

Financial Literacy and Its Influence on Customers' Online Banking Behaviour

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Abstract
With the rapid digitization of financial services of the banks, financial literacy has become critical for individuals to access and benefit from online banking platforms, therefore this study explored the impact of financial literacy on customers' online banking behavior, focusing on the Balangoda Divisional Secretariat Division in Sri Lanka. A sample of 382 bank customers was selected using simple random sampling, and data was gathered through structured questionnaires and interviews. Analysis using Multiple Linear Regression and Binary Logistic Regression models through IBM SPSS 23 revealed that financial knowledge, attitudes, and behavior positively influence online banking behavior, also financial literacy increases, customers are more likely to engage with online banking. Therefore, this study brings out the essential role of financial literacy in encouraging online banking facilities and the essential of targeted educational programs by banks to increase customers' awareness and comfort with online banking Facilities.

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1. Introduction

Financial literacy plays a vital role in preparing individuals to manage their financial activities effectively, particularly in a rapidly digitalizing economy. As financial services increasingly transition to online platforms, customers need both financial literacy and digital competencies to benefit from these services. The Organization for Economic Co-operation and Development (OECD) defines financial literacy as a combination of awareness, knowledge, skill, and behavior necessary to make sound financial decisions (OECD, 2018) [27]. Studies indicate that higher levels of financial literacy positively influence the usage of online banking facilities (Andreou & Anyfantaki, 2020) [4]. However, in many developing economies, including Sri Lanka, digital banking adoption remains limited despite the growing accessibility of internet-enabled devices and mobile phones (Shaikh & Karjaluoto, 2015) [32].

According to SNS internal research, the online banking market size is estimated to be USD 18.94 billion in 2022. It has been growing at a healthy CAGR of 12.1% over the forecast period of 2023-2030. According to this report, it is expected to reach 47.24 billion dollars by 2030 (Yugandhara,2023) [37]. Also, the Gitnux Marketdata Report 2024, it has been identified that there is a significant difference between different age groups when it comes to the use of online banking, even if the world is considered as a whole. It is 48.5% baby boomers and 80% millennials.

When considering Asia, online banking is the most popular banking method in Asia, and it is reported that in 2022, more than 805 million users were gathered around it. Also, considering Norway, it is reported that more than 96% of people used online banking in 2022, 2023. In the context of America, in 2010 only a minority of 36% of Americans used online banking, and by 2020 it will be only approximately 60%. Also, considering North America, its online banking usage is around 74%.

According to Gitnux Marketdata Report 2024, the global online banking market is forecast to reach $20.5 billion by 2026. It has been recognized that technological development has a strong impact on people's literacy and especially financial literacy.

Online banking simplifies financial transactions, offering convenience, cost savings, and broader service accessibility (Verma & Tanwar, 2021). However, despite the advantages and the increasing availability of internet facilities used by 34.5% of Sri Lanka's population adoption of online banking services remains low, with only 1% of bank customers using these platforms (Mano *et al*., 2020). This is surprising given the rising internet penetration and access to mobile devices, with 70.9% of users accessing the internet through mobile phones (Central Bank Annual Report, 2018) [10].

Moreover, the financial literacy rate in Sri Lanka was recorded the female financial literacy rate 55.2% and the male literacy rate is 61.1%. (Financial literacy survey Sri Lanka, 2021) [11]. Although individuals aged 15–34 exhibit higher general literacy levels, their use of online banking services is notably low (Mano *et al*., 2020). Studies suggest that even when infrastructure is available, insufficient financial literacy limits customers from embracing online banking services (Nethananthan & Shanmugathas, 2018) [25]. This study is expected to generate valuable insights for multiple stakeholders by exploring the impact of financial literacy on online banking behavior within the Sri Lankan context. For financial institutions, the findings will enable the development of targeted educational programs and strategies designed to enhance customer engagement with online banking services. As noted by Gautam and Devkota (2020), such efforts can significantly improve customer satisfaction by encouraging the effective use of online banking facilities. Banks can also benefit by identifying the challenges customers face in adopting online banking, allowing them to address barriers and refine service delivery.

For policymakers and regulatory bodies, this research will provide empirical evidence to support the design of policies that promote financial literacy and encourage the use of online banking facilities. As financial literacy plays a critical role in achieving financial inclusion, the study's findings will help foster the expansion of online banking across diverse segments of the population (OECD, 2018) [27]. These insights are essential for developing initiatives that align with national goals for financial inclusion, particularly as internet usage and access to digital tools continue to grow.

Customers will also benefit directly from the research by identifying how financial literacy influences the adoption of online banking. The study aims to empower individuals to make informed decisions about their use of online banking services. As Hashim *et al*. (2021) indicate, improved financial literacy enhances personal financial well-being, helping customers manage their finances more effectively and confidently navigate digital platforms. This empowerment can lead to a more positive user experience with online banking, reducing the perceived complexity of financial technology.

Also, this research will offer significant contributions to academic literature by addressing a critical gap regarding the relationship between financial literacy and digital financial behavior in developing countries, particularly Sri Lanka. Previous studies have explored these issues in other global contexts (Andreou & Anyfantaki, 2020) [4] but comprehensive research focusing on rural and developing regions of Sri Lanka remains limited. The study will therefore provide a solid foundation for further investigations into financial literacy, digital adoption, and financial inclusion, serving as a valuable resource for future researchers exploring similar topics.

