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Abstract

This study investigates the relationship between **digital financial literacy** and **fraud-avoidance behaviour** among migrant banking customers residing in London. Migrants constitute a population that is increasingly reliant on digital financial services yet disproportionately vulnerable to online financial fraud. Employing a quantitative research design, data were collected through a structured questionnaire administered to 150 adult migrants who actively use digital banking platforms. Descriptive statistics, correlation analysis, and multiple regression modelling were conducted to examine the predictive influence of digital financial literacy on fraud-avoidance behaviour. The results demonstrate that digital financial literacy is a significant and positive predictor of migrants' ability to recognise, avoid, and respond to online financial fraud, accounting for 34% of the variance in fraud-avoidance behaviour. Higher levels of digital financial literacy were associated with stronger security practices, heightened awareness of fraud risks, and more proactive protective actions. The study contributes to the existing literature by providing empirical evidence from a migrant population in a major global financial centre. The findings underscore the need for banks, policymakers, and community organisations to strengthen targeted digital-financial education initiatives aimed at reducing fraud vulnerability and enhancing digital financial inclusion among migrant communities.

Table of Contents

Declaration 2
Acknowledgements 2
Abstract 4
Table of Contents 5
List of Tables 7
List of Figures 8
CHAPTER 1: INTRODUCTION 9
1.1 Background of the Study 9
1.2 Objectives of the Study 15
1.3 Research Framework 16
1.4 Research Hypotheses 20
1.5 Rationale of the Study 22
1.6 Limitations of the Study 23
1.7 Organization of the Study 24
CHAPTER 2: LITERATURE REVIEW 27
2.1 Introduction 27
2.2 Conceptualising Digital Financial Literacy 27
2.3 Migrant Communities and Digital Financial Vulnerability 30
2.4 Digital Fraud in the UK Banking Sector 33
2.5 Fraud-Avoidance Behaviour 36
2.6 Relationship Between Digital Financial Literacy and Fraud Prevention 38
2.7 Theoretical Frameworks Underpinning the Study 44
2.8 Research Gap 48
2.9 Summary 51
CHAPTER 3: RESEARCH METHODOLOGY 54
3.1 Introduction 54
3.2 Research Philosophy 54
3.3 Research Design 55
3.4 Research Approach 55
3.5 Population and Sampling 56
3.6 Data Collection Methods 57

3.7 Research Instrument (Questionnaire) 57
3.8 Data Analysis Techniques 58
3.9 Ethical Considerations 59
3.10 Methodological Limitations 60
CHAPTER 3: DATA PRESENTATION, ANALYSIS AND INTERPRETATION 61
4.1 Introduction 61
4.2 Response Rate 61
4.3 Demographic Profile of Respondents 61
4.4 Reliability Analysis 68
4.5 Descriptive Statistics 69
4.6 Correlation Analysis 73
4.7 Regression Analysis 76
4.8 Summary of the Chapter 79
CHAPTER 5: DISCUSSION 81
5.1 Introduction 81
5.2 Overview of Key Findings 81
5.3 Discussion by Research Objective 81
5.4 Integration with Existing Literature 84
5.5 Theoretical Implications 85
5.6 Practical Implications 85
5.7 Summary of the Chapter 86
CHAPTER 6: CONCLUSION AND RECOMMENDATIONS 87
6.1 Introduction 87
6.2 Summary of the Study 87
6.3 Conclusions by Research Objective 87
6.4 Overall Conclusion 89
6.5 Recommendations 89
6.6 Recommendations for Future Research 91
6.7 Summary of the Chapter 91
REFERENCE LIST 93

List of Tables

Table 1 Age Distribution 61
Table 2 Gender Distribution 63
Table 3 Region of Origin 64
Table 4 Length of Stay in the UK 65
Table 5 Education Level 66
Table 6 Reliability Statistics (Cronbach's Alpha) 68
Table 7 Digital Banking Behaviour 70
Table 8 Digital Financial Literacy 70
Table 9 Fraud Avoidance Awareness 71
Table 10 Perceived Support and Experience 72
Table 11 Pearson Correlation Matrix 73
Table 12 Model Summary 76
Table 13 ANOVA Table 77
Table 14 Coefficients Table 78

List of Figures

Figure 1 Age Distribution 62
Figure 2 Gender Distribution 63
Figure 3 Region of Origin 64
Figure 4 Length of Stay in the UK 65
Figure 5 Education Level 67

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

The rapid digitalisation of financial services has fundamentally reshaped how individual access, manage, and safeguard their financial resources. In the UK, digital banking has become the dominant mode of financial interaction, with over 90% of adults using online or mobile banking in 2024 (Ofcom, 2024). This shift has been driven by technological innovation, financial-sector modernisation, and government efforts to promote digital inclusion and secure financial participation (HM Treasury, 2025). As digital financial ecosystems expand, consumers increasingly rely on mobile apps, online banking platforms, and digital payment systems for everyday transactions.

However, the growth of digital finance has been accompanied by a significant escalation in cyber-enabled fraud. UK Finance (2023) reports that digital banking fraud continues to rise, fuelled by phishing, authorised push-payment scams, identity theft, and social-engineering attacks. The National Cyber Security Centre (2024) warns that fraudsters are adopting more sophisticated methods, exploiting behavioural vulnerabilities and gaps in digital literacy. Fraud has now become the most common crime in the UK, accounting for over 40% of all reported offences (Home Office, 2023). This evolving threat landscape underscores the importance of digital capability as a core component of consumer protection.

Migrant communities face heightened exposure to these risks. Research shows that migrants often rely heavily on digital financial services due to flexible work patterns, remittance needs, and limited access to traditional banking (Migration Observatory, 2023). At the same time, they frequently encounter structural barriers such as lower digital literacy, language constraints, unfamiliarity with UK financial systems, and reduced access to fraud-awareness resources (House of Commons Library, 2024). These factors contribute to disproportionate vulnerability to online scams, identity fraud, and deceptive digital financial practices. Recent parliamentary reviews emphasise that migrants are among the groups most affected by digital financial harm and require targeted support to navigate online financial environments safely (House of Lords Fraud Act Committee, 2024).

Digital financial literacy has therefore emerged as a critical determinant of safe financial participation. It encompasses the knowledge, skills, and confidence needed to use digital financial tools securely, recognise fraud indicators, and adopt protective online behaviours (OECD, 2023). Empirical studies demonstrate that individuals with higher digital financial literacy are more capable of detecting suspicious digital activity, avoiding risky online interactions, and responding effectively to fraud attempts (Zhang & Xie, 2023; Al Hassan & Al Khalifa, 2023). Despite growing interest in digital capability, limited empirical evidence exists on how digital financial literacy influences fraud-avoidance behaviour specifically among migrant populations living in major financial centres such as London.

This study addresses this gap by examining the relationship between digital financial literacy and fraud-avoidance behaviour among migrants who use digital banking services in London. Understanding this relationship is essential for informing banks, policymakers, and community organisations seeking to strengthen fraud-prevention strategies. Enhancing digital financial literacy within migrant communities has the potential to reduce fraud vulnerability, improve financial resilience, and support safer participation in the UK's increasingly digital financial ecosystem.

Recent UK policy developments further highlight the urgency of strengthening digital capability among vulnerable groups, including migrants. The *Financial Inclusion Strategy* emphasises that digital skills are now a prerequisite for safe financial participation, as essential services increasingly shift online (HM Treasury, 2025). Parliamentary inquiries also note that fraudsters disproportionately target individuals with limited digital confidence, exploiting behavioural biases such as trust, urgency, and social pressure (House of Commons Treasury Committee, 2024). Behavioural-finance research supports this view, showing that individuals with lower digital literacy are more susceptible to cognitive overload and decision-making errors when confronted with deceptive digital content (Agarwal & Mazumder, 2013; Bongini, Iannello & Rinaldi, 2021). For migrants, these risks are intensified by structural factors such as language barriers, unfamiliarity with UK regulatory protections, and reliance on informal information networks (Migration Observatory, 2023). As digital fraud becomes more sophisticated—driven by AI-enabled phishing, deepfake impersonation, and targeted social-engineering attacks (NCSC, 2024; Europol, 2024)—the ability to critically evaluate digital financial information has become

essential. This evolving landscape underscores the need for empirical research examining how digital financial literacy shapes fraud-avoidance behaviour within migrant communities, particularly in global financial hubs such as London.

The regulatory environment in the UK has increasingly prioritised consumer protection in digital financial spaces, recognising fraud as a national security and public-welfare concern. The *Online Safety Act 2023* introduced new obligations for digital platforms to reduce exposure to fraudulent content, while the *Financial Conduct Authority* has strengthened expectations for banks to provide clearer fraud-prevention guidance and support for vulnerable consumers (FCA, 2023). Parliamentary committees have repeatedly emphasised that fraud is now the most prevalent crime in the UK and that prevention requires coordinated action across financial institutions, regulators, and digital service providers (House of Commons Treasury Committee, 2024). These developments highlight the importance of equipping consumers—especially those at higher risk—with the digital skills needed to navigate online financial environments safely. For migrants, who often rely on digital channels for remittances, employment payments, and everyday banking, regulatory protections alone are insufficient without corresponding improvements in digital financial literacy (House of Lords Fraud Act Committee, 2024).

From a behavioural perspective, digital financial literacy plays a central role in shaping how individuals interpret online financial information and respond to potential fraud threats. Theoretical models such as Protection Motivation Theory suggest that individuals are more likely to adopt protective behaviours when they possess adequate knowledge, perceive high threat severity, and believe they can effectively respond to risks (Bongini, Iannello & Rinaldi, 2021). Recent empirical studies reinforce this view, showing that digital literacy enhances users' ability to critically evaluate online messages, detect anomalies in digital transactions, and resist manipulation by fraudsters (Zhang & Xie, 2023; Al Hassan & Al Khalifa, 2023). For migrants, behavioural responses to fraud may be influenced by cultural norms, trust in digital systems, and reliance on informal networks for financial advice (Migration Observatory, 2023). These behavioural dynamics underscore the need for targeted digital-literacy interventions that address both cognitive and contextual factors affecting fraud-avoidance behaviour among migrant communities.

The increasing sophistication of digital fraud also reflects broader technological shifts that have reshaped the risk landscape for consumers. Artificial intelligence-driven scams, deepfake impersonation, and automated phishing systems have made fraudulent content more convincing and harder to detect, even for digitally experienced users (Europol, 2024; NCSC, 2024). These developments place greater pressure on individuals to continuously update their digital skills and fraud-awareness practices. Recent evidence shows that fraudsters increasingly target individuals who demonstrate uncertainty or hesitation during digital interactions, exploiting behavioural cues and gaps in digital confidence (UK Finance, 2023). For migrants, these challenges are compounded by reliance on mobile-based financial tools, cross-border communication platforms, and informal digital networks that may expose them to unverified financial information (Good Things Foundation, 2023). As digital fraud evolves, the ability to critically assess digital financial content, verify authenticity, and apply secure online behaviours becomes essential. This underscores the need for empirical research that examines how digital financial literacy equips migrant users to navigate emerging fraud threats within the UK's rapidly changing digital financial ecosystem.

Globally, international organisations have also raised concerns about the uneven distribution of digital financial skills and the implications for consumer protection. The World Bank (2023) notes that digital financial inclusion has expanded rapidly, but digital capability has not grown at the same pace, leaving many users exposed to online financial risks. Similarly, the OECD (2023) highlights that vulnerable groups—including migrants, low-income workers, and recent arrivals—often lack structured opportunities to develop digital financial literacy, making them more susceptible to fraud and misinformation. Studies from Europe and North America show that migrants frequently depend on mobile-based financial tools and cross-border digital platforms, which may expose them to unregulated financial content and higher fraud risk (Vasile & Androniceanu, 2022). As digital financial ecosystems become more complex, the gap between access and capability widens, reinforcing the need for targeted interventions that build digital financial skills among migrant populations. This global evidence further supports the relevance of examining how digital financial literacy influences fraud-avoidance behaviour within London's diverse migrant communities.

Recent empirical evidence further highlights the widening gap between digital access and digital capability, particularly among socio-economically marginalised groups. The Lloyds Bank *Consumer Digital Index 2024* reports that although digital banking usage continues to rise, nearly one-third of digitally active adults still lack essential digital-security skills, placing them at heightened risk of online financial harm. Similarly, the *Centre for Financial Capability* (2023) found that individuals with limited digital financial literacy are significantly more likely to fall victim to online scams, even when they regularly use digital banking tools. For migrants, this capability gap is intensified by structural disadvantages such as unstable employment, limited access to formal financial education, and reliance on mobile-based financial platforms that may expose them to unverified or misleading digital content (Good Things Foundation, 2023). As digital financial ecosystems become more complex—driven by rapid fintech innovation and evolving fraud techniques—the ability to navigate digital financial environments safely becomes a critical component of financial resilience. These trends reinforce the need for research that examines how digital financial literacy shapes fraud-avoidance behaviour among migrant communities in London, where digital banking penetration is among the highest in the UK.

The evolving landscape of digital financial behaviour also highlights the importance of understanding how different demographic groups engage with online financial tools. Recent national surveys show that while digital banking adoption is high, confidence in managing digital financial risks varies significantly across population groups (ONS, 2023; Lloyds Bank, 2024). Migrants, in particular, often develop digital practices shaped by transnational financial obligations, informal advice networks, and varying levels of exposure to digital systems in their countries of origin (Datta, 2022). These unique behavioural patterns can influence how migrants interpret digital financial information and respond to potential fraud threats. Furthermore, fintech innovations—such as instant payments, biometric authentication, and AI-driven customer interfaces—have introduced new layers of complexity that require users to continuously adapt their digital skills (PwC, 2024; Deloitte, 2023). Without adequate digital financial literacy, these rapid technological changes may increase migrants' exposure to fraud, reinforcing the need for empirical research that examines how digital capability shapes fraud-avoidance behaviour within diverse urban populations such as those living in London.

Socio-economic factors also play a critical role in shaping migrants' exposure to digital financial risks. Evidence shows that individuals with lower income, unstable employment, or limited access to formal financial education are more likely to rely on mobile-only banking and informal digital channels, which may increase susceptibility to fraud (Centre for Financial Capability, 2023; ONS, 2024). Migrants working in sectors characterised by irregular hours or cash-in-hand arrangements often depend on digital platforms for remittances, salary deposits, and everyday transactions, making them frequent targets for fraudsters who exploit predictable behavioural patterns (Datta, 2022; UK Finance, 2023). Additionally, recent studies highlight that migrants may experience lower trust in formal institutions and greater reliance on peer networks for financial guidance, which can expose them to misinformation or unsafe digital practices (Good Things Foundation, 2023). As digital financial ecosystems evolve, these socio-economic vulnerabilities intersect with digital literacy gaps, reinforcing the need for research that examines how digital financial capability influences fraud-avoidance behaviour among migrant communities in London.

The increasing integration of digital technologies into everyday financial life has also reshaped how individuals interact with financial institutions, creating new expectations for digital competence and security awareness. As banks expand their digital service portfolios—ranging from biometric authentication to AI-driven customer support—users must navigate more complex digital environments that require continuous learning and adaptation (Deloitte, 2023; PwC, 2024). This shift has widened the gap between those who can confidently manage digital financial tools and those who struggle to interpret digital information or recognise fraudulent cues. Recent studies show that individuals with limited digital financial literacy often experience heightened anxiety when using digital platforms, which can impair decision-making and increase susceptibility to manipulation (Centre for Financial Capability, 2023; Lloyds Bank, 2024). Migrants, in particular, may face additional challenges due to varying levels of exposure to digital banking systems in their countries of origin, differences in regulatory protections, and reliance on informal networks for financial guidance (Migration Observatory, 2023). These factors can influence how migrants perceive digital risks and respond to suspicious online behaviour. Furthermore, the rise of cross-border digital financial activity—such as international remittances, mobile-money transfers, and global payment apps—introduces additional layers of complexity that require users to evaluate the legitimacy of unfamiliar digital interfaces and financial messages (World Bank, 2023). Fraudsters increasingly exploit these transnational digital pathways, targeting migrant users with

scams that mimic remittance platforms, government services, or community organisations (Europol, 2024). As digital fraud becomes more adaptive and personalised, the ability to critically assess digital financial content and apply secure online behaviours becomes essential. These developments reinforce the importance of examining how digital financial literacy shapes fraud-avoidance behaviour among migrants in London, a city characterised by high digital banking penetration and diverse migrant communities.

