T2 | 0.868 | | | |
| T3 | 0.835 | | | |
| T4 | 0.864 | | | |
| T5 | 0.881 | | | |

Model of Structure

The structural model illustrates the proposed pathways employed within the research paradigm. The SRMR method was employed to evaluate the adequacy of the model's fit to the data. The SRMR score obtained was 0.063, falling below the minimal threshold of 0.10. This suggests that the goodness of fit of the model was satisfactory (Hair et al., 2024).

Table 2: Model Fit

| | Saturated Model | Estimated Model |
|-------------------|-----------------|-----------------|
| SRMR | 0.063 | 0.070 |
| d_ULS | 1.509 | 1.860 |
| d_G | 1.085 | 1.150 |
| Chi-square | 550.777 | 567.945 |
| NFI | 0.822 | 0.817 |

Table 3: Fornell-Larcker

| | EF | ASU | PE | PEOU | PU | T |
|------|-------|-------|-------|-------|-------|-------|
| EF | 0.788 | | | | | |
| ASU | 0.642 | 0.878 | | | | |
| PE | 0.668 | 0.878 | 0.850 | | | |
| PEOU | 0.729 | 0.862 | 0.860 | 0.892 | | |
| PU | 0.667 | 0.868 | 0.872 | 0.904 | 0.914 | |
| T | 0.658 | 0.871 | 0.901 | 0.831 | 0.859 | 0.867 |

Note: EF- Environmental Factors, ASU- Actual System Use, PE- Performance Expectancy, PEOU- Perceived Ease of Use, PU- Perceived Usefulness, T- Trust

The Fornell-Larcker criterion is well recognised and considered a reliable measure for assessing both the validity of a measurement instrument and the presence of common method bias.

Table 3: Result Summary

| Hypothesis | Original | Standard Deviation | T statistics | P values | Result |
|------------|----------|--------------------|--------------|----------|--------|
|------------|----------|--------------------|--------------|----------|--------|

| | Sample (O) | (STDEV) | (O/STDEV) | | |
|------------|------------|---------|-------------|-------|-------------|
| EF -> PEOU | 0.280 | 0.085 | 3.306 | 0.001 | Significant |
| PE -> PEOU | 0.672 | 0.081 | 8.293 | 0.000 | Significant |
| PE -> PU | 0.202 | 0.098 | 2.066 | 0.039 | Significant |
| PEOU ->ASU | 0.423 | 0.138 | 3.067 | 0.002 | Significant |
| PEOU -> PU | 0.542 | 0.077 | 7.051 | 0.000 | Significant |
| PU -> ASU | 0.486 | 0.136 | 3.582 | 0.000 | Significant |
| T -> PU | 0.226 | 0.088 | 2.565 | 0.010 | Significant |

The coefficient for H1 (EF positively contributes to PEOU) is 0.280, the t value is 3.306, and the p value is 0.001. H1 is accepted and supported by the results, the t-statistics and p-value results are significant at 1% level of significance. H2 (PE has a positive effect on PEOU) was also confirmed by the given results. The coefficient for PE is 0.672, the t statistics is 8.293, and the p value is 0.000. H3 (PE has a positive effect on PU) is 0.202, the t value is 2.066, and the p value is 0.039 results are significant. H4 (PEOU positively contributes to ASU) is 0.423, the t statistics is 3.067, and the p value is 0.002 and hence it's significant. H5 (PEOU positively contributes to PU) is 0.542, the t value is 7.051, and the p value is 0.000 results are significant at 1% level of significance. H6 (PU has a positive effect on ASU) is 0.486, the t value is 3.582, and the p value is 0.000. H6 is accepted and supported by the results. H7 (T positively contributes to PU) is 0.226, the t value is 2.565, and the p value is 0.010. H7 is accepted and supported by the results.