By contributing to the understanding of financial literacy's role in online banking behavior, this research will have far-reaching implications for stakeholders across sectors, promoting financial inclusion and improving the accessibility and usability of online banking services.

2. Theoretical Background

An important part of this research is to study how customers approach financial activities and their behavior in the context of digitalization. Previous studies have identified several models that help to critically explain the issues of technological adaptation. Accordingly, some of the important theories regarding customers' adaptation to online banking and their financial literacy are as follows.

2.1. Human Capital Theory

Human capital theory is an economic perspective that regards individuals' knowledge, skills, abilities, and experience as valuable assets that enhance productivity and earning potential. The theory suggests that investments in education, training, and health contribute to the development of human capital, which in turn improves individual productivity and promotes economic growth.

Within the labor market, individuals differ in their levels of education, knowledge, and competencies. Those with higher levels of education and specialized skills are generally able to provide more effective contributions to organizations compared to individuals with limited knowledge and training. Consequently, the concept of human capital has received considerable attention in the context of organizational development and workforce productivity (McConnell *et al*., 2009) [20].

The origins of human capital theory can be traced back to the eighteenth century. Adam Smith initially emphasized the importance of human capabilities in the production process. Later, Theodore W. Schultz formally introduced the term "human capital," highlighting the role of education and investment in human abilities. The concept gained further prominence when Gary Becker expanded the theory and was awarded the Nobel Prize for his work on human capital. According to this perspective, differences in wages and salaries among individuals largely arise from variations in education, training, and skills. Furthermore, individuals with higher levels of knowledge and competencies are more likely to secure employment opportunities (Blair, 2012).

Thomas Davenport (1999) [13] later conceptualized human capital as a combination of knowledge, skills, personal talent, behavior, and effort, and subsequently incorporated the element of time into this framework. Knowledge includes intelligence, cognitive abilities, and both general and specialized knowledge required to perform specific tasks. Skills refer to the physical capabilities and technical expertise necessary to perform job-related activities. Personal talent reflects the inherent attributes of individuals that can be further enhanced through development. Behavior encompasses observable actions, attitudes, ethical standards, and personal beliefs that influence work performance. Effort represents the application of knowledge, experience, and abilities toward achieving work-related goals. In addition, Davenport emphasized the importance of time as a critical factor influencing the utilization of human capital.

Based on human capital theory, several fundamental components contribute to the development of human capital. Investments in education are considered a primary

mechanism for enhancing human capital. Formal education enables individuals to acquire knowledge and competencies that increase their productivity and earning potential in the labor market (Thomas *et al*., 2013) [33]. In recent years, scholars have also emphasized the importance of financial literacy as an additional dimension of human capital development (Abubakar *et al*., 2021) [1].

Training and development represent another important aspect of human capital formation. Beyond formal education, continuous skill development and professional training are essential for individuals to adapt to changing economic conditions and technological advancements (Mayo, 2012). Healthcare also plays a crucial role in strengthening human capital. Healthy individuals are more capable of maintaining higher levels of productivity and efficiency, which contributes positively to organizational performance and overall economic growth (Coff & Kryscynski, 2011) [12]. Human capital theory further explains labor market outcomes by suggesting that individuals with higher levels of human capital tend to receive higher wages and have greater access to quality employment opportunities compared to those with lower levels of human capital (McConnell *et al*., 2009) [20].

In contemporary research, financial literacy has gained significant attention as a key component of human capital. Financial literacy is viewed as the knowledge and skills that enable individuals to make informed financial decisions and manage economic resources effectively. As such, it is increasingly recognized as an important dimension of human capital (Abubakar *et al*., 2021) [1]. Rahim *et al*. (2021) [29] emphasize that the development of human capital and economic growth requires both accessible financial systems and adequate financial literacy. Improving financial literacy enhances individuals' knowledge and skills, thereby strengthening human capital and contributing to broader economic development.

Similarly, Mishra and Narayan (2015) highlight the influence of the financial system on the capacity to absorb capital, which is closely related to financial literacy. Higher levels of financial literacy enable businesses to access greater financial resources, improve financial management practices, and enhance investment capacity. As a result, firms are better positioned to expand operations and contribute to economic growth. Furthermore, the advancement of financial literacy contributes to the development of human capital by strengthening individuals' knowledge and competencies. This improvement supports the growth of the real sector and ultimately facilitates economic development. Consequently, financial literacy not only supports organizational growth but also contributes to overall economic progress (Shahid *et al*., 2015).

2.2. Social Learning Theory

Albert Bandura proposed social learning theory. This theory explains that people learn from each other through observation, imitation and modeling. Socialization and how it affects human behavior is studied through this theory. Accordingly, the basis of the social learning theory is that people observe the behavior, attitudes and consequences of others and adjust their actions based on the information obtained from it (Bandura and Walters, 1963) [8].

According to the social learning theory, a person can see 4 basic stages in building his actions based on the experiences he gets through the actions of others. That is, attention, retention and memory, initiation and motor behavior, and motivation (Bandura and Walters, 1963) [8].

This can be shown graphically as follows.

