

The Role of the Central Bank of Ireland in Regulating Fair Practices in Digital Lending

MSc Research Project
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Amala Kalarickal Saji
Student ID: 23300183

School of Computing
National College of
Ireland

Supervisor: Faithful Onwuegbuche

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Student Name:	Amala Kalarickal Saji
Student ID:	23300183
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The Role of the Central Bank of Ireland in Regulating Fair Practices in Digital Lending

Amala Kalarickal Saji

Student ID: 23300183

Abstract

The aim of the research is to evaluate the role of CBI for ensuring fair digital lending practices in Ireland. The motivation of the research is to uncover use of AI and machine learning algorithms by digital lenders and role of CVI to support fintech innovation. Further, the objectives consider regulatory frameworks of CBI, effectiveness of current regulations, challenges and strategies for promoting fair digital lending. The consideration of primary quantitative methods to conduct surveys of 320 participants as legal experts, students, financial professionals, and general consumers of the Irish community. Additionally, frequency and statistical analysis present IAF and SEAR regulations of CBI to promote ethical digital lending while maintaining transparency to protect consumers. The findings evaluated challenges of data privacy, algorithm bias, and lack of transparency influence fintech innovation although SupTech, RegTech, and regulatory sandboxes enhance supervision of CBI to secure online credit. Overall, CBI is efficient towards eliminating unfair lending processes to secure online borrowing and protecting consumers with fair regulatory practices in Ireland.

1. Introduction

1.1 Background

Digital lending is the key trend in the present era, and borrowers across the globe consider this as an approach to borrow funds. Around 50 million borrowers globally are digitising lending processes, although in Ireland, AI-powered lending automation has been considered to grow with net interest income of digital banks to \$583.34m within 2025 (Business Wire, 2022; Statista, 2025). The Central Bank of Ireland (CBI) introduced Payment Services Regulations 2018, the Digital Services Act 2024, and the Amended Electronic Money Regulations 2011 to enhance the digital banking and lending process while protecting consumers. Further, around €1.9 billion in short-term loans, which is 89% of total net lending to Irish Non-Financial Corporations (NFCs), drives through fair regulations (CBI, 2025b) [*Refer to Figure 1*]. Hence, CBI is important to support digital lending practices in Ireland while regulating operations.

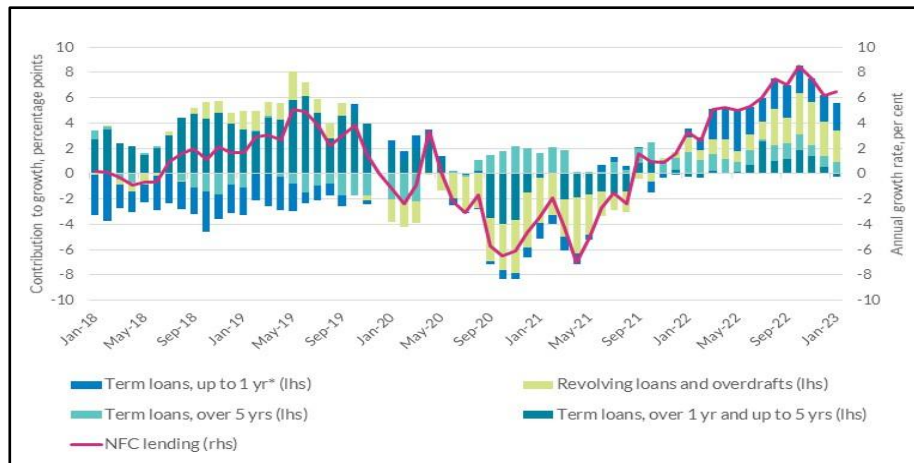


Figure 1: Main drivers of recent trends in net lending to NFC

(Source: CBI, 2025b)

The rising cybersecurity and data privacy concerns in digital banking impact the fair lending operations in Ireland. Further, the regulatory gaps and analysis of real-time problems are required to address the viability of CBI towards maintaining fair digital lending practices. Therefore, the problem in terms of uncovering areas related to jurisdictional challenges for adopting fintech facilitates scope for current research. Besides adverse concerns within digital lending, customers perceive benefits such as modernising consumer protection frameworks for digital lending practices by CBI, which is the prime purpose of the study.

1.2 Importance

The research is significant to analyse the unfair digital lending practices faced by consumers in Ireland, which declines trust towards lenders and CBI for addressing the problem of rising data privacy and cybersecurity issues. Further, the study uncovered the use of Artificial Intelligence (AI) and machine learning algorithms by digital lenders and the role of CBI towards supporting fintech innovation. This research is important to measure regulatory gaps that create challenges towards ensuring fair lending, although it analyses the strategies undertaken by CBI to protect consumers from data misuse.

1.3 Research aim, objectives, and questions

1.3.1 Aim

The research aims to evaluate the role of the CBI in regulating fair practices in digital banking operations.

1.3.2 Objectives

1.3.2.1 To examine the regulatory guidelines, present in CBI for promoting fair digital lending.

1.3.2.2 To analyse the effectiveness of CBI's current regulation for digital lending practices in the economy.

1.3.2.3 To evaluate the challenges involved in fintech innovation for supporting digital lending practices.

1.3.2.4 To develop the recommended strategies towards managing regulatory gaps that persist in CBI for fair digital lending.

1.3.3 Questions

1.3.3.1 What are the regulatory guidelines and frameworks available in CBI to ensure ethical digital lending operations?

1.3.3.2 How are the current regulations of CBI viable for digital lending to ensure consumer protection, transparency, and fairness?

1.3.3.3 How do the key challenges related to data privacy, algorithm bias, cross-border, and outdated, insufficient laws influence fintech innovation?

1.3.3.4 What are the recommended strategies for managing regulatory gaps of CBI to ensure international collaboration for fair digital lending?

1.4 Limitation

The limitation of the research is to consider only primary quantitative methods, which limit in-depth qualitative analysis about the role of CBI to maintain cybersecurity during ethical digital lending practices. Further, the comparative analysis is limited in this research to consider comparison with different economic regulations towards supporting digital lending, which limits the scope for broader research.

