

Title: Exploring Peer-to-Peer Lending Adoption among SMEs and Startups in Ghana

An Extended Technology Acceptance Model (TAM) Approach

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Summary

Peer-to-peer (P2P) lending is widely recognised as an alternative financing mechanism, yet its uptake remains limited in sub-Saharan Africa. This study explores the determinants of P2P lending adoption among Ghanaian SMEs and startups, focusing on the pressing need for improved access to finance.

Drawing on an extended Technology Acceptance Model (TAM), the research incorporates constructs such as trust, perceived risk, perceived cost, and relative advantage. Employing a quantitative survey and structural equation modelling, it scrutinises how these factors shape adoption intentions.

The findings will contribute to fintech literature by highlighting the specific challenges and opportunities in digital lending for emerging economies, while also offering practical insights for policymakers seeking to foster a supportive regulatory environment. Ultimately, this research aims to enhance SME and startup access to capital through P2P lending, thereby contributing to both theoretical advancement and tangible improvements in financial inclusion.

INTRODUCTION / RESEARCH CONTEXT

Traditionally, SMEs face more difficulties in accessing credit than their larger counterparts. In developing economies, accessibility to financial resources poses more significant challenges, especially in some African and Asian countries. Lending to small businesses is generally seen as a greater risk and cost since these firms have higher chances of failure and are more susceptible to economic shocks. Moreover, small enterprises do not provide very detailed financial statements; they seldom, if ever, have a source of publicly traded equity. This makes it even more difficult to judge their creditworthiness (Mach, Carter, and Slattery 2014). Peer-to-peer (P2P) lending is frequently mentioned in literature as a potential solution to address some of the financing constraints SMEs face. This research is significant because P2P lending services are relatively new in many advanced and emerging economies. This study aims to provide a clear overview of P2P lending and how it operates for potential users. Additionally, it will closely examine the factors that influence individuals' willingness to use P2P lending (perceived usefulness, perceived ease of use, perceived trust, perceived cost, perceived risk, and relative advantage) and the relationships between these factors and various variables.

BACKGROUND AND RATIONALE

SME financing in Africa, Asia-Pacific, and the Middle East has received little research attention in the top five journals in the area of “small business management”. Future research has been encouraged to emphasise SME financing in these regions, which are categorised under emerging and developing markets where SMEs play a significant role in driving employment and economic growth (Rao et al., 2021). The majority of P2P lending research has focused on the mechanisms of P2P lending, particularly around the success and failures of P2P lending platforms (He and Li, 2021; Emekter et al., 2015). Not much attention has been given to adoption intention, acceptance of this information system and continuance of use of this technology by potential and existing users. The main aim of the research is to investigate the factors affecting small businesses' intention to adopt peer-to-peer lending in Ghana and provide recommendations to promote its future use.

LITERATURE REVIEW (BRIEF)

Overview of P2P Lending

Formally, P2P refers to unsecured loans, usually not backed up by tangible collaterals, between lenders and borrowers through an online platform that provides all functions necessary to carry out loan transactions directly between lenders and borrowers (Liu et al., 2020, p.428). According to Transparency Market Research, the global P2P market is expected to be valued at \$897.85 billion by 2024, up from \$26.16 billion in 2015. In America, Prosper.com was the first P2P lending platform to emerge and has aided in the disbursement of \$11 billion of unsecured loans as of 2017. This has led to the majority embracing P2P lending as the primary alternative finance industry in the US, having an equal measure of credibility from experts (Lin, Prabhala and Viswanathan, 2013). In the UK, a significant portion of the evolution of financial services conducted through FinTech platforms revolves around P2P lending. Chen, Zhang and Yin(2018) estimate that P2P business lending accounts for 15% of UK SME lending, with more than half of these loans unlikely to receive approval from traditional banks (Bavoso, 2020). There are over 2500 Fintech credit firms in China, cementing its place as the largest, with credit volumes growing steadily with cumulative lending reaching CNY 1.36 trillion (around USD 210 billion). Since these P2P lending platforms were formed, idle private capital due to fewer opportunities to invest began to flow into the market (Dimitropoulos, 2022) , which is a fundamental notion considering the access to capital problem in developing countries. In P2P lending research, most work has focused extensively on areas such as China and the US, particularly around platform-related research, i.e., Prosper.com and Lendingclub.com, due to their publicly available data and both websites being leading frontiers of P2P lending.