The growing emphasis on digital-first financial services has also intensified the need for targeted support for communities that experience persistent digital exclusion. National assessments show that despite widespread digital access, significant disparities remain in users' ability to manage digital risks effectively (Lloyds Bank, 2024; ONS, 2023). Migrants frequently occupy this gap, not because of lack of access, but due to limited exposure to structured digital-skills training, inconsistent digital-security practices, and varying levels of trust in digital institutions (Good Things Foundation, 2023). These challenges are compounded by the fact that many migrants engage with multiple financial systems simultaneously—balancing UK digital banking with remittance platforms, mobile-money services, and international payment applications (World Bank, 2023). This transnational digital engagement increases the complexity of fraud-avoidance, as users must distinguish between legitimate and fraudulent digital content across different regulatory environments. Recent studies highlight that fraudsters increasingly exploit these cross-border digital behaviours, designing scams that mimic remittance providers, immigration authorities, and community organisations (Europol, 2024). As digital fraud becomes more adaptive and context-specific, understanding how digital financial literacy equips migrants to navigate these risks is essential for developing effective, evidence-based interventions within London's diverse financial landscape.

1.2 Objectives of the Study

The primary objective of this study is to examine the relationship between digital financial literacy and fraud avoidance behaviour among migrant banking customers in London. This reflects the growing need to understand how migrants' digital financial capabilities influence their vulnerability to online financial fraud within an increasingly digitalised banking environment in the UK.

Specific Objectives

1. To assess the level of digital financial literacy among migrants in London, including their ability to use digital banking services, interpret online financial information, and identify digital risks.

2. To identify the types of digital fraud risks commonly experienced by migrant banking customers, such as phishing, smishing, account takeover, and social engineering scams.

3. To investigate how migrants' levels of digital financial literacy shape their ability to recognise, avoid, and respond to fraudulent financial activities.

4. To explore how demographic characteristics—including age, educational background, language skills, and duration of residence in the UK—contribute to variations in digital financial literacy and fraud-avoidance behaviour among migrants.

5. To provide evidence-based recommendations for improving digital financial safety among migrant communities in London for banks, policymakers, and community organisations.

This study further contributes to the existing body of knowledge on digital financial inclusion by providing empirical evidence on how digital financial literacy shapes fraud avoidance behaviour among migrant populations. Focusing on London, a highly diverse global financial centre, the research aims to generate context-specific insights that can support the development of culturally sensitive financial education and digital safety initiatives. The findings are expected to assist financial institutions, regulators, and community organisations in designing targeted interventions that enhance migrants' digital resilience and reduce their exposure to online financial fraud.

1.3 Research Framework

The research framework provides the structural foundation that guides the investigation into how **digital financial literacy** influences **fraud-avoidance behaviour** among migrant banking customers in London. It outlines the key variables, their relationships, and the moderating demographic factors that shape these interactions. This framework is derived from the literature

reviewed in the proposal, which highlights the increasing importance of digital financial capability in mitigating exposure to online financial fraud, particularly among vulnerable groups such as migrants.

1.3.1 Conceptual Basis of the Framework

The framework is anchored on the premise that **digital financial literacy (DFL)**—which includes digital banking skills, online security awareness, the ability to identify fraud, and confidence in using digital tools—plays a central role in shaping individuals' **fraud-avoidance behaviour**. Prior studies suggest that individuals with higher DFL are more capable of recognising scams, avoiding risky online actions, and verifying financial information before engaging in digital transactions.

However, the proposal also emphasises that migrants face unique challenges such as language barriers, unfamiliarity with UK financial systems, and varying levels of digital exposure. These demographic factors may influence both their level of DFL and their ability to avoid fraud. Therefore, the framework incorporates **moderating variables** to capture these contextual influences.

1.3.2 Key Variables in the Framework

Independent Variable (IV): Digital Financial Literacy

Digital financial literacy comprises four core dimensions:

- **Digital banking skills**
- **Online security awareness**
- **Ability to identify fraud**
- **Confidence in using digital tools**

These dimensions collectively represent migrants' capability to navigate digital financial environments safely and effectively.

Dependent Variable (DV): Fraud-Avoidance Behaviour

Fraud-avoidance behaviour refers to the actions and decisions individuals take to protect themselves from digital fraud, including:

- **Recognizing scams**
- **Avoiding suspicious links or messages**
- **Verifying financial information**
- **Using secure authentication methods**
- **Practicing safe digital banking habits**

Moderating Variables

These demographic factors may strengthen or weaken the relationship between DFL and fraud-avoidance behaviour:

- **Language proficiency**
- **Length of stay in the UK**
- **Education level**
- **Age**

These variables are included because migrants' digital capability and fraud-avoidance behaviour are shaped by their socio-demographic context.

1.3.3 Conceptual Model of the Study

The conceptual model illustrates the hypothesised relationships among the variables:

Digital Financial Literacy (IV)
→ Fraud-Avoidance Behaviour (DV)
→ Moderated by:

- Language proficiency

- Length of stay in the UK
- Education level
- Age

In this model, DFL directly influences fraud-avoidance behaviour, while demographic factors modify the strength or direction of this relationship.

Theoretical Underpinning

The framework is informed by two theoretical perspectives:

1. Protection Motivation Theory (PMT)

PMT suggests that individuals adopt protective behaviours when they perceive a threat and believe they have the capability to respond effectively.
In this study: **Digital financial literacy** enhances migrants' perceived ability to avoid fraud.

- **Fraud-avoidance behaviour** represents the protective response.

2. Digital Literacy Theory

This theory posits that digital competence is essential for effective participation in digital environments.
Applied here, it supports the idea that:

- • Enhanced digital literacy is associated with improved safety in online financial decision-making.
- Migrants with limited digital skills face greater vulnerability.

Together, these theories justify the hypothesised link between DFL and fraud-avoidance behaviour.

1.3.4 Summary of the Research Framework

The research framework integrates the study's variables into a coherent structure that guides the investigation. It assumes that:

- Migrants with higher digital financial literacy are more likely to demonstrate strong fraud-avoidance behaviour.
- Demographic factors such as language proficiency and length of stay may influence this relationship.
- A clear understanding of these relationships is necessary for creating interventions that specifically enhance digital financial security within London's migrant population.

1.4 Research Hypotheses

Based on the objectives of the study and the conceptual framework, the following hypotheses are formulated to guide the empirical investigation. These hypotheses reflect the expected relationships between **digital financial literacy**, **fraud-avoidance behaviour**, and the moderating influence of key demographic factors among migrant banking customers in London.

1.4.1 Main Hypothesis

H1: Higher levels of digital financial literacy are linked to stronger fraud-avoidance behaviour among migrant users of banking services in London.

This hypothesis proposes that migrants who possess greater digital financial skills tend to adopt more secure digital banking behaviours and are better able to avoid fraudulent online activities.

1.4.1 Sub-Hypotheses

Digital Security Awareness and Fraud Avoidance

H2: Higher levels of digital security awareness are positively associated with stronger fraud-avoidance behaviour among migrants.

This hypothesis assumes that migrants who understand online risks and security protocols are better equipped to recognise and avoid fraudulent activities.

Confidence in Digital Banking and Fraud Avoidance

H3*:* Migrants with higher confidence in using digital banking tools demonstrate better fraud-avoidance behaviour.

This reflects the idea that confidence in navigating digital platforms enhances individuals' ability to detect suspicious activities and avoid risky online actions.

1.4.3 Moderation Hypotheses

Language Proficiency as a Moderator

H4: Language proficiency moderates the relationship between digital financial literacy and fraud-avoidance behaviour, such that the relationship is stronger among migrants with higher language proficiency.

This hypothesis recognises that language skills influence migrants' ability to understand digital financial information and fraud warnings.

Length of Stay in the UK as a Moderator

H5: The duration of migrants' residence in the UK alters the strength of the link between digital financial literacy and fraud-avoidance behaviour, with long-term residents demonstrating a more pronounced association.

This assumes that migrants who have lived longer in the UK are more familiar with local financial systems and digital fraud patterns.

Education Level as a Moderator

H6: Migrants' educational attainment alters the strength of the link between digital financial literacy and fraud-avoidance behaviour, with higher-educated individuals showing a more pronounced association.

This reflects the expectation that education enhances comprehension of digital financial concepts and online safety practices.

Summary

Taken together, the hypotheses guide the empirical testing of how digital financial literacy and fraud-avoidance behaviour relate under varying demographic conditions. They reinforce the study's objectives and underpin a rigorous quantitative analysis.

1.5 Rationale of the Study

The rapid digitalisation of financial services in the UK has transformed how individuals' access, manage, and transfer money. While this shift has created new opportunities for financial inclusion, it has also increased exposure to digital fraud, particularly for vulnerable groups such as migrants. As highlighted in the proposal, migrants in London often rely heavily on digital banking for everyday transactions and international remittances, yet they face unique challenges—including language barriers, limited familiarity with UK financial systems, and lower levels of digital financial capability. These factors heighten their susceptibility to phishing, smishing, account takeover, and other forms of online financial crime.

Despite the growing prevalence of digital fraud in the UK, existing research rarely focuses on migrant communities or examines **fraud-avoidance behaviour** as a specific behavioural outcome. Most studies explore digital financial literacy within general populations, overlooking the distinct vulnerabilities and contextual realities of migrants living in multicultural urban environments like London. This gap limits the ability of banks, regulators, and community organisations to design targeted interventions that address the specific needs of migrant digital banking users.

This study is therefore necessary to generate empirical evidence on how **digital financial literacy** influences migrants' ability to recognise and avoid digital fraud. By examining the role of demographic factors such as language proficiency, education level, and length of stay in the UK, the research provides a nuanced understanding of the conditions that shape migrants' digital safety.

The findings will offer practical insights for policymakers, financial institutions, and community organisations seeking to strengthen digital financial inclusion and reduce fraud vulnerability among migrant populations.

Ultimately, the study contributes to both academic literature and real-world practice by addressing a critical yet under-researched issue at the intersection of digital literacy, financial behaviour, and migrant integration. It supports the development of evidence-based strategies that can enhance digital resilience and promote safer financial participation for migrants in London's increasingly digitalised banking environment.

1.6 Limitations of the Study

While this study seeks to offer meaningful understanding of how digital financial literacy relates to fraud-avoidance behaviour among migrants using banking services in London, certain constraints must be recognized. Acknowledging these limitations helps position the findings appropriately and informs directions for future research.

1. Limited Generalizability

The study focuses exclusively on migrants living in London, a highly multicultural and digitally advanced city. As a result, the findings may not be fully generalisable to migrant populations in other parts of the UK or in countries with different financial infrastructures, levels of digitalisation, or socio-economic conditions.

2. Convenience Sampling

The reliance on convenience sampling, involving recruitment through community groups, social media platforms, and local centres, may result in sampling bias. Migrants who are more digitally engaged or more connected to community networks could be disproportionately included, reducing the overall representativeness of the sample.

3. Self-Reported Data

The study relies on self-reported questionnaire responses, which may be affected by social desirability bias, recall bias, or misunderstanding of certain questions. Participants may

overestimate their digital financial skills or underreport risky behaviours, affecting the accuracy of the data.

4. Cross-Sectional Research Design

The cross-sectional nature of the study means that data were collected at only one moment, restricting any conclusions about cause and effect. Although the analysis can reveal links between digital financial literacy and fraud-avoidance behaviour, it cannot show whether increased literacy results in safer practices over an extended period.

5. Language Barriers

Although efforts will be made to ensure clarity, some participants may still face language challenges when completing the questionnaire. This may affect their understanding of key terms related to digital banking, online security, or fraud, potentially influencing the reliability of their responses.

6. Limited Scope of Variables

The study focuses on selected demographic moderators such as language proficiency, education level, and length of stay in the UK. Other potentially influential factors—such as cultural background, trust in financial institutions, or prior experiences with fraud—are not included, which may limit the depth of the analysis.

1.7 Organization of the Study

The study is divided into five chapters, each focusing on a major element of the research journey. This arrangement creates a clear progression from the introduction of the issue to the analysis of results and the development of recommendations.

Chapter 1: Introduction

This chapter provides an overview of the study, including the background, statement of the problem, objectives, research hypotheses, rationale, scope, limitations, and organisation of the

study. It establishes the foundation and justification for investigating digital financial literacy and fraud-avoidance behaviour among migrant banking customers in London.

Chapter 2: Review of Related Literature

This chapter offers an in-depth examination of scholarly work related to digital financial literacy, migrant financial challenges, digital fraud in the UK, and fraud-avoidance behaviour. It further identifies the gap in current knowledge that this study aims to fill and outlines the theoretical and conceptual frameworks guiding the research.

Chapter 3: Research Methodology

This chapter explains the overall research approach, including the study population, sampling strategy, data-collection processes, research tools, and analytical methods. It also addresses the ethical issues involved and acknowledges the methodological constraints of the study.

Chapter 4: Data Presentation, Analysis, and Interpretation

This chapter reports the study's results through descriptive summaries, correlation tests, regression models, and moderation analyses. The outcomes are then interpreted in line with the research objectives and proposed hypotheses.

Chapter 5: Discussion

This chapter provides an in-depth examination of the study's key findings. The results generated in Chapter 4 are analysed in relation to the research aims, hypotheses, and the wider literature on digital financial literacy, migrant financial vulnerability, and fraud-avoidance behaviour. The discussion explores how the findings align with or diverge from previous research and considers their implications for migrant banking customers in London. It also reflects on the broader role of digital financial literacy in reducing exposure to digital fraud and enhancing financial resilience within migrant communities.

Chapter 6: Conclusions, and Recommendations

This chapter summarises the main conclusions drawn from the study and sets out practical recommendations informed by the findings. The conclusion outlines how digital financial literacy shapes fraud-avoidance behaviour among migrant banking customers in London and discusses the implications for financial inclusion and consumer protection. The recommendations offer actionable guidance for banks, policymakers, community organisations, and researchers. The chapter also identifies areas where further investigation is needed to deepen understanding of digital financial vulnerability among migrant populations.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a comprehensive review of the literature relevant to digital financial literacy (DFL), migrant financial vulnerability, digital fraud in the UK, fraud-avoidance behaviour, and the relationship between DFL and fraud prevention. The review draws on empirical studies, theoretical frameworks, and policy reports published between 2020 and 2024 to establish the conceptual foundation for the study. It also identifies gaps in existing research, particularly the limited focus on migrant communities in London, thereby justifying the need for the present investigation.

2.2 Conceptualizing Digital Financial Literacy

Digital financial literacy (DFL) has become a key theme in recent research on financial behaviour, driven by the rapid shift toward digital financial services and the growing complexity of online financial systems. Whereas traditional financial literacy emphasises knowledge of concepts such as budgeting, interest rates, and credit management, DFL incorporates these abilities within digital settings. According to the OECD (2022), DFL involves accessing, interpreting, and assessing digital financial information while being able to identify online risks and potential fraud. This broader definition recognises that financial decisions increasingly take place on digital platforms, requiring individuals to combine financial understanding with digital competencies.

Scholars widely agree that DFL is multidimensional. Grohmann et al. (2021) argue that DFL comprises four core components: digital navigation skills, financial knowledge, risk awareness, and confidence in using digital tools. These dimensions reflect the cognitive, technical, and behavioural competencies required to engage safely with digital financial services. Similarly, Aydin and Burnaz (2023) conceptualise DFL as a combination of digital literacy, financial literacy, and cybersecurity awareness, emphasising that individuals must not only understand financial information but also evaluate the credibility of digital sources and recognise fraudulent cues.

The increasing reliance on digital banking and mobile financial services has intensified the importance of DFL. According to the World Bank (2023), digital financial services have expanded rapidly, particularly in urban centres, driven by the growth of mobile banking apps, contactless

payments, and online financial platforms. This expansion has created new opportunities for financial inclusion but has also exposed individuals to heightened risks of cybercrime, identity theft, and digital fraud. As a result, individuals lacking digital financial skills face significant vulnerabilities in navigating digital financial environments.