1.5 Outline of methodology

The research methodology considers a primary quantitative method to collect information, along with frequency and statistical data analysis using SPSS techniques, with the implication of tests to interpret results. Further, conducting a survey as a primary method helps in developing evidence-based results to meet intended objectives.

1.6 Structure of the report

Introduction: The introduction involves the development of aims, objectives and research questions while developing background, problem, and importance of the research.

Literature Review: This section consists of a critical analysis of literature related to subject areas, discussing gaps, related theories, and identifying variables through a conceptual framework.

Methodology: The methodology outlines the data collection method and analysis technique used in this research while addressing the research objectives.

Results, Findings, and Discussion: This section discusses the data analysis process to develop findings while maintaining linkage with objectives.

Conclusion: The conclusion addresses the results of the research to restate findings while answering research questions.

2 Literature Review

2.1 Introduction

Literature review consists of the critical analysis of existing literature related to the research to develop an understanding of a selected topic. In this literature review, the analysis of digital lending practices and regulatory guidelines of CBI to support ethical operation is discussed while linking with theory and identifying gaps to present the scope of current research.

2.2 Overview of regulatory guidelines and frameworks for digital lending in Ireland

The regulatory guidelines provide protection and ensure ethical operation while managing digital lending practices. According to Solas, Cubillas and Salvador (2023), and Yue et al. (2021), the banking regulatory framework facilitated the global value of alternative digital lending to \$776.2 billion in 2019 while regulating the digital financial market *[Refer to figure 2]*. In Ireland, the strict regulation towards individual accountability facilitates the operation of the financial services sector. However, Kulal et al. (2024), and Walker and McGrath (2023), outlined that Central Bank Individual Accountability Framework (IAF) Act 2023 and Senior Executive Accountability Regime (SEAR) regulation regulate credit institutions to protect consumers with a fine of €100 million. This showcases the safeguarding practices initiated by CBI to ensure digital lending operations.

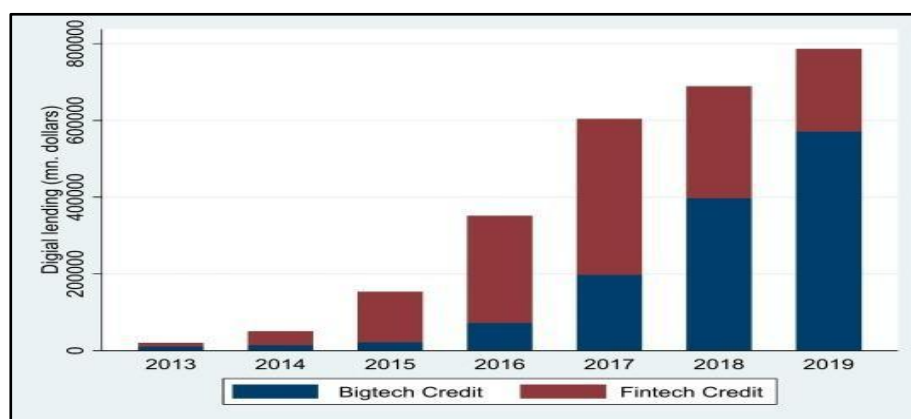


Figure 2: Evolution of alternative digital lending like Big Tech and Fintech Credit

(Source: Solas, Cubillas and Salvador, 2023)

Regulators consider a safer financial ecosystem to manage digital financial innovation with a flexible regulatory framework to balance innovation with consumer protection and stability of

the financial system (Afjal, 2023; Eichengreen, 2021). CBI develops a regulatory environment in Ireland to manage the peer-to-peer lending operation to maintain transparency in operation. Vijayagopal, Jain and Viswanathan (2024), and Yang, Gan and Li (2019), discussed that the Global Financial Crisis (GFC) of 2008 resulted in instability in banking operations, although peer-to-peer lending has standardised with technological innovation and supportive regulation. Thus, the evolution of digital lending in Ireland has been supported by CBI for introducing legislation towards protecting consumer interests and eliminating unethical operations.

2.3 Importance of current regulations of CBI to facilitate consumer protection during digital lending

The regulatory landscape for digital lending platforms ensures technology-driven credit solutions to consumers to transform borrowing operations while fulfilling compliance requirements. McGrath and Walker (2022), and Varma et al. (2022), addressed that use of blockchain in banking facilitates automation in lending and is regulated by central banks, as Financial Services Culture Board (FSCB) in Ireland ensures ethical practices. Further, the IAF Act and SEAR regulation by CBI ensure a reasonable assessment of credit at a fair rate of interest. However, Arena and James (2024), and Arkanuddin, Saragih and Nugroho (2021), discussed that federal regulations manage personal data of consumers to eliminate data privacy risk with big data analytics usage for enhancing the fintech ecosystem *[Refer to Figure 3]*. Therefore, the current regulation of CBI robust transparency while preventing misconduct in digital lending processes.

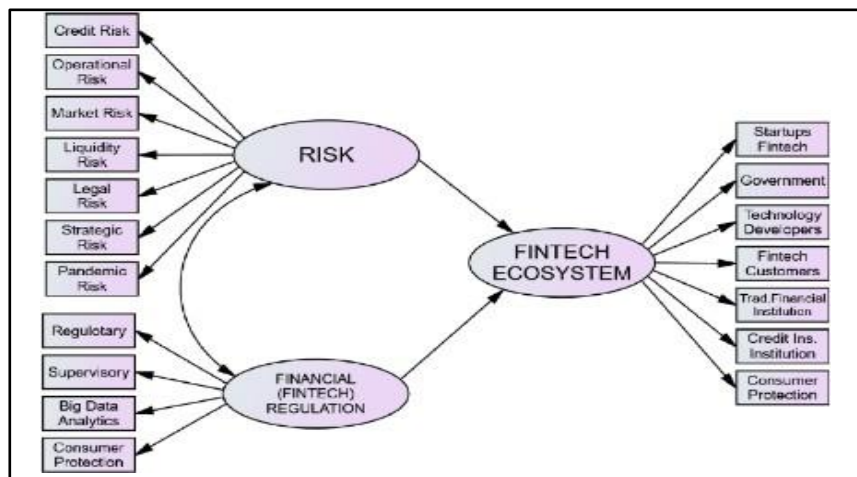


Figure 3: Fintech ecosystem

(Source: Arkanuddin, Saragih and Nugroho, 2021)

