

AI-Driven Credit Scoring and Financial Justice among Young Entrepreneurs in Dhaka City: A Qualitative Study

Mahbuba Akhtar

Manarat International University, Dhaka

Mahedy Hasan Raihan

Wright State University

Ashrafun Nahar

Manarat International University, Dhaka

Sat Al Arab

American International University – Bangladesh

Hasib Ahmed, Nur Nahar

Manarat International University, Dhaka

Foysal Habib

Bancharampur Government Degree College

Khayrul Islam

Jagannath University, Dhaka

Corresponding Author

Hasib Ahmed

Manarat International University, Dhaka

Gulshan -2,Dhaka-1205

Bangladesh

Abstract

The lack of access to finance is a major issue for young entrepreneurs, especially those who have poor credit scores, lack financial statements and have no collateral. Artificial intelligence (AI) based credit scoring systems have been seen as a potential solution to credit assessment using alternative data, but there are concerns about fairness, transparency, accountability and algorithmic exclusion. This study aims to understand the impact of AI-powered credit scoring on financial justice for young entrepreneurs in Dhaka City, focusing on perceptions of financial access, AI-driven lending opportunities, ethical concerns, and responsible decision-making practices. The study uses a qualitative research approach and thematic analysis to explore the experiences and perspectives of entrepreneurs on traditional credit assessment systems and AI-powered lending mechanisms. The results show that AI-powered credit scoring is seen as a potential means to financial inclusion, as it can include alternative data like digital transaction records and business activity data. But there are also important issues of algorithmic bias, data quality, privacy, transparency, and the risk of leaving out people with small digital footprints, participants note. The study also shows that in the context of AI-driven lending, financial justice encompasses not merely the opportunity to obtain a loan, but also procedural fairness, transparency or explain ability, accountability, and the ability to object to or challenge automated decisions. The study adds to the literature on responsible AI and financial inclusion by offering a socio-technical approach that combines technological innovation and human-centered governance. The results indicate that AI-based credit scoring can contribute to inclusive entrepreneurial finance if applied in an ethically guided, transparent, and accountable manner with proper human supervision.

Keywords: *Artificial Intelligence, AI-driven Credit Scoring, Financial Justice, Financial Inclusion, Responsible AI, Young Entrepreneurs.*

I. INTRODUCTION

One of the biggest challenges to the growth and sustainability of young entrepreneurial businesses is access to finance. The traditional credit assessment systems have relied on well-known financial metrics, such as credit history, collateral, income documents, and repayment history. While these mechanisms have helped financial institutions to control lending risks, they may have a negative effect on emerging entrepreneurs, who may lack credit histories or have no formal financial records. Thus, even if young entrepreneurs have entrepreneurial potential and business opportunities they may have problems to access business finance. Traditional credit scoring methods have come with their shortcomings, which has led financial institutions to embrace artificial intelligence (AI) and machine learning (ML) for credit scoring. Unlike traditional statistical methods, AI-powered credit assessment models can process vast amounts of structured and alternative data, uncovering intricate patterns linked to borrower behavior and creditworthiness. These are increasingly integrating a variety of data, such as digital transaction data, data from mobile financial services, online business operations, and behavioral data, which can help financial institutions assess individuals who have been previously excluded from formal financial services. Previous studies have shown that machine learning credit scoring models can outperform traditional statistical models, providing better predictive accuracy and risk assessment capabilities (Lessmann et al., 2015; Fuster et al., 2022).

But, as AI becomes more deeply embedded in financial decision-making, there are significant issues to consider other than technological efficiency. As credit decisions have a direct impact on the economic opportunities of individuals, automated lending systems should not only be evaluated on the basis of the predictive accuracy but also on the aspects of fairness, transparency and social implications. While AI-driven systems can minimize human biases by applying uniform decision-making criteria, they can also perpetuate existing biases if trained on historical data that contain imbalances from past discriminatory practices or unequal access. Algorithmic bias, explain ability and accountability have thus become key topics in the research of responsible AI (Barocas & Selbst, 2016; Rudin, 2019). In sectors with a high impact on people, like financial services, if individuals are unable to understand or contest automated decisions there might be new forms of exclusion. These are especially the problems in developing economies where access to formal financial services is limited and information asymmetry is a problem for financing entrepreneurs. Alternative data driven credit scoring has been suggested as a means to increase financial inclusion, by allowing lenders to assess borrowers outside of traditional financial data sources. The impact of these systems, however, is contingent upon the acceptance of the decisions by potential users, which relies on the trustworthiness, understandability, and fairness of the AI-based decisions. Studies on responsible AI emphasize that the development of technology should go hand in hand with transparency, accountability processes and the experience of the impacted stakeholders (Arrieta et al., 2020).

