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Financial Literacy and Mobile Banking Usage: The Moderating Role of Demographic Characteristics

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ABSTRACT

This study aimed to analyze the relationship between financial literacy and mobile banking usage, considering the moderating role of demographic characteristics among commercial bank clients in the Jordanian southern provinces of Jordan. Using a sample of 1,380 commercial bank clients from Jordan's southern region. To achieve the study's objective and test its hypotheses, the authors employed the quantitative method and utilized SPSS software version 28 for data analysis. The results revealed a strong positive relationship between the level of financial literacy and mobile banking usage, with a moderating role of demographic characteristics on the relationship between the level of financial literacy and mobile banking usage. The study found that male clients and individuals with higher income levels were more inclined to utilize mobile banking services compared to female clients and those with lower income levels. On the other hand, age and educational level did not show a moderating effect on this relationship. Based on the findings, the study recommends enhancing financial literacy through the development of programs and diverse digital banking products to meet client's needs, thereby promoting the adoption of mobile banking services.

Keywords: Financial Literacy, Mobile Banking, Demographic Characteristics, Financial Technology, Jordan, Commercial Banks.
JEL Classifications: G21, G53

1. INTRODUCTION

Globally, financial institutions are actively working to enhance the utilization of mobile banking services by incorporating financial technology (FinTech) into their operational frameworks. However, challenges such as cost, security concerns, and reliability issues still hinder the widespread adoption of mobile banking services (Hanafizadeh et al., 2014; Yu, 2012). Despite the growing benefits of FinTech, adoption of these services varies significantly across different regions and demographic groups. Factors such as the cost of services, security, and reliability influence the adoption of mobile banking, with customers favoring services that offer cost-efficiency compared to traditional options (Wessels and Drennan, 2010; Jouda, 2020; Chaouali et al., 2016; Maitah and Hodrab, 2015; Jeong and Yoon, 2013).

In Jordan, the banking sector faces a dual challenge: keeping pace with the rapid development of financial technology while simultaneously addressing the changing needs of customers, particularly in the Jordanian southern region (Aladaileh et al., 2016). This shift has led Jordanian banks to transition to electronic banking solutions, with mobile banking being a pivotal innovation that has transformed the banking sector (Jünger and Mietzner, 2020; Campanella et al., 2017; Malviya, 2015). Mobile banking allows users to manage accounts, transfer funds, and pay bills with ease, convenience, and reduced costs (Montazemi and Qahri-Saremi, 2015; Hoehle et al., 2012). Consequently, mobile banking has become a strategic priority for banks seeking to meet customers' digital expectations, helping retain existing customers while attracting new ones (Campanella et al., 2017; Martins et al., 2014).

Despite the advancements, significant barriers to mobile banking adoption remain, particularly in Jordan's rural and southern regions, where financial literacy and demographic factors play a key role in usage patterns. According to the Central Bank of Jordan (CBJ), the penetration rate of mobile banking in 2023 was 35%, indicating potential for substantial growth compared to global averages, which often exceed 60% (Central Bank of Jordan, 2023). However, mobile banking is more common in urban populations, with rural and southern regions showing lower usage rates, highlighting the need for tailored strategies to address the specific barriers faced by these underserved areas.

One of the primary factors contributing to the limited adoption of mobile banking services is the varying levels of financial literacy and demographic characteristics. Individuals with higher financial literacy are generally more capable of making informed financial decisions and are more aware of the available financial products and services. However, a lack of financial literacy remains a barrier to fully utilizing mobile banking, particularly with the rapid growth of FinTech (Grohmann et al., 2018; Babych et al., 2018). Additionally, demographic factors such as age, gender, income, and educational level play a significant role in shaping financial literacy and the likelihood of adopting mobile banking services. For example, men tend to adopt mobile banking at higher rates compared to women, possibly due to higher confidence in technology use and greater financial independence (Ben-Belgacem et al., 2024). Similarly, individuals with higher income and education are more likely to adopt these services, driven by their exposure to technology and more complex financial needs (Abayomi et al., 2019). On the other hand, older individuals or those with lower income and education may face barriers such as limited access to smartphones, the internet, or a lack of trust in digital financial systems (Olaleye et al., 2022; Jünger and Mietzner, 2020; Hanafizadeh et al., 2014).