Ebrahimi et al. (2024), and Xie and Wu (2024), outlined that algorithm transparency enhances fairness perceptions, although digital finance risk regulation facilitates information-sharing

practices between borrowers and lenders. In Ireland, to develop public trust in financial institutions, CBI ensures fair access to information for better scoring models to eliminate vulnerability. Cornelli et al. (2022), and Hamarat and Broby (2022), evaluate that innovative peer-to-peer lenders for lending to small businesses ensure easy funding access to maintain financial stability, and banking regulations monitor the market to promote operations. Overall, while maintaining transparency and fairness to protect consumer data, CBI develops an ethical banking infrastructure to support lending practices in the digital era with fair regulation.

2.4 Challenges present related to implementing digital lending operations in Ireland

The digital lending operation consists of challenges related to data privacy, cybersecurity, and insufficient regulations for managing fintech innovation. According to Singh and Prerna (2024), and Siddiqui and Rivera (2022), cross-border data flow in the digital age has created privacy and security concerns due to cyber risk and less protection under laws in fintech *[Refer to Figure 4]*. Thus, in Ireland, the limited regulations towards digital banking operations create a problem in securing lending transactions by CBI. However, Siddique et al. (2024), and Suryono, Budi and Purwandari (2020), analysed that bias and unfairness in ethical obligation and limited discussion about determining feasibility of regulations for P2P loan platforms raised concerns about protecting consumer data. Hence, the regulatory gap persists in the CBI approach towards implementing digital lending, resulting in a challenge to the volatile trust of lenders.

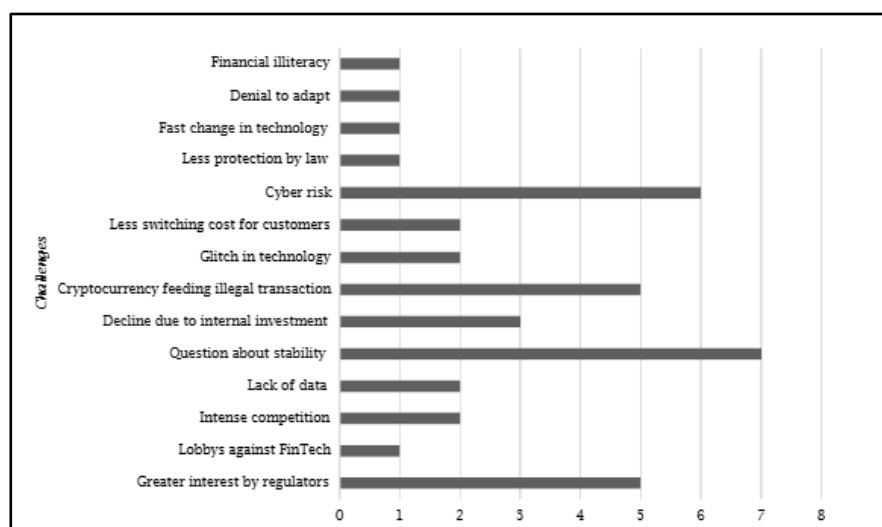


Figure 4: Challenges of fintech

(Source: Siddiqui and Rivera, 2022)

Ferran (2023), and Mpogole (2024), discuss that the existing digital lending laws are not adequate that impact safeguard the operation of consumers, although insufficient specialist focus leads to prudential concerns with the risk of over-indebtedness. Thus, CBI failed to

measure the unfair payment and collection practices from the borrowers to track credit scores during digital lending with insufficient regulations. On the contrary, Anton and Nucu (2024), and Arend (2023), stated that data privacy and security concerns create a negative impact on consumer welfare, as low stable banking systems lead to financial inclusion challenges. Moreover, the regulatory gaps in Ireland and improper management of consumer data towards implementing digital lending resulted in challenges towards supporting fintech innovation.

2.5 Strategies towards managing the regulatory gap of CBI for promoting international collaboration

The strategies towards facilitating supervision with the consideration of smart regulation support digital lending processes. Siddiqui and Rivera (2022), and Zeranski and Sancak (2020), stated that Supervisory Technology (SupTech) usage for governing real-time data with prudential disclosure policy facilitates peer-to-peer lending and supports fintech business model *[Refer to figure 5]*. CBI manages digitisation in financial institutions while adopting a supervision system. However, Asamani and Majumdar (2024), and Shavshukov and Zhuravleva (2023), outlined that European Securities and Markets Authority (ESMA) considers harmonisation of financial supervision to develop prudential standards aligning with International Financial Market Regulation to support digital lending. Therefore, the regulatory authority in Ireland and the central bank facilitates international collaboration while harmonising digital lending processes to ensure secure transactions.

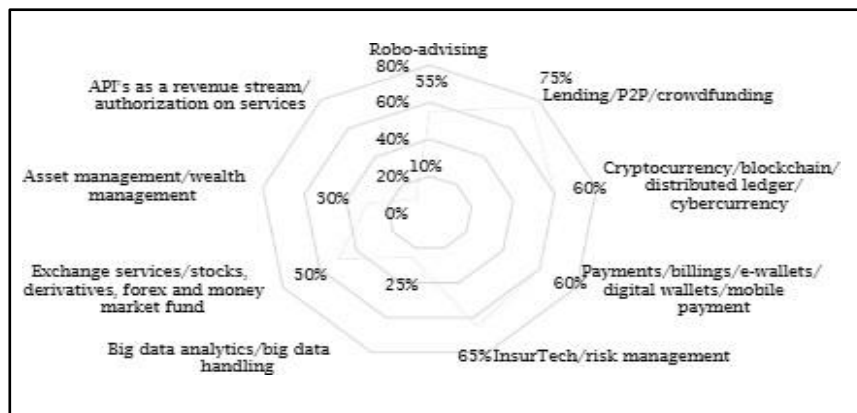


Figure 5: Fintech business models

(Source: Siddiqui and Rivera, 2022)

According to Ahuja et al. (2019), and Zetzsche et al. (2017), strengthening both Ireland's and the European Union's position on financial regulatory policy and regulatory sandboxes for innovative financial institutions fulfils security-related requirements in electronic banking services. This helps the digital banks of Ireland to develop security and data privacy while managing cybersecurity risk. On the other hand, Birch and Adediji (2025), stated that the

adoption of big tech for managing digital personal data ensures the protection of consumers with legitimisation mechanisms to support financial innovation. Thus, the usage of SupTech, smart regulation, big tech and strengthening international collaboration with harmonisation facilitates digital lending operations in Ireland.