Dhaka City gives a crucial perspective to understanding these problems as one of the most dynamic entrepreneurial and digital financial ecosystem in Bangladesh. The city has seen significant increases in start-ups, small businesses and digital business, especially among younger entrepreneurs. However, many young business owners are still struggling to secure formal financing because of a lack of collateral, limited banking history and trouble meeting traditional lending criteria. AI credit scoring can offer greater potential for financial assessment inclusivity, but it is unclear if these systems actually enhance financial opportunities or create new inequalities for young entrepreneurs. The concept of financial justice provides a valuable framework for analyzing the broader implications of AI-driven credit scoring. Financial justice is not just about access to credit but also includes equal opportunity, procedural fairness, transparency and accountability in financial decision making. Most of the studies on AI credit scoring have been conducted from a technical point of view, focusing on the performance of the models, prediction accuracy, and risk classification. While such research is valuable in understanding the effectiveness of algorithms, there has been much less work on the lived experiences and perceptions of the people impacted by AI-driven financial decisions, especially young entrepreneurs in growing urban environments.

Thus, there is a gap in the literature on the perception of young entrepreneurs in credit scoring systems powered by AI technologies and the role of such technologies in providing fair and inclusive financial opportunities. The perspectives of entrepreneurs are crucial, as the success of AI-assisted lending will rely on both the technical capabilities and the trust, legitimacy, and social acceptance of the users. In response to this gap, the present study delves into the connection of AI-based credit scoring

and financial justice among the youth entrepreneurs of Dhaka city. In particular, this study focuses on the experiences of entrepreneurs with the current credit evaluation procedures, the opportunities and challenges of AI-based credit scoring, and the perspectives on fairness, transparency, and potential risks of automated credit decision-making.

This study, using a qualitative approach, adds to the growing body of research on responsible AI in the financial sector, emphasizing the human and ethical aspects of AI-driven credit evaluation. The findings aim to provide insights for financial institutions, fintech companies, and policymakers seeking to develop more transparent, inclusive, and socially responsible AI-driven financial systems.

Research objectives and questions

Recognizing the research gap, this study seeks to investigate the impact of AI-powered credit scoring systems on financial access and perceptions of financial justice for young entrepreneurs in Dhaka City. In particular, this study aims to accomplish the following:

1. To explore the experiences and perspectives of young entrepreneurs regarding existing credit assessment and financial service acquisition processes.
2. To examine how young entrepreneurs perceive the opportunities and challenges associated with Artificial Intelligence (AI)-driven credit assessment or 'credit scoring' systems.
3. To investigate perspectives on fairness, transparency, and potential risks in AI-based credit decision-making processes.

Accordingly, the study addresses the following research questions below-

RQ1: How do young entrepreneurs in Dhaka city perceive and evaluate existing loan assessment and financial access processes?

RQ2: What are the perceptions of young entrepreneurs regarding the role of AI-driven credit scoring systems in facilitating access to financial services?

RQ3: How do young entrepreneurs view the fairness, transparency, and potential risks associated with AI-driven loan decision-making processes in the context of ensuring financial equity?

II. LITERATURE REVIEW

Credit assessment systems have always been devised to mitigate information asymmetry between financial institutions and borrowers. Most of the existing credit scoring models use formal financial data such as credit history, income details, repayment history, collateral details etc. to measure borrower risk. While these methods have helped lenders to make more systematic decisions, they can pose problems for those with a short credit history or no business credit history. New entrepreneurs are especially impacted as new businesses often have poor credit history, few income statements, or few assets that can be used as collateral with traditional lenders. Existing studies have pointed out that traditional credit scoring models can disproportionately limit access to credit for new borrowers as they tend to rely on past financial data which is not available for many entrepreneurial groups (Hand & Henley, 1997; Thomas et al., 2017). Thus, alternative evaluation methods that can measure a borrower's ability in a more comprehensive way are needed to improve credit accessibility.