This study is significant as it addresses the reduced reliance on physical branches and the increased efficiency of services, particularly in regions with limited branch access (Wessels and Drennan, 2010; Cruz et al., 2010; Laukkanen and Cruz, 2009). To the best of the authors' knowledge, this study is among the first to examine the relationship between financial literacy, mobile banking adoption, and demographic characteristics in the Jordanian context, specifically focusing on the moderating effects of these characteristics. As such, it provides valuable insights for commercial banks and policymakers, offering strategies to enhance mobile banking adoption by addressing financial literacy and targeting specific demographic groups. Furthermore, this research fills a significant gap in the literature, contributing to the Arabic scholarship on financial technology and banking in Jordan.

This study aims to bridge the enduring gap in mobile banking adoption specifically within the southern governorates of Jordan, where adoption rates lag significantly behind other regions. Drawing on Central Bank of Jordan data, the study examines the relationship between financial literacy and mobile banking adoption, with a focus on how demographic characteristics (gender, age, income, education) moderate this relationship within the commercial banking sector in the southern region of Jordan. This research will provide a comprehensive analysis of these variables, offering actionable insights for developing policies and strategies to boost mobile banking adoption in underserved regions.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1. Financial Literacy and Mobile Banking Usage

Mobile banking refers to using smartphones and tablets to perform financial services, enabling customers to access their bank accounts easily, and securely and carry out a variety of financial transactions such as account viewing, money transfers, and bill payments. These services rely on banks possessing a robust digital infrastructure that ensures security and fast access (Johnson, 2020; Shaikh and Karjaluoto, 2014).

Although smartphone applications are adopted across all generations, adoption rates vary across different population segments (Carlin et al., 2017). One of the challenges that hinders the adoption of mobile banking applications is the availability of internet access, as its unavailability can cause delays in completing transactions on time (Tunji, 2013), which negatively impacts overall adoption rates for these banking services.

Researchers have extensively studied several factors that affect the adoption of mobile banking services, with Davis' 1989 introduction of the Technology Acceptance Model (TAM) being one of the most notable frameworks. TAM emphasizes ease of use, trust, and perceived usefulness as key factors in the adoption of mobile banking services (Sharma, 2019; Mardini, 2018; Hong and Yu, 2018). Additionally, the Unified Theory of Acceptance and Use of Technology (UTAUT) is another model frequently employed to explain technology adoption behavior (Merhi et al., 2019; Alalwan et al., 2018).

Several studies have shown that ease of use and accessibility positively influence customer adoption of mobile banking services, while risks act as a negative factor (Jouda, 2020). For instance, a study by Liao and Chen (2020) found a negative relationship between financial literacy and mobile payment usage in the United States.

Financial literacy refers to individuals' ability to understand and analyze economic information, enabling them to make informed financial decisions related to financial planning, wealth management, and debt control. Financial literacy encompasses a blend of knowledge, skills, awareness, and attitudes necessary for choosing appropriate financial products and services, managing risks, and understanding inflation and compound interest. This literacy enhances confidence in making short-term financial decisions and long-term planning that take into account economic and life circumstances to ensure individual financial well-being (Chhillar and Arora, 2023; OECD, 2022; Lusardi, 2019; Clark et al., 2016; Lusardi and Mitchell, 2014).

Studies have shown that individuals with higher levels of financial literacy are more capable of using a wide range of financial services

with confidence and awareness (Grohmann, 2018). Morgan and Trinh (2019) also pointed out that financial literacy contributes to increasing awareness of financial technology and promotes the adoption of digital financial services. As a result, there is a pressing need to enhance financial literacy among various population groups (Lee et al., 2020).

On the other hand, studies have shown that higher levels of financial literacy enhance financial planning capabilities and support more stable financial decision-making (Kumar et al., 2023; Tahir et al., 2021). However, some studies, such as Setiawan et al. (2021), indicate that financial knowledge may have a lesser impact on the adoption of financial technology, as using financial technology may not necessarily require a high level of financial knowledge.