2.6 Theoretical underpinning

Institutional Theory deals with the concept that the practices, structure, and norms influence organisations to shape decision-making with institutional change (Berthod, 2018). In this way, digital lending as a technological change in financial institutions requires consideration of the regulatory norms and legislation of the CBI to support transactions. Therefore, the decision related to digital lending develops the organisational structure of banks to support secure transactions for better institutional operations.

2.7 Literature gap

The previous literature evaluates the change in banking regulation to support digital innovation in banks, although there is a gap in measuring the viability of CBI regulations. According to Yang, Gan and Li (2019), the role of banking regulations on the performance of financial institutions is evaluated to facilitate better supervision. However, this literature is limited to a specific analysis of central bank roles in Ireland and also does not cover the aspect of digital lending. Thus, the current research uncovers the area to facilitate specific analysis of the CBI role to promote digital lending while protecting consumer data.

2.8 Summary

The literature review evaluates that technological innovation in financial institutions related to digital lending involves issues related to data security and privacy concerns for consumers. Additionally, the concept of instructional theory helps in understanding the norms developed by CBI to manage institutional change related to digital lending practices.

3 Methodology

3.1 Introduction

Methodology deals with the steps to collect data and interpret results while explaining the research problem to maintain the validity of research. The stages of Saunders' research onion consider different philosophies, approaches, strategies, data collection methods and analysis techniques to select suitable ones as per research requirements (Saunders, Lewis and Thornhill, 2019) [*Refer to Figure 6*]. This methodology follows the research onion to select the primary method to conduct a survey and facilitate frequency, along with statistical analysis techniques to interpret quantitative results while meeting research objectives.

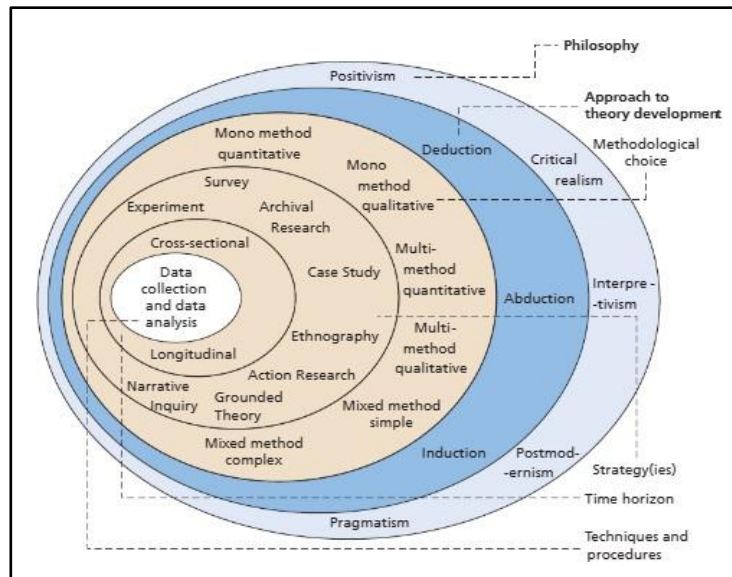


Figure 6: Stages of Saunders' research onion

(Source: Saunders, Lewis and Thornhill, 2019)

3.2 Research design

A **descriptive research design** has been chosen for the study to present the characteristics of a particular phenomenon and manipulate variables to present results. Sileyew (2019), stated that descriptive design is viable for developing reliable databases to develop comprehensive knowledge for providing unbiased outcomes. Based on that, the selected research design addresses the regulatory measures towards digital banking practices for developing knowledge and presenting valid results. Hence, a descriptive research design is beneficial for the study to analyse the current state of phenomena for measuring the role of the central bank to promote digital lending in Ireland.

3.3 Research philosophy

This research has considered the **positivism philosophy** to explore the understanding of human experience. Further, positivism philosophy ensures empirical-based research with objective observations while dealing with quantitative data to emphasise results (Hjorland, 2005). In this study, while using positivism, dealing with human experience to examine the regulatory guidelines for ethical digital lending helps in delivering empirical results. Therefore, with the use of a selected research philosophy, the methodology processes are enhanced through determining causal relationships between variables while solving the research problem.

3.4 Research strategy and approach

Survey as a quantitative research strategy has been selected for the research to collect quantitative data related to the CBI role towards regulating fair digital lending, while consisting of real-life participants. The use of surveys is considered a legitimate strategy to examine

variables for quantitative evidence based on questionnaires with numerically rated aspects (Ponto, 2015). In this way, using surveys is significant for collecting responses from human participants to understand the current regulations of Ireland that foster consumer protection, fairness, and transparency during digital lending. Thus, the selected strategy is significant for the study to present valid results to meet the research aim.

A **deductive approach** has been used in this research to determine specific outcomes related to the regulatory framework of CBI. As stated by Mohammed (2024), the deductive approach is considered a theory-testing paradigm that starts with a general hypothesis to facilitate specific observations for testing validity. In this way, the selected research approach is significant for the study to test the validity of the collected data related to challenges and strategies towards facilitating digital lending operations by CBI. Overall, the deductive approach ensures the development of specific outcomes related to the subject phenomena.

