**Education and Digital Finance: Exploring the Relationship Between Educational Attainment and Online Banking Engagement in Sri Lanka**

**Abstract**

This study investigates the relationship between educational attainment and online banking engagement among adults in Sri Lanka, addressing a critical gap in digital financial inclusion literature. Despite high general literacy and expanding digital infrastructure, online banking usage in Sri Lanka remains disproportionately low, with only about 1% of bank customers actively using such services. Using simple random sampling method data were collected from 382 respondents in the Balangoda Divisional Secretariat Division and analyzed using ANOVA. The findings reveal a statistically significant difference in online banking usage across various education levels. Specifically, individuals with a bachelor's degree or higher reported the highest levels of engagement, while those with lower educational qualifications, particularly below GCE O/L, demonstrated minimal usage. Pairwise comparisons further confirmed that increased education correlates positively with greater online banking usage, likely due to improved digital literacy, cognitive ability, and familiarity with financial technologies. The study emphasizes that educational attainment is a key predictor of digital financial behavior, surpassing the effects of general literacy alone. These findings suggest that policies aimed at promoting online banking should consider targeted educational interventions, especially in regions with lower educational access. By highlighting education as a central factor in technology adoption, this research contributes to a more nuanced understanding of digital inclusion and offers valuable insights for policymakers seeking to enhance equitable access to financial services in developing economies like Sri Lanka.

Keywords: Digital Financial Inclusion, Educational Attainment, Financial Literacy, Online Banking

**Introduction**

The growing integration of digital technology into financial services has revolutionized the banking sector, with online banking emerging as a key mode of service delivery. It offers customers the convenience of accessing their accounts, transferring funds, paying bills, and conducting various transactions remotely via digital platforms . In Sri Lanka, while the digital infrastructure has expanded significantly and the general literacy rate remains high at 93% (Department of Census and Statistics, 2021), the actual engagement in online banking services remains disproportionately low. According to Mano et al. (2020), only about 1% of Sri Lankan bank customers actively use online banking, a statistic that raises concerns about the accessibility and inclusiveness of digital financial services.

Among the various factors influencing this low level of engagement, educational attainment stands out as a potentially significant determinant. Education is widely recognized as a critical component of human capital, equipping individuals with the cognitive ability, digital familiarity, and confidence needed to navigate complex systems, including digital financial platforms (McConnell et al., 2009; Blair, 2011). Prior research suggests that individuals with higher education levels are more likely to engage with online banking due to better access to technology, higher digital literacy, and greater exposure to formal financial systems (Gavurova et al., 2017). Conversely, those with lower educational backgrounds may struggle with digital interfaces, lack awareness of available banking tools, or distrust online systems, leading to their exclusion from digital financial ecosystems.

In the Sri Lankan context, the mismatch between a generally literate population and the minimal usage of online banking services suggests that education may be a more influential factor than previously considered. Despite the presence of 24 licensed commercial banks offering digital services and the steady growth of mobile internet usage, the expected growth in digital financial activity has not materialized evenly across different educational groups (Central Bank of Sri Lanka, 2021). While existing studies have explored the effects of financial literacy and income on online banking usage (Karunarathna & Kumari, 2024), limited attention has been given to educational attainment as a primary variable. This gap is especially concerning in a country where educational access varies widely between urban and rural populations, and where digital transformation is a stated national objective.

This study is important because it addresses a critical dimension of digital financial inclusion by investigating whether and how education influences an individual's likelihood to engage with online banking services. Understanding this relationship is essential for designing effective interventions to reduce digital disparities and to promote broader usage of online financial services across all segments of society. In light of this, the main objective of the study is to explore the relationship between educational attainment and online banking engagement among adults in Sri Lanka. By doing so, the research aims to contribute to a more inclusive digital economy and offer policy-relevant insights that support equitable access to financial technology.

**Literature Review**

The transformation of the banking sector through digital innovation has created a new landscape in which customers increasingly rely on online platforms to manage their financial affairs. The shift from traditional banking to online banking has been driven by technological advancements, global digitization trends, and the increasing demand for convenience and efficiency in financial transactions .In developed countries, the adoption of online banking has become widespread. However, in developing nations such as Sri Lanka, the transition has been slower and more uneven, primarily due to socio-demographic disparities, particularly in education.