With the advent of Artificial Intelligence (AI) and Machine Learning (ML), there are new opportunities for revolutionizing credit assessment practices. While traditional statistical models typically rely on assumed correlations between specific variables, AI-based systems can analyze vast amounts of data and complex information to uncover subtle trends and patterns related to creditworthiness. In credit risk assessment, machine learning algorithms, such as ensemble learning approaches and approaches based on neural networks, have proven to be very predictive. Lessmann et al. (2015) demonstrated that advanced classification algorithms can perform better than some of the traditional credit scoring algorithms, which can be useful in financial decision making where AI-based approaches are used. Likewise, Fuster et al. (2022) identified that the use of machine learning in the credit market can have a significant impact on the outcomes of credit markets, as it helps to predict risk and make more data-driven lending decisions. Overall, these advancements indicate that AI-powered credit scoring can offer potential avenues for improving financial inclusion, especially for those who are underbanked or lack access to conventional credit scoring methods. One of the key improvements related to AI credit scoring is the adoption of alternative data sources. Digital financial transactions, mobile payment records, online business transactions and behavioural factors offer further insights beyond traditional

banking information to enable credit assessment. Berg et al. (2020) showed that digital footprints can be used to gain valuable predictive information for credit assessment, especially for those who have a short credit history. These are very applicable to young entrepreneurs, as there are many young businesses that have not yet formalised and have only digital records of transactions on financial technologies and online platforms. Thus, AI-based credit evaluation has been seen as a possible solution to mitigate the information asymmetry and expand financial inclusion.

But, the use of AI in credit decision-making has also raised concerns about fairness, transparency, and accountability. Financial decisions impact on the economic opportunities of individuals, so algorithmic systems need to be assessed not just for predictive accuracy. While AI models can help to minimize human variability in some aspects, they can also perpetuate social and economic disparities if trained on biased historical data. Barocas and Selbst (2016) further contended that even if sensitive information is not used in a data-driven decision system, the system can still result in discriminatory outcomes if the indirect information used is a proxy for social disadvantage. In credit markets, this algorithmic bias could have adverse consequences for those who have traditionally been excluded from markets. Hence, it is important to keep fairness principles and measures to avoid discriminatory outcomes in mind when adopting AI.

Another significant hurdle in AI credit scoring is transparency and explainability. Many advanced machine learning models are complex systems that are hard to interpret as to why and how decisions are made. In financial situations, borrowers' lack of knowledge about the credit decision-making process can lead to a lack of trust and less accountability. Rudin (2019) pointed out that high-stakes decision making systems should focus on interpretable approaches to decision making and not just on opaque predictive models. In this context, Arrieta et al. (2020) pointed out that explainable artificial intelligence (XAI) is an integral part of responsible development of AI, especially in areas where AI decisions have a direct impact on people's lives. Transparency in AI-driven lending decisions is thus tightly coupled to notions of fairness and legitimacy for young entrepreneurs who are looking for finance.

As part of the discussion on inclusive finance, the link between AI-based credit scoring and financial justice has grown in importance in recent times. Financial justice is not just about access to financial services, but about whether people are given equal opportunities, treated fairly and decision-making is transparent. In this context, an effective credit system should not only be able to identify the financially reliable borrowers, but also the assessment mechanism should not make new forms of exclusion. The literature on algorithmic fairness indicates that only technical measures of performance are not sufficient to ensure fairness, but also social context, user experiences and institutional accountability play a role (Mehrabi et al., 2021). Therefore, it is crucial to have an understanding of entrepreneurs' perceptions of AI-based financial decisions in determining the impact of AI technologies on equitable financial systems.

The problem is especially pertinent in the new entrepreneurial contexts like Dhaka City. Dhaka is the commercial and technological hub of Bangladesh and has seen a tremendous increase in startups, small businesses and digital businesses, especially among the younger entrepreneurs. Many young entrepreneurs still find it difficult to secure formal financing despite the growing number of entrepreneurial activities, because of the lack of collateral, inadequate banking relationships and poor credit histories. While digital financial services and fintech innovations have helped to broaden the scope of alternative financial assessment, the potential of AI-powered credit scoring to overcome these challenges is still unclear. In addition, the introduction of technology is not enough to ensure financial justice if the entrepreneurs do not feel that these systems are accessible, comprehensible and equitable.