3.5 Data Collection and Data Analysis

Dependent variable	Independent variable
● Fair digital lending practices	● Role of CBI
Sub-variables	Sub-variables
● Access to digital credit ● Data privacy ● Consumer trust ● Transparency in lending	● Individual Accountability Framework ● Senior Executive Accountability Regime ● Data Governance ● Consumer Protection

Table 1: Identification of variables

A **primary method** has been considered for this study to deal with real-life participants for collecting information. Lim (2024) outlined that the quantitative method deals with collection of information directly from source and considers statistics and numbers for better measurement to find patterns while addressing research questions. This study has undertaken a survey of 320 participants through purposive sampling including different professions like legal expert, student, financial professional, and general consumer of the Irish community. Additionally, developing a questionnaire consisting of 25 questions helps in collecting information about fair lending practices and regulatory measures in Ireland to ensure data

privacy and protection of consumers. Therefore, the primary quantitative method is significant for the study as the selected participants are viable to provide responses based on personal experience for achieving research objectives.

Statistical and frequency data analysis techniques have been chosen for this research to analyse quantitative information for presenting reliable findings. According to Dibekulu (2020), and Oosterbaan (1994), statistical and frequency analysis evaluate data patterns based on different tests and predict frequency of values of a variable phenomenon to maintain reliability respectively. Further, using survey responses, the frequency analysis is processed through the charts generated for interpreting results. Additionally, using descriptive analysis, correlation, and regression for statistical analysis helps in identifying relationships between variables. Therefore, both statistical and frequency analysis are viable for this study to interpret quantitative data for understanding the process of ethical digital lending with fair regulations practices in Ireland.

3.6 Ethical considerations

Data Protection Act, 2018 and General Data Protection Regulation (GDPR) in Ireland respect the right of privacy to set provision for security and confidentiality for protecting personal data (DETE, 2018). This study has followed the data protection act and GDPR compliance while collecting information from participants to maintain ethics. Additionally, the study has followed the guidelines of the university to take consent from participants and provide rights to withdraw at any time. Thus, maintaining anonymity and privacy, the data stored in a password protected folder that are not accessible to any third party to consider ethics.

3.7 Summary

Research onion by Saunders helps in selecting positivism philosophy, deductive approach, survey quantitative strategy, primary method, along with statistical, and frequency analysis techniques to deliver evidence-based results. Therefore, dealing with real-life participants during the primary method helps in collecting valid information while following ethics to maintain reliability of the research.

4 Results and Discussion

4.1 Introduction

Results, findings and discussion involves the interpretation of outcome through effective data analysis for meeting research objectives. In these results and discussion, the data analysis is processed through frequency and statistical analysis techniques for interpreting primary quantitative data collected from survey participants. Additionally, the results are interpreted

using charts and different tests to identify pattern and relationship between variables through empirical analysis to attain research objectives. The ethical considerations involve withdrawal of consent that consist of approximately 7-8 participants withdrawing consent due to the feeling of sharing proprietary information although the survey has not involved any proprietary information only consists of industry trends and CBI regulations. Thus, the frequency analysis results are evaluated based on the received responses of respective questions while following ethics.

4.2 Frequency Analysis

The visualisation from survey has been showcased in *Appendix 2* and discussed through frequency analysis below:-

Figure 7 showcases that all participants who belong to Ireland in the survey are viable for measuring the viability of CBI regulations. Ireland community members are efficient to provide valid insights about fair digital lending in Ireland and the role of the central bank for maintaining ethics in operation.

The duration of residency varied among participants, in **Figure 8**, yet most had been in Ireland for 5 years. This short length of stay guaranteed less effective financial openness in lending, demonstrating a minimal understanding of digital lending procedures and CBI rules in the regional financial landscape.

The majority of participants in the survey as per **Figure 9** are general consumer, financial professional and student. Further, general consumers and financial professionals have provided insights about digital lending processes to measure the regulation viability for supporting this fintech innovation in Ireland.

Figure 10 shows that digital lending behaviours are actively regulated by the CBI, according to the majority of survey respondents. This favourable opinion demonstrates the apparent contribution of CBI to promoting ethical, transparent and equitable digital lending and reflects industry stakeholder trust in the current regulatory structure.

Figure 11 depicts that the maximum number of participants in the survey are aware about CBI regulation for protecting consumers during digital lending. The awareness in terms of IAF and SEAR regulatory frameworks in Ireland by CBI helps in maintaining ethics while managing digital credit operations.

The trust fuelled by continuing trends in digital supervision was seen in the majority responses (**Figure 12**) for recognition of CBI use of SupTech to oversee digital lending. Others were voicing doubt, pointing to a lack of clarity, and showed differing levels of understanding. This

discrepancy in SupTech perspectives was a reflection of varying degrees of awareness and confidence in technology regulation strategies.

Most of the participants in **Figure 13** feel that current digital lending regulations are sufficient for protecting low-income and young borrowers in Ireland. CBI set strict regulations related to consumer protection compliance and digitisation standards to ensure secure automated credit processes with fair disclosure practices that are viable for protecting vulnerable consumers.

Figure 14 shows that many respondents attributed the legislative strategy of Ireland to the proactive nature and conformity with financial technology developments of CBI, hence evaluating it as stronger than that of other EU nations. Some people were noticing gaps, which could indicate unequal harmonisation, as the responses emphasised regulatory feasibility of Ireland among the EU nations.

Figure 15 outlines that CBI requires collaboration with tech experts while developing digital lending regulations. Collaboration of regulatory authority with technology experts helps in measuring risk for emerging trends to ensure secure governance of data with safe adoption of AI under Regulatory Technology (RegTech).

Most of the participants in the survey stated that SupTech as real-time monitoring by regulators facilitate trust over digital lending platforms in Ireland (**Figure 16**). Further, SupTech facilitates supervision by CBI to ensure fair digital lending while accessing risk through credit scoring using AI for maintaining transparency.

Consumers in Ireland had easily available channels to criticise or contest unlawful online lending procedures, according to the majority of responses (**Figure 17**). This was an indication of trust in the safeguarding of consumer systems by Financial Consumer Protection (FCP) Principles of CBI (OECD, 2024). However, several expressed dissatisfactions pointing out opportunities to increase the effectiveness and clarity of dispute handling.

In **Figure 18**, the majority of respondents support that algorithm-based lending decisions are unbiased and fair in Ireland. Machine learning algorithms facilitate transparency and regular fairness audits to ensure unbiased credit lending (Tolan, 2019). Hence, the participants believe in facilitating digital lending for fair disclosure of information.