Education is widely recognized as a foundational determinant in the adoption of online banking. It equips individuals with the knowledge and digital competency necessary to understand, trust, and effectively use digital financial services (Gavurova et al., 2017). According to the Human Capital Theory, education enhances an individual’s capacity to make informed decisions and interact with complex systems, including financial technologies (Blair, 2011; McConnell et al., 2009). In this context, educational attainment is more than just a measure of academic qualification; it is an indicator of a person's potential to access, evaluate, and apply financial and digital knowledge. Research by Binti et al. (2021) further supports this view, emphasizing that individuals with higher levels of education demonstrate stronger financial behaviors and are more inclined to utilize online banking platforms.

Sri Lanka presents an interesting case where, despite notable improvements in both general and computer literacy rates, actual engagement with online banking remains critically low. According to the Department of Census and Statistics (2023), the computer literacy rate increased from 24.9% in 2014 to 39.5% in 2023, while digital literacy also showed a steady rise, reaching 63.8% by 2023. Nevertheless, Mano et al. (2020) found that only 1% of bank customers use online banking services, highlighting a significant gap between digital readiness and actual usage. This disconnect suggests that other structural and educational barriers may be impeding the broader adoption of online banking services.

In previous studies, financial literacy has often been the focal point in understanding online banking behavior. Andreou and Anyfantaki (2019) identified a strong positive relationship between financial literacy and online banking adoption. Similarly, Karunarathna (2024) noted that financial capability is essential for navigating digital banking systems. However, education and financial literacy are often intertwined, and the role of formal education as an independent predictor of digital banking engagement remains under-examined in the Sri Lankan context. While financial literacy initiatives exist, their effectiveness may be limited if the baseline educational level of the target audience is insufficient to absorb and apply the knowledge.

The online banking environment in Sri Lanka is further complicated by regional disparities. Studies such as those by Hereth and Aruppala (2024) and Mano et al. (2020) show that urban populations tend to adopt online banking more readily than rural populations, often due to higher levels of education, better access to digital tools, and increased financial awareness. Despite nationwide internet penetration and mobile device usage, lower educational attainment in rural areas continues to act as a barrier to digital inclusion.

Globally, the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB) have been used to explain how perceived usefulness, ease of use, social norms, and perceived behavioral control influence technology adoption. However, these models also underscore the critical role of user competence, which is often shaped by educational exposure (Ajzen, 1991; Davis, 1989). In the Sri Lankan context, where education is not uniformly distributed and quality varies between urban and rural regions, applying these theoretical frameworks necessitates a careful examination of educational influence on digital financial behavior.

Overall, the existing body of literature suggests that while several factors influence the uptake of online banking including income, financial literacy, and technological infrastructure, among them educational attainment plays a central, though often under-researched, role. The current study seeks to address this gap by focusing specifically on how varying levels of education influence online banking engagement among adults in Sri Lanka, thereby contributing to a more nuanced understanding of digital financial inclusion.

**Methodology**

This study adopts a quantitative research approach to investigate the relationship between educational attainment and the use of online banking services among adults. Data were collected from a sample of 382 bank customers residing in the Balangoda Divisional Secretariat Division, located within the Ratnapura District of the Sabaragamuwa Province in Sri Lanka. Participants were selected using simple random sampling, ensuring that every individual in the population had an equal chance of being included in the study.

According to the Census of Population and Housing (2012), the population aged 20 years and above in the Balangoda Divisional Secretariat Division is 54,623. The appropriate sample size was determined using the Krejcie and Morgan sample size determination table, which is widely accepted for selecting representative samples from large populations. Based on this method, a total of 382 respondents were selected for the study.

The Sabaragamuwa Province was intentionally chosen due to its distinct demographic and technological profile. It is the fifth most populous province in the country, with a total population of approximately 1.9 million (Census of Population and Housing, 2012). Notably, the province ranks second in the country for computer ownership and usage, with around 20% of the population demonstrating computer literacy (Computer Literacy Statistics, 2022). The province also boasts a high general literacy rate of 94.8%, making it one of the most educationally and digitally literate regions in Sri Lanka. Despite these promising indicators, there is a notable lack of empirical research on how educational qualifications influence digital banking behavior in this area. Thus, the study seeks to address this gap in literature.

Data for the research was obtained from both primary and secondary sources. Primary data were collected through pre-tested structured questionnaires and face-to-face interviews conducted with the selected participants. Secondary data were drawn from academic literature, previous empirical studies, and official records such as reports from the Central Bank of Sri Lanka and the Department of Census and Statistics.