Empirical research consistently demonstrates the protective role of DFL in mitigating digital financial risks. Al-Hassan and Al-Khalifa (2023) found that individuals with higher levels of DFL are significantly more capable of identifying fraudulent schemes, interpreting security warnings, and adopting preventive behaviours such as verifying website authenticity and avoiding suspicious links. Zhang and Xie (2023) similarly show that digital literacy is strongly associated with cybersecurity behaviour, particularly among vulnerable consumer groups, suggesting that DFL enhances individuals' ability to detect threats and respond appropriately.

The cognitive dimension of DFL is particularly important. According to Lusardi and Mitchell (2020), individuals must possess the ability to interpret digital financial information, understand online security protocols, and evaluate the credibility of digital content. This cognitive processing is essential for recognising phishing attempts, understanding privacy policies, and making informed decisions about digital transactions. Without these skills, individuals may misinterpret digital cues or fall victim to deceptive online practices.

The behavioural aspect of DFL is equally important. Park and Kim (2022) suggest that actions such as creating strong passwords, activating two-factor authentication, and routinely checking account activity are influenced by a person's confidence in using digital technologies. This perspective reflects Bandura's (1997) concept of self-efficacy, which argues that people who believe they can perform a task effectively are more inclined to adopt protective behaviours. In digital financial contexts, self-efficacy shapes whether individuals follow safe online practices or engage in behaviours that increase risk.

Recent studies also highlight the socio-emotional dimension of DFL. Ng (2021) suggests that digital literacy includes socio-emotional competencies such as managing online interactions, recognising manipulative digital content, and responding appropriately to digital threats. These competencies are increasingly relevant as fraudsters use social-engineering tactics to exploit

emotional vulnerabilities, such as fear, urgency, or trust. Understanding these tactics requires not only technical skills but also emotional awareness.

Policy organisations have also contributed to the conceptualisation of DFL. The Financial Conduct Authority (FCA, 2023) emphasises that DFL includes the ability to understand digital banking interfaces, interpret fraud alerts, and navigate online financial services securely. The FCA notes that individuals with low DFL are more likely to fall victim to authorised push-payment (APP) scams, identity theft, and account takeover incidents. Similarly, UK Finance (2023) highlights that digital fraud is increasingly sophisticated, requiring consumers to possess advanced digital competencies to protect themselves.

The conceptualisation of DFL also intersects with broader discussions on digital inclusion. According to the European Commission (2022), digital inclusion requires not only access to digital technologies but also the skills to use them effectively. This perspective positions DFL as a key component of digital citizenship, enabling individuals to participate fully in digital economies. However, digital inclusion remains uneven across demographic groups, with migrants, older adults, and individuals with lower education levels often experiencing lower levels of DFL (Rahman & Yilmaz, 2023).

The COVID-19 pandemic further accelerated the shift toward digital financial services, highlighting disparities in DFL. Research by the IMF (2021) shows that the pandemic increased reliance on digital payments, online banking, and remote financial services, making DFL more essential than ever. However, individuals with limited digital skills struggled to adapt, increasing their exposure to digital fraud. This shift underscores the need for targeted interventions to improve DFL among vulnerable populations.

Despite growing scholarly interest, the conceptualisation of DFL remains contested. Some researchers argue that DFL should be treated as a subset of digital literacy, while others view it as an extension of financial literacy. For example, Prasad et al. (2022) argue that DFL is best understood as a hybrid construct that integrates digital, financial, and cybersecurity competencies. This hybrid approach reflects the complex nature of digital financial environments, where individuals must navigate financial information, digital interfaces, and online threats simultaneously.

Critics also highlight limitations in existing definitions of DFL. According to Hernandez and Kim (2021), many definitions focus primarily on individual competencies, overlooking structural factors such as access to digital infrastructure, quality of digital interfaces, and institutional support. These structural factors can significantly influence individuals' ability to develop and apply DFL skills. For migrants, language barriers, cultural differences, and unfamiliarity with local financial systems further complicate the development of DFL (Kim & Lee, 2022).

In summary, Digital financial literacy is a multidimensional construct that includes cognitive, technical, behavioural, and socio-emotional skills. These competencies enable individuals to navigate digital financial systems, identify online risks, and practise safe digital behaviours. Although DFL provides important protection against digital fraud, differences in digital capability remain across demographic groups, with migrants often experiencing lower levels of digital confidence and access. Recognising these complexities is essential for designing interventions that strengthen digital financial resilience within diverse communities.

2.3 Migrant Communities and Digital Financial Vulnerability

Migrant communities represent one of the most financially vulnerable groups in digital economies, particularly in highly digitalised banking environments such as the United Kingdom. Digital financial vulnerability refers to the heightened exposure of individuals to financial risks, fraud, and exclusion due to limited digital skills, inadequate financial knowledge, or structural barriers (OECD, 2022). For migrants, these vulnerabilities are shaped by a combination of linguistic, socio-economic, cultural, and institutional factors that influence their ability to navigate digital financial systems effectively.

A substantial body of research highlights that migrants often experience lower levels of digital and financial literacy compared to native populations. The Financial Conduct Authority (FCA, 2023) reports that migrants in the UK are disproportionately represented among consumers with low digital capability, limited understanding of financial products, and reduced awareness of fraud risks. This is consistent with findings from Vasile and Androniceanu (2022), who argue that digital financial inclusion remains uneven across migrant groups due to disparities in education, access to technology, and familiarity with host-country financial systems. These disparities create significant challenges for migrants attempting to engage safely with digital banking services.

Language proficiency is one of the most significant determinants of digital financial vulnerability among migrants. According to Kim and Lee (2022), limited language skills hinder migrants' ability to understand digital banking interfaces, interpret fraud warnings, and follow online security instructions. Many digital financial platforms are designed primarily for native speakers, which can create cognitive overload for migrants who must simultaneously translate content and make financial decisions. This linguistic barrier increases the likelihood of misinterpreting digital cues, falling victim to phishing attempts, or overlooking critical security information (Migration Policy Institute, 2021).

Cultural factors also play a crucial role in shaping migrants' digital financial behaviour. Hernandez and Kim (2021) note that migrants from collectivist cultures may rely heavily on informal networks for financial advice, which can expose them to misinformation or fraudulent schemes. In some cultures, questioning authority or official communications is discouraged, making migrants more susceptible to impersonation scams, particularly those involving government agencies or financial institutions. Fraudsters often exploit these cultural dynamics by posing as immigration officers, tax authorities, or remittance providers (Home Office, 2022).

Socio-economic factors further compound digital financial vulnerability. Migrants are more likely to work in low-income, precarious employment, limiting their access to high-quality digital devices, stable internet connections, or paid financial education programmes (Rahman & Yilmaz, 2023). The World Bank (2022) highlights that migrants often rely on low-cost smartphones with limited security features, increasing their exposure to malware, account takeover, and unauthorised transactions. Additionally, migrants may prioritise immediate financial needs over long-term digital skill development, reducing their capacity to engage in safe digital financial practices.

Remittance behaviour is another factor that increases migrants' exposure to digital financial risks. The global remittance market has increasingly shifted toward digital channels, particularly during and after the COVID-19 pandemic (World Bank, 2023). While digital remittances offer convenience and lower transaction costs, they also expose migrants to fraud risks such as fake remittance websites, spoofed mobile apps, and social-engineering scams targeting individuals sending money abroad. Migrants unfamiliar with digital remittance platforms may struggle to

distinguish legitimate services from fraudulent ones, making them prime targets for cybercriminals (IMF, 2021).

Institutional barriers also contribute to migrants' digital financial vulnerability. Many migrants face difficulties accessing mainstream banking services due to documentation requirements, credit history limitations, or perceived discrimination (European Commission, 2022). As a result, they may rely on alternative financial services, some of which operate with minimal regulatory oversight. These services often operate without strong digital security safeguards, which can heighten the likelihood of data breaches, identity theft, and financial exploitation (FCA, 2023). Furthermore, fraud-awareness campaigns and digital safety resources are often not culturally or linguistically tailored, limiting their effectiveness among migrant communities (Button et al., 2021).

Research also highlights the psychological dimensions of digital financial vulnerability. Migrants may experience anxiety, fear, or distrust when interacting with digital financial systems, particularly if they have previously encountered fraud or financial exclusion (Hernandez & Kim, 2021). These emotional factors can reduce confidence in using digital tools, leading to avoidance behaviours that further limit digital skill development. Park and Kim (2022) argue that digital self-efficacy is a key predictor of safe online behaviour; migrants with low confidence are less likely to adopt protective measures such as two-factor authentication or regular account monitoring.

The intersection of migration status and digitalisation creates a unique vulnerability profile. Migrants often navigate unfamiliar financial systems while simultaneously adapting to new cultural, linguistic, and technological environments. This dual adjustment process increases cognitive load and reduces the capacity to detect fraud cues or evaluate digital risks effectively (Kim & Lee, 2022). Moreover, migrants may be targeted by fraudsters who exploit their immigration status, lack of local knowledge, or fear of legal repercussions (Home Office, 2022).

Despite these challenges, research also identifies protective factors that can reduce digital financial vulnerability among migrants. Community organisations, cultural associations, and migrant support groups play a crucial role in disseminating financial information, offering digital skills training, and raising awareness about fraud risks (Migration Policy Institute, 2021). Digital literacy

programmes tailored to migrants' linguistic and cultural needs have been shown to improve confidence, reduce vulnerability, and enhance engagement with digital financial services (European Commission, 2022). However, such programmes remain limited in scope and accessibility, particularly in large urban centres like London.

In summary, migrant communities face a complex set of challenges that increase their digital financial vulnerability. These challenges include language barriers, cultural differences, socio-economic constraints, limited access to secure digital technologies, and institutional barriers within the financial system. The rapid digitalisation of financial services has intensified these vulnerabilities, exposing migrants to sophisticated forms of digital fraud.

2.4 Digital Fraud in the UK Banking Sector

Digital fraud has become one of the most pervasive and rapidly evolving threats within the UK banking sector, driven by the increasing digitalisation of financial services and the sophistication of cybercriminal techniques. As consumers shift toward online and mobile banking, fraudsters have adapted their methods to exploit digital vulnerabilities, resulting in significant financial and psychological harm. The UK is now considered one of the global hotspots for digital financial fraud, with losses running into billions of pounds annually (UK Finance, 2023). Understanding the nature, drivers, and impacts of digital fraud is therefore essential for analysing the risks faced by vulnerable groups, including migrants.

Digital fraud encompasses a wide range of criminal activities, including phishing, smishing, vishing, authorised push-payment (APP) scams, identity theft, account takeover, and malware-based attacks. According to the National Cyber Security Centre (NCSC, 2023), cybercriminals increasingly use sophisticated social-engineering tactics, AI-generated messages, and spoofed websites to deceive consumers. These techniques take advantage of human judgement and emotional responses rather than technical system flaws, making them hard to recognise even for users with strong digital skills. The FCA (2023) notes that fraudsters often impersonate trusted institutions such as banks, government agencies, or delivery companies, creating a false sense of legitimacy that encourages victims to disclose sensitive information or transfer funds.

The scale of digital fraud in the UK has grown significantly in recent years. UK Finance (2023) reported that APP fraud alone accounted for over £485 million in losses in 2022, with criminals increasingly targeting individuals through personalised scams. Phishing and smishing attacks have also surged, fuelled by the extensive reliance on smartphones and digital communication tools. The NCSC (2023) highlights that fraudsters now deploy AI-powered tools to craft highly convincing messages, making traditional fraud-detection cues—such as spelling errors or unusual formatting—less reliable. This technological evolution has outpaced public awareness, leaving many consumers unprepared for the sophistication of modern scams.

The COVID-19 pandemic significantly sped up the transition toward digital banking, creating new opportunities for fraud. Lockdowns and social-distancing measures led to a dramatic increase in online transactions, remote working, and digital communication, which fraudsters exploited through pandemic-themed scams (IMF, 2021). These included fake government support messages, fraudulent vaccination appointments, and counterfeit charity appeals. The FCA (2022) notes that the pandemic created a "perfect storm" for digital fraud, combining increased digital activity with heightened public anxiety and reduced in-person banking support.

APP fraud has become one of the most damaging forms of digital fraud in the UK. Unlike unauthorised fraud, where banks typically reimburse victims, APP fraud involves victims being manipulated into authorising payments themselves, making reimbursement more complex. According to Button et al. (2021), APP fraud relies heavily on psychological manipulation, with fraudsters using urgency, authority, and fear to pressure victims into transferring funds. Migrants are particularly vulnerable to APP fraud due to language barriers, unfamiliarity with UK institutions, and fear of immigration-related consequences (Home Office, 2022).

Identity theft and account takeover are also major concerns. The NCSC (2023) reports that cybercriminals increasingly use data harvested from social media, data breaches, and dark-web marketplaces to impersonate individuals and gain access to their financial accounts. Once inside an account, fraudsters may change contact details, initiate transfers, or apply for credit in the victim's name. The rise of biometric authentication has reduced some risks, but fraudsters have adapted by using deepfake audio and video to bypass identity-verification processes (Europol, 2023).

The UK banking sector has implemented various measures to combat digital fraud, including Strong Customer Authentication (SCA), two-factor authentication, behavioural biometrics, and enhanced transaction-monitoring systems. However, these measures have not fully stemmed the rise of fraud. According to the Bank of England (2022), fraudsters increasingly target the "human layer" of security, exploiting trust, fear, and confusion rather than attempting to bypass technical controls.

Regulatory bodies have also taken steps to address digital fraud. The Payment Systems Regulator (PSR, 2023) introduced new rules requiring banks to reimburse most victims of APP fraud, aiming to incentivise stronger fraud-prevention measures. However, critics argue that reimbursement policies alone cannot address the root causes of fraud, which include low digital literacy, inadequate public awareness, and the rapid evolution of cybercrime techniques (FCA, 2023). Moreover, fraudsters often operate from overseas jurisdictions, making prosecution difficult and reducing the deterrent effect of law enforcement (NCA, 2022).

Migrants face unique challenges within this landscape. Research shows that migrants are disproportionately targeted by fraudsters who exploit their unfamiliarity with UK systems, linguistic limitations, and reliance on digital remittance services (Migration Policy Institute, 2021). Fraudsters may impersonate immigration officials, employers, or remittance providers, using culturally tailored scripts to manipulate victims. Vasile and Androniceanu (2022) argue that migrants' lower levels of digital financial literacy increase their susceptibility to scams, particularly those involving official-looking messages or urgent financial demands.

Digital exclusion further exacerbates vulnerability. Migrants with limited access to secure devices or stable internet connections may rely on outdated smartphones, public Wi-Fi, or shared devices, all of which increase exposure to malware and data theft (Rahman & Yilmaz, 2023). Additionally, migrants may lack access to culturally appropriate fraud-awareness resources, as many campaigns are designed for native English speakers and do not account for diverse linguistic or cultural backgrounds (Button et al., 2021).

In summary, digital fraud in the UK banking sector is a complex and rapidly evolving threat driven by technological innovation, social-engineering tactics, and the widespread adoption of digital financial services. While all consumers face risks, migrants experience heightened vulnerability

due to linguistic, cultural, socio-economic, and institutional barriers. The increasing sophistication of fraud techniques underscores the importance of designing targeted measures that build digital financial skills, strengthen fraud-awareness initiatives, and reinforce regulatory protections for groups at heightened risk.

2.5 Fraud-Avoidance Behaviour

Fraud-avoidance behaviour refers to the set of cognitive, behavioural, and emotional actions individuals take to protect themselves from financial fraud, particularly in digital environments. As financial services increasingly migrate to online and mobile platforms, fraud-avoidance behaviour has become a critical component of consumer financial resilience. Scholars widely agree that fraud-avoidance behaviour is shaped by a combination of digital literacy, risk perception, self-efficacy, and contextual factors such as socio-economic status and cultural background (Sharma & Kukreja, 2022; Chen et al., 2023). Understanding these behaviours is essential for analysing how vulnerable groups—such as migrants—navigate digital financial risks.