The major concern of the participants are data privacy and lack of transparency during digital lending in Ireland (**Figure 19**). Data privacy challenges are present for managing digital finance due to handling large amounts of sensitive customer information that lead to risk of data breaches with unauthorised access (Adegbite, 2025). Thus, the concerns of participants are genuine while adopting digital lending in Ireland.

Majority respondents in **Figure 20**, cited instances of improper conduct by online lenders, primarily related to biased lending standards, concealed costs, or a lack of openness. This emphasised the necessity of more stringent regulation and reaffirmed the significance of the regulatory function of CBI in guaranteeing equity in online lending.

Figure 21 highlights that the maximum number of participants believe that digital lenders require to disclose the lending decisions made by algorithms. The disclosure of algorithm-based lending is significant to facilitate trust of consumers while eliminating bias to ensure responsible lending in Ireland.

Figure 22, reflects the opinions on algorithmic bias in lending decisions, as several expressed concern about the lack of transparency, while others expressed slight worry about the possibility of bias. This indicates that respondents have a modest level of trust, yet concerns about computational impartiality persisted in decisions related to credit scoring.

The majority of participants in the survey stated that digital lending terms are confusing or unclear in Ireland (**Figure 23**). Further, technical jargons in digital lending led to complexity in understanding and excessive information resulted in confusion for consumers in Ireland.

According to the vast majority in **Figure 24**, Irish consumers were sufficiently safeguarded by the online borrowing regulations of CBI. This impression reflected faith in the upholding of openness, ethics regulation, and moral behaviour (McGrath, 2021). Further, to reinforce consumer protections, others were proposing improvements in the monitoring and redress systems.

Figure 25 reflects that most of the participants support the fact that CBI regulations maintain pace with the evolution of fintech innovation. CBI introduces consumer protection regulation, SupTech, and regulatory sandbox for maintaining fairness in digital lending to support fintech innovation with better supervision.

Figure 26 demonstrates that people were holding the CBI accountable for the AI-driven financing presumption, while most were blaming algorithm developers and fintech firms. The remaining percentage was still unclear, suggesting uncertainty regarding regulatory limits. This demonstrated the necessity of more precise standards for accountability within online lending operations driven by AI.

The majority of respondents in the survey agree with testing digital lending platforms in regulatory sandboxes in Ireland (**Figure 27**). Regulatory sandboxes by CBI assure better oversight of credit models with fair disclosure to protect consumers from cybersecurity risk due to the usage of digital lending platforms.

Figure 28 shows that most of the participants support that regulatory authorities of the EU require the creation of a single digital finance authority for managing fintech services across borders. Single digital finance authority reduces complexity to manage digital credit operation while following guidance of CBI to protect consumers.

Most of the respondents in **Figure 29**, were in favour of establishing a public record of online lenders, seeing the move as an effort towards openness and well-informed customer choice. This is indicative of a wider call for accountability and disclosure in the changing digital lending environment of Ireland.

Figure 30 depicts that respondents acknowledged the utilisation of legal sandboxes for evaluating fintech technologies in CBI, viewing them as useful instruments for development and secured experimentation. Certain participants expressed uncertainty about its scope, indicating that sandbox projects require greater awareness and more transparent communication.

The participants have scope for open-ended questions to present insight that evaluates transparency, data privacy and consumer protection to develop trust of digital lending services in Ireland (**Figure 31**). Further, the increasing transparency and standard lending operation in digital more robust algorithm-based decisions to ensure satisfaction among consumers while building trust in Ireland.

4.3 Statistical Analysis

4.3.1 Descriptive statistics

Descriptive statistics are useful for addressing heterogeneity in diverse collections and facilitating the generalisation of significant findings and describing the link between clustered variables (Smith, 2019). The outcomes of descriptive statistics (N=320) were clustered, with the majority of respondents placed around the positively valued opinions regarding the role of CBI and the equal proportions of digital lending. In the context of Adequate protection, the mean was high, 4.25 (SD = 1.132), which is a sign of general agreement that the consumers felt protected under the current regulations (*See Appendix 3*). Similarly, skewness and kurtosis remained mainly within reasonable limits, the only exceptions being variables such as Digital_lending_terms, nail down, being outliers in terms of skew with values of -2.017 and -2.102, respectively. This high mean value with reasonable association fintech limits states that the regulatory effectiveness of CBI in Ireland is higher and might enhance its lending platforms by prioritising consumer interest. Further, this also resonates with the adoption of Consultation Paper (CP158) in 2024, outlining its plans to update the 2012 (modified) Consumer Protection

Code to incorporate digital protections and customer preferences (PwC, 2024). However, SupTech_improve_lending (mean: 3.57, SD: 0.760) and Item Specific regulations (mean: 2.69, SD: 0.509) exhibited fewer algorithm facets, showing a high range of tech experts adopted for handling lending procedures. This suggests increased agreement on the understanding of the protections offered by the rules and the aid of the supervisory technology by CBI. These values of high means and low standard deviations indicate that the models are largely approved by professionals and consumers of Ireland, and to evaluate regulatory deficiencies, parameters such as transparency, bias, and data governance indicate deficiencies. Overall, these descriptive statistics notions support the current guidelines of CBI, functionality, and the challenges connected with fintech, with attention paid to both the level of trust and gaps to fill in lending procedures in Ireland.

4.3.2 Regression

Hypothesis

Null Hypothesis (H0): Insignificant statistical relationship between the combined factors such as protection of vulnerable consumers, algorithm disclosure, adequate protection mechanisms, and SupTech adoption towards the effectiveness of the Central Bank of Ireland in regulating fair practices in digital lending.

Alternative Hypothesis (H1): Vulnerable consumer protection, algorithmic disclosure, adequate protection, and SupTech adoption significantly supports the effectiveness of the Central Bank of Ireland in regulating fair practices in digital lending.