The technical aspects of AI-based credit scoring have been extensively studied in the literature, focusing on the accuracy of the models, predictive power, and risk classification. But there is relatively little work that has examined the experience, perceptions and concerns of those directly impacted by AI-driven lending decisions. This is particularly true for young entrepreneurs' views, which are under researched in the context of the simultaneous processes of financial exclusion and digital transformation in developing urban areas. These views are crucial to consider as the implementation of AI-driven credit systems relies on trust, fairness perceptions, and social acceptance among users.

To fill this research gap, this study aims to understand the perception of young entrepreneurs in Dhaka City about AI-based credit scoring systems and its impact on financial justice. This study takes a qualitative approach to explore the experiences of entrepreneurs with the current credit assessment systems, their perceptions of potential opportunities and challenges related to AI-based credit scoring, and their perspectives on fairness, transparency, and potential risks of automated financial decision-making. The present study adds to the literature on responsible AI and financial inclusion in highlighting the human and ethical aspects of AI-based credit assessment.

III. METHODOLOGY

The study used a qualitative research approach to understand the impact of AI-powered credit scoring systems on financial access and perceptions of financial justice for young entrepreneurs in Dhaka City. Given the study's focus on participants' experiences, perceptions, and concerns about AI-based credit assessment, fairness, transparency, and algorithmic decision-making, a qualitative design was deemed suitable. The study adopted an interpretivist approach to understand the meaning that people make about financial inclusion and responsible adoption of AI in their social and economic environment.

The data were obtained by using semi-structured interview with 12 participant's selected by purposive sampling. Young entrepreneurs, online business owners, bank officers and financial experts with relevant knowledge and experience in the field of entrepreneurial finance, credit accessibility and digital credit assessment were the participants. Participants with diverse backgrounds allowed for a multi-faceted view on AI credit scoring, financial inclusion, fairness, transparency, and responsible use of AI.

Thematic analysis was used to analyze the collected qualitative data with the help of NVivo software. The analysis was done through systematic coding of the interview responses, identification of recurring patterns, categorization of related concepts and development of key themes and sub-themes. The NVivo-supported analysis facilitated the data to be organized and interpreted in a structured manner, ensuring transparency in the coding and theme development process. The final analysis revealed six main themes: barriers to access to finance, opportunities of AI digital credit scoring, risks and ethical concerns, human-AI decision making, financial justice and transparency, and recommendations for inclusive finance.

The ethical principles have been adhered to during the research process. The participants were told the aim of the study, that participation was voluntary and that their answers would be kept confidential. All information was used for academic purposes only and the identities of the participants were safeguarded during analysis and reporting. The study was conducted in a systematic manner and the coding and thematic development process was grounded in the participants' responses to ensure the quality of the research, following the principles of qualitative trustworthiness.

IV. RESULTS

This section regarding the results has been prepared based on the data obtained from the interviews. It employs a thematic coding approach using NVivo, organizing recurring concepts into parent themes and sub-themes based on relevant information provided by the participants.

Table 1. Participant and Data Overview

Item	Description
Interview responses analyzed	12
Analysis approach	NVivo-informed thematic coding
Unit of analysis	Individual participant responses

Table 2. NVivo-Informed Coding Frequency Summary

The frequency values below indicate the number of responses providing evidence for each theme, based on the manual thematic coding of the answers submitted by the participants.

Theme/Node	Participants coded	Cases	Percentage
Barriers to accessing finance	Based on coding	12	
AI digital credit scoring opportunities	Based on coding	12	
Algorithmic & ethical risks	Based on coding	12	
Human AI decision-making	Based on coding	12	
Financial justice and	Based on coding	12	

transparency			
Recommendations for inclusive finance	Based on coding	12	

Table 3. Theme Development Framework

Initial codes	Categories	Final themes
Collateral, credit history, documentation processing difficulty	Traditional lending constraints	Barriers to finance
Digital transactions, alternative data ,online sales	Expanded credit evidence	AI opportunities
Bias, privacy, transparency concerns, , inaccurate data	Algorithmic governance	Ethical risks
Human judgment, appeal rights, context	Decision safeguards	Human AI decision making
Fairness, accountability, explanations	Procedural justice	Financial justice
Simplified procedures, flexible finance education,	Institutional support	Inclusive finance

Participant Quotations (P01-P12)

P02: No. An established business owner easily get loan while a starter can't

P03: Yes, I applied financial support for my fashion brand Ibahat lifestyle.