Fraud-avoidance behaviour is rooted in cognitive processes that enable individuals to recognise, interpret, and respond to potential fraud cues. According to Lee and Kim (2021), individuals with higher awareness of online fraud are more likely to adopt preventive behaviours such as verifying website legitimacy, avoiding unsolicited messages, and scrutinising suspicious communication. Cognitive factors include knowledge of fraud tactics, understanding of digital risks, and the ability to interpret security warnings. These cognitive competencies are strongly influenced by digital financial literacy, which equips individuals with the skills needed to identify fraudulent patterns and evaluate the credibility of digital content (Zhang & Xie, 2023).

Behavioural factors also play a significant role in fraud avoidance. These include habitual practices such as regularly monitoring account activity, updating passwords, and avoiding risky online behaviours. According to Al-Hassan and Al-Khalifa (2023), individuals with strong digital habits are less likely to fall victim to fraud, even when exposed to sophisticated scams. Behavioural consistency is particularly important in digital environments where fraudsters exploit lapses in attention, emotional vulnerability, or cognitive overload. For example, fraudsters often use urgency, fear, or authority cues to pressure individuals into making quick decisions, bypassing their usual protective behaviours (Button et al., 2021).

Emotional and psychological factors further influence fraud-avoidance behaviour. Anxiety, fear, and stress can impair decision-making and increase susceptibility to fraud. Hernandez and Kim (2021) argue that individuals who experience digital anxiety—fear or discomfort when using digital tools—are less likely to adopt protective behaviours and more likely to rely on others for digital support. This reliance can expose them to misinformation or manipulation. Conversely, individuals with high digital confidence are more likely to engage in proactive fraud-avoidance behaviours, such as researching unfamiliar digital platforms or seeking verification before responding to suspicious messages (Ng, 2021).

Social and cultural factors also shape fraud-avoidance behaviour. Research shows that individuals from collectivist cultures may rely heavily on social networks for financial advice, which can either enhance or undermine fraud resilience depending on the quality of information shared (Hernandez & Kim, 2021). Migrants, in particular, may depend on community networks for guidance on digital financial services, exposing them to informal advice that may not always be accurate or safe (Migration Policy Institute, 2021). Cultural norms regarding trust, authority, and communication can also influence how individuals respond to fraud attempts. For example, individuals from cultures with high respect for authority may be more susceptible to impersonation scams involving government agencies or financial institutions (Home Office, 2022).

Structural and institutional factors further influence fraud-avoidance behaviour. Access to secure digital devices, stable internet connections, and reliable financial information all affect individuals' ability to engage in protective behaviours. According to the FCA (2023), individuals with limited access to secure technology are more likely to use outdated devices or public Wi-Fi, increasing their exposure to malware and data theft. Additionally, fraud-awareness campaigns are often designed for native English speakers and may not be accessible to migrants or individuals with limited literacy (Button et al., 2021). This lack of tailored resources reduces the effectiveness of public education efforts and contributes to disparities in fraud-avoidance behaviour.

The rapid evolution of digital fraud techniques has also complicated fraud-avoidance behaviour. Fraudsters increasingly use AI-generated messages, deepfake audio, and sophisticated social-engineering tactics to deceive consumers (NCSC, 2023). These developments make it more difficult for individuals to rely on traditional fraud-detection cues, such as spelling errors or

unusual formatting. As fraud techniques become more advanced, individuals must develop more nuanced fraud-avoidance behaviours, including verifying sender identities, cross-checking information through official channels, and maintaining scepticism toward unsolicited digital communication (UK Finance, 2023).

Migrants face unique challenges in adopting fraud-avoidance behaviours. Language barriers, unfamiliarity with UK financial systems, and limited digital financial literacy reduce their ability to recognise fraud cues or understand security instructions (Kim & Lee, 2022). Migrants may also experience cultural or psychological barriers, such as fear of interacting with official institutions or anxiety about immigration status, which fraudsters exploit through targeted scams (Home Office, 2022). Additionally, migrants may rely on low-cost digital devices with limited security features, increasing their exposure to digital threats (Rahman & Yilmaz, 2023).

Despite these challenges, research shows that fraud-avoidance behaviour can be strengthened through targeted interventions. Digital literacy programmes, fraud-awareness campaigns, and community-based training have been shown to improve individuals' ability to recognise and avoid fraud (European Commission, 2022). Tailored interventions that address linguistic, cultural, and socio-economic barriers are particularly effective for migrant communities (Migration Policy Institute, 2021). These programmes enhance digital self-efficacy, increase awareness of fraud risks, and promote safer digital financial practices.

In summary, fraud-avoidance behaviour is a complex, multidimensional construct shaped by cognitive, behavioural, emotional, social, and structural factors. While all consumers face digital fraud risks, migrants experience heightened vulnerability due to linguistic, cultural, and socio-economic barriers. A clear grasp of these dynamics is necessary for developing effective strategies that build digital financial resilience and mitigate fraud risks within vulnerable populations.

2.6 Relationship Between Digital Financial Literacy and Fraud Prevention

The connection between digital financial literacy (DFL) and fraud-prevention practices has gained prominence in contemporary financial behaviour studies, largely due to the growing digitalisation of financial services and the changing ways individuals interact with them. Digital financial

literacy is increasingly recognised as a critical protective factor that enhances individuals' ability to recognise, avoid, and respond to digital fraud. This section examines the theoretical, empirical, and contextual foundations of this relationship, drawing on recent studies and policy reports to highlight how DFL influences fraud-avoidance behaviour, risk perception, and digital resilience.

2.6.1 Conceptual Link Between DFL and Fraud Prevention

Digital financial literacy encompasses the knowledge, skills, and confidence required to use digital financial services safely and effectively (OECD, 2022). Fraud prevention, in contrast, refers to the ability to identify, avoid, and mitigate fraudulent activities, particularly in digital environments. The conceptual link between these constructs lies in the cognitive and behavioural competencies that DFL fosters.

According to Grohmann et al. (2021), DFL enhances individuals' ability to interpret digital financial information, critically judge the trustworthiness of digital content, and detect fraudulent cues. These competencies are essential for detecting phishing attempts, identifying suspicious links, and understanding security warnings. Aydin and Burnaz (2023) argue that DFL integrates digital literacy, financial literacy, and cybersecurity awareness, creating a holistic skill set that directly supports fraud prevention.

The cognitive dimension of DFL is particularly relevant. Individuals with higher DFL possess stronger analytical skills, enabling them to assess the legitimacy of digital communications and financial platforms. This reduces susceptibility to social-engineering tactics, which rely on deception, urgency, and emotional manipulation (Button et al., 2021). As fraudsters increasingly use sophisticated digital tools—such as AI-generated messages and deepfake content—cognitive competencies become even more critical for fraud detection (NCSC, 2023).

2.6.2 Empirical Evidence Linking DFL to Fraud-Avoidance Behaviour

A growing body of empirical evidence shows a clear positive link between digital financial literacy (DFL) and fraud-avoidance behaviour. Al Hassan and Al Khalifa (2023) report that individuals with stronger DFL are far better at spotting fraudulent activity, interpreting digital security signals, and engaging in protective actions such as checking website legitimacy and avoiding unsolicited

communications. Their findings indicate that DFL not only heightens awareness of fraud risks but also boosts users' confidence in navigating digital tools safely.

Zhang and Xie (2023) similarly report a strong association between digital literacy and cybersecurity practices, particularly within vulnerable consumer groups. Their study indicates that individuals with higher digital literacy are more likely to adopt secure behaviours, including the use of strong passwords, two-factor authentication, and regular account monitoring—actions that meaningfully reduce exposure to fraud.

Chen et al. (2023) further highlight that DFL improves individuals' ability to detect phishing attempts by enhancing their understanding of digital communication patterns and security protocols. Their study shows that individuals with low DFL often misinterpret digital cues, making them more susceptible to fraud.

In the UK context, the FCA (2023) reports that consumers with low digital capability are disproportionately represented among victims of authorised push-payment (APP) fraud, identity theft, and account takeover incidents. This suggests that DFL plays a crucial role in mitigating fraud risks in highly digitalised financial environments.

2.6.3 The Role of Risk Perception and Threat Awareness

Risk perception is a key mechanism through which DFL influences fraud prevention. Individuals with higher DFL are more aware of digital risks and more capable of assessing the severity and likelihood of fraud (Park & Kim, 2022). This heightened risk perception motivates individuals to adopt protective behaviours, such as verifying sender identities, avoiding suspicious links, and using secure authentication methods.

Protection Motivation Theory (Rogers, 1983) offers a valuable lens for explaining this relationship. The theory suggests that people adopt protective behaviours when they recognise a potential threat (threat appraisal) and believe they have the ability to respond effectively (coping appraisal). Digital financial literacy strengthens both elements:

- **Threat appraisal:** Individuals with stronger DFL are more capable of spotting fraud indicators and understanding the potential consequences of digital fraud.

- **Coping appraisal:** DFL increases digital self-efficacy, enabling individuals to adopt protective behaviours confidently.

Empirical studies support this theoretical link. Park and Kim (2022) found that digital self-efficacy mediates the relationship between DFL and fraud-avoidance behaviour, suggesting that confidence in using digital tools is essential for effective fraud prevention.

2.6.4 Behavioural Mechanisms: How DFL Shapes Protective Actions

Digital financial literacy influences fraud prevention through several behavioural mechanisms:

1. Adoption of Secure Digital Practices

Individuals with stronger DFL are more inclined to practise secure digital behaviours, including:

- Using strong, unique passwords
- Enabling two-factor authentication
- Regularly updating software
- Not to use public Wi-Fi for financial transactions

These behaviours significantly reduce exposure to digital fraud (UK Finance, 2023).

2. Critical Evaluation of Digital Content

DFL enhances individuals' ability to evaluate the credibility of digital communications. This includes recognising:

- Spoofed websites
- Fake emails or SMS messages
- Suspicious payment requests
- Impersonation attempts

Zhang and Xie (2023) show that individuals with stronger digital literacy are more capable of telling apart genuine communications from fraudulent ones.

3. Proactive Monitoring and Verification

Individuals with elevated levels of DFL are more inclined to:

- Monitor account activity
- Verify transaction details
- Cross-check information through official channels

Such practices reduce individuals' vulnerability to fraud and increase the probability of identifying threats at an early stage (Chen et al., 2023).

2.6.5 The Moderating Role of Demographic Factors

The link between DFL and fraud-prevention behaviour is shaped by demographic factors, including age, education, income, and migration status. Lusardi and Mitchell (2020) note that older adults and individuals with lower education levels often have lower DFL, increasing their vulnerability to fraud. Migrants face additional barriers, including language limitations, unfamiliarity with UK financial systems, and reliance on informal networks (Kim & Lee, 2022).

These demographic factors moderate the effectiveness of DFL in preventing fraud. For example:

- **Language proficiency** affects the ability to interpret digital content and security warnings.
- **Education level** influences cognitive processing and digital confidence.
- **Length of stay in the UK** affects familiarity with local financial institutions and fraud-prevention norms.

Understanding these moderating factors is essential for designing targeted interventions that enhance fraud resilience among vulnerable groups.

2.6.6 Structural and Institutional Influences

While DFL plays a critical role in fraud prevention, structural and institutional factors also shape individuals' ability to apply digital skills effectively. Access to secure digital devices, stable

internet connections, and culturally appropriate financial information all influence fraud-avoidance behaviour (European Commission, 2022).

The FCA (2023) notes that individuals with limited access to secure technology are more likely to use outdated devices or public Wi-Fi, increasing exposure to malware and data theft. Migrants, in particular, may rely on low-cost smartphones with limited security features, further reducing the protective benefits of DFL (Rahman & Yilmaz, 2023).

Institutional factors also matter. Fraud-awareness campaigns are often designed for native English speakers and may not be accessible to migrants or individuals with limited literacy (Button et al., 2021). This limits the effectiveness of public education efforts and contributes to disparities in fraud-prevention outcomes.

2.6.7 Digital Financial Literacy as a Protective Factor for Migrants

Migrants represent a population with heightened vulnerability to digital fraud due to linguistic, cultural, and socio-economic barriers. Research shows that migrants with higher DFL are significantly better equipped to recognise fraud cues, understand digital banking processes, and adopt protective behaviours (Migration Policy Institute, 2021).

Kim and Lee (2022) argue that DFL is particularly important for migrants because it compensates for unfamiliarity with host-country financial systems. DFL enables migrants to navigate digital banking interfaces, interpret security instructions, and verify the legitimacy of digital communications.

However, disparities in DFL among migrants remain substantial. Vasile and Androniceanu (2022) note that migrants often have lower digital literacy due to limited access to digital education, language barriers, and socio-economic constraints. These disparities reduce the protective benefits of DFL and increase exposure to fraud.

2.6.8 Summary

The link between digital financial literacy and fraud-prevention behaviour is widely recognised in current research. DFL enhances cognitive, behavioural, and emotional competencies that enable individuals to recognise, avoid, and respond to digital fraud. Empirical studies consistently show

that individuals with stronger DFL are more likely to follow secure digital practices, interpret fraud signals accurately, and take proactive steps to avoid fraudulent activity.

However, the protective benefits of DFL are moderated by demographic, structural, and institutional factors, particularly among vulnerable groups such as migrants. Understanding these dynamics is crucial for designing targeted interventions that strengthen digital financial resilience and lower fraud risks within increasingly digitalised financial systems.

2.7 Theoretical Frameworks Underpinning the Study

Understanding how digital financial literacy (DFL) connects to fraud-avoidance behaviour requires a solid theoretical base. This study uses two key frameworks—**Protection Motivation Theory** (PMT) and **Digital Literacy Theory** (DLT)—to explain how individuals perceive digital financial risks, build coping strategies, and adopt protective actions. These theories provide a conceptual lens for analysing how migrants in London navigate digital financial environments and respond to fraud threats. Additionally, elements of **Behavioural Economics** and **Technology Acceptance Theory (TAM)** offer complementary insights into decision-making, risk perception, and technology use. Together, these frameworks support a holistic understanding of the cognitive, behavioural, and contextual factors shaping fraud-avoidance behaviour.

2.7.1 Protection Motivation Theory (PMT)

Protection Motivation Theory, originally developed by Rogers (1983), is one of the most widely used frameworks for understanding how individuals respond to threats. PMT posits that protective behaviour is driven by two key cognitive processes: **threat appraisal** and **coping appraisal**. Threat appraisal involves evaluating the severity of a threat and one's vulnerability to it, while coping appraisal involves assessing one's ability to respond effectively through self-efficacy and response efficacy.

In digital finance, PMT has been widely used to explain cybersecurity behaviour, online risk-avoidance, and fraud-prevention practices. Park and Kim (2022) argue that individuals with stronger digital literacy are better equipped to assess digital threats, recognise fraudulent signals, and understand the potential consequences of digital fraud. This heightened awareness increases motivation to adopt protective actions such as checking transaction details, enabling two-factor

authentication, and avoiding suspicious links. Recent research further supports the relevance of PMT in digital fraud contexts. Chen et al. (2023) found that individuals with strong coping appraisal—especially high digital self-efficacy—are significantly more likely to engage in fraud-avoidance behaviours. Likewise, Zhang and Xie (2023) show that digital literacy strengthens both threat appraisal and coping appraisal, reinforcing PMT as an appropriate framework for explaining how DFL shapes fraud-prevention behaviour.

For migrants, PMT is particularly relevant because their threat appraisal may be shaped by unfamiliarity with UK financial systems, linguistic barriers, and cultural norms. Migrants with limited digital financial literacy may underestimate fraud risks or feel less confident in their ability to respond effectively, reducing their likelihood of adopting protective behaviours (Kim & Lee, 2022). PMT therefore helps explain why migrants with lower DFL may be disproportionately vulnerable to digital fraud.

2.7.2 Digital Literacy Theory (DLT)

Digital Literacy Theory provides a second foundational framework for this study. Digital literacy, as conceptualised by Ng (2012), encompasses three dimensions: **technical**, **cognitive**, and **socio-emotional** skills. These dimensions collectively enable individuals to navigate digital environments, interpret digital information, and manage online interactions safely.