Regression analysis assists in establishing the effects of the changes in the independent variable on the dependent variable, and this enables one to predict and gain insight into the causal relationship (Daoud, 2017). The analysis of multiple regression was designed to investigate the relationships between the four predictors, namely protection of vulnerable consumers, algorithmic disclosure, sufficient protection mechanisms, and SupTech adoption, with a dependent variable of CBI regulations effectively. **Appendix 4**, reflects that the R-squared value between these four models rose uniformly between 0.081 and 0.150, implying that every independent variable had a positive impact on the model. Similarly, the Adjusted R-squared increased by 0.078 to 0.139, indicating that there was an improvement in predictive accuracy without overfitting. This increasing trend demonstrates that each component significantly improved the capacity of the model to forecast the regulatory efficacy consequences of digital lending-related factors in Ireland. Also, this supports the real estate boom fuelled by rising salaries and inexpensive credit, which increased bank assets by more than five times in Ireland through extensive lending on residential and business properties (IMF, 2019). However, the F-

values from ANOVA ($F = 13.856$, $p < 0.001$) showcase the ability to use the joint effect of predictors to achieve a statistically significant result for regulatory effectiveness in CBI. This shows that threshold values estimate the actual integration of lending practices with client interests in Ireland.

The vulnerable consumer protection registered the greatest effect ($\beta = .192$, $P = .001$), particularly, which signals increasing demands for comprehensive regulation (*See Appendix 4*). Other significant effects in Coefficients as Algorithmic disclosure (p (Sig.) = .006), and SupTech adoption ($p = .033$) for all four variables, supporting regulatory priorities and interests of consumers. All these p -values less than 0.05 show that a significant relationship between predictors and outcome exists in handling fair digital lending practices in Ireland. Thus, all of the p -values are less than 0.05, which means that ***H1 is acceptable*** and H_0 is rejected, proving that the set of predictors contributes to the determination of regulatory effectiveness. The regression analysis provides evidence sufficient to ***reject H0***, which suggests that vulnerable consumer protection, algorithm disclosure, sufficient safeguards, as well as SupTech adoption have a significant impact on reports of effectiveness of regulatory practice for digital lending by CBI.

4.3.3 Correlation

The correlation analysis shows crucial associations both at the 0.01 and 0.05 levels, significant enough to claim that there is a significant relationship between variables affecting the perceptions of the regulatory role of CBI. SupTech enhancing lending ($r = .247$, $p < .01$) and sufficient protection ($r = .230$, $p < .01$) have positive correlations with CBI as a successful regulator, which indicates a high perceived significance of oversight and digital lending protection. Further, the regulatory approach ($r = .116$, $p = .038$) and disclosed algorithms ($r = .241$, $p = .005$) are also positively correlated with regulatory perception, setting a moderate yet statistically significant correlation (*See Appendix 5*). The positive correlation is essential in various disciplines as it offers an insight into the relationship between different variables and assists in making sound decisions. Conversely, the tracking of Supertech trust is negatively related to CBI regulation ($r = -.186$, $p < .01$), stating the issues of trust in clients might erode regulatory confidence. Therefore, these conflicting findings demonstrate that the future of fintech regulation is two-layered and there is increased openness and protection that promote trust among clients and digital lending practices.

4.4 Key Findings

4.4.1 Frequency analysis

The frequency analysis evaluates that CBI has contributed towards ethical and transparent digital lending to facilitate trust of stakeholders. Further, the participants are aware of the CBI regulations as the usage of SupTech facilitates supervision by regulatory bodies and digitalisation standards in Ireland ensure secure automated credit processes to protect consumers. Additionally, harmonisation of CBI regulation with EU while collaborating with tech experts facilitate better governance of data during digital lending with real-time monitoring using SupTech. Therefore, safeguarding consumers with FCP by CBI facilitates fair and unbiased algorithmic decisions in lending to a managed privacy concern in Ireland while supporting fintech innovation with regulatory sandbox testing.

4.4.2 Statistical analysis

The statistical findings showcase the high mean and low standard deviations, favouring the regulatory effectiveness of CBI, and effective parameters included sufficient protection, use of SupTech in enhancing lending procedures. Further, in regression outcomes it is observed that an increase in R-squared values with optimal significance thresholds contributes to the acceptance of the H1 and proves that predictors are chosen to be significant to affect perceptions of regulatory effectiveness. Correlation analysis revealed a positive association between the significant variables, such as specific regulations, algorithmic transparency, and terms of lending in the digital world. Hence, addressing technology-controlled regulation across fintech and eventually lead to greater stakeholder confidence and the formation of innovative policy and regulation in CBI.

4.5 Discussion

4.5.1 Regulatory guidelines of CBI support fair digital lending practices in Ireland

CBI has introduced different guidelines to protect data of consumers while ensuring fair digital credit practices in the economy. The literature review addresses that the banking regulatory framework has increased the alternative digital lending practices across the globe. Walker and McGrath (2023), evaluates that SEAR regulation and IAF Act 2023 control operation of credit institutions and the CBI charged a fine of over €100 million to protect from fraudulent activities. However, EU GDPR covers the issues raised from the application of digital technologies to ensure cybersecurity during lending and digital finance transactions (Assentian and Aranda, 2022). Hence, the regulations set by the central bank are significant for maintaining data privacy to secure transactions of consumers during digital lending in Ireland.

The results of survey and statistical analysis evaluates that unlawful online lending procedures are reported by consumers in Ireland as per respondents. Furthermore, the FCP of CBI facilitates trust towards safeguarding the lending practices while enhancing consumer creditworthiness with The European Union Regulations 2016 to protect consumers in credit agreements (OECD, 2024). Overall, the data analysis evaluates that regulations of CBI supervise digital finance operation for responsible lending and provide adequate protection to consumers.

4.5.2 Effectiveness of current regulations of CBI to promote digital lending operation The current regulations in Ireland are viable for supporting fintech innovation like digital lending to secure data of consumers and handle credit risk. Based on the insight of literature review technology-driven credit solutions fulfil compliance requirements to ensure transformation in borrowing operation. As stated by McGrath and Walker (2022), and Varma et al. (2022), blockchain in banking has been governed by The Irish Banking Culture Board (IBCB) to facilitate responsible lending supported by automation. However, the result of the survey evaluates that Ireland's regulatory structure implements SupTech for better supervision of online credit. Therefore, the secure automated lending procedure by CBI with fair disclosure practices is significant for protecting vulnerable consumers.