P04: Not required yet, in other words i hadn't any big opportunity in last two years. Now finally the time arrived. We are getting a big project soon inshaallah in that case we need big amount of financial investment with a very short notice period!

P05: I need loan but I don't know which bank will provide me

P06: I have not yet applied for a loan or business financing. However, I am interested in applying if needed in the future.

P07: Privacy concerns, data security risks, algorithmic bias, lack of transparency, and unfair discrimination may arise from AI-driven credit scoring.

P08: While established businesses still have advantage

P09: I have been running my grocery shop for about four years. It is a small retail business in my local area. I sell daily household and grocery products to local customers.

P10: I have been running an online clothing business for about two and a half years. I sell clothes through Facebook and other online platforms.

P11: I have been operating my small manufacturing business for about six years. We produce and sell household products to local customers and retailers.

P12: I have been running a small restaurant and food delivery business for around three years. We serve local customers and also receive online orders.

Results Interpretation

The analysis reveals that participants view AI-driven credit scoring systems as a potential means to expand access to finance through the use of alternative data and rapid assessment. However, they also raised concerns regarding fairness, transparency, data quality, privacy, and the risk of exclusion from services. Thus, financial justice extends beyond mere access to credit; it requires that lending decisions be explainable and accountable, and that there be opportunities to contest or challenge them.

V. DISCUSSION

This study aimed to explore young entrepreneurs' perceptions of AI-powered credit scoring systems and their impact on financial justice in Dhaka City. The results show that AI-credit scoring is not only a technological innovation but also a socio-technical phenomenon. The participants acknowledged the potential of AI-driven assessment for enhancing access to finance through alternative data and faster decision-making, but they also raised concerns about the fairness, transparency, accountability, and the need for human judgment in AI-driven assessments. These results add to the existing literature on responsible AI in financial services, highlighting that the usefulness of AI credit scoring is not only about its predictive power, but also about how the systems are perceived by the affected users, in terms of fairness, understandability and inclusiveness.

One of the key findings of this study is that young entrepreneurs still face challenges when applying for credit in traditional credit assessment processes, including the need for collateral, lack of credit history, lack of financial records and the complexity of the process. The study's results corroborate existing literature that indicates that traditional credit scoring models may be ineffective for people or businesses with limited credit history or documentation (Hand & Henley, 1997; Thomas et al., 2017). Traditional financial metrics might not always be a good reflection of the ability or future growth of a young business, especially those that are early-stage or digital. Hence, the results confirm the earlier arguments for broadening the scope of credit assessment beyond the traditional financial information, to lessen information asymmetry and enhance access to entrepreneurial finance.

The study also reveals that the respondents believe that the AI-based credit scoring can be a solution to some drawbacks of traditional lending. In particular, the respondents emphasized the need of alternative data sources such as digital transactions, online business activities, and other types of financial traces. The findings align with previous studies that indicated that digital footprints could be useful to determine creditworthiness, especially for people with low traditional credit scores (Berg et al., 2020). Moreover, earlier research has shown that machine learning credit scoring models can yield better prediction results than traditional statistical models (Lessmann et al., 2015; Fuster et al., 2022). This study, however, adds to the current literature by demonstrating that entrepreneurs' assessment of AI systems is not solely based on technical efficiency but also on their ability to provide fair opportunities.

While acknowledging the inclusive potential of artificial intelligence (AI), participants expressed concern about the risk of new forms of exclusion or marginalization resulting from automated credit decisions. This finding corroborates previous research on algorithmic fairness, which indicates that algorithmic systems can perpetuate social inequalities if they are trained on historical patterns that reflect existing inequalities (Barocas & Selbst, 2016). The application of alternative data could lead to a paradox in entrepreneurial finance: as digital data can assist the "banking-challenged," it could also disadvantage entrepreneurs with less digital data. The results indicate that the data available and its interpretation, as well as algorithmic decision-making, must be carefully considered when applying AI to financial inclusion.

Another key finding of this study is the issue of transparency and explainability of AI-driven lending decisions. Participants considered it important to have understandable explanations for decisions of approval or rejection for financial fairness. This discovery confirms earlier studies which highlighted the need for interpretable and accountable decision-making processes with high impact AI systems (Rudin, 2019). Likewise, in the field of explainable AI, research emphasizes the importance of transparency as a key element in building trust and ensuring the responsible use of AI technologies (Arrieta et al., 2020). In financial services, where the consequences of credit decisions have a direct impact on people's economic opportunities, the lack of understanding or the ability to contest the automated outcome may have a negative impact on perceptions of legitimacy and fairness.