Technology Acceptance Model (TAM) and Extensions

Many theories have been suggested to explain the intention to use or adopt technology. The most popular one with support from literature, according to (Chuttur, 2009; Luarn and Lin, 2005) is the Technology Acceptance Model (TAM). TAM's inherent simplicity and parsimony render it an expedient model for application compared to its counterparts (Davis, 1989). Furthermore, TAM's efficacy finds validation across various studies and diverse technological domains, transcending boundaries into manufacturing, finance, healthcare, and education sectors. TAM posits that perceived usefulness and ease of use are primary drivers of technology adoption (Davis, 1989). More recent studies have extended TAM by incorporating trust, perceived risk, and other constructs (Venkatesh & Bala, 2008), aligning with broader theoretical frameworks such as the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB). This research will

adopt an extended TAM model to determine attitudes towards P2P lending from a developing country perspective where constructs such as perceived cost, trust, relative advantage and perceived risk.

Research Gap

While TAM-based studies in mobile banking or e-commerce exist for several African markets, a dearth of research applies extended TAM frameworks specifically to P2P lending within the Ghanaian SME sector. This gap is particularly significant given the high proportion of SMEs and startups seeking alternative finance solutions. Addressing this gap will advance theoretical understanding and furnish practical insights for policymakers, platform developers, and end-users alike.

RESEARCH QUESTIONS / OBJECTIVES

This paper aims to investigate key factors influencing the intention to adopt P2P lending among Ghanaian SMEs and startups. Specifically, it asks:

Q1: What is the impact of perceived usefulness, perceived ease of use, trust, perceived risk, perceived cost, and relative advantage on SMEs' and startups' attitudes on P2P lending adoption intention in Ghana?

Q2: What is the impact of attitude toward P2P lending on behavioural intention to adopt P2P lending among Ghanaian SMEs and startups?

Q2: To what extent do demographic factors (age and gender) moderate the relationship between attitude and behavioural intention to adopt P2P lending?

Research hypotheses

H1a	<i>Perceived Ease of Use (PEOU) has a positive effect on consumer Attitude toward using P2P lending.</i>
H1b	<i>Perceived Ease of Use (PEOU) has a positive effect on behavioural Intention to use P2P lending.</i>

H2a	<i>Perceived Usefulness (PU) has a positive effect on consumer Attitude toward using P2P lending.</i>
H2b	<i>Perceived Usefulness (PU) has a positive effect on behavioural Intention to use P2P lending.</i>
H3a	<i>Trust in the P2P lending platform has a significant and positive effect on consumer Attitude toward using P2P lending.</i>
H3b	<i>Trust in the P2P lending platform has a significant and positive effect on Perceived Ease of Use (PEOU).</i>
H4a	<i>Perceived Risk (PR) has a negative effect on consumer Attitude toward using P2P lending.</i>
H4b	<i>Perceived Risk (PR) has a negative effect on Trust in P2P lending.</i>
H5	<i>Relative Advantage (RA) has a positive effect on Perceived Usefulness (PU) of P2P lending.</i>
H6	<i>Perceived Cost (PC) has a significant and negative effect on consumer Attitude toward using P2P lending.</i>
H7	<i>Attitude has a positive and direct effect on Behavioural Intention to use P2P lending.</i>

H8a	<i>Age moderates consumer Attitude toward using P2P lending; younger business owners are more likely to adopt P2P lending.</i>
H8b	<i>Gender moderates consumer Attitude toward using P2P lending; males are more likely to adopt P2P lending.</i>

PROPOSED METHODOLOGY

Research Design

A quantitative approach will be employed, utilising a structured questionnaire to gather data from Ghanaian SME and startup business owners. This research will adopt a technique where a P2P lending platform operation will be pre-recorded in a neutral explainer video and hosted online, respondents will need to watch this video before they can complete the questionnaire. This is necessary since P2P lending is not a well-known information system tool for Ghana's borrowing and is underutilised in the region. Survey participants will be recruited from Ghana, for an SSA regional context, using convenience sampling (Liébana-Cabanillas et al., 2018; Muk and Chung, 2015) and purposive and quota sampling method as adopted by (Herrero and San Martín, 2012) to match the target population structure on age and gender.