Research confirms a direct correlation between high levels of financial literacy and increased frequency of mobile banking usage. Increased awareness of financial technology also leads to better usage of digital banking applications (Yoshino et al., 2020). However, challenges such as the lack of internet access or fears surrounding financial risks negatively affect the adoption of these services.

Legal aspects are among the most crucial factors affecting the use of mobile banking services, as financial institutions must comply with a range of laws and regulations that ensure the protection of customers' rights and the security of their personal data. In Jordan, banks adhere to regulations issued by the Central Bank of Jordan aimed at enhancing security and privacy in digital transactions. This includes ensuring that personal data is not misused, complying with anti-money laundering and counter-terrorism financing laws, and adhering to global financial protection regulations. Additionally, personal data protection laws play a key role in safeguarding financial information and providing consumers with protection in the growing digital environment. Therefore, compliance with these laws is essential for building trust between customers and banks, encouraging the safe and sustainable use of mobile banking services (Central Bank of Jordan, 2023; Ghrohmann, 2018).

Based on the above, the authors have developed the following hypothesis:
Hypothesis 1: There is a relationship between financial literacy and mobile banking usage.

2.2. The Moderating Role of Demographic Characteristics

Demographic characteristics are important indicators that reflect the structure of society and the changes occurring within it. These characteristics can be used as moderating, mediating, or predictive variables (Olaleye et al., 2022). The impact of demographic characteristics on mobile banking adoption has been the subject of numerous studies, examining factors such as gender, age, income, and educational level, either as direct variables or as moderating or mediating factors.

Regarding gender, a study by Ben-Belgacem et al. (2024) indicated that women tend to have less trust in financial literacy, which reduces their adoption of mobile banking services. Similarly, Taft et al. (2013) found in Iran that financial literacy levels were higher among men than women, suggesting gender-based disparities in the use of these technologies. Abayomi et al. (2019) also found a weak positive effect of gender on mobile banking adoption.

In terms of age, research has shown significant variations in the adoption of mobile banking services. For example, Olaleye et al. (2022) and Abayomi et al. (2019) reported a negative correlation between age and the use of mobile banking applications. Conversely, other studies, such as Pradhan (2023), identified a positive effect of age and educational level on adoption, indicating that outcomes may vary depending on geographic and social contexts.

When it comes to income, numerous studies have indicated that individuals with higher incomes are more likely to adopt mobile banking services. This is evident in the study by Abayomi et al. (2019) in Nigeria, where income had a positive impact on mobile banking usage.

Educational level also plays a significant role in adoption. Fall et al. (2020) found that low educational levels among women in Senegal hindered their adoption of mobile banking services. Moreover, studies by Mwenemilao and Kipilimba (2021), Mori and Mlambiti (2020), and Jiménez and Díaz (2019) have shown a positive impact of educational level on the use of mobile banking services. On the other hand, Olaleye et al. (2022) and Abayomi et al. (2019) found that educational level was not a significant predictor for mobile banking adoption.

A study conducted by El-Jafari et al. (2020) in Palestine on the adoption of 3G services in Bethlehem province found that demographic factors such as age, academic qualifications, and income influenced the intention to use 3G services. The study indicated that individuals with higher levels of financial literacy were more likely to use mobile banking services, highlighting the importance of financial awareness and the ease of technology use in promoting digital adoption.

Owusu Kwateng et al. (2019), in their study on factors influencing customers' adoption and use of mobile banking services in Ghana using the UTAUT2 model (Unified Theory of Acceptance and Use of Technology 2), found that age moderated the relationship between the theory and technology usage behavior. Similarly, Chawla and Joshi (2018), in their analysis of whether demographic characteristics influenced users' attitudes toward mobile banking services in India, concluded that gender and age served as moderating variables, while educational background had no significant moderating effect on users' attitudes toward mobile banking.

Based on this evidence, it can be concluded that demographic characteristics play a pivotal role in moderating the relationship between financial literacy and mobile banking usage. These factors interact to influence individuals' behavior toward the adoption of digital banking technologies. Consequently, the authors developed the following hypothesis:

Hypothesis 2: Demographic characteristics (gender, age, income, educational level) have a moderating effect on the relationship between financial literacy and mobile banking usage.