The results also underline the ongoing need for human involvement in credit assessment using AI. Overall, there was no resistance to the adoption of AI; rather, a preference for a hybrid approach to decision making with AI augmenting human decision making. The argument is based on the view that entrepreneurial credit evaluation is a process that may not be completely reflected by algorithmic indicators. Human interpretation may be necessary due to business conditions, personal capabilities, market conditions and exceptional situations. In this regard, this study offers a perspective toward a responsible AI debate that human supervision is not a constraint of automation but rather a key governance tool for high-risk financial decision-making.

This study extends the ongoing debate on financial justice by showing that the concept of fairness in the context of AI credit scoring is not limited to access to finance. Participants linked financial justice to equal opportunity, clearly communicated evaluation criteria, clear decisions and accountability. This discovery aligns with the larger understanding of the importance of social context and institutional responsibility in algorithmic fairness (Mehrabian et al., 2021). As a result, AI-powered credit systems must be assessed not just for their predictive power in determining repayment risks, but also for their role in fostering fair and transparent financial interactions. This study theoretically adds to the literature on responsible AI and financial inclusion by suggesting a socio-technical understanding of AI credit scoring. It has been found that technological capability, availability of alternative data and predictive accuracy are not enough to attain financial justice. Rather, inclusive AI-based lending should involve the use of proper data practices, transparent algorithms, human supervision, and avenues for individuals to challenge or rectify decisions. From a practical perspective, the results offer valuable insights for banks, fintech firms, and regulators. For financial institutions implementing AI credit scoring systems, it is crucial to establish clear and transparent credit scoring procedures, implement responsible data management practices, and provide human oversight for complex credit decisions. Fintech providers also need to take into account the digital lives of young entrepreneurs and not develop systems that inadvertently bar people with less digital credit histories. Policymakers can foster inclusive entrepreneurial finance by promoting responsible AI standards, consumer protection measures, and transparency in AI-driven financial decision-making.

In conclusion, while AI credit scoring shows promise in enhancing financial access for young entrepreneurs, its role in achieving financial justice is contingent on the design, governance, and user experience of these models. Technological innovation alone is not sufficient for AI to be a vehicle for more inclusive finance, it must also be fair, transparent, accountable, and have a human element to decision-making.

5.1 Theoretical Contribution

This study adds to the growing body of literature on responsible artificial intelligence and financial inclusion, which goes beyond technical performance and predictive accuracy of AI-driven credit scoring. This study emphasizes the social and ethical aspects of AI lending platforms from the young entrepreneur's point of view, which have been under-researched so far. The results show that financial justice in AI-powered credit systems requires transparency, explainability, accountability and human oversight in addition to access to finance. This study brings together AI governance and financial justice lenses to offer a socio-technical perspective on the potential of AI credit scoring to foster financial justice.

5.2 Practical Implications

The findings offer valuable insights for banks, fintech firms, and policymakers. In the context of financial institutions implementing AI-based credit scoring, it is essential to integrate alternative data sources and maintain responsible data practices, transparency, and explainable decision-making. Human review processes can be used to overcome context issues that automated processes may fail to account for. Policymakers should foster responsible AI policies that ensure equitable and responsible access to financial services, including for young and emerging entrepreneurs.

5.3 Limitations and Future Research

There are a number of limitations in this study. First, the qualitative design and the context-specific nature of the study and the focus on young entrepreneurs in Dhaka City means that the results are not generalizable to other groups and areas. Second, the study is about perceptions and experiences and not actual AI credit scoring results. Future studies might use mixed-methods, larger sample sizes, and comparative studies in different contexts to explore the impact of AI-based credit scoring on financial inclusion and fairness in practice.

VI. CONCLUSION

The study aimed to understand the connection between AI-based credit scoring and financial justice for young entrepreneurs in Dhaka City by delving into their experiences, perceptions, and concerns about AI-based credit assessment systems. The results indicate that traditional credit evaluation systems still pose problems to young entrepreneurs because they need collateral, their credit history is limited, and the documentation process is difficult; