

Consumer Acceptance of the AGRANI Bank Smart Banking App: An Analysis of Agrani Bank plc's online Smart Banking Application.

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Abstract:

This article aims to empirically investigate the factors influencing Bangladesh's adoption of online banking apps. It looks at how the use of these apps is influenced by factors like trust, perceived usefulness, perceived ease of use, attitude toward use, and behavioral intention. The results show that the use of online banking apps in Bangladesh positively correlates with perceived utility, trust, simplicity of use, attitude toward use, and behavioral intention. On the other hand, perceived ease of use was not determined to be a significant component in this study, which contradicts the Technology Acceptance Model (TAM). Based on these findings, bank executives ought to devise plans to increase the uptake of online banking applications. Enhancing website security and privacy helps boost user confidence, but banks should also concentrate on developing and marketing customer-friendly features. Additionally, the government should support banks in their efforts to boost online banking app adoption. The study clarifies the variables affecting Bangladesh's adoption of online banking. It implies that similar conclusions may hold for other nations that are just beginning to engage in e-commerce and online banking. Unlike previous studies based on TAM, this research includes security and trust as additional variables. Most existing studies on online banking adoption focus on developed countries, making this study particularly relevant for developing countries like Bangladesh.

Keywords: online banking; trust; electronic commerce; bangladesh

1.0 Introduction:

The use of Internet technology to improve corporate performance is not a new development. According to Rosário, A., & Raimundo, R. (2021), the use of e-commerce in businesses has grown significantly over the past decade. E-commerce offers numerous benefits, including cost reduction, increased business opportunities, shorter lead times, and more personalized services for consumers

(Taher, 2021).

In Bangladesh, e-commerce is still in its early stages (Karim, M. T., & Qi, X, 2018). Although Bangladesh is currently attracting foreign investors due to its cost advantages compared to other countries, relying solely on a low-cost strategy is not sustainable for long-term competitiveness (Mujeri et al., 2021). To remain competitive, businesses can adopt e-commerce through mobile banking apps, which can enhance productivity and efficiency. The Bangladeshi government's emphasis on e-commerce is evident in its goal to have more firms conducting e-commerce by 2010, as outlined in its Overall

Plan on Developing E-commerce (People's Daily, 2006). Online banking using apps is now an integral part of Bangladesh's overall e-commerce strategy.

While previous literature has examined the adoption of mobile banking apps for online banking, most studies have focused on European countries or the United States (Shaikh, A. A., & Karjaluo, H, 2015) Bangladesh, with its rapidly growing economy and less developed e-commerce infrastructure compared to countries like Malaysia, presents a different context. Therefore, the adoption of mobile banking apps and online banking is still in its nascent stage compared to developed nations. The primary objective of this research is to understand Bangladeshi consumers' perceptions of Internet banking and identify factors that predict their intention to use mobile banking apps. Bank decision-makers would be able to concentrate on the elements that will boost online banking app adoption in Bangladesh thanks to the data. The Technology Acceptance Model (TAM) has been used in many research to describe user behavior and intention to adopt new technologies. The main elements of TAM are attitude, aim, perceived usefulness, and simplicity of use. The moderating impact of behavioral factors on users' attitudes toward technology adoption has also been studied.

Although many Americans use internet apps, older, less educated, minority, and lower-income individuals have lower usage rates compared to younger, highly educated, white, and wealthier individuals (Tsetsi, E., & Rains, S. A, 2017)

TAM takes into account perceived utility and ease of use in this context as influencing elements of attitude. To explain attitude and intention, the innovation diffusion hypothesis, on the other hand, looks at perceived relative advantage, ease of use, compatibility, observability, and trialability. Both perceived usefulness and perceived relative advantage highlight the benefits of mobile banking, such as time and place independence, effort-saving qualities (Khrais, L. T, 2017), ubiquity, flexibility, and mobility (Sulaiman, Jaafar & Mohezar, 2007), compared to other banking channels. Perceived usefulness is the belief that using a particular technology enhances performance. Given the limited hours in a day, mobile banking should offer increased productivity with minimal effort and maximum convenience.

The goal of this article is to enhance our understanding of the factors influencing the acceptance of online banking apps using the Technology Acceptance Model (TAM) (Marangunic, N., & Granic, A, 2015). Specifically, the acceptance of online banking apps will be studied from the information systems acceptance perspective, considering that consumers are directly using the banking app as an information system. For online banking apps to be successful in Bangladesh, users must be willing to adopt the technology (Hassan et al., 2022).

Objective of the study:

- To examine the socio-economic demographics of

customers using the Agrani mobile banking app service.

- To identify the factors influencing customer satisfaction with Agrani Bank's mobile banking app service.
- To determine the satisfaction levels of customers regarding Agrani Bank's mobile banking app services.
- To provide recommendations and conclusions to further enhance the development of Agrani Bank's mobile banking app services in Bangladesh.

2.0 Literature review:

Mobile banking through app applications refers to mobile-based platforms that enable users to perform financial transactions via the Internet (Shaikh & Karjaluo, 2015; Sharma et al., 2020a). The existing literature examines various aspects of mobile banking applications through established theories and models, such as the Technology Acceptance Model TAM, (Ahmad, M, 2018) (e.g., Hassan & Wood, 2020; Ho et al., 2020; Sharma, 2019), the Unified Theory of Acceptance and Use of Technology (UTAUT) (e.g., Sharma et al., 2020a), and UTAUT2 (e.g., Sharma et al., 2020b). Among these, TAM is particularly prominent in studying mobile banking service application (MBSA) adoption. For instance, Luarn and Lin (2005) expanded TAM by adding three variables, while Hassan and Wood (2020) integrated perceived trust, perceived usefulness, and ease of use, discovering that both primary and secondary country cultures can somewhat influence consumer perceptions and intentions regarding mobile banking apps. Additionally, Munoz-Leiva et al., 2017 applied the TAM model and identified trust as a significant determinant of the intention to use innovative technology.

Many researchers have studied mobile banking apps using the Technology Acceptance Model (TAM). The authors employed TAM to investigate factors influencing the adoption of mobile banking apps in Bangladesh, using Confirmatory Factor Analysis to analyze collected data and Structural Equation Modeling to validate their proposed model. The results indicated that Perceived Ease of Use, Perceived Usefulness, and Perceived Trust significantly impact customers' attitudes toward using mobile banking apps. The authors also extended TAM to predict consumer intention to use the mobile banking app in Agrani Bank.

The TAM model, which incorporates moderate factors that have been deemed helpful in researching the factors influencing customers' propensity to use mobile banking app services, will be used in this study.

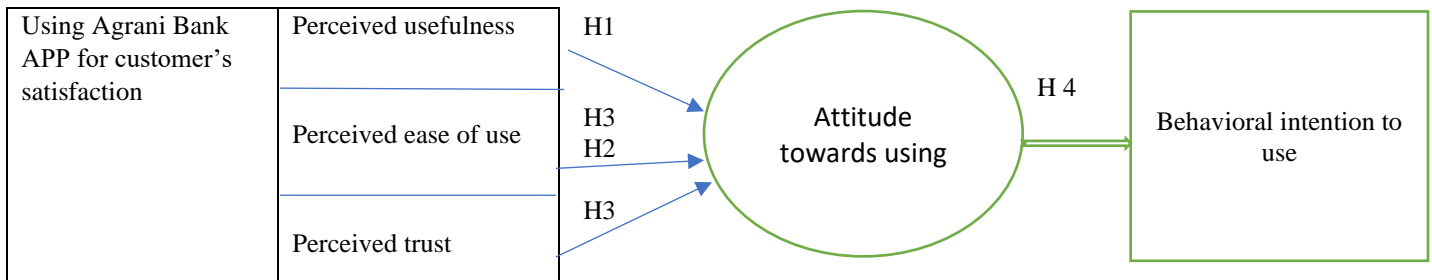
Finally, unlike our study which focuses on factors influencing mobile banking app adoption by customers, Shamot conducted research on public bank managers' opinions regarding the benefits of mobile banking apps in Bangladesh. The results indicated that Amman bank managers believe using the mobile banking app provides high comfort for their customers. Additionally, managers

with less than eight years of experience felt that the mobile banking app could improve monitoring and reporting more effectively than those with 15 or more years of experience.

2.2 Conceptual framework:

Conceptual Model of Agrani Bank PLC through the online banking app system.

Fig: 1 Research Model:



Source: Extent literature review

This study aimed to examine the impact of four Agrani Bank mobile banking app service quality dimensions on customer satisfaction (see Figure 1).

2.2.1 Perceived Usefulness and Attitude Towards Using:

Extensive research indicates that perceived usefulness significantly impacts usage intention (Agarwal & Prasad, 1999; Davis et al., 1989; Hu et al., 1999; Jackson et al., 1997; Venkatesh, 1999, 2000; Venkatesh & Davis, 1996, 2000; Venkatesh & Morris, 2000; Tahar et al., 2020; Al-Emran et al., 2020). The primary reason people use mobile banking apps is because they find them beneficial. Thus, we propose the following hypothesis:

H1. Perceived usefulness will positively influence attitudes towards using mobile banking apps.

2.2.2 Perceived Ease of Use and Attitude Towards Using:

Numerous studies over the past decade have shown that perceived ease of use significantly affects usage intention, whether it directly impacts perceived usefulness or not (Agarwal & Prasad, 1999; Davis et al., 1989; Hu, Chau, Sheng, & Tam, 1999; Jackson, Chow, & Leitch, 1997; Venkatesh, 1999, 2000; Venkatesh & Davis, 1996, 2000; Venkatesh & Morris, 2000; Ebadi, S., & Raygan, A, 2023; Mican, D., & Sitar-Taut, D. A, 2024). To avoid the problem of "underused" systems, mobile banking systems must be easy to learn and use. Perceived ease of use is also a significant precursor to the perceived credibility of Internet banking (Raza et al., 2017). Therefore, we propose the following hypothesis:

H2. Perceived ease of use will positively influence attitudes towards using mobile banking apps.

2.2.3 Perceived Trust and Attitude Towards Using:

Perceived trust refers to the extent to which using a computer is perceived to be enjoyable in itself (Alalwan et al., 2018), differing from perceived usefulness, which is an extrinsic motivation. Perceived trust (PT) is considered an intrinsic motivation to use

information systems. Several studies (Davis et al., 1992; Igbaria et al., 1995; Teo et al., 1999; Bastari et al., 2020) have found that PT significantly affects intentions to use computers. Igbaria et al. (1995) discovered that PT positively correlates with the duration of use but not with usage frequency or number of tasks. They also found that perceived usefulness significantly impacts the intention to use the Internet. Based on this, we expect that PT affects the acceptance of online banking:

H3. Perceived trust (PT) will positively influence attitudes towards using online banking apps.

2.2.4 Attitude Towards Using and Behavioral Intention to Use:

Our focus group interview highlighted the importance of a reliable Internet connection and its impact on customer attitude. Additionally, Sathye, 1999; Chang et al., 2020) identified attitude access as a factor affecting the adoption of online banking apps. Without a proper positive attitude connection, the use of online banking apps is not feasible. Therefore, we propose

H4. A positive attitude connection will mediate a positive effect on consumer behavioral intention toward using online banking.

Methodology of the study:

To ensure the content validity of the scales used, it is crucial that the selected items accurately represent the concept being studied. Therefore, the items chosen for the constructs were primarily adapted from previous studies to maintain content validity. The instruments from the Technology Acceptance Model (TAM) are psychometrically robust. Instruments for perceived ease of use and perceived usefulness exhibit strong convergent and discriminant properties (Adams et al., 1992; Chin & Gopal, 1995; Davis, 1989; Elkaseh et al., 2016; Ortiz-López et al., 2024), are internally reliable (Davis, 1989; Davis et al., 1989; Mathieson, 1991; Luo et

al., 2023), and demonstrate predictive validity (Szajna, 1994). The items measuring perceived ease of use and perceived usefulness were derived from an existing validated inventory and adjusted to fit the specific technology being studied. Items measuring behavioral intention were taken from previous applications of TAM (Agarwal & Prasad, 1999; Venkatesh & Davis, 1996; Liao et al., 2018). Perceived trust was assessed using two items adapted from Wang et al. (2003) to reflect users' specific beliefs in the security and privacy protection offered by mobile banking. Finally, items for measuring perceived attitude towards using were adapted from the original behavior instrument developed by Compeau and Higgins, 1995; Grassini et al., 2023. All questions used Likert scales, ranging from "strongly disagree" to "strongly agree," except for items measuring perceived usefulness, which ranged from "not at all confident" to "totally confident." Pre-testing of these measures was conducted with selected consumers from the mobile banking app field and experts in the e-commerce research area. The items were modified to ensure relevance in the context of mobile banking apps.

Survey Administration:

This research focuses on Bangladesh as the site for the empirical investigation because E-commerce is more active and successful there compared to other countries, making it a suitable location for studying app usage.

The research involved a two-stage survey to test hypotheses. Initially, a pretest was conducted to validate the survey questionnaire. Questions that respondents found unclear were revised, and two respondents reviewed the questions to enhance construct validity. The pretest results led to the final version of the survey questionnaire. Respondents rated the items on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The questionnaire also included nominally scaled background questions to collect demographic and Internet usage information.

A structured, paper-based questionnaire was used in the formal survey to evaluate the proposed model and validate the set of interrelationships related to consumers' perceptions of security and trust in app usage. The survey was conducted using a 17-item questionnaire distributed to participants across various industries and social institutions, such as schools, universities, offices, research institutes, and companies in Bangladesh, through mail, personal visits, and emails. To increase the response rate, we asked recipients for their email addresses or phone numbers and followed up with calls and emails.

A total of 160 questionnaires were collected via mail, personal visits, and email. Forty-four were eliminated due to invalid responses or lack of app usage experience. The final sample consisted of 52.5% male and 47.5% female respondents, with most being experienced app users. In terms of age, 34.0% were between 18 and 29 years old, 39.0% between 30 and 39 years old, and 27.0% between 40 and 49 years old.

Young and middle-aged app users represent a significant portion

of the user population in Bangladesh. According to Lin and Lu (2000), the results from this sample can still reflect true phenomena and provide significant outcomes since young and middle-aged users are the most important strata of the user population and are likely to be the most active consumers in e-commerce shortly. As a result, it is possible to regard the sample as typical of all Bangladeshi app users.

Result of descriptive analysis:

Table-01:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Perceived Usefulness	200	1.50	4.75	3.4913	1.21195
Perceived Ease of Use	200	1.50	4.50	3.5625	0.91839
Perceived Trust	200	1.00	5.00	3.5333	0.99860
Attitude Towards Using	200	1.33	5.00	3.6683	1.04638
Behavioral Intention to Use	200	1.00	4.67	3.5083	1.01740
Valid N (listwise)	200				

Table 1: shows that the average mean value of the Perception statements in the perceived usefulness dimension is 3.4913. This means that the customer is satisfied. So, we may accept the hypothesis 1. It depicts that the average mean value of the Perception statements in the perceived ease of use dimension is 3.5625. This means that customers are almost satisfied with this. So, we may accept hypothesis 2. It states that the average mean value of the Perception statements in the perceived trust dimension is 3.5333. This means that the customer is satisfied. So, we may accept hypothesis 3. It shows that the average mean value of the Perception statements in the attitude towards using dimension is 3.5083. This means those customers are satisfied. So, we may accept the hypothesis.

Analytical strategy of data:**Table-02: Reliability test:**

Scale	Number of items	Alpha	Mean	SD
Perceived Usefulness	4	0.941	3.49	1.21
Perceived Ease of Use	4	0.877	3.56	0.91
Perceived Trust	3	0.888	3.53	0.99
Attitude Towards Using	3	0.832	3.66	1.04
Behavioral Intention to Use	3	0.861	3.50	1.07

Reliability is determined by Cronbach's alpha, a popular method for measuring reliability. Nunnally (1978) suggests that for any research at its early stage, a reliability score or alpha that is 0.60 or above is sufficient. As shown in Table, the reliability scores of all the constructs were found to exceed the threshold set by Nunnally; all measures demonstrated good levels of reliability (greater than 0.80). The perceived trust scale achieved the largest reliability of 0.941.

Conclusion:

This study focuses on online mobile banking, specifically examining customer feedback. Online mobile banking has become increasingly significant in recent times. This research builds on previous studies and incorporates current data, potentially contributing to future studies.

The study presents preferences for online mobile banking app usage from the customer's perspective. It highlights how the use of the Agrani Smart Banking App and the measurement of various factors influence Agrani Bank customers' attitudes towards adopting and continuing to use the technology. A research framework, developed based on previous studies, led to the formulation and testing of four hypotheses in light of existing literature.

In the first half of the year, it was suggested that perceived usefulness (PU) positively impacted attitudes toward using (ATU) the Agrani Smart Banking App. This result was in line with earlier research (Davis et al., 1989; Azam et al., 2023), which showed that attitudes improved with increasing PU and positively influenced service usage. The results demonstrated that each hypothesis was accepted. According to the study's second hypothesis (H2), attitudes and sustained usage of the Agrani Smart Banking App were positively impacted by perceived ease of use (PEU). Users are encouraged to keep using the Agrani Smart Banking App due to the good customer attitudes that have been developed by the broad usage of mobile banking apps. Individual decisions are also

influenced by social factors like friends and family (Gu et al., 2009; Chen et al., 2020).

Sharma et al. (2020), for example, found that an app's usability, flexibility, and image—all impacted by PEU—improve perceptions of ease of use and usage intentions. Consequently, PEU is thought to have an impact on how users interact with their mobile banking apps.

Perceived trust (PT) had a beneficial impact on attitudes and ongoing usage of the Agrani Smart Banking App, according to the third hypothesis (H3). In comparison to other banking channels, customers weigh the advantages of mobile banking (Hassan and Wood, 2020; Luarn and Lin, 2005; Malaquias et al., 2018). It is anticipated that customer attitudes will be directly impacted by user perceptions of benefits through trust.

The results validated the study's prediction that attitudes toward utilizing the Agrani Smart Banking App (ATU) would have a beneficial impact on behavioral intention (BI) in the second half of the year. An individual's attitude is defined as their conscious decision and readiness to continue using the service. Perceived usefulness, perceived usability, perceived trustworthiness, and attitudes toward use can influence decisions to use an information system, such as mobile banking (Wessels, 2010; Shakil and Karjaluo, 2020; Sharma et al., 2009; Mohammadi, 2015).

In conclusion, this study shows that these factors have a favorable impact on consumers' perceptions of the Agrani Smart Banking App, which encourages continued use in the future. Customers are responding well to the app.

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