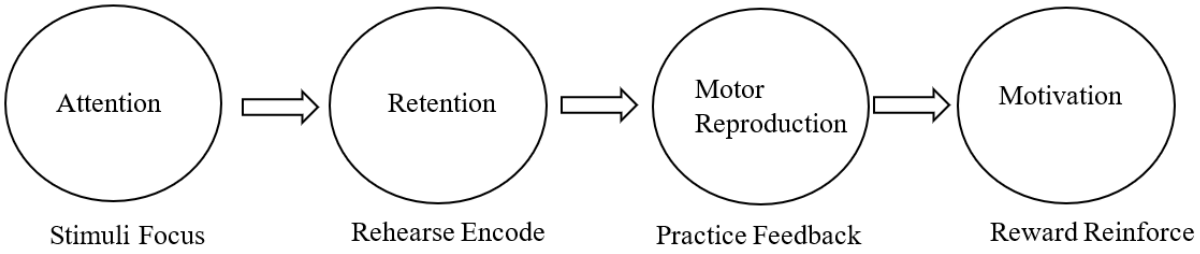

Fig 1: Social learning theory

Attention: According to social learning theory, in order for a person to imitate a behavior, it must attract our attention. Humans observe many behaviors on a daily basis and most of them are not significant (Lee and Lee, 2018). Accordingly, in order for any lesson or experience to have an effect on an observer, that observer must observe his surroundings carefully. In order for the observer to have positive feelings about it, the observer must recognize the model well. Also, the way the observer invests in the observation process is important for the observer to have strong feelings about the experience being observed. Accordingly, factors affecting attention include complexity, uniqueness and functional value (Amatucci and Crawley, 2011) [3].

Retention: This refers to the extent to which an observer remembers what has been observed. If something observed at some point is not remembered, it does not allow for imitation. Accordingly, it is important to remember that to imitate something. As for most social actions, they are not instantaneous. Memory is important to refer to an event even if it happens again. Therefore, according to the social learning process, Retention is important for making their own actions based on the experience and information obtained from society (McLeod, 2016) [21].

Reproduction/ Initiation and motor capability: This means the ability to repeat the same based on the information and experience gathered through observation. Although people want to imitate, they are not always able to do so. Many behaviors are observed by people every day, and they are stored in memory. But sometimes it is not possible to imitate them due to physical abilities or other reasons. Therefore, individuals want to reproduce but are unable to do so (Bandura, 1977) [6].

If a person wants to apply the lesson learned, the observer must be able to reproduce it realistically. But in order to reproduce and model a behavior, the necessary skills must be learned (Bandura, 1986) [7]. Through that, based on the information obtained through the observation of the society, it is possible to remember and reconstruct them.

Motivation: According to the social learning theory, motivation is important for engaging in some action based on the information gathered by an observer from the society. Accordingly, even if an observer focuses on a lesson, remembers all its details, and prepares all the necessary steps to do it, it will not happen if he is not motivated to do it (Mu‟izzuddin *et al*, 2017) [22].

The observer focuses on the rewards and punishments for that action to create motivation. It can also include the observation that similar behavior is rewarded, the behavior, the desire to be like the model displayed, or the desire to improve or learn. In addition, other factors that influence motivation include personal characteristics, past experiences, promised incentives, positive reinforcement and punishment (McLeod, 2016) [21].

Social learning theory is important in discussing financial literacy. In other words, people are directed to learn about the financial literacy of individuals through society. According to social learning theory, people learn various things from their environment and especially from their parents, family and peers (Pinto *et al*., 2005) [28]. Accordingly, social learning refers to learning by interacting with others. In this context, individuals tend to learn certain things from their peers and family about the use of financial services and related concepts (Agabalinda and Isoh, 2020) [2].

Within the scope of financial social learning, many dimensions are included such as the way money management is done, the way new financial decisions are reached, and they refer to the learning of individuals socially. In it, the issues related to the financial literacy of individuals refer to gathering individuals through society (Agabalinda and Isoh, 2020) [2]. According to Lee and Lee (2018), there is a positive relationship between financial knowledge and social learning. It found that people acquire or improve financial skills based on experiences from their peers, family members and parents (Gutter *et al*, 2010) [17].

Also, it has been recognized that individuals observe and gain experience from what their family and peers do about financial affairs, remember that information and use it for their own financial affairs (Mahdavi *et al*, 2012) [19]. It has been recognized that individuals will be directed to prepare and make positive and profitable decisions from related financial matters (Campbell, 2006) [9]. Accordingly, considering the facts indicated by the social learning theory, individuals use those facts in making financial decisions. It is also clear that the knowledge gathered through the society will increase the financial literacy of individuals (Lusardi and Mitchell, 2011a).

2.3. Empirical Review of the Study

A considerable number of studies have examined the concept of online banking from different perspectives. Previous research has explored several aspects such as the factors influencing customers' adoption of online banking, the efficiency of online banking services, and the advantages and limitations associated with its use. The key findings of earlier studies related to online banking can therefore be summarized as follows.

Jegatheesparan and Ajeshwaran (2020) conducted a study to identify the factors influencing customers in Sri Lanka to adopt online banking services. The study was based on a sample of 180 respondents and examined variables such as ease of use, perceived usefulness, compatibility, security, and information quality. The findings revealed that ease of use, usefulness, compatibility, and information quality have a significant positive influence on customers' adoption of online banking services. Similarly, Nedumaran and Baladevi (2018) [24] investigated the level of customer awareness regarding the services offered through online banking. Their findings indicated that although most respondents possessed a reasonable level of awareness about these services, banks should take further steps to educate customers about new technological developments and available services. In addition, the study suggested extending customer interaction time with bank officials in order to retain existing customers and attract potential clients. These findings indicate that increased customer awareness can encourage greater adoption of online banking services.