The Consumer Protection (Regulation of Credit Servicing Firms) Act 2015 regulates firms to maintain transparency for responsible credit and mortgage practices (CBI, 2025a). Further, institutional theory considers transformation in institutions with reforms in structure and practices to shape decision-making. Hence, CBI regulates the digital lending practices to ensure responsible credit management while facilitating transparency during automated transactions.

4.5.3 Challenges persist in fintech innovation like digital lending in Ireland

The challenges related to fintech innovation involve data privacy concern, inadequate regulation, and cybersecurity issues that impact digital lending in Ireland. As per literature review, in the digital age cross-border data flow leads to high chances of data breaches that disrupt online credit operation. Siddique et al. (2024), and Suryono, Budi and Purwandari (2020), discussed that unfairness and bias present in regulations of P2P lending platforms resulted in a challenge to protect consumer data. However, the novelty risk for consumers due to lack of financial literacy leads to a problem to consider digital lending models and increases chances of privacy and security breaches (Mulwa and Yahya, 2025). Thus, the online credit practices in Ireland involve issues related to weak regulation, data security and privacy that disrupt fintech innovation.

The results of survey and statistical analysis measures digital lending in Ireland involves concern of lack of transparency, algorithm bias, and weak consumer protection. Handling large amounts of sensitive data for digital finance increases the risk of data breaches due to unauthorised access that influences lending processes (Adegbite, 2025). Therefore, the data analysis evaluates the challenges of limited financial literacy among consumers that leads to cybersecurity and data privacy concerns although weak regulations in Ireland impact innovation in financial institutions of Ireland.

4.5.4 Strategic recommendation to manage regulatory gap of CBI for optimising digital lending

The implementation of better supervision and regulations towards consumer protection by CBI optimises digital lending while managing the challenges of data privacy and security concerns. Further, the literature review evaluates that the adoption of smart regulations and developing supervision ensure secure online credit procedure. Siddiqui and Rivera (2022), and Zeranski and Sancak (2020), discussed the implementation of SupTech for facilitating P2P lending to govern real-time data with better disclosure practices. However, development of a regulatory framework for money laundering and terrorist financing risks robust digital credit growth (Le, Ngo and Nguyen, 2023). Thus, the evolution of the legal framework of Ireland supported by CBI promotes fintech-based credit while managing data privacy issues.

The statistical analysis and survey results evaluate better algorithm disclosure and adoption of SupTech by CBI transform the digital lending operation. Further, the algorithms of machine learning promote fair and unbiased digital lending decisions with regular audits (Tolan, 2019). Overall, the data analysis evaluates that adoption of SupTech ensures responsible digital lending with enhanced supervision and risk assessment through AI for mitigating regulatory gaps of CBI to protect young and low-income borrowers.

5. Conclusion

5.1 Overall conclusion on successfully answering research questions and achieving objectives

The study aims to analyse the role of CBI towards regulating fair digital lending operation. The regulatory guidelines of CBI consist of promotion of ethical, equitable, and transparent digital lending in Ireland to maintain stakeholder trust. Further, effective regulatory policies enhance fair and secure practices of digital lending that are proven by frequency and statistical analysis in terms of SEAR, IAF Act, and GDPR. SupTech, along with these policies, improves oversight, safeguards consumers that are at risk and guarantees ethical credit practices. Therefore, the influence of these regulations facilitates the idea of responsible credit operation

and data privacy in digital lending aspects in the economy.

The current regulation of CBI is effective in terms of digital supervision through SupTech to oversee online lending processes. Further, it has found that protecting low-income and young borrowers of Ireland by CBI to set consumer protection legislation and efficient digitalisation standards to secure automated credit function with fair disclosure. Additionally, the regulatory structure of the central bank is efficient in protecting vulnerable consumers and effectively promotes ethical, transparent, and secure digital lending in Ireland. This might be implemented while collaborating with tech experts to manage the risk of adoption of AI to secure governance with RegTech and prudential disclosure policy. Overall, the results of primary data analysis are viable to analyse the positive role of CBI towards optimising online and ethical credit operations with adequate regulatory policy maintenance by policymakers.

The challenges persist in fintech innovation to promote digital fair lending are low financial literacy, underdeveloped consumer protection, and algorithm bias. Further, financial professionals and legal experts of Ireland consider the lack of transparency and data privacy concerns to manage digital lending while lending large amounts of data through CBI guidelines. In this way, data breaches that exposed sensitive customer information resulted in unauthorised access and created a challenge to promoting fintech innovation. Thus, algorithm bias results in inefficient credit scoring, while policies by CBI, such as GDPR and SEAR, secure client data, diminish data breaches and enhance consumer protection for equitable digital lending in Ireland.

The recommended strategies to manage regulatory gaps in CBI for fair digital lending consist of better supervision and intelligent regulations to optimise safe and inclusive digital loans in Ireland. Based on the usage of regulatory sandboxes by CBI and the European Union, the IAF Act, and GDPR policies for testing, fintech innovation helps in eliminating financial fraud while facilitating trust on digital lending services to promote satisfaction among consumers. Additionally, the algorithms-based decision while facilitating accountability and disclosure of digital credit in Ireland with better supervision eliminates cybersecurity risk. Overall, CBI policies, including IAF and prudent financial reforms contribute towards real-time monitoring and better supervision on digital lending processes to promote ethical operation while protecting consumers in Ireland.

5.2 Proposal for future work

The future research could facilitate understanding regarding the contribution of CBI towards fair online credit operation that helps in accessing scope of the research to uncover areas of further research. Future researchers will focus on cross-country comparison to evaluate suitability of regulation regarding digital lending in Ireland with other nations to broaden

research scope. Additionally, the proposed research in future will consider the secondary qualitative of conducting interviews for in-depth research regarding the fair online lending practices in Ireland. Overall, future work will consider subjective inferences related to CBI regulatory structure while comparison with other country regulations to develop scope.

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