3. METHODOLOGY DESIGN

3.1. Study Population and Sample

The study population consisted of clients from branches of Jordanian commercial banks located in the southern region, which includes 48 branches (Association of Banks in Jordan, 2022). Due to the large size of the study population and the difficulty of accurately defining it, the authors employed a convenience sampling method. The questionnaire was distributed electronically through social media platforms. A total of 1,600 questionnaires were distributed, with 1,450 returned. of these, 1,380 questionnaires were deemed valid for analysis, yielding a response rate of 86.25%.

3.2. Study Model

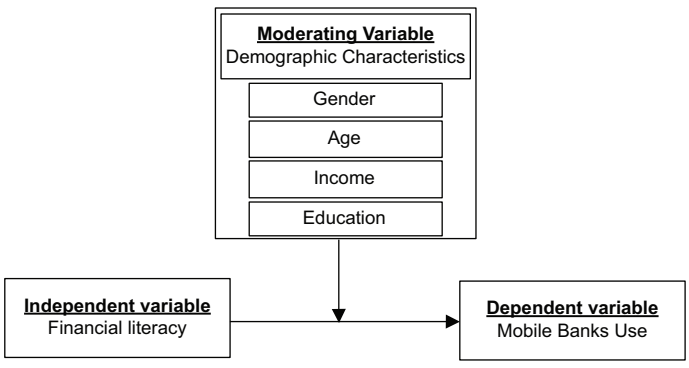
Figure 1 presents the proposed model, which tests the relationship between financial literacy and mobile banking usage, with the moderating role of demographic characteristics.

3.3. Study Instrument

The authors developed the study questionnaire based on a set of previous studies (Singh et al., 2024; Olaleye et al., 2022; Heo et al., 2021; Thair et al., 2021). The questionnaire consisted of three main sections. The first section includes demographic data (gender, age, income, and educational level). The second section measures participants' level of financial literacy using a set of questions that cover key aspects of money management, including financial understanding, financial behavior, and awareness of financial concepts. The third section addresses the use of mobile banking services through questions related to past experiences, current usage, and intentions to use these services in the future. The authors employed a five-point Likert scale to assess participants' responses, ranging from "strongly agree" (5) to "strongly disagree" (1) (Chyung et al., 2017).

Table 1 illustrates the demographic characteristics and variance (ANOVA) analysis, to assess differences between the demographic variables (gender, age, income, educational level) and mobile banking usage. This was done by dividing the demographic variables into groups and comparing the mean mobile banking usage for each group to determine if there were statistically significant differences. The results of this analysis are presented in Table 2.

Figure 1: Proposed Model



From Table 1, we observe the following:

- Gender: The F-value is 5.67, which is statistically significant with a P-value of 0.018, less than 0.05. This indicates a significant difference between males and females in mobile banking usage, with males tending to use mobile banking more than females.
- Age: The F-value is 2.34, and the P-value is 0.075, which is greater than 0.05. This suggests that there are no statistically significant differences between different age groups in mobile banking usage, although younger individuals tend to use mobile banking more frequently.
- Income: The F-value is 4.90, and the P-value is 0.008, which is less than 0.05. This indicates significant differences between income groups, with higher-income individuals tending to use mobile banking more frequently.
- Educational Level: The F-value is 2.54, and the P-value is 0.08, which is greater than 0.05. This suggests that there are no statistically significant differences between educational levels in mobile banking usage, although individuals with higher education tend to use mobile banking more often.

3.4. Measurement Instrument

3.4.1. Validity

For assessing the validity of the measurement instruments, the authors relied on construct validity analysis. To verify this, exploratory factor analysis (EFA) was employed. Typically, the Kaiser-Meyer-Olkin (KMO) value and Bartlett's test are used to determine the suitability of the data for factor analysis. The results of the analysis are presented in Table 3.

From Table 3, we observe that the KMO value is 0.85, which is greater than 0.60, and Bartlett's test is statistically significant ($p < 0.05$), indicating that the data is suitable for factor analysis. The factor analysis revealed two main factors, explaining 65% of the total variance.