A study conducted in Thailand examined the determinants influencing customers' usage of online banking by analyzing variables such as customer expectations, perceived value, perceived quality, customer complaints, customer satisfaction, and customer loyalty. The results demonstrated that all these factors influence the use of online banking, with perceived quality and perceived value having the strongest impact on customers' adoption behavior (Unyathanakorn & Rompho, 2014) [34]. Similarly, research examining the relationship between customer satisfaction and online banking usage found that customer satisfaction positively influences the likelihood of using online banking services. Factors such as system availability, efficiency, privacy, responsiveness, connectivity, and website design were identified as significant contributors to higher customer satisfaction (Abbasi, 2018).

Gautam and Sah (2023) [16] investigated the impact of online banking service practices on e-customer satisfaction and e-customer loyalty. In their study, service quality was measured using dimensions such as organizational website features, e-customer service, user-friendliness, website efficiency, privacy, and security. The findings indicated that the effectiveness of e-customer service plays a particularly significant role in online banking service quality, while privacy, security, and user-friendliness are also important determinants. Similarly, Dianne and Quiber (2023) noted that online banking offers fast and reliable services to customers. However, as many customers remain hesitant to adopt online banking services, their study examined factors affecting customer satisfaction in order to identify existing challenges and improve the customer experience. The study identified convenience, security, speed, and service quality as key determinants influencing customer satisfaction. Furthermore, the development of online banking systems and technological advancements have enabled banks to attract more customers while simultaneously reducing operational costs.

Gijón and Covadonga (2023) examined whether customers' orientation toward online banking varies according to demographic characteristics such as gender and education level. The results indicated that significant differences exist based on both gender and educational attainment. In addition, the study highlighted that individuals with higher levels of digital skills are more likely to use online banking services.

Naeem *et al*. (2023) [23] conducted a SWOT analysis of online banking services provided by banks in Pakistan. The study identified strengths such as competitive advantage, reduced need for physical branch visits, system integration, user-friendly services for both customers and managers, a large customer base, and cost reduction for banks. Weaknesses included low literacy rates, scalability challenges,

connectivity issues, website maintenance problems, cybersecurity threats, and poor customer relationship management. Opportunities included ready access to customers, high demand for financial products, easy access to financial records, simplified loan facilities, reduced queues, and convenience for elderly customers. However, threats such as weak regulatory frameworks, inadequate IT infrastructure, security concerns, operational complexities, interference from foreign banks, and potential money laundering activities were also identified. Similarly, Islam *et al*. (2023) [18] found that the use of online banking in Bangladesh is increasing rapidly. Their research highlighted that service quality, security, and convenience are major factors influencing customer satisfaction with online banking services.

In addition to these factors, several researchers have investigated how financial literacy influences individuals' adoption of online banking. Andreou and Anyfantaki (2020) [4] conducted a study among the elderly population in Cyprus following the country's financial crisis in 2013. As part of post-crisis financial reforms, Cyprus expanded digital banking facilities including online banking services. However, the study revealed that financial literacy among the population remains relatively low, with only 37.33% of respondents demonstrating a high level of financial literacy. The findings confirmed a positive relationship between financial literacy and the use of online banking services.

Similarly, Lisa (2008) examined the relationship between financial literacy and online banking behavior, focusing particularly on low-income populations and individuals living in inner-city areas. The results suggested a potential relationship between financial literacy and online banking usage. The study also found that financial literacy levels among low-income populations were relatively low, indicating the need for targeted interventions to improve financial knowledge and encourage effective use of online banking services.

Yates (2016) conducted research among African American banking customers to examine the factors influencing online banking adoption. The study found that financial literacy, in addition to income and education, has a strong positive effect on the use of online banking services. The findings suggest that improved financial literacy can contribute to more effective and efficient use of online banking systems.

Similarly, Bapat (2019) investigated the factors influencing online banking adoption among postgraduate students in India. The study concluded that financial literacy has a significant positive influence on the use of online banking services. In Japan, a financial literacy index was developed using data from approximately 25,000 participants from the Bank of Japan's 2019 Financial Literacy Survey to examine the relationship between financial literacy and the use of e-payments and online banking. The findings revealed that individuals with higher levels of financial literacy are more likely to adopt online banking services (Long *et al*., 2023).

Satoto and Putra (2021) [30] further examined the impact of financial literacy and other determinants on individuals' intention to use electronic money. Their findings indicated that financial literacy directly influences individuals' intention to adopt digital financial services. Similarly, Seryon and Kaestner (2008) [31] studied the relationship between financial literacy, communication technology, and financial behavior among low-income bank customers. The study revealed a significant association between communication technology and financial literacy, while also noting that low- and moderate-income urban populations show interest in improving their technological and financial knowledge, although achieving this requires substantial effort.

Banai and Alpek (2023) explored whether online banking could replace traditional personal banking services through a study involving 1,000 adults in Hungary. The findings indicated that customers generally do not consider online banking as a complete substitute for traditional banking services. The primary reason identified was the relatively low level of financial literacy among elderly customers and their limited familiarity with new technologies.