To examine the relationship between educational level and the frequency of online banking usage, the study employed an ANOVA test. In this analysis, the independent variable was the educational qualification of the respondents, categorized into seven levels. The dependent variable was online banking usage, measured by the number of times respondents accessed online banking services in a typical week. Data analysis was conducted using IBM SPSS (Version 23) and Microsoft Excel to ensure precise and credible statistical outcomes.

In alignment with the research objective, the following hypotheses were tested:

Null Hypothesis (H₀): There is no significant difference in online banking engagement across different levels of educational attainment.

Alternative Hypothesis (H₁): There is a significant difference in online banking engagement across different levels of educational attainment.

1. **Results and Discussion**

The results obtained from the research can be described as follows.

Table 01: Summary of demographic profile for users of online Banking

|  |  |  |
| --- | --- | --- |
| **Description** | **Frequency** | **Percentage** |
| **Gender** |  |  |
| Male | 170 | 45 |
| Female | 212 | 55 |
| **Age group** |  |  |
| 20-29 | 202 | 53 |
| 30-39 | 140 | 37 |
| 40-49 | 28 | 7 |
| 50 | 12 | 3 |
| **Education Level** |  |  |
| No Schooling | 0 | 0 |
| Primary (Grade 1-5) | 2 | 1 |
| Junior Secondary (Grade 6-9) | 20 | 5 |
| Senior Secondary (Grade 10-11) | 57 | 15 |
| G.C.E O/L | 65 | 17 |
| G.C.E A/L | 60 | 16 |
| Vocational Diploma | 71 | 19 |
| Bachelor's degree and above | 107 | 28 |

Source: Survey data (2024)

Regarding the gender distribution of online banking users, 170 individuals (44.5%) identified as male, while 212 individuals (55.5%) identified as female. With respect to age, the respondents were categorized into four main groups, all above the age of 20. Among them, 202 individuals (53%) fell within the 20–29 age range, 140 individuals (37%) were between 30 and 39 years, 28 respondents (7%) were aged 40–49, and the remaining 12 participants (3%) were over 50 years old.

The educational background of the survey participants indicated that a significant portion, 28%, held a bachelor's degree or higher. Additionally, 71 respondents had obtained a vocational diploma. There were 60 participants who had completed the GCE A/L and 65 who had passed the GCE O/L examinations. Altogether, 360 respondents had at least completed the 10th grade. Overall, the majority of participants were relatively well-educated, with only 22 individuals not having completed senior secondary education, and among them, just two had not finished junior secondary education.

Table 02: Online Banking Usage related data

|  |  |  |
| --- | --- | --- |
| **Description** | **Frequency** | **Percentage** |
| **Number of account ownership** |  |  |
| One bank | 207 | 54.19 |
| Two Banks | 159 | 41.62 |
| Three banks | 13 | 3.40 |
| More than three banks | 3 | 0.79 |
| **Online bank/s relationship duration** |  |  |
| Less than 1 year | 59 | 15.45 |
| 1 to 3 Years | 171 | 44.76 |
| 4 to 7 Years | 132 | 34.55 |
| More than 7 Years | 20 | 5.24 |
| **Number of times use online banking in a week** |  |  |
| One time | 91 | 23.82 |
| Two times | 110 | 28.80 |
| Three times | 52 | 13.61 |
| Four times | 39 | 10.21 |
| Five times | 38 | 9.95 |
| Six times | 32 | 8.38 |
| Seven times | 13 | 3.40 |
| More than seven times | 7 | 1.83 |

Source: Survey data (2024)

According to Table 2, the majority of respondents preferred to maintain accounts with a single bank, accounting for 54.15% of the sample. Additionally, 41.6% reported holding accounts with two banks. This indicates that nearly 95% of respondents choose not to manage accounts with more than two banks at the same time, while only about 3% prefer to maintain separate accounts with multiple banks.

The table also presents information on the duration of respondents' use of online banking services. Approximately 44% had been using such services for a period of 1 to 3 years, while 34% had used them for 4 to 7 years. Only 15% had accessed online banking for less than one year, and a small fraction, just 5% had been using these services for more than seven years.

In terms of weekly frequency, 91 respondents used online banking once per week, while 110 used it twice weekly. Usage declined progressively with frequency: 52 individuals accessed services three times per week, 39 used them four times, and 38 did so five times. A total of 32 respondents used online banking six times per week, while only 13 and 7 individuals reported using the services seven times or more each week, respectively.