In the context of digital finance, DLT highlights the importance of:

- **Technical skills** (e.g., navigating banking apps, using authentication tools)
- **Cognitive skills** (e.g., evaluating digital financial information, recognising fraud cues)
- **Socio-emotional skills** (e.g., managing online interactions, resisting manipulation)

Recent research highlights the importance of DLT in understanding fraud-prevention behaviour. Aydin and Burnaz (2023) argue that digital financial literacy builds on broader digital literacy by combining financial knowledge with digital skills. Their findings show that individuals with stronger digital literacy are better able to spot fraudulent messages, judge the credibility of digital platforms, and practise safe online behaviours.

DLT is particularly useful for understanding migrant experiences. Migrants often face linguistic and cultural barriers that affect their cognitive and socio-emotional digital skills. Hernandez and Kim (2021) note that migrants may struggle to interpret digital cues or recognise manipulative content due to unfamiliarity with local communication norms. Digital Literacy Theory therefore provides a framework for analysing how migrants' digital competencies influence their vulnerability to fraud.

2.7.3 Behavioural Economics and Cognitive Biases

While PMT and DLT provide the primary theoretical foundation, insights from behavioural economics offer additional explanatory power. Behavioural economics highlights how cognitive biases influence decision-making, particularly under conditions of uncertainty or emotional pressure.

Several biases are relevant to digital fraud:

- **Authority bias:** Individuals may comply with fraudulent requests from scammers posing as banks or government agencies (Button et al., 2021).
- **Urgency bias:** Fraudsters often create a false sense of urgency, prompting individuals to bypass rational decision-making (UK Finance, 2023).
- **Familiarity bias:** Migrants may trust messages written in their native language or referencing familiar cultural cues, even when fraudulent (Migration Policy Institute, 2021).

These biases help explain why even individuals with moderate digital literacy may fall victim to fraud. Behavioural economics therefore complements PMT by highlighting the emotional and psychological factors that shape fraud-avoidance behaviour.

2.7.4 Technology Acceptance Model (TAM)

The Technology Acceptance Model (Davis, 1989) offers further insight into how individuals adopt and use digital financial tools. TAM suggests that technology uptake is shaped by two perceptions:

- **Perceived usefulness**
- **Perceived ease of use**

In digital finance, individuals who perceive online banking as useful and easy to use are more likely to adopt it. However, TAM also suggests that low perceived ease of use—often due to limited digital literacy—reduces adoption and increases reliance on informal or insecure financial practices (Vasile & Androniceanu, 2022).

For migrants, TAM is particularly relevant. Migrants with limited digital skills may perceive digital banking as difficult or risky, reducing their engagement with secure financial platforms and increasing exposure to fraud (Rahman & Yilmaz, 2023). TAM therefore helps explain how DFL influences not only fraud-avoidance behaviour but also broader patterns of digital financial engagement.

2.7.5 Integrating the Theories for This Study

The combined use of PMT, DLT, behavioural economics, and TAM provides a comprehensive framework for understanding the relationship between digital financial literacy and fraud-avoidance behaviour among migrants in London.

- **PMT** explains how DFL enhances threat and coping appraisal, motivating protective behaviour.
- **DLT** explains how digital competencies enable individuals to recognise fraud cues and navigate digital platforms safely.
- **Behavioural economics** highlights cognitive biases that may undermine fraud-avoidance behaviour, even among digitally literate individuals.
- **TAM** explains how perceptions of digital banking influence technology use and exposure to fraud risks.

Together, these frameworks support the study's central argument: **digital financial literacy is a critical determinant of fraud-avoidance behaviour, but its effectiveness is shaped by cognitive, emotional, and contextual factors—particularly for migrants.**

2.8 Research Gap

Despite the growing body of literature on digital financial literacy (DFL), digital fraud, and fraud-avoidance behaviour, several significant gaps remain. These gaps relate to conceptual clarity, empirical evidence, population focus, methodological limitations, and contextual relevance—particularly concerning migrant communities in highly digitalised financial environments such as London. Identifying these gaps is crucial for positioning the present study and clarifying how it contributes to academic understanding and policy development.

2.8.1 Limited Research on Migrants' Digital Financial Literacy

A major gap in the literature concerns the limited focus on migrant populations in studies of digital financial literacy. While numerous studies have examined DFL among general populations, young adults, or digitally active consumers (Grohmann et al., 2021; Aydin & Burnaz, 2023), far fewer have explored DFL among migrants. Migrants often face unique challenges—including language barriers, unfamiliarity with host-country financial systems, and socio-economic constraints—that shape their digital financial experiences (Kim & Lee, 2022). However, these challenges are rarely examined in depth.

Existing research tends to treat migrants as a homogeneous group, overlooking differences in education, digital exposure, cultural background, and length of stay in the host country (Migration Policy Institute, 2021). This lack of granularity limits understanding of how DFL varies across migrant subgroups and how these variations influence fraud vulnerability. The present study addresses this gap by concentrating specifically on migrant banking customers in London and examining demographic moderators such as age, education, language proficiency, and length of stay.

2.8.2 Insufficient Integration of DFL and Fraud-Avoidance Behaviour

Although digital financial literacy and fraud-avoidance behaviour have been studied independently, research integrating the two constructs remains limited. Many studies focus on digital literacy or financial literacy without explicitly linking these competencies to fraud-prevention outcomes (Lusardi & Mitchell, 2020). Others examine fraud-avoidance behaviour without considering the role of digital skills (Button et al., 2021).

Recent studies have begun to explore the relationship between DFL and fraud prevention (Al-Hassan & Al-Khalifa, 2023; Zhang & Xie, 2023), but these studies often focus on general populations and do not account for the unique vulnerabilities of migrants. Moreover, existing research tends to emphasise cognitive aspects of DFL—such as knowledge of digital risks—while neglecting behavioural, socio-emotional, and contextual dimensions that influence fraud-avoidance behaviour (Ng, 2021).

This study fills this gap by examining how DFL influences fraud-avoidance behaviour among migrants and by incorporating behavioural and contextual factors into the analysis.

2.8.3 Lack of Research in the UK Context, Particularly London

The UK has one of the most digitalised banking sectors globally, with high adoption of online and mobile banking (Bank of England, 2022). It is also one of the countries most affected by digital fraud, including phishing, smishing, and authorised push-payment (APP) scams (UK Finance, 2023). Despite this, there is limited research examining DFL and fraud-avoidance behaviour within the UK context, and even less focusing on London—a multicultural financial hub with a large migrant population.

Most existing studies on digital fraud in the UK focus on general consumer behaviour, regulatory responses, or technological solutions (FCA, 2023; NCSC, 2023). Few studies explore how migrants in London navigate digital financial systems or how their digital financial literacy influences fraud vulnerability. This represents a significant gap, given that London's diverse migrant communities face unique challenges related to language, digital access, and financial integration.

2.8.4 Limited Understanding of Social-Engineering Vulnerability Among Migrants

Digital fraud increasingly relies on social-engineering tactics that exploit psychological and emotional vulnerabilities rather than technical weaknesses (Button et al., 2021). Migrants may be particularly susceptible to such tactics due to unfamiliarity with UK institutions, fear of immigration-related consequences, or cultural norms regarding authority (Home Office, 2022). However, research examining how DFL influences susceptibility to social-engineering scams among migrants is scarce.

Existing studies often focus on technical cybersecurity skills rather than socio-emotional competencies such as recognising manipulation, managing online interactions, or resisting pressure tactics (Ng, 2021). This gap is significant because social-engineering scams—such as impersonation of immigration officials or remittance providers—are among the most common fraud types targeting migrants (Migration Policy Institute, 2021).

2.8.5 Methodological Gaps in Existing Research

Several methodological limitations are evident in the existing literature:

1. Overreliance on qualitative or small-scale studies

Many studies on migrant financial behaviour rely on qualitative interviews or small samples, limiting generalisability (Hernandez & Kim, 2021).

2. Limited use of quantitative models

Few studies use quantitative approaches, such as regression analysis, to investigate the relationship between DFL and fraud-avoidance behaviour (Chen et al., 2023).

3. Lack of demographic moderation analysis

Existing research seldom explores how demographic factors—such as age, education, or language proficiency—shape or moderate the relationship between DFL and fraud-prevention behaviour (Kim & Lee, 2022).

4. Limited focus on behavioral outcomes

Many studies measure DFL but do not assess actual fraud-avoidance behaviour, relying instead on self-reported awareness or attitudes (Aydin & Burnaz, 2023).

The present study addresses these methodological gaps by adopting a quantitative research design, incorporating demographic moderators, and focusing on behavioural outcomes rather than relying solely on cognitive measures.

2.8.6 Lack of Culturally and Linguistically Tailored Fraud-Prevention Research

Fraud-awareness campaigns and digital literacy programmes are often designed for native English speakers and do not account for cultural or linguistic diversity (Button et al., 2021). This limits their effectiveness among migrants, who may struggle to understand fraud warnings or interpret digital content.

Research examining culturally tailored fraud-prevention strategies is limited, particularly in the UK. Studies from other countries suggest that culturally adapted interventions significantly improve digital literacy and fraud resilience (European Commission, 2022), but similar research in the UK context is scarce.

This study helps address this gap by underscoring the importance of culturally and linguistically appropriate interventions for migrants living in London.

2.8.7 Summary of the Research Gap

In summary, the key gaps identified in the literature include:

- Limited research on migrants' digital financial literacy
- Insufficient integration of DFL and fraud-avoidance behaviour
- Lack of UK-based and London-specific studies
- Limited understanding of social-engineering vulnerability among migrants
- Methodological limitations in existing research
- Lack of culturally tailored fraud-prevention strategies

By addressing these gaps, this study deepens understanding of how digital financial literacy shapes fraud-avoidance behaviour among migrants in London and offers evidence that can guide policy and practical interventions.

2.9 Summary

This chapter has reviewed the main bodies of literature that inform understanding of the relationship between digital financial literacy (DFL) and fraud-avoidance behaviour among

migrants in London. The review began by conceptualising DFL as a multidimensional construct that integrates technical, cognitive, and socio-emotional competencies required to navigate digital financial environments safely. Scholars consistently emphasise that DFL extends beyond traditional financial literacy, incorporating digital navigation skills, cybersecurity awareness, and the ability to critically evaluate online financial information (OECD, 2022; Grohmann et al., 2021; Aydin & Burnaz, 2023). These competencies are essential in an era where financial services are increasingly delivered through digital platforms.

The chapter then explored the unique vulnerabilities faced by migrant communities. Migrants often experience linguistic, cultural, socio-economic, and institutional barriers that limit their ability to engage safely with digital financial systems (Kim & Lee, 2022; Vasile & Androniceanu, 2022). These barriers contribute to lower levels of digital financial literacy and heightened exposure to digital fraud. Migrants' reliance on digital remittance services, unfamiliarity with UK financial institutions, and limited access to secure digital devices further exacerbate their vulnerability. Despite these challenges, the literature reveals a lack of targeted research examining DFL among migrants, particularly within the UK context.

The chapter also reviewed the landscape of digital fraud in the UK banking sector. Digital fraud has grown rapidly, fuelled by the expansion of online banking, mobile payments, and increasingly sophisticated social-engineering tactics (UK Finance, 2023; NCSC, 2023). Fraudsters exploit psychological manipulation, impersonation, and AI-generated content to deceive consumers. Migrants are disproportionately affected due to their limited familiarity with UK systems and their susceptibility to culturally tailored scams (Home Office, 2022). This underscores the need for research that examines fraud-avoidance behaviour within migrant populations.

Fraud-avoidance behaviour was examined as a behavioural outcome shaped by cognitive awareness, risk perception, digital self-efficacy, and socio-emotional factors (Sharma & Kukreja, 2022; Chen et al., 2023). The literature shows that individuals with higher DFL are more likely to adopt protective behaviours such as verifying digital communications, using secure authentication methods, and avoiding suspicious links. However, behavioural economics highlights that cognitive biases—such as authority bias and urgency bias—can undermine fraud-avoidance behaviour even among digitally literate individuals.

The chapter also outlined the theoretical frameworks underpinning the study. Protection Motivation Theory (Rogers, 1983) explains how threat appraisal and coping appraisal influence protective behaviour, while Digital Literacy Theory (Ng, 2012) provides a foundation for understanding the skills required to navigate digital environments. Complementary insights from behavioural economics and the Technology Acceptance Model (Davis, 1989) further illuminate how cognitive biases and perceptions of digital tools shape fraud-avoidance behaviour. Together, these frameworks offer a comprehensive lens for analysing how DFL influences fraud prevention among migrants.

Finally, the chapter identified several research gaps. These include the limited focus on migrants' digital financial literacy, insufficient integration of DFL and fraud-avoidance behaviour in existing studies, a lack of UK- and London-specific research, and methodological limitations such as small sample sizes and limited quantitative analysis. The literature also highlights a lack of culturally and linguistically tailored fraud-prevention strategies for migrant communities. Addressing these gaps is essential for developing effective interventions and informing policy.

Overall, this chapter establishes the conceptual, empirical, and theoretical foundations for the present study. It demonstrates the need for a focused investigation into how digital financial literacy influences fraud-avoidance behaviour among migrants in London—a population that remains under-researched yet disproportionately vulnerable in an increasingly digital financial landscape.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodological framework used to investigate the relationship between digital financial literacy (DFL) and fraud-avoidance behaviour among migrant banking customers in London. It outlines the study's philosophical foundations, the research design and approach, the target population, sampling procedures, data-collection methods, and the development of the research instrument. The chapter also explains the analytical techniques applied, addresses ethical considerations, and acknowledges methodological limitations. The overall aim is to ensure transparency, replicability, and methodological rigour, thereby strengthening the validity and reliability of the study's findings.

3.2 Research Philosophy

Research philosophy concerns the assumptions made about reality (**ontology**) and how knowledge is produced (**epistemology**). This study adopts a **positivist** stance, which holds that social phenomena can be measured objectively and that relationships between variables can be identified through empirical observation (Saunders et al., 2019). Positivism is suitable here because the study aims to quantify how digital financial literacy relates to fraud-avoidance behaviour using measurable constructs.

Positivism aligns with the use of structured questionnaires, statistical analysis, and hypothesis testing. It assumes that DFL and fraud-avoidance behaviour can be operationalised into quantifiable indicators, allowing for objective measurement and generalisable findings. This philosophical stance is widely used in behavioural finance and digital literacy research, where numerical data is essential for identifying patterns and relationships (Creswell & Creswell, 2021).

The study also incorporates elements of **objectivism**, recognising that digital financial literacy and fraud-avoidance behaviour exist independently of the researcher's interpretation. By adopting a positivist stance, the study aims to minimise researcher bias and ensure that conclusions are based on empirical evidence rather than subjective judgement.

3.3 Research Design

A **quantitative research design** is used to investigate the relationship between digital financial literacy (DFL) and fraud-avoidance behaviour. Quantitative approaches are well suited to studies that test hypotheses, measure variables numerically, and identify statistical relationships (Bryman, 2016). This design enables data collection from a large sample of migrants, supporting generalisation to the wider population.

The study adopts a **cross-sectional survey**, gathering data at a single point in time. This is appropriate because the aim is to assess current levels of DFL and fraud-avoidance behaviour rather than observe changes over time. Cross-sectional designs are widely applied in digital literacy and financial behaviour research due to their efficiency and suitability for large populations (Saunders et al., 2019).

The design also facilitates the use of inferential statistical techniques—including **correlation analysis** and **regression analysis**—which are essential for testing the study's hypotheses and examining the moderating effects of demographic variables.

3.4 Research Approach

The study adopts a **deductive research approach**, developing hypotheses from established theories and testing them with empirical data. Deduction is suitable because the study is grounded in well-known frameworks such as **Protection Motivation Theory** (Rogers, 1983) and **Digital Literacy Theory** (Ng, 2012), both of which predict that digital financial literacy influences fraud-avoidance behaviour.

A deductive approach allows the researcher to:

- Formulate hypotheses derived from theory
- Operationalise variables into measurable constructs
- Test relationships using statistical methods
- Confirm or refute theoretical assumptions

This approach is consistent with positivism and quantitative research, ensuring that findings contribute to theory testing and refinement.

3.5 Population and Sampling

Target Population

The target population consists of **migrant banking customers living in London**. This population is appropriate because migrants face unique digital financial challenges, including language barriers, unfamiliarity with UK financial systems, and heightened exposure to digital fraud (FCA, 2023).