Overall, previous research indicates that financial literacy plays an important role in influencing customers' adoption and use of online banking services. While some studies highlight positive relationships between financial literacy and online banking usage, others suggest that technological knowledge and demographic factors also influence adoption behavior. In the context of Sri Lanka, several studies have separately examined financial literacy and online banking usage. However, limited research has explored the combined relationship between financial literacy and online banking adoption. Therefore, this study aims to examine the impact of customers' financial literacy on the use of online banking in the city of Balangoda, Sri Lanka.

3. Methodology

This research has used quantitative techniques to analyze the data from a sample of 382 bank customers of Balangoda Divisional Secretariat Division in Ratnapura district of Sabaragamuwa province. In selecting this sample, simple random sampling method was used to select the divisional secretariat and 382 customers. This gives the customers an equal opportunity to choose from the crowd who are focusing on online banking. This has been done to eliminate bias.

According to the population above 20 years in Balangoda Divisional Secretariat Division total population is 54 623(Census report, 2012) [14]. Based on the population the following Krejcie and Morgan sample size calculation formula was used to calculate the sample size. Accordingly, based on the sample size determination equation for this study is obtained 382 sample.

Some of the main factors that influenced the selection of Sabaragamuwa province for this study can be identified. Considering Sri Lanka as a whole, Sabaragamuwa province is represented by the 5th largest population. According to the population and housing census report of 2012, the population of Sabaragamuwa province is 1 928 655. According to Computer Literacy Statistics 2022, Sabaragamuwa province is the second highest province in terms of computer usage and ownership. Its value is 20.0%. Also, according to the Census of Population and Housing - 2012, the literacy rate is 94.8% and in comparison, with other provinces, this is the third highest value. Also, the computer literacy rate is 19.9. Based on the peculiarities of Sabaragamuwa province, it was chosen as the basis for the sample of the study. Also, in the research conducted on the use of online banking and financial literacy, although research has been done in other areas, this study area was chosen to fill the gap in this study due to the fact that research has not been done in relation to Balangoda.

Both primary data and secondary data sources are used in this research. Here, a structured questionnaire and interview method have been used in the collection of primary data. In the primary data collection, data collection has been done

after giving prior notice to all the respondents who are undergoing the study. In the collection of secondary data, the data obtained from previous researches and the data obtained through literature investigations as well as the data contained in the articles related to this study have been used. In that, Central Bank reports and Department of Census and Statistics annual reports have been used.

Here, a Multiple Linear Regression, and a binary logistic regression are used to identify the relationship between customers' financial literacy and online banking behaviour. First, to run a multiple linear regression, three independent variables were used. For this, the variables Financial Knowledge, Financial Behavior, and Financial Attitude were used, and scores were created for each independent variable and dependent variable using the data collected from the Likert scale questions. Based on these values, multiple linear regression was performed.

Also, to do the binary logistic regression, data was collected using Likert scales questions. using that collected data, an average value was calculated based on the answers the respondents gave to the financial literacy questions in constructing a financial literacy score. Also, in creating the score related to online banking behavior, the average value of the answers given to the questions directed to it was calculated. Then the dependent variable was split into two parts (0, 1) based on the literature review to perform the logistic regression. After that, a binary logistic was performed and the results obtained from it can be analyzed as follows. To analyze the date IBM SPSS (Version 23), and Microsoft Excel used.

3.1. Conceptual Framework and Research Hypothesis of The Study

In developing the conceptual framework for this study, the variables used by previous researchers in their studies have been used. Accordingly, the main focus here is to identify how the independent variables of financial knowledge (OECD/INFE, 2012), behavior (Dew and Xiao, 2010; and OECD/INFE, 2023) [26], and attitudes (OECD/INFE, 2012 and OECD/INFE, 2023) have affected the dependent variable of customers' online banking behaviour (Ansari, 2021; Andreou and Anyfantaki, 2020) [4]. Accordingly, it is assumed that the three independent variables have a positive effect. The hypotheses developed based on that can be shown as follows, which explain the impact of the three main variables used to measure financial literacy on customers' online banking behaviour. This provides the banking system and policy makers with an understanding of how to effectively socialize the use of online banking and those services through influencing financial literacy.

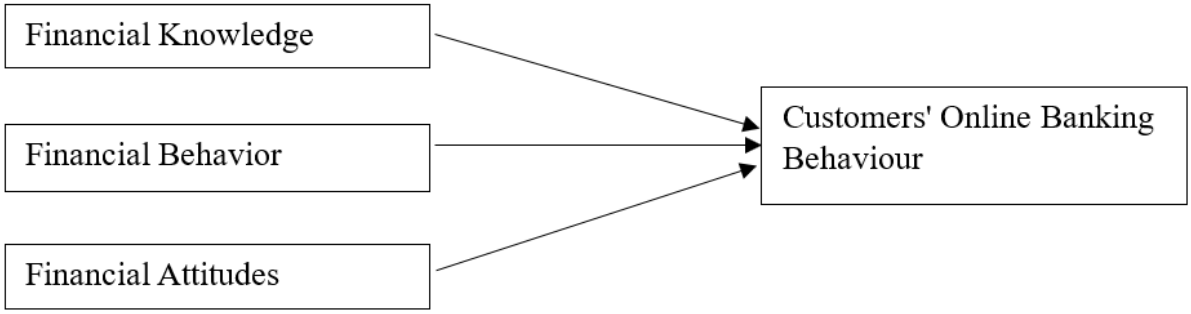

Fig 2: Conceptual Framework of the Study. Source: Research data, 2025.