Table 03: ANOVA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 1180.013 | 6 | 196.669 | 473.088 | .000 |
| Within Groups | 155.892 | 375 | .416 |  |  |
| Total | 1335.906 | 381 |  |  |  |

Source: Survey data (2024)

According to the results presented in Table 03, the hypothesis test was conducted, and the null hypothesis was rejected as the p-value was less than 0.05 (0.00 < 0.05). This indicates that the alternative hypothesis (H₁) is accepted, confirming that there is a statistically significant difference in online banking engagement among individuals with varying levels of education.

Table 04:Multiple Comparisons

|  |  |  |  |
| --- | --- | --- | --- |
| **Comparison Groups** | **Mean Difference** | **Significance**  **(p-value)** | **Interpretation** |
| Bachelor's vs Primary | 4.579 | 0.000 | Significant; bachelor's degree users engage more |
| Bachelor's vs Junior Secondary | 4.579 | 0.000 | Significant |
| Bachelor's vs Senior Secondary | 4.579 | 0.000 | Significant |
| Bachelor's vs GCE O/L | 3.764 | 0.000 | Significant |
| Bachelor's vs GCE A/L | 3.529 | 0.000 | Significant |
| Bachelor's vs Vocational Diploma | 2.27 | 0.000 | Significant |
| Vocational Diploma vs Primary | 2.31 | 0.000 | Significant; vocational diploma users engage more |
| Vocational Diploma vs Junior Secondary | 2.31 | 0.000 | Significant |
| Vocational Diploma vs Senior Secondary | 2.31 | 0.000 | Significant |
| Vocational Diploma vs GCE O/L | 1.494 | 0.000 | Significant |
| Vocational Diploma vs GCE A/L | 1.26 | 0.000 | Significant |
| GCE A/L vs Junior Secondary | 1.05 | 0.000 | Significant; A/L users engage more |
| GCE A/L vs Senior Secondary | 1.05 | 0.000 | Significant |
| GCE O/L vs Junior Secondary | 0.815 | 0.000 | Significant |
| GCE O/L vs Senior Secondary | 0.815 | 0.000 | Significant |
| Primary vs Junior/Senior Secondary | 0.000 | > 0.05 | Not Significant |
| Junior Secondary vs Senior Secondary | 0.000 | > 0.05 | Not Significant |
| GCE A/L vs GCE O/L | 0.235 | 0.396 | Not Significant |

Source: Survey data (2024)

The results reveal statistically significant differences in online banking usage across various educational levels, with p-values less than 0.05 in the majority of comparisons. Notably, respondents with a bachelor's degree or higher reported substantially greater usage of online banking services compared to all other education groups. For instance, the mean difference in banking usage between individuals with a bachelor's degree and those with only a primary education is 4.579, indicating a marked disparity in engagement. Similarly, respondents holding vocational diplomas also demonstrated significantly higher usage than those with lower educational qualifications, with consistent positive mean differences (e.g., 2.310 when compared with primary education). A clear pattern emerges from the data, suggesting that online banking usage increases with higher levels of educational attainment. This trend is further supported by the fact that all significant pairwise comparisons involving higher education levels (vocational diploma and above) showed confidence intervals that do not cross zero, confirming the reliability of the observed differences. Conversely, the differences in usage among lower education categories, such as primary, junior secondary, and senior secondary were not statistically significant, indicating relatively similar engagement levels within these groups. Overall, the findings underscore a strong positive relationship between educational attainment and online banking usage, implying that individuals with higher education are more likely to adopt and utilize digital financial services, possibly due to greater digital literacy, familiarity with technology, and confidence in navigating online platforms.

**Conclusion**

This study examined the relationship between educational attainment and online banking usage among adults in Sri Lanka. The results reveal a clear and statistically significant link between higher levels of education and increased engagement with digital banking services. Individuals with a bachelor's degree or higher demonstrated significantly greater usage of online banking compared to those with lower educational qualifications. The most notable disparities emerged between those in the highest and lowest education categories, highlighting a considerable gap in digital financial behavior.

The study also found that individuals with vocational diplomas reported relatively high usage levels, suggesting that technical and applied forms of education contribute meaningfully to digital inclusion. Conversely, those with only primary or junior-level education showed limited engagement, with little variation among them, indicating possible barriers in digital access and usability for this group.

These findings highlight the importance of educational attainment in shaping digital financial behavior. As the financial sector becomes increasingly digitized, reducing educational inequalities will be critical to ensuring broad and inclusive access to online banking services. Efforts to improve digital and financial literacy among less-educated populations may serve as a key strategy in closing the digital divide and promoting more equitable participation in the digital economy.

Consent

As per international standards or university standards, respondents’ written consent has been collected and preserved by the author(s).

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1.

2.

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