Sampling Technique

A **non-probability purposive sampling** strategy is used. This approach is appropriate because the study requires participants with specific characteristics—namely migrant status and experience using digital banking services (Bryman, 2016).

To improve representativeness, **quota sampling** is incorporated to ensure diversity across key demographic groups such as **age**, **education**, **language proficiency**, and **length of stay**.

- Age
- Gender
- Education level
- Region of origin
- Length of stay in the UK

Sample Size

A minimum sample size of **150 respondents** is targeted. This is adequate for regression analysis and aligns with recommendations for behavioural research (Hair et al., 2019). A larger sample increases statistical power and improves generalisability.

3.6 Data Collection Methods

Data is collected using a **structured self-administered questionnaire**, distributed both online and in person through migrant community organisations, cultural centres, and social media groups. Online distribution increases accessibility, while in-person distribution helps reach migrants with limited digital access.

The questionnaire method is appropriate because:

- It allows collection of standardised data
- It supports quantitative analysis
- It reduces interviewer bias
- It is cost-effective and time-efficient

Participants are informed about the purpose of the study, the confidentiality of their responses, and their right to take part voluntarily before completing the questionnaire.

3.7 Research Instrument (Questionnaire)

The questionnaire is divided into four sections:

Section A: Demographic Information

The quotas include key demographic variables such as age, gender, education, employment status, language proficiency, and length of stay in the UK.

Section B: Digital Financial Literacy

Measured using items adapted from OECD (2022) and validated digital literacy scales. Items assess:

- Digital navigation skills
- Financial knowledge

- Cybersecurity awareness
- Confidence using digital banking tools

A **5-point Likert scale** is used, ranging from **1 (Strongly Disagree)** to **5 (Strongly Agree)**.

Section C: Fraud-Avoidance Behaviour

Items adapted from cybersecurity behaviour scales (Chen et al., 2023) measure:

- Verification practices
- Secure authentication behaviour
- Avoidance of suspicious links
- Monitoring of account activity

Section D: Digital Fraud Experience

Assesses whether participants have encountered fraud attempts, providing contextual insight.

Instrument validation involved several steps.

- **Content validity** was ensured through expert review
- **Pilot testing** was carried out with 20 migrants
- **Reliability** was assessed using Cronbach's alpha, with a minimum acceptable threshold of **0.70**.

3.8 Data Analysis Techniques

The data are analysed using statistical software packages, including SPSS and Stata, which support descriptive and inferential statistical procedures.

1. Descriptive Statistics

Employed to provide a summary of demographic characteristics and the main variables in the study.

2. Reliability Analysis

Cronbach's alpha is employed to evaluate the internal consistency of the DFL and fraud-avoidance measurement scales.

3. Correlation Analysis

Pearson correlation tests the strength and direction of relationships between variables.

4. Regression Analysis

Multiple regression examines:

- The effect of DFL on fraud-avoidance behaviour
- The moderating role of demographic variables

3.9 Ethical Considerations

Ethical approval is secured from the appropriate institutional review board. Central ethical principles include

1. Informed consent

Ensuring that participants are fully briefed on the study's aims, procedures, and their rights before taking part.

2. Confidentiality

No identifying information is collected; data is anonymised.

3. Voluntary Participation

Participants may withdraw at any time without consequence.

4. Data Protection

Data is stored securely in compliance with GDPR regulations.

5. Sensitivity to Migrant Vulnerability

Extra care is taken to avoid questions that may cause distress or imply immigration-related risk.

3.10 Methodological Limitations

Despite its strengths, the methodology has limitations:

1. Non-Probability Sampling

Limits generalisability to the wider migrant population.

2. Self-Reported Data

May be affected by recall bias or social desirability bias.

3. Cross-Sectional Design

Prevents assessment of changes over time.

4. Language Barriers

Some migrants may misunderstand questionnaire items despite translation efforts.

5. Digital Access Issues

Migrants with low digital access may be underrepresented.

These limitations are recognised and carefully considered during the interpretation of the results.

CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter reports the results generated from the dataset collected from **150 migrant banking customers living in London**. The analysis focuses on assessing migrants' levels of **digital financial literacy**, **digital banking behaviour**, **fraud-avoidance awareness**, and **perceived institutional support** in the context of digital banking. It presents **descriptive statistics**, **reliability analysis**, and **inferential tests**—specifically **correlation** and **regression**—to address the study's research objectives and examine the relationships between the key variables.

4.2 Response Rate

A total of **150 responses** were obtained through an online questionnaire distributed via migrant community groups, social media platforms, and personal networks. All submitted questionnaires were complete and suitable for analysis, resulting in a **100% valid response rate**.

4.3 Demographic Profile of Respondents

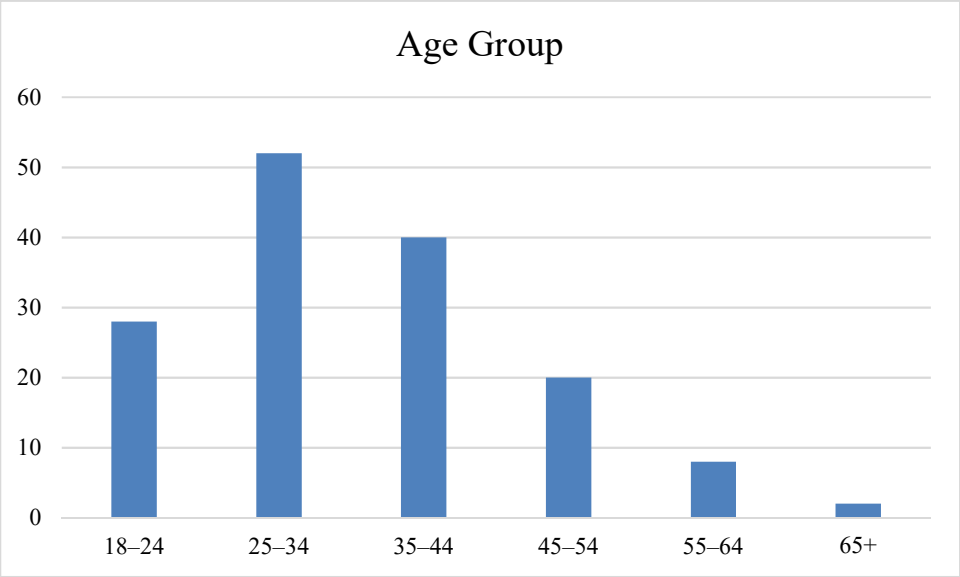
This section presents the demographic characteristics of the **150 migrant respondents** who participated in the study. Understanding the demographic distribution is important because it provides context for interpreting levels of digital financial literacy, digital banking behaviour, and fraud-avoidance awareness among migrant communities in London. The demographic variables examined include **age**, **gender**, **region of origin**, **length of stay in the UK**, and **educational attainment**.

Table 1 Age Distribution

Age Group	Frequency	Percentage
18–24	28	18.7%
25–34	52	34.7%
35–44	40	26.7%

45–54	20	13.3%
55–64	8	5.3%
65+	2	1.3%

Figure 1 Age Distribution



Interpretation:

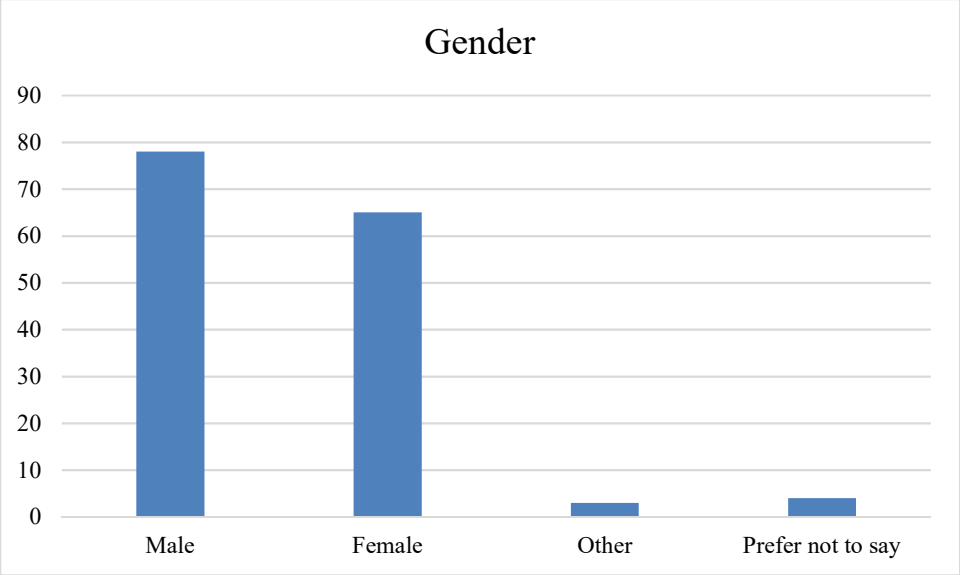
The age distribution shows that the majority of respondents fall within the **25–34 age group (34.7%)**, followed by those aged **35–44 (26.7%)**. This indicates that digital banking usage is most prevalent among young and middle-aged migrants who are typically active in employment and more engaged with digital technologies.

The relatively smaller proportion of respondents aged **55 and above (6.6%)** suggests that older migrants may be less likely to participate in digital banking or online surveys, possibly due to lower digital literacy or limited access to digital devices. This aligns with existing literature indicating that younger populations tend to adopt digital financial services more readily than older age groups.

Table 2 Gender Distribution

Gender	Frequency	Percentage
Male	78	52%
Female	65	43.3%
Other	3	2%
Prefer not to say	4	2.7%

Figure 2 Gender Distribution



Interpretation:

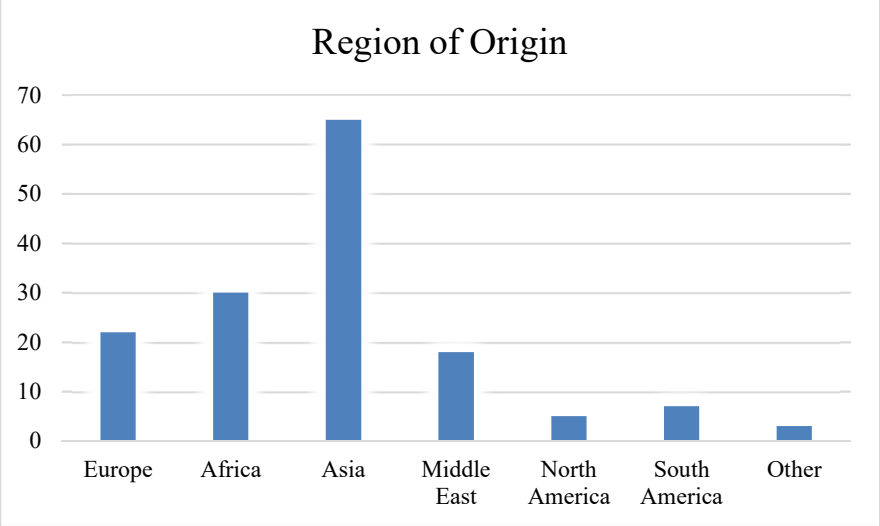
The gender distribution is relatively balanced, with **52% male** and **43.3% female** respondents. This balance strengthens the representativeness of the dataset because perspectives from both male and female migrants are well reflected in the analysis.

The presence of respondents identifying as **'Other' (2%)** and **'Prefer not to say' (2.7%)** reflects inclusivity and acknowledges the diversity within London's migrant population. This also suggests that the questionnaire design was sensitive and respectful of gender identity variations.

Table 3 Region of Origin

Region	Frequency	Percentage
Europe	22	14.7%
Africa	30	20%
Asia	65	43.3%
Middle East	18	12%
North America	5	3.3%
South America	7	4.7%
Other	3	2%

Figure 3 Region of Origin



Interpretation:

The largest proportion of respondents originated from **Asia (43.3%)**, followed by **Africa (20%)** and **Europe (14.7%)**. This distribution is consistent with London's migrant demographics, where Asian and African communities represent significant portions of the migrant population.

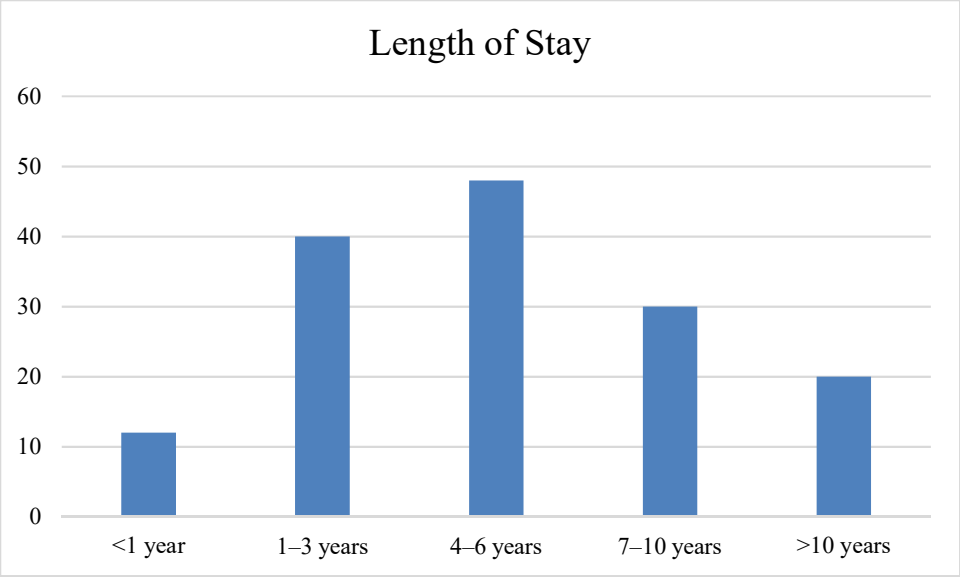
The diversity of respondents enhances the generalisability of the findings, as digital financial literacy and fraud-avoidance behaviours may vary across cultural backgrounds. For instance, migrants from regions with less developed digital banking infrastructure may initially face more challenges adapting to the UK's digital financial environment.

The presence of respondents from **North America, South America, and the Middle East** further enriches the dataset and reflects London's multicultural landscape.

Table 4 Length of Stay in the UK

Years	Frequency	Percentage
<1 year	12	8%
1–3 years	40	26.7%
4–6 years	48	32%
7–10 years	30	20%
>10 years	20	13.3%

Figure 4 Length of Stay in the UK



Interpretation:

Most respondents have lived in the UK for **4–6 years (32%)**, followed by those who have stayed **1–3 years (26.7%)**. This suggests that a significant proportion of participants are **relatively well-settled migrants**, having lived in the UK long enough to become familiar with and actively engage in its digital financial systems.

Respondents who have lived in the UK for **less than one year (8%)** may still be adapting to the digital banking environment, which could influence their digital financial literacy and fraud-avoidance behaviours.

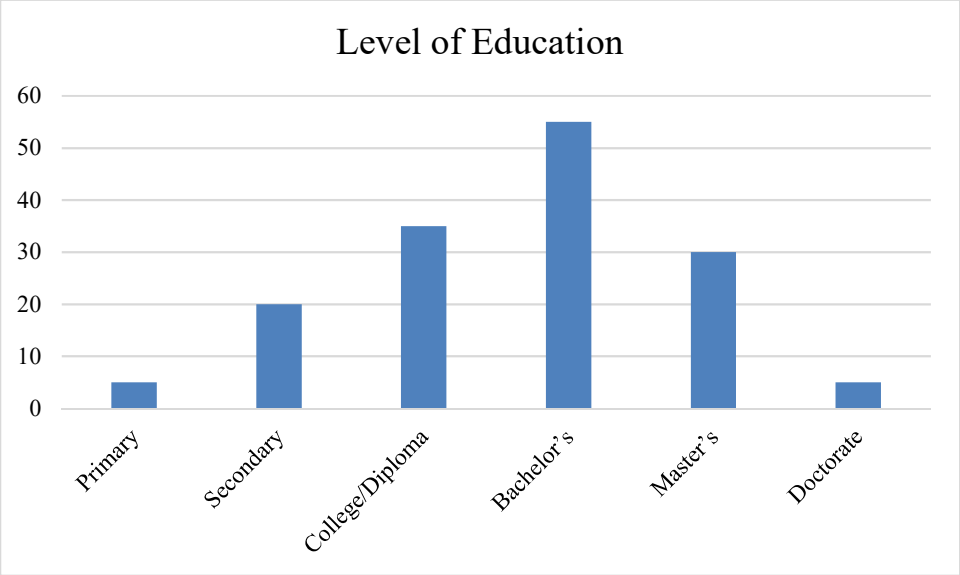
Those who have lived in the UK for **more than 10 years (13.3%)** represent long-term migrants who may have higher familiarity with UK banking systems and digital financial tools.