Hypothesis one (H_1)

One of the important independent variables in this study is financial knowledge, which refers to the basic knowledge of key financial concepts and the ability to apply numerical skills in financial situations (OECD/INFE, 2012). As an individual's financial knowledge increases, they tend to engage more in banking and, with digitalization, they tend to use it for their banking activities. Accordingly, it is hypothesized that financial knowledge has a positive effect on customers' online banking behaviour. Accordingly, by identifying the impact of this factor, it is possible to organize the necessary activities to increase customers' financial knowledge and banks can formulate the necessary strategies to motivate them to use online banking services.

H_1- Financial knowledge has a positive effect on customers' online banking behaviour

Hypothesis two (H_2)

Another important aspect of financial literacy is financial behavior. In this study, it is another independent variable that focuses on individuals' ability to plan their spending and build a financial safety net (Xiao, Chen and Sun, 2015) [36]. By identifying the impact of financial behavior on customers' adoption of online banking, the banking system will be able to better understand their behavior and make necessary changes. In this study, it is hypothesized that financial behavior has a positive impact on customers' online banking behaviour.

H_2- Financial behavoiur has a positive effect on customers' online banking behaviour

Hypothesis three (H_3)

Financial attitudes have also become a strong factor influencing whether or not people use online banking. If people have a somewhat negative attitude towards saving for their future, they are less inclined to do so, and their preference for traditional banking and modern banking facilities determines their use (OECD/INFE, 2023) [26]. Accordingly, it is important to identify the impact of customers' financial attitudes on their online banking behaviour. Here, it is assumed that it has a positive effect.

H_3- Financial attitudes have a positive effect on customers' online banking behaviour

4. Results and Discussion

4.1. Descriptive Analysis

Through descriptive analysis, it is possible to get an understanding of the demographic factors of the people used

as a sample for the research and the data related to customers' online banking behaviour.

Table 1: Demographic and online banking behaviour related data

Description	Frequency	Percentage
Gender		
Male	170	44.5%
Female	212	55.5%
No of Banks		
One Bank	207	54.19%
Two Banks	159	41.62%
Three Banks	13	3.40%
More Than Three Banks	03	0.78%
Reasons for Choosing Online Banking Facilities		
Brand Name	221	57.85%
Better Service	329	86.12%
Convenience	380	99.47%
Reliability	241	63.08%
Time Savings	379	99.21%
Other	78	20.41%

Source: Survey data (2025)

Based on the sample distribution, the majority of respondents were female, representing 55.5% of the total sample, while male respondents accounted for 45.5%. With regard to bank account ownership, most respondents indicated a preference for maintaining their financial activities with a single banking institution. Approximately 54.19% of respondents reported holding all their accounts within one bank, whereas 41.62% maintained accounts in two different banks. Consequently, nearly 95% of the respondents preferred not to maintain accounts in more than two banks simultaneously. Only a small proportion, approximately 3% of respondents, indicated an interest in holding accounts across multiple banking institutions.

When examining the reasons for adopting online banking services, convenience and time savings emerged as the primary motivating factors among respondents. The findings indicate that these two aspects play a significant role in encouraging customers to use online banking facilities. In addition, approximately 86% of respondents believed that online banking services provide better service quality, making it the second most influential factor. Furthermore, reliability and brand reputation were also identified as important determinants influencing the adoption of online banking services, with 63% and 57% of respondents respectively indicating these factors as key reasons for their usage of online banking.

4.2. Reliability Analysis

Reliability analysis is an important step in data analysis as it evaluates the consistency and dependability of the data, thereby ensuring the accuracy and credibility of the research findings. In this study, Cronbach's alpha coefficient was used to assess the internal consistency of the scale items employed in the analysis. In general, Cronbach's alpha value greater than 0.70 is considered acceptable and indicates that the measurement scale is reliable. The results of this study show that Cronbach's alpha values for the dimensions used exceed 0.80, indicating a high level of internal consistency among the scale items. Therefore, it can be concluded that the data collected for this study demonstrate strong reliability and are appropriate for use in further statistical analysis.

Table 2: Reliability analysis.

Variable	Cronbach's Alpha	No. of Item
Financial Knowledge	0.817	8
Financial Behaviour	0.877	12
Financial Attitudes	0.940	10
Customers' Online Banking Bahaviour	0.950	29

Source: Survey data (2025)

Factor analysis is a statistical technique used to identify the underlying factors that explain the relationships among observed variables. In this study, factor analysis was employed to determine the most significant factors influencing customers' online banking behavior, specifically financial knowledge, financial behavior, and financial attitude.

To evaluate the suitability of the data for factor analysis, the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity were applied. The KMO statistics assess the adequacy of the sample for conducting factor analysis by measuring the proportion of variance among variables that may be common variance. The KMO value ranges from 0 to 1, where values between 0.5 and 0.7 indicate a moderate level of adequacy, values above 0.7 are considered good, and values exceeding 0.9 represent an excellent level of sampling adequacy (Islam *et al*., 2019; Kweyu & Ngare, 2013) [35].