3.4.2 Reliability

To ensure the internal reliability of the study instrument, Cronbach's alpha coefficient was used, and the results are presented in Table 4.

Referring to Table 4, we observe that the Cronbach's alpha values for all variables exceed 0.80, indicating a very good reliability of the study instrument (Hair et al., 2021).

4. HYPOTHESIS TESTING

4.1. Correlation Analysis

Table 5 presents the Pearson correlation coefficient values between the independent variable (financial literacy) and the dependent variable (mobile banking usage).

From Table 5, we observe that the correlation coefficient value is 0.65 at a significance level of ($P < 0.05$), which is statistically

Table 1: ANOVA and demographic characteristics

Variable	Demographic characteristics		ANOVA Results		
	Frequency	Percentage	Mobile Banking Usage Average	F-value	P-value
Gender				5.67	0.018
Male	828	60	4.2		
Female	552	40	3.8		
Age				2.34	0.075
18-29	414	30	4.1		
30-39	552	40	4.3		
40-49	276	20	3.9		
50 and above	138	10	3.6		
Income				4.90	0.008
Less than 500 JOD	345	25	3.7		
500-999 JOD	483	35	4.2		
1000-1499 JOD	345	25	4.4		
More than 1500 JOD	207	15	4.5		
Educational Level				2.54	0.08
Secondary or less	276	20	3.8		
Bachelor's degree	690	50	4.2		
Postgraduate	414	30	4.3		

Source: SPSS output

Table 2: Moderated regression analysis results

Independent Variable	Regression Coefficient (B)	Moderating Effect (%)	T-value	P-value
Financial Literacy	0.60	60	9.0	0.000
Financial Literacy × Gender	0.10	10	2.5	0.01
Financial Literacy × Age	0.05	5	1.2	0.20
Financial Literacy × Income	0.15	15	3.0	0.002
Financial Literacy × Educational Level	0.08	8	1.8	0.07
Correlation Coefficient (R)		0.72		
Coefficient of Determination (R^2)		0.52		

Source: SPSS output

Table 3: Results of exploratory factor analysis

Test	Value
KMO	0.85
Bartlett's Test	χ^2=985.67, P<0.05
Number of Factors	2 factors
Variance Explained	65%

Source: SPSS output

Table 4: Cronbach's alpha test results

Scale	Cronbach's Alpha
Financial Literacy	0.88
Mobile Banking Usage	0.85

Source: SPSS output

Table 5: Pearson correlation coefficient results

Variable	Mobile Banking Usage
Financial Literacy	0.65 (P<0.05)

Source: SPSS output

significant. This indicates a positive correlation between financial literacy and mobile banking usage, suggesting that as financial literacy increases, the use of mobile banking services also increases.

4.2. Multicollinearity Analysis

To conduct a multicollinearity test, the variance inflation factor (VIF) was used. If VIF values are high (typically greater than 10), indicates a potential multicollinearity problem. Additionally, the Tolerance value, which is the inverse of VIF (1/VIF), is examined. The closer the Tolerance value is to zero (typically less than 0.10), indicates a potential multicollinearity problem. The results of the test are shown in Table 6.

Table 6: Multicollinearity test results

Independent Variable	VIF	Tolerance (1/VIF)
Financial Literacy	1.80	0.56
Gender	1.25	0.80
Age	1.35	0.74
Income	2.10	0.48
Educational Level	1.60	0.63

Source: SPSS output

Based on the VIF and Tolerance values presented in Table 6, we observe that there is no multicollinearity problem (Orcan, 2020; Sekaran and Bougie, 2016).

4.3. First Hypothesis Test

Table 7 presents the results of the simple linear regression analysis for the first hypothesis, which states that there is an effect of financial literacy on the use of mobile banking.

From Table 7, we observe that the regression coefficient value is (B = 0.75) at a significance level of (P < 0.05), indicating a strong positive effect of financial literacy on the use of mobile banking. Additionally, the correlation coefficient (R = 0.65) reflects the

Table 7: Simple linear regression test results

Independent Variable	Regression Coefficient (B)	Correlation Coefficient (R)	Coefficient of Determination (R^2)	T-value	P-value
Financial Literacy	0.75	0.65	0.42	10.5	0.000

Source: SPSS output

strength of the relationship between financial literacy and the use of mobile banking. Moreover, the coefficient of determination ($R^2 = 0.42$) indicates that 42% of the variance in mobile banking usage is explained by financial literacy. Accordingly, the first hypothesis of the study is accepted.

4.4. Second Hypothesis Test

To test the second hypothesis, which states that there is a moderating role of demographic characteristics (gender, age, income, educational level) on the relationship between financial literacy and the use of mobile banking, the following tests were conducted:

4.5. Multiple linear Regression Analysis

A multiple linear regression analysis was conducted to test the moderating role of demographic characteristics on the relationship between financial literacy and the use of mobile banking. The results of this analysis are presented in Table 8.

From Table 8, we observe that there remains a significant and positive effect of financial literacy on the use of mobile banking ($B = 0.55$, $P < 0.05$). Additionally, gender and income show significant effects on usage, where males and individuals with higher incomes tend to use mobile banking more frequently. Conversely, age and educational level do not exhibit significant effects in this model.

The correlation coefficient ($R = 0.72$) indicates a strong relationship between the independent variables (financial literacy and demographic characteristics) and mobile banking usage. Furthermore, the coefficient of determination ($R^2 = 0.52$) suggests that 52% of the variance in mobile banking usage can be explained by the independent variables, meaning that the addition of demographic characteristics (gender, age, income, educational level) contributed an additional 0.1 to the explanatory power of the model.

4.6. Moderation Analysis

Table 2 presents the results of the moderation analysis, which is used to study whether the effect of the independent variable (financial literacy) on the dependent variable (mobile banking usage) changes based on the level of the moderating variable (demographic characteristics).

From Table 2, we observe the following:

- Financial Literacy Regression Coefficient ($B = 0.60$; $P = 0.000$): This indicates a strong positive effect of financial literacy on mobile banking usage, meaning that for every increase in financial literacy, mobile banking usage increases by 60%.
- Interaction between Financial Literacy and Gender: The interaction coefficient ($B = 0.10$) shows that the effect of financial literacy on mobile banking usage differs between males and females. The P-value ($P = 0.01$) is statistically significant, indicating that gender moderates the relationship between financial literacy and mobile banking usage by 10%. Therefore, males tend to use mobile banking more than females at the same level of financial literacy.
- Interaction between Financial Literacy and Age: The interaction coefficient ($B = 0.05$) indicates a slight influence of age on the relationship between financial literacy and mobile banking usage. However, the P-value ($P = 0.20$) is not statistically significant, suggesting that age does not significantly moderate the relationship between financial literacy and mobile banking usage.
- Interaction between Financial Literacy and Income: The interaction coefficient ($B = 0.15$) shows that the effect of financial literacy increases significantly with higher income. The P-value ($P = 0.002$) is statistically significant, indicating that income moderates the relationship by 15%. This means that individuals with higher incomes benefit more from financial literacy in terms of mobile banking usage.
- Interaction between Financial Literacy and Educational Level: The interaction coefficient ($B = 0.08$) suggests that the effect of financial literacy increases with higher educational levels. The P-value ($P = 0.07$) is close to the significance level (0.05) but not fully statistically significant. This indicates that education has a moderate, but not strong, effect on modifying the relationship between financial literacy and mobile banking usage.

Table 8: Multiple linear regression test results

Independent Variable	Regression Coefficient (B)	T-value	P-value
Financial Literacy	0.55	7.8	0.000
Gender	0.18	3.1	0.002
Age	−0.05	−1.2	0.23
Income	0.22	4.0	0.000
Educational Level	0.10	1.5	0.13
Correlation Coefficient (R)	0.72		
Coefficient of Determination (R^2)	0.52		

Source: SPSS output

In conclusion, we observe that the demographic variables have varying effects on the relationship between financial literacy and mobile banking usage, meaning that the addition of demographic characteristics (gender, age, income, educational level) contributed an additional 0.1 to the explanatory power of the model. Gender and income show the most significant moderation, at 10% and 15%, respectively, meaning that the relationship is stronger for males and high-income individuals. On the other hand, age and educational level, while showing some moderation, do not significantly influence the relationship, indicating that their effect is relatively weak.

5. RESULTS AND DISCUSSION

The study focused on the relationship between financial literacy and the use of mobile banking, as well as the moderating effects

of demographic characteristics (gender, age, income, educational level) on this relationship. The findings were as follows:

1. The Relationship Between Financial Literacy and Mobile Banking Usage:
   The research revealed a strong positive relationship between financial literacy and mobile banking usage. Individuals with higher levels of financial literacy tend to use mobile banking more frequently. This is because financially literate individuals are more aware of the benefits provided by mobile banking services, such as accessibility, convenience, and security. Therefore, they are more inclined to use these services compared to individuals who lack such awareness. This finding is consistent with studies such as Grohmann (2018), which highlighted that individuals with higher financial literacy levels are more knowledgeable about digital financial products and services, leading to increased utilization. Additionally, Morgan and Trinh (2019) highlighted that financial literacy plays an important role in increasing awareness of financial technology.
2. The moderating role of demographic characteristics:
   Gender: The results showed that gender influences the relationship between financial literacy and mobile banking usage, with males tending to use these services more than females, even when financial literacy levels are equal. This may be due to males having more confidence in banking technology or being more open to adopting new technologies compared to females, who may have greater concerns about security or effectiveness. This finding is consistent with Ben-Belgacem et al. (2024), who noted that women tend to have less confidence in financial literacy, which reduces their adoption of mobile banking services. Similarly, Taft et al. (2013) found that men in Iran have higher levels of financial literacy compared to women, which is reflected in their use of financial technology.
   Age: The results did not indicate a significant effect of age on the relationship between financial literacy and mobile banking usage. This may be because mobile banking usage has become widespread across different age groups, as nearly all ages rely heavily on smartphones. Therefore, age did not have a substantial impact on this relationship in the studied sample. This contrasts with some studies, such as Olaleye et al. (2022) and Abayomi et al. (2019), which found a negative correlation between age and the use of mobile banking services, with older individuals using these services less compared to younger ones. However, this result may vary based on geographic and cultural contexts.
   Income: The results showed that income moderates the relationship between financial literacy and mobile banking usage, with individuals with higher incomes using these services more frequently. This is likely because individuals with higher incomes may have more complex financial needs or multiple banking transactions, making them more inclined to adopt and use mobile banking services to perform these operations easily. Additionally, they may have better access to smartphones and technology in general. This finding is consistent with Abayomi et al. (2019) in Nigeria, who demonstrated that individuals with higher incomes exhibit greater usage of mobile banking compared to those with lower incomes. Mwenemilao and Kipilimba (2021) also support this idea by confirming that individuals with higher incomes have more complex financial needs, driving them to use digital banking services more frequently.
   Educational Level: Educational level did not have a significant moderating effect on the relationship between financial literacy and mobile banking usage. This may suggest that access to mobile banking does not depend heavily on an educational level but rather on financial awareness or the daily banking needs of individuals. This result may contrast with some studies, such as Fall et al. (2020), which suggested that lower educational levels reduce the use of mobile banking services. Conversely, studies such as Chawla and Joshi (2018) found that educational background has an insignificant impact on the adoption of these services, aligning partially with the findings of the current study.

6. RECOMMENDATIONS AND LIMITATIONS:

The study recommends further research by adding other variables such as occupation and social status, and comparing different geographic regions or other countries to analyze the impact of cultural and geographic variation on mobile banking usage. Additionally, developing financial literacy programs and creating diverse digital banking products to meet clients' needs.

The study's restriction to the southern region of Jordan limits the generalizability of the findings. Moreover, employing a convenience sample may introduce bias into the results. Furthermore, depending solely on questionnaires for data collection may lead to personal bias and a shallow understanding of the topic. Moreover, the study predominantly examines demographic variables and overlooks psychological and behavioral factors that could impact the correlation between financial literacy and mobile banking. Lastly, the rapid technological advancements may render the findings less relevant over time.

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