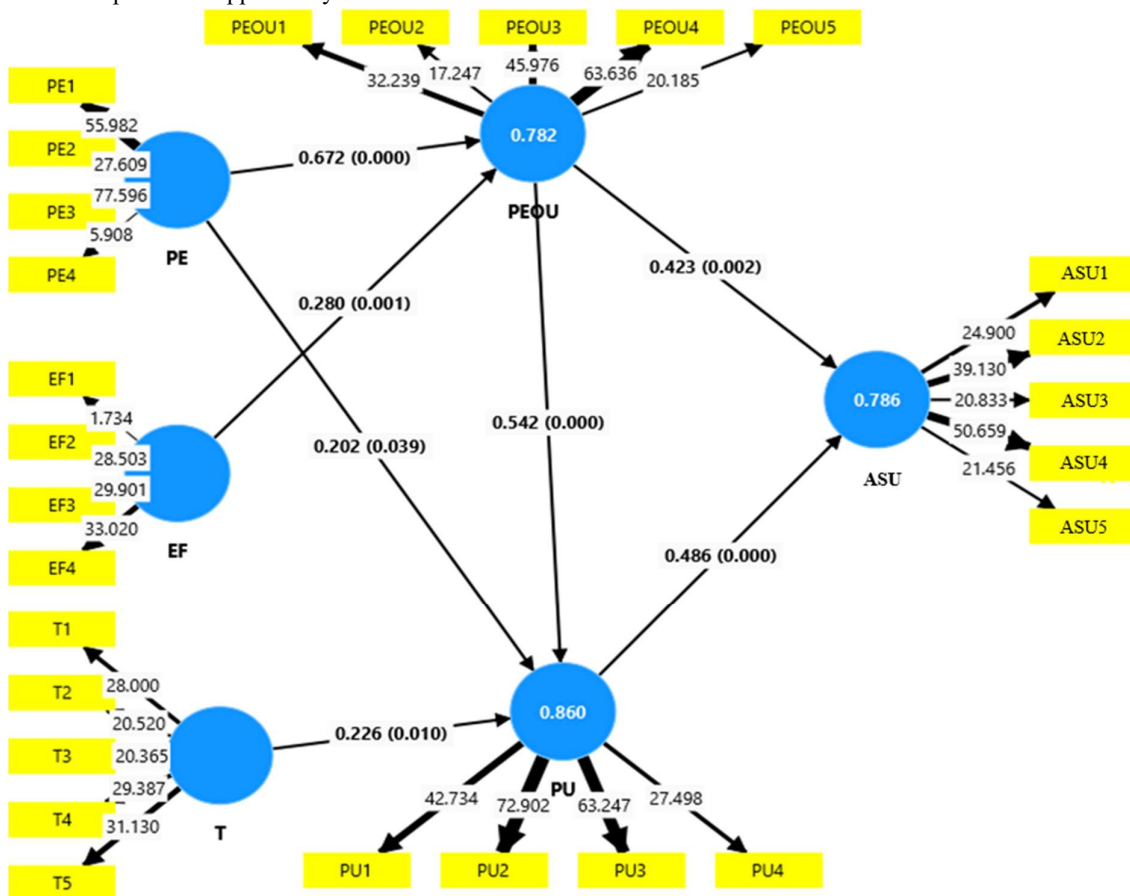


Figure 1: Hypothesis Test Results

Conclusions

This research aims to analyse the suggested theoretical framework by establishing relationships between various

external factors and their linkage with perceived ease of use and perceived usefulness and their influence on actual system use of Green Banking Practices. Prior research does not include the suggested model concept that the performance expectancy, environmental factors, and trust ascertain the effectiveness on perceived ease of use and perceived usefulness. This study makes a contribution to the current body of research on TAM by demonstrating the significance of PU and PEOU with regard to the actual use of Green Banking Practices. Consequently, the findings of this research confirm that performance expectancy has a significant impact on PU and PEOU both. Therefore, all the hypothesis cited in opening section had significant associations. Therefore, it is important to assist them in comprehending the significance of external elements impacting the adaptation of green banking practices and to place greater focus on the formerly overlooked role of perceived usefulness and perceived ease of use.

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