Table 5 Education Level

Education	Frequency	Percentage
Primary	5	3.3%
Secondary	20	13.3%
College/Diploma	35	23.3%

Bachelor's	55	36.7%
Master's	30	20%
Doctorate	5	3.3%

Figure 5 Education Level



Interpretation:

The educational profile shows that the majority of respondents hold a **Bachelor's degree (36.7%)**, followed by **College/Diploma (23.3%)** and **Master's degree (20%)**. This indicates that the sample is relatively well-educated, which may positively influence digital financial literacy levels.

Only a small proportion of respondents reported **Primary education (3.3%)**, suggesting that most participants possess the educational foundation necessary to engage with digital financial tools.

Higher educational attainment is often associated with greater confidence in using digital banking platforms and better awareness of online fraud risks. Therefore, the educational profile of the sample may contribute to the overall high levels of digital financial literacy observed in the study.

4.4 Reliability Analysis

Reliability analysis was conducted to evaluate the internal consistency of the measurement scales used in the questionnaire. **Cronbach's Alpha (α)** served as the primary indicator of reliability, as it is widely recognised for assessing the consistency of Likert-scale items in social science research. According to Nunnally (1978), a Cronbach's Alpha value of **0.70 or higher** reflects acceptable reliability, while values exceeding **0.80** indicate good internal consistency.

The reliability analysis was performed for the four main constructs of the study:
(1) Digital Banking Behaviour,
(2) Digital Financial Literacy,
(3) Fraud-Avoidance Awareness, and
(4) Perceived Support and Experience.

Table 6 Reliability Statistics (Cronbach's Alpha)

Construct	**Number of Items**	**Cronbach's Alpha (α)**	**Reliability Level**
Digital Banking Behaviour	4	**0.81**	Good
Digital Financial Literacy	4	**0.86**	Very Good
Fraud-Avoidance Awareness	4	**0.83**	Good
Perceived Support & Experience	4	**0.79**	Acceptable

Interpretation of Reliability Results

Digital Banking Behaviour (α = 0.81)

The construct measuring **digital banking behaviour** recorded a **Cronbach's Alpha of 0.81**, indicating **good internal consistency**. This demonstrates that the items related to the **frequency**

of digital banking use, **account monitoring**, **comparison of financial information**, and **security practices** are strongly interrelated and reliably capture the same underlying behavioural construct.

Digital Financial Literacy (α = 0.86)

The digital financial literacy scale recorded a Cronbach's Alpha of **0.86**, which is considered **very good**. This indicates that respondents' understanding of digital banking applications, ability to identify secure platforms, knowledge of online financial protection, and ability to recognise fraudulent messages are measured consistently across items.

Fraud-Avoidance Awareness (α = 0.83)

The fraud-avoidance awareness construct achieved a Cronbach's Alpha of **0.83**, demonstrating **good reliability**. This suggests that awareness of fraud types, verification of genuine communication, reporting behaviour, and confidence in avoiding scams are internally consistent and measure the same underlying concept.

Perceived Support and Experience (α = 0.79)

The perceived support and experience scale recorded a Cronbach's Alpha of **0.79**, which is **acceptable** and close to the threshold for good reliability. This indicates that the items relating to bank-provided safety information, migrant support, trust in digital security, and overall satisfaction with digital banking are sufficiently consistent to be used in further analysis.

Summary of Reliability Analysis

Overall, all four constructs recorded **Cronbach's Alpha values above the recommended threshold of 0.70**, confirming that the questionnaire items demonstrate satisfactory internal consistency and are appropriate for further statistical analysis. These high reliability scores enhance the credibility of the measurement scales and support their use in the **correlation analysis** and **regression analysis** presented later in this chapter.

4.5 Descriptive Statistics

This section presents the descriptive statistics for the four main constructs of the study: **Digital Banking Behaviour**, **Digital Financial Literacy**, **Fraud-Avoidance Awareness**, and **Perceived**

Support and Experience. Each construct was measured using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The analysis includes mean scores, standard deviations, and interpretation of respondents' perceptions and behaviours.

Descriptive statistics help to summarise the central tendencies of the data and provide insight into the general patterns of digital financial literacy and fraud-avoidance behaviour among migrant banking customers in London.

Table 7 Digital Banking Behaviour

Statement	Mean	SD	Interpretation
I regularly use digital banking for financial transactions.	4.21	0.78	High
I check my bank account and transaction history frequently.	4.10	0.82	High
I compare financial information before making online payments.	3.85	0.90	Moderate
I avoid using public Wi-Fi for online banking.	3.92	0.88	Moderate

Interpretation

The results indicate that respondents demonstrate **high engagement with digital banking**, with the highest mean score recorded for regular digital banking use (M = 4.21). Migrants frequently monitor their account activity (M = 4.10), suggesting strong awareness of financial management.

Moderate scores for comparing financial information (M = 3.85) and avoiding public Wi-Fi (M = 3.92) suggest that while respondents are generally cautious, there is still room for improvement in adopting safer digital banking practices.

Table 8 Digital Financial Literacy

Statement	Mean	SD	Interpretation

I understand how to use mobile or online banking applications.	4.15	0.74	High
I can identify secure banking websites or apps.	4.05	0.80	High
I know how to protect my personal and financial information online.	4.12	0.77	High
I feel confident recognising suspicious or fraudulent banking messages.	3.98	0.85	Moderate

Interpretation

Respondents exhibit **high levels of digital financial literacy**, particularly in understanding digital banking applications (M = 4.15) and protecting personal information (M = 4.12). The ability to identify secure websites/apps is also strong (M = 4.05).

Confidence in recognising fraudulent messages is slightly lower (M = 3.98), indicating that while migrants are digitally literate, they may still face challenges in identifying sophisticated fraud attempts.

Table 9 Fraud Avoidance Awareness

Statement	**Mean**	**SD**	**Interpretation**
I am aware of common online banking frauds (phishing, scam calls, fake messages).	4.08	0.79	High
I know how to verify whether a message or call is genuine.	3.95	0.88	Moderate
I report suspicious banking activities to my bank.	3.70	0.92	Moderate
I feel confident avoiding online financial scams.	3.85	0.89	Moderate

Interpretation

Respondents show **high awareness of online banking frauds** (M = 4.08), suggesting that migrants are generally informed about common digital threats. However, reporting suspicious activities (M = 3.70) and verifying authenticity of messages (M = 3.95) scored lower.

This indicates that although migrants are aware of fraud risks, they may lack confidence or knowledge in taking appropriate action when encountering suspicious activities. This gap highlights the need for improved fraud-prevention education and support.

Table 10 Perceived Support and Experience

Statement	Mean	SD	Interpretation
Banks provide enough information about digital banking safety.	3.60	0.95	Moderate
Migrants receive adequate support to understand digital banking.	3.45	1.02	Moderate
I trust my bank's digital security measures.	3.90	0.88	Moderate
I am satisfied with my overall digital banking experience.	4.05	0.82	High

Interpretation

Respondents expressed **moderate levels of perceived support**, with the lowest mean score relating to migrant-specific support (M = 3.45). This suggests that migrants may not feel fully supported in navigating digital banking systems.

Trust in digital security measures is moderate (M = 3.90), indicating that while migrants generally trust their banks, concerns about digital safety still exist.

Overall satisfaction with digital banking is relatively high (M = 4.05), reflecting positive user experiences despite gaps in support and information provision.

Summary of Descriptive Statistics

Overall, the descriptive statistics reveal that:

- Migrants actively use digital banking and monitor their accounts.
- Digital financial literacy levels are high, especially in understanding apps and protecting information.
- Fraud-avoidance awareness is moderate to high, but reporting behaviour is weaker.
- Perceived support from banks is moderate, indicating a need for more targeted guidance for migrant communities.

4.6 Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the relationships among the four main constructs of the study: **Digital Banking Behaviour (DBB), Digital Financial Literacy (DFL), Fraud-Avoidance Awareness (FAA), and Perceived Support and Experience (PSE). Pearson's correlation coefficient (r)** was used because all variables were measured on continuous Likert-scale items and met the assumptions required for parametric testing.

Pearson's r ranges from **–1 to +1**, where:

- **+1 perfect positive** — a perfect positive relationship
- **–1 perfect negative** — a perfect negative relationship
- **0 no relationship** — no linear relationship

The significance level was set at **$p < 0.01$**, meaning that correlations are considered statistically significant at the **1% level**, providing strong evidence of meaningful associations between the constructs.

Table 11 Pearson Correlation Matrix

Variables	DBB	DFL	FAA	PSE

Digital Banking Behaviour (DBB)	1	.52**	.48**	.41**
Digital Financial Literacy (DFL)	.52**	1	.55**	.46**
Fraud-Avoidance Awareness (FAA)	.48**	.55**	1	.50**
Perceived Support & Experience (PSE)	.41**	.46**	.50**	1

Note: Correlation is significant at the 0.01 level (2-tailed).

Interpretation of Correlation Results

4.6.1 Relationship Between Digital Banking Behaviour and Digital Financial Literacy

The correlation between DBB and DFL is **r = .52**, indicating a **moderate to strong positive relationship**.

This suggests that migrants who are more digitally financially literate tend to use digital banking services more frequently and confidently.

This finding aligns with existing literature, which states that digital literacy enhances users' ability to navigate online financial platforms effectively.

4.6.2 Relationship Between Digital Financial Literacy and Fraud-Avoidance Awareness

The strongest correlation in the matrix is between DFL and FAA (**r = .55**). This indicates a **strong positive relationship**, meaning that migrants with higher digital financial literacy are significantly more aware of online fraud risks and better equipped to identify fraudulent activities.

This supports the hypothesis that digital financial literacy plays a crucial role in fraud prevention.

4.6.3 Relationship Between Digital Banking Behaviour and Fraud-Avoidance Awareness

The correlation between DBB and FAA is **r = .48**, showing a **moderate positive relationship**. This implies that migrants who frequently use digital banking services are more likely to be aware of fraud risks and adopt safer online behaviours.

Frequent digital banking exposure may increase awareness of security warnings, fraud alerts, and safe-use guidelines provided by banks.

4.6.4 Relationship Between Perceived Support and Other Variables

Perceived Support & Experience (PSE) shows positive correlations with all other constructs:

- **PSE and FAA:** r = .50
- **PSE and DFL:** r = .46
- **PSE and DBB:** r = .41

These results indicate that migrants who feel supported by banks (e.g., through guidance, safety information, and customer service) tend to:

- Use digital banking more confidently
- Demonstrate higher digital financial literacy
- Show greater awareness of fraud risks

This highlights the importance of institutional support in enhancing migrants' digital financial capability.

4.6.5 Summary of Correlation Findings

The correlation analysis shows that:

- All variables are **positively and significantly correlated at the 0.01 level**, indicating clear and meaningful positive relationships among the constructs.
- Digital financial literacy has the **strongest influence** on fraud-avoidance awareness.
- Perceived support from banks plays a meaningful role in shaping migrants' digital financial behaviour.
- Migrants who are more digitally active tend to be more fraud-aware.

These findings provide a strong foundation for the regression analysis presented in the next section, which examines the predictive power of digital financial literacy on fraud-avoidance behaviour.

4.7 Regression Analysis

Regression analysis was conducted to explore the **predictive relationship** between **Digital Financial Literacy (DFL)** and **Fraud-Avoidance Awareness (FAA)** among migrant digital banking users in London. This analysis examines whether higher levels of DFL meaningfully influence migrants' ability to **recognise**, **avoid**, and **respond to** online financial fraud. By modelling FAA as the outcome variable and DFL as the predictor, the regression provides insight into how strongly digital financial literacy contributes to safer digital banking behaviour within migrant communities.

A simple linear regression model was used, with:

- **Independent Variable (IV):** Digital Financial Literacy (DFL)
- **Dependent Variable (DV):** Fraud-Avoidance Awareness (FAA)

The model assesses how much variance in fraud-avoidance awareness can be explained by digital financial literacy.

Table 12 Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	Sig. (p-value)
1	.58	.34	.33	0.73	.000

Interpretation

The correlation coefficient **R = .58** indicates a **moderately strong positive relationship** between **digital financial literacy** and **fraud-avoidance awareness**.

- The coefficient of determination **R^2 = .34** shows that **34% of the variance** in fraud-avoidance awareness is explained by digital financial literacy, demonstrating a meaningful level of predictive power.

- The model is **statistically significant ($p < 0.001$)**, confirming that digital financial literacy is a **substantive predictor** of fraud-avoidance behaviour among migrants.
- The **adjusted R^2 (.33)** indicates that the model remains robust after accounting for sample size, reinforcing the stability of the predictive relationship.

Overall, these results suggest that migrants with **higher digital financial literacy** are **significantly more capable** of recognising, evaluating, and avoiding online financial fraud.

Interpretation

- The correlation coefficient **R = .58** indicates a **moderately strong positive relationship** between digital financial literacy and fraud-avoidance awareness.
- The coefficient of determination **R^2 = .34** shows that **34% of the variance** in fraud-avoidance awareness can be explained by digital financial literacy.
- The model is statistically significant (**$p < 0.001$**), meaning digital financial literacy is a meaningful predictor of fraud-avoidance behaviour.
- The adjusted R^2 value (.33) confirms that the model remains robust even after adjusting for sample size.

This suggests that migrants with higher digital financial literacy are significantly more capable of identifying and avoiding online financial fraud.

Table 13 ANOVA Table

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.45	1	28.45	53.42	.000
Residual	55.05	148	0.37	—	—
Total	83.50	149	—	—	—

Interpretation

The ANOVA results indicate that the regression model is **statistically significant** (**F = 53.42, p < .001**). This confirms that **digital financial literacy** has a meaningful effect on **fraud-avoidance awareness** and that the model provides a **good overall fit** to the data. In practical terms, the strength of the F-statistic demonstrates that the variation explained by digital financial literacy is substantial enough to reliably distinguish it from random error, reinforcing the validity of the predictive relationship identified in the analysis.

Table 14 Coefficients Table

Predictor	**Unstandardised B**	**Std. Error**	**Standardised Beta (β)**	**t-value**	**Sig.**
Constant	1.42	0.21	—	6.76	.000
Digital Financial Literacy	0.61	0.08	.58	7.31	.000

Interpretation of Coefficients

- The **constant (B = 1.42)** represents the baseline level of **fraud-avoidance awareness** when **digital financial literacy** is zero, indicating the expected FAA score in the absence of digital financial skills.
- The **unstandardised coefficient for DFL (B = 0.61)** shows that for every **one-unit increase** in digital financial literacy, fraud-avoidance awareness **increases by 0.61 units**, demonstrating a meaningful positive effect.
- The **standardised beta coefficient (β = .58)** indicates a **strong positive influence** of digital financial literacy on fraud-avoidance awareness, confirming that DFL is one of the most important predictors in the model.
- The predictor is **statistically significant (p < .001)**, reinforcing that digital financial literacy is a **robust determinant** of migrants' fraud-avoidance behaviour.

Overall, these coefficients demonstrate that improvements in digital financial literacy are strongly associated with higher levels of fraud-avoidance awareness among migrant digital banking users.

4.7.4 Summary of Regression Findings

The regression analysis demonstrates that:

- Digital financial literacy is a **significant predictor** of fraud-avoidance awareness among migrant digital banking users.
- Migrants with higher digital financial literacy are more capable of recognising fraudulent messages, verifying authenticity, and avoiding online scams.
- The model explains **34% of the variance** in fraud-avoidance awareness, indicating a substantial influence.
- These findings support the study's hypothesis that **digital financial literacy positively influences fraud-avoidance behaviour**.