4.3. Factor Analysis

Table 3: Factor analysis

Variable	Kaiser-Meyer-Olkin Test (KMO Test)	Bartlett's test (Sig.)
Financial Knowledge	0.717	0.000
Financial Behaviour	0.844	0.000
Financial Attitudes	0.900	0.000
Customers' Online Banking Bahaviour	0.921	0.000

Source: Survey data (2025)

Based on the results obtained, both the independent variables and the dependent variable used in this study are suitable for factor analysis. This conclusion is supported by the Kaiser–Meyer–Olkin (KMO) values, which are greater than 0.70 for all variables, indicating adequate sampling suitability for conducting factor analysis.

Furthermore, the results of Bartlett's test of sphericity show that the p-value for all four variables is 0.000, which is lower than the significance level (α = 0.05). This indicates that a statistically significant correlation exists among the variables. Therefore, the results confirm that the dataset is appropriate for factor analysis, and the relationships between customers' online banking behavior and the factors influencing it can be effectively examined based on the collected data.

4.4. Multiple Linear Regression

Multiple linear regression analysis was performed to identify the independent variables that influence customers' online banking behavior. In this analysis, the dependent variable was constructed using the average score of respondents' answers to the questions related to online banking behavior. The independent variables included financial knowledge, financial behavior, and financial attitude. Based on these variables, the regression analysis was conducted and the results are presented as follows.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	.801[a]	.641	.638	.4681	1.138

Source: Survey data (2025)

This table illustrates the goodness of fit of the estimated regression model. The multivariate correlation coefficient (R) is reported as 0.801, indicating a strong positive relationship between the dependent variable and the set of independent variables, as values greater than 0.70 generally suggest a strong correlation.

The coefficient of determination (R^2) is 0.641, which represents the proportion of variance in the dependent variable explained by the independent variables included in the model. Accordingly, the independent variables account for approximately 64% of the variation in customers' online banking behavior.

The Adjusted R^2 value, which provides a more accurate estimate by adjusting for the number of predictors in the model, is reported as 0.638. This indicates that about 63.8% of the variation in the dependent variable is explained by the model after accounting for the number of independent variables. Since the difference between the R^2 value and the Adjusted R^2 value is minimal, it suggests that the model does not suffer from overfitting and can therefore be considered appropriate for explaining the relationship between the variables.

Table 5: Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148.038	3	49.346	225.179	.000[b]
	Residual	82.836	378	.219		
	Total	230.874	381			

Source: Survey data (2025)

The ANOVA table presents the overall statistical significance of the regression model. It is used to determine whether the independent variables, as a group, significantly explain the variation in the dependent variable. In other words, the test examines whether at least one of the independent variables has a statistically significant effect on the dependent variable. The significance level (Sig.) is used to evaluate this relationship. In this study, a significant threshold of 5% (α = 0.05) is applied. Therefore, for the model to be considered statistically significant, the p-value should be lower than 0.05. The results show that the significance value of the model is 0.000, which is less than the threshold level (0.000 < 0.05). This indicates that the regression model is statistically significant and confirms that the independent variables included in the model collectively have a significant influence on the dependent variable.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.911	.106		8.612	.000
	Financial Knowledge	.189	.040	.204	4.768	.000
	Financial Behaviour	.204	.052	.216	3.912	.000
	Financial Attitudes	.340	.042	.458	8.121	.000

Source: Survey data (2025)

Based on the results presented in the table, the individual significance of each independent variable can be determined using the significance (Sig.) values. In this analysis, the independent variables considered are financial knowledge, financial behavior, and financial attitude. The significance values associated with each variable were examined to evaluate their individual impact on customers' online banking behavior. Accordingly, these results were used to test the hypotheses formulated in the study.

H_1: Financial knowledge has a positive effect on customers' online banking behaviour

The significance values presented in the coefficients table indicate the statistical significance of each independent variable. The significance value associated with the variable financial knowledge is 0.000, which is lower than the selected significance level of 0.05 (0.000 < 0.05). Therefore, the null hypothesis stating that financial knowledge has no positive effect on customers' online banking behavior is rejected. This

result indicates that financial knowledge has a statistically significant positive relationship with customers' online banking behavior.

H2: Financial behavior has a positive effect on customers' online banking behavior.

According to the regression results, the significance value for financial behavior is also 0.000. Since this value is less than 0.05 (0.000 < 0.05), the null hypothesis is rejected, and the alternative hypothesis is accepted. This finding confirms that customers' financial behavior has a significant positive effect on their online banking behavior.

H3: Financial attitudes have a positive effect on customers' online banking behavior.

The significance value related to financial attitudes is 0.000, which is also below the significance threshold of 0.05 (0.000 < 0.05). Therefore, the null hypothesis is rejected. This indicates that customers' financial attitudes significantly influence their online banking behavior.

The Unstandardized Coefficients (B) column in the regression output indicates the extent to which the dependent variable changes when an independent variable increases by one unit, while other variables remain constant. The values can be either positive or negative, depending on the direction of the relationship.

The regression results show that all independent variables have a positive effect on customers' online banking behavior. Specifically, a one-unit increase in financial knowledge leads to an increase of 0.189 units in online banking behavior. Similarly, a one-unit increase in financial behavior results in an increase of 0.204 units in online banking behavior. In addition, a one-unit increase in financial attitudes leads to an increase of 0.340 units in customers' online banking behavior.

Based on these coefficients, the regression equation representing the relationship between financial literacy dimensions and customers' online banking behavior can be formulated.