Data Collection and Analysis

Instrument Development: The questionnaire was developed by adapting validated measurement scales from existing technology acceptance and P2P lending research (e.g., Davis, 1989; Kim and Shin, 2015; Turker et al., 2022). The questionnaire comprised close-ended statements structured in multiple sections. Section I focused on demographics and business characteristics, collecting data about gender, age group, business sector, years of operation, and prior experience with digital financial services. Section II comprised observed variables measuring the latent constructs using a 7-point Likert scale, where respondents indicated their level of agreement with statements related to each construct in the extended TAM model.

Pilot Study

An online questionnaire was developed to collect data for this research from SMEs and startup business owners without experience using P2P lending platforms. A pre-test was carried out with a small group of respondents to determine any anomalies in the questionnaire before being circulated to the general population (Chong, 2013b; Yusuf Dauda and Lee, 2015; Lu, Deng and Wang, 2010). The pilot phase involved 30 Ghanaian SMEs and startup owners, who were selected to represent the target demographic of the main study. The resultant questionnaire structure emerged as a comprehensive instrument comprising six distinct sections, progressing logically from demographic information to specific construct measurements. This structure was validated through multiple iterations with pilot participants to ensure optimal flow and engagement.

Analysis

After collecting 220 valid responses, this research will use Statistical Package for Social Sciences (SPSS) version 26.0 and Analysis of Moment Structures (AMOS) version 28 to conduct advanced statistical analyses because of their robust analytical capabilities and widespread acceptance in technology adoption research. Measurement scale validation will be performed, Cronbach's alpha coefficients will be calculated, and validity assessments will be conducted through Average Variance Extracted (AVE) computations. Confirmatory Factor Analysis (CFA) will be conducted to assess model fit through multiple indices (χ^2 , CFI, TLI, and RMSEA) and Structural Equation Modelling (SEM) will be employed to test the research hypotheses, enabling simultaneous examination of multiple dependency relationships between constructs.

EXPECTED CONTRIBUTIONS

Theoretical Contribution

This study makes several theoretical contributions by extending the Technology Acceptance Model (TAM) with constructs such as trust, perceived risk, perceived cost, and relative advantage, thereby clarifying how contextual factors in emerging economies influence technology acceptance. While previous research has centred largely on e-commerce and mobile banking, situating TAM within peer-to-peer (P2P) lending for small and medium-sized enterprises (SMEs) in sub-Saharan Africa addresses a notable gap in the literature. By drawing on insights from the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB), the study illustrates how beliefs about risk and trust, alongside demographic moderators such as age and gender, shape the adoption intentions of diverse user segments. This approach underscores the importance of cultural

norms and regulatory frameworks in shaping fintech uptake, offering a more nuanced perspective than traditional, Western-focused analyses. Consequently, the research deepens our understanding of fintech adoption, particularly in regions with limited access to credit, and opens avenues for future examination of further sociocultural and macroeconomic dimensions in developing economies.

Practical Contribution

Policymakers and fintech stakeholders could benefit from an improved understanding of how SMEs and startups perceive P2P lending platforms. Insights gleaned may guide the development of user-centric policy frameworks and platform strategies, ultimately easing access to finance. Also, this research study offers regulatory insights and analysis that can be used to create a baseline and evaluate the dynamics of digital lending platforms in emerging markets, particularly the SSA region. It offers data, trends, and evidence on the SSA digital lending economy and the opportunities and challenges affecting the area, considering that Africa currently has one of the highest mobile phone technology penetration levels, as captured in this research.

Current status

Further iterations of this paper will:

- Integrate more profound literature on P2P adoption in developing economies.
- Conduct robust statistical analyses following data collection.
- Include a comprehensive discussion of findings, limitations, and implications.
- Seek targeted reviewer feedback on the methodology, particularly ensuring sample representativeness and cultural relevance of survey items.

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