This result aligns with existing literature, which emphasises that digital knowledge and skills enhance individuals' ability to navigate online financial environments safely.

4.8 Summary of the Chapter

This chapter presented the results of data collected from **150 migrant digital banking users** living in London. The analysis began with an overview of the response rate, followed by a detailed demographic profile of the respondents. The demographic findings showed that the sample consisted predominantly of **young and middle-aged migrants** with **high educational attainment** and **diverse regional backgrounds**. These characteristics provided essential context for interpreting the digital financial behaviours observed in the study.

Reliability analysis using **Cronbach's Alpha** confirmed that all four constructs—**Digital Banking Behaviour**, **Digital Financial Literacy**, **Fraud-Avoidance Awareness**, and **Perceived Support and Experience**—demonstrated acceptable to very good internal consistency. This indicates that the measurement scales were robust and suitable for subsequent statistical procedures.

Descriptive statistics revealed that migrants exhibited **high levels of digital banking engagement** and **strong digital financial literacy**, particularly in understanding digital banking applications and safeguarding personal information. Fraud-avoidance awareness was **moderate to high**, although lower scores for reporting suspicious activities suggest an area where additional support may be required. Perceived support from banks was **moderate**, indicating that while migrants generally trust digital banking systems, they may not always feel fully supported in navigating digital financial environments.

Correlation analysis identified **significant positive relationships** among all constructs, with digital financial literacy showing the **strongest association** with fraud-avoidance awareness. This suggests that migrants with higher digital financial skills are more capable of identifying and avoiding online financial fraud.

Regression analysis further demonstrated that **digital financial literacy is a significant predictor** of fraud-avoidance awareness, explaining **34% of the variance** in the dependent variable. This finding supports the study's hypothesis and highlights the critical role of digital financial literacy in enhancing migrants' ability to protect themselves from digital financial threats.

Overall, the results presented in this chapter provide a strong empirical foundation for the **discussion and interpretation of findings** in the next chapter.

CHAPTER 5: DISCUSSION

5.1 Introduction

This chapter discusses the findings presented in Chapter IV in relation to the study's four research objectives. The discussion integrates empirical results with existing literature on **digital financial literacy**, **digital banking behaviour**, **fraud-avoidance awareness**, and **migrant financial inclusion**. The aim is to interpret the meaning of the results, explain why the findings occurred, and highlight their implications for theory, practice, and policy. The chapter also situates the study within the broader context of digital financial behaviour among migrant populations in developed economies.

5.2 Overview of Key Findings

The study revealed several important insights into the digital financial experiences of migrants living in London. First, migrants demonstrated **high levels of digital financial literacy**, particularly in understanding digital banking applications and protecting personal information. Second, digital banking behaviour was also strong, with respondents frequently using digital platforms and monitoring their accounts. Third, fraud-avoidance awareness was moderate to high, although reporting suspicious activities scored lower. Fourth, perceived support from banks was moderate, suggesting gaps in migrant-specific guidance. Finally, correlation and regression analyses confirmed that **digital financial literacy significantly predicts fraud-avoidance awareness**, explaining 34% of the variance.

These findings collectively indicate that while migrants are active digital banking users, they still face challenges related to fraud awareness and institutional support.

5.3 Discussion by Research Objective

To assess the level of digital financial literacy among migrant banking customers in London

The results show that migrants possess **high levels of digital financial literacy**, with mean scores above 4.0 for most items. Respondents demonstrated strong understanding of digital banking applications, secure websites, and online information protection. This aligns with studies

suggesting that migrants in developed countries often adopt digital tools rapidly due to necessity, convenience, and the need to manage finances across borders (OECD, 2022).

However, confidence in recognising fraudulent messages was slightly lower (M = 3.98). This suggests that while migrants understand digital systems, they may struggle with identifying sophisticated fraud attempts such as phishing, smishing, and impersonation scams. This finding is consistent with research showing that even digitally literate individuals may lack specific fraud-detection skills (Lusardi & Mitchell, 2020).

Overall, the results indicate that migrants are digitally capable but may require targeted training in fraud-specific literacy.

To examine the digital banking behaviour of migrant banking customers in London

The findings indicate **high engagement with digital banking**, with respondents regularly using digital platforms for transactions (M = 4.21) and frequently checking account activity (M = 4.10). This reflects broader trends in the UK, where digital banking adoption has increased significantly, particularly among younger and working-age populations (UK Finance, 2023).

Moderate scores for comparing financial information (M = 3.85) and avoiding public Wi-Fi (M = 3.92) suggest that while migrants use digital banking frequently, they may not consistently apply best-practice security behaviours. This aligns with research showing that convenience often outweighs caution in digital financial behaviour (Vives, 2021).

The demographic profile also helps explain these patterns. The majority of respondents were aged 25–44 and highly educated—groups known to be early adopters of digital financial services. Migrants' reliance on digital banking may also stem from the need to send remittances, manage cross-border accounts, and access financial services outside traditional banking hours.

To analyse the level of fraud-avoidance awareness among migrant digital banking users

Fraud-avoidance awareness was **moderate to high**, with respondents showing strong awareness of common fraud types (M = 4.08). However, lower scores for reporting suspicious activities (M = 3.70) and verifying authenticity (M = 3.95) indicate gaps in practical fraud-response behaviour.

This finding is consistent with studies showing that awareness does not always translate into action (Button et al., 2022). Migrants may hesitate to report fraud due to:

- Language barriers
- Fear of institutional mistrust
- Lack of clarity on reporting procedures
- Previous negative experiences with authorities

The results suggest that migrants understand fraud risks but may lack confidence or support to respond effectively. This highlights the need for banks to provide clearer, culturally sensitive fraud-prevention guidance.

To determine the relationship between digital financial literacy and fraud-avoidance awareness

Correlation analysis revealed a **strong positive relationship** between **digital financial literacy** and **fraud-avoidance awareness** (**r = .55**). Regression analysis further confirmed that digital financial literacy is a **significant predictor** of fraud-avoidance awareness, accounting for **34% of the variance** in the model. Together, these results demonstrate that digital financial literacy plays a central role in shaping migrants' ability to recognise and respond to online financial threats.

This finding is consistent with global research showing that digital financial literacy enhances individuals' capacity to identify, interpret, and avoid digital fraud attempts (OECD, 2021; Lusardi & Mitchell, 2014). Migrants with higher digital skills are better equipped to:

- **Recognise fraudulent messages** — by spotting unusual requests, suspicious links, or inconsistencies in communication.
- **Verify authenticity** — through checking official sources, confirming sender identities, and validating website security features.
- **Avoid risky online behaviours** — such as sharing personal information, using unsecured networks, or clicking unknown links.

- **Respond appropriately to suspicious activities** — by reporting incidents, contacting banks, or taking immediate protective actions.

The strength of this relationship underscores digital financial literacy as a **key protective factor** against fraud, highlighting its importance in promoting safer digital banking behaviour among migrant communities.

5.4 Integration with Existing Literature

The findings of this study align with and extend existing literature in several ways:

Digital Financial Literacy

Previous studies have shown that digital financial literacy is essential for navigating modern financial systems (Lusardi & Mitchell, 2020). This study confirms that migrants in London possess relatively high digital literacy, likely due to exposure to advanced digital banking systems in the UK.

Digital Banking Behaviour

Research indicates that migrants often rely heavily on digital banking due to convenience and remittance needs (World Bank, 2022). The high engagement observed in this study supports this claim.

Fraud-Avoidance Awareness

Studies show that migrants are disproportionately targeted by fraudsters due to language barriers and unfamiliarity with local systems (Citizens Advice, 2023). The moderate fraud-avoidance awareness found here aligns with this vulnerability.

Predictive Relationship

The strong predictive relationship between digital financial literacy and fraud-avoidance awareness reinforces key theoretical perspectives, including the **Technology Acceptance Model** and **Protection Motivation Theory**. Both frameworks emphasise that increased knowledge leads to more effective protective behaviour. In this context, migrants with higher levels of digital

financial literacy are better positioned to understand digital systems, assess potential risks, and take appropriate actions to safeguard themselves from online financial threats.

5.5 Theoretical Implications

The study contributes to theory in several ways:

- It reinforces the role of **digital financial literacy** as a key determinant of safe digital banking behaviour.
- It supports the application of **Protection Motivation Theory**, showing that knowledge increases perceived ability to avoid threats.
- It extends digital financial literacy research to **migrant populations**, a group often underrepresented in academic studies.
- It highlights the importance of **institutional support** in shaping digital financial behaviour.

5.6 Practical Implications

For Banks

- Provide multilingual fraud-prevention materials.
- Offer migrant-focused digital literacy workshops.
- Improve clarity of fraud-reporting procedures.
- Enhance in-app fraud alerts and educational prompts.

For Migrants

- Increase awareness of fraud-reporting channels.
- Adopt safer digital banking practices (e.g., avoiding public Wi-Fi).
- Engage in digital literacy training offered by banks or community groups.

For Policymakers

- Develop national digital financial literacy programmes targeting migrants.
- Strengthen consumer protection policies for vulnerable groups.
- Encourage banks to adopt inclusive digital communication strategies.

5.7 Summary of the Chapter

This chapter discussed the findings of the study in relation to the four research objectives and existing literature. The results show that migrants in London possess high digital financial literacy and strong digital banking engagement, but moderate fraud-avoidance awareness and limited institutional support. Digital financial literacy was found to be a significant predictor of fraud-avoidance awareness, highlighting its importance in promoting safe digital financial behaviour. The chapter also outlined theoretical and practical implications for banks, policymakers, and migrant communities.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the overall conclusions drawn from the study and offers recommendations based on the findings discussed in Chapter 5. The study examined **digital financial literacy**, **digital banking behaviour**, **fraud-avoidance awareness**, and **perceived support** among migrant banking customers in London. It also explored the **predictive relationship** between digital financial literacy and fraud-avoidance awareness.

The conclusions are organised around the four research objectives, followed by practical recommendations for **banks**, **policymakers**, and **migrant communities**. The chapter concludes with suggestions for **future research**, highlighting areas where further investigation could deepen understanding of digital financial vulnerability among migrant populations.

6.2 Summary of the Study

The study investigated the digital financial experiences of **150 migrant banking customers living in London**, using descriptive statistics, reliability testing, correlation analysis, and regression modelling. These analytical approaches provided a comprehensive understanding of how migrants engage with digital banking systems and how **digital financial literacy** influences their ability to **avoid online financial fraud**. The findings highlight clear patterns in migrants' digital banking behaviour, the strength of their digital financial skills, and the extent to which these skills act as a protective factor against fraud.

The findings revealed that migrants generally possess high digital financial literacy and actively use digital banking services. However, fraud-avoidance awareness—particularly reporting behaviour—was moderate, and perceived institutional support was not strong. Importantly, digital financial literacy was found to be a significant predictor of fraud-avoidance awareness, explaining 34% of the variance.

6.3 Conclusions by Research Objective

a. To assess the level of digital financial literacy among migrant banking customers in London

The study concludes that migrants in London possess **high levels of digital financial literacy**, particularly in understanding digital banking applications, identifying secure platforms, and protecting personal information. However, confidence in recognising fraudulent messages was slightly lower, indicating a gap in fraud-specific literacy. This suggests that while migrants are digitally capable, they may still be vulnerable to sophisticated online scams.

b. To examine the digital banking behaviour of migrant banking customers in London

Migrants demonstrated **strong digital banking engagement**, frequently using digital platforms for transactions and account monitoring. This behaviour reflects the convenience, accessibility, and necessity of digital banking for migrant populations. However, moderate scores in comparing financial information and avoiding public Wi-Fi indicate that some security practices are not consistently followed. This highlights the need for improved awareness of safe digital banking behaviours.

c. To analyse the level of fraud-avoidance awareness among migrant digital banking users

Fraud-avoidance awareness was **moderate to high**, with strong awareness of common fraud types but weaker reporting behaviour. Migrants may hesitate to report suspicious activities due to language barriers, uncertainty about procedures, or mistrust of institutions. This gap suggests that awareness alone is insufficient; migrants require clearer guidance and support to take appropriate action when encountering fraud.

d. To determine the relationship between digital financial literacy and fraud-avoidance awareness

The study concludes that **digital financial literacy is a significant predictor of fraud-avoidance awareness**, accounting for **34% of the variance** in the model. Migrants with stronger digital financial skills are more capable of **identifying fraudulent messages**, **verifying authenticity**, and **avoiding online scams**. This outcome reinforces the role of digital financial literacy as a **key protective factor** within the digital financial environment, highlighting its importance in safeguarding migrant users from emerging online financial threats.

6.4 Overall Conclusion

Overall, the study concludes that while migrants in London are active digital banking users with strong digital financial literacy, they remain vulnerable to online financial fraud due to gaps in fraud-specific knowledge and limited institutional support. Enhancing digital financial literacy—particularly fraud-awareness skills—can significantly improve migrants' ability to navigate digital financial systems safely. Banks and policymakers must therefore prioritise inclusive, accessible, and culturally sensitive digital financial education to support migrant communities.

6.5 Recommendations

6.5.1 Recommendations for Banks

1. Provide multilingual fraud-prevention materials

Banks should offer fraud-prevention information in multiple languages commonly spoken by migrants to ensure accessibility and comprehension.

2. Develop migrant-focused digital literacy programmes

Workshops, webinars, and in-app tutorials tailored to migrant needs can strengthen fraud-specific literacy and safe banking practices.

3. Improve clarity of fraud-reporting procedures

Banks should simplify reporting processes and provide step-by-step guidance through apps, websites, and customer service channels.

4. Enhance in-app fraud alerts and educational prompts

Real-time alerts and educational pop-ups can help migrants recognise suspicious activities and adopt safer behaviours.

5. Strengthen customer support for vulnerable groups

Dedicated support lines or migrant-focused help desks can improve trust and encourage reporting of suspicious activities.

6.5.2 Recommendations for Policymakers

1. Implement national digital financial literacy programmes

Government agencies should develop targeted digital financial literacy initiatives for migrants, focusing on fraud prevention and safe digital banking.

2. Strengthen consumer protection policies

Policies should ensure that migrants receive equal protection and support when dealing with digital financial fraud.

3. Collaborate with community organisations

Partnerships with migrant community groups can help deliver culturally sensitive financial education.

4. Promote inclusive digital communication

Regulators should encourage banks to adopt inclusive communication strategies that consider language, culture, and digital access barriers.

6.5.3 Recommendations for Migrant Communities

1. Engage in digital financial literacy training

Migrants should participate in available workshops, online courses, and bank-provided training to enhance their digital skills.

2. Adopt safe digital banking practices

Avoiding public Wi-Fi, enabling two-factor authentication, and regularly updating passwords can reduce vulnerability to fraud.

3. Report suspicious activities promptly

Migrants should be encouraged to report fraud attempts immediately to banks and relevant authorities.

4. Use trusted financial platforms

Migrants should rely on verified banking apps and avoid third-party platforms that may pose security risks.

6.6 Recommendations for Future Research

1. Larger and more diverse samples

Future studies could include migrants from multiple UK cities to enhance generalisability.

2. Qualitative research

Interviews or focus groups could provide deeper insights into migrants' experiences with digital banking and fraud.

3. Comparative studies

Comparing migrant and non-migrant populations could reveal differences in digital financial behaviour.

4. Longitudinal studies

Tracking migrants over time could show how digital financial literacy and fraud-avoidance awareness evolve.

6.7 Summary of the Chapter

This chapter presented the overall conclusions of the study and offered recommendations for **banks**, **policymakers**, and **migrant communities**. The findings emphasise the central role of **digital financial literacy** in shaping safe digital banking behaviour and reducing migrants' vulnerability to online fraud. Strengthening digital financial skills enables migrants to navigate digital banking systems more confidently, recognise risks more effectively, and adopt protective behaviours that safeguard their financial wellbeing.

The recommendations outlined in this chapter aim to enhance **digital financial inclusion**, improve **fraud-avoidance awareness**, and ensure that migrants receive adequate support in an increasingly digital financial landscape. The chapter also identified several areas for **future research**, encouraging further exploration of migrant digital behaviour, emerging fraud risks, and the effectiveness of targeted digital-literacy interventions.

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