Y –customers' online banking behaviour

X_1 – Financial knowledge (K)

X_2 – Financial bahaviour (B)

X_3 – Financial attitudes (A)

$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3$

$Y = 0.911 + 0.189K + 0.204B + 0.340A.$

4.5. Binary Logistic Regression

Based on the collected data a binary logistic regression was conducted to study how financial literacy affects online banking behavior of customers

Table 7: Dependent Variable Encoding

Original Value	Internal Value
Law	0
High	1

Source: Survey data (2025)

This table presents the categorization of the dependent variable used in the study. In this research, customers' online banking behavior is considered the dependent variable. According to the classification used in the analysis, value 0 represents a lower level of online banking behavior, while value 1 indicates a higher level of online banking behavior among customers.

The categorization was performed based on the average scores obtained from respondents' answers to the online banking behavior-related questions. A total of 29 Likert scale questions were used to measure this variable, and the average value of the responses was calculated for each respondent. Based on these average scores, the respondents were categorized into two groups representing lower and higher levels of online banking behavior. According to Jegatheesparan (2020), the score ranges used to classify online banking behavior are as follows:

$1.0 \leq X \leq 2.5$: Lower level online banking usage

$2.5 < X \leq 3.5$: Moderate level online banking usage

$3.5 < X \leq 5.0$: Higher level online banking usage

Based on the above classification, since it is necessary to conduct a binary logistic regression, the avarege value was classified as follows in this research.

$X \leq 2.5$: Lower level online banking behavior

$2.6 < X \leq 5.0$: Higher level online banking behavior

Table 8: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Financial Literacy	13.118	2.820	21.638	1	.000	497705.194	1979.575	125133180.011
	Constant	-32.903	6.772	23.605	1	.000	.000		

Source: Survey data (2025)

This table presents the contribution of the independent variable to the model as well as its statistical significance. The Wald test shown in the table is used to determine the statistical significance of each independent variable. The Sig. column represents the probability value associated with this test. According to the results, the independent variable financial literacy is statistically significant (p = 0.000).

Based on these results, the hypothesis regarding the relationship between financial literacy and online banking behavior can be tested.

H0a: Customers' financial literacy does not affect online banking behavior. H1a: Customers' financial literacy affects online banking behavior.

Since the p-value is less than 0.05, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, it can be concluded that customers' financial literacy has a significant effect on their online banking behavior.

The coefficients in the logistic regression model are expressed in log-odds units. The results indicate that a one-unit increase in customers' financial literacy increases the log-odds of engaging in online banking behavior by 13.118 units.

In this study, binary logistic regression analysis was conducted to determine whether differences exist in online banking behavior based on customers' financial literacy levels. The results show that the overall model is statistically significant compared with the null model (p < 0.001). The model explains 95% of the variance in online banking behavior based on the Nagelkerke R^2 value and correctly

classifies 99% of the cases. Furthermore, the independent variable financial literacy is statistically significant (β = 13.118; p = 0.000).

Accordingly, the findings indicate that an increase in customers' financial literacy leads to a higher likelihood of engaging in online banking behavior. Based on these results, the logistic regression equation for the model can be expressed as follows.

Customer online banking Behaviour = Constant ± Financial Literacy

Customer online banking Behaviour = -32.903 + 13.118

5. Conclusion

This study confirms that financial literacy significantly influences customers' online banking behavior in the Balangoda Divisional Secretariat Division, Sri Lanka. The findings indicate that higher levels of financial literacy empower individuals to engage more effectively with online banking services. As observed in previous studies (Andreou & Anyfantaki, 2020) [4], financially literate individuals are better equipped to navigate online banking facilities, enhancing their ability to manage transactions conveniently and efficiently.

According to the research results, it is clear that there is a positive relationship with the dependent variable, financial knowledge, financial behavior, and financial attitudes, which were used as independent variables in the multiple linear regression analysis. Accordingly, it is important to take measures to directly increase the financial knowledge, behavior, and attitudes of customers in situations where it is expected to increase the bahaviour of online banking by customers. Also, the results of the binary logistic regression analysis show that an increase in financial literacy leads to a significant improvement in the use of online banking and reflects a strong positive relationship between the two variables. Hence, it is clear that the impact of the components of financial literacy, financial knowledge, behavior, and attitudes on the online banking behavior of customers individually or when it is considered as a whole as financial literacy, has a high positive impact.

This study contributes to the literature by addressing a key research gap how financial literacy affects online banking behavior. Balangoda, with its steady but slower technological development, represents a region where financial literacy can play a transformative role in increasing the use of digital financial services. For banks, the research emphasizes the importance of developing educational programs to increase awareness and comfort with online banking platforms (Gautam & Devkota, 2020). For policymakers, the results provide valuable evidence to guide efforts toward enhancing financial inclusion through literacy programs aligned with national goals (OECD, 2018) [27].

Also, these findings demonstrate that promoting financial literacy is essential to drive the adoption of online banking and achieve broader financial inclusion in Sri Lanka. By empowering customers to make informed financial decisions, banks can improve service accessibility, reduce operational costs, and enhance customer satisfaction. Ultimately, increasing financial literacy will not only expand the usage of online banking facilities but also contribute to creating a financially inclusive society in Sri Lanka, where individuals from all regions and demographics can benefit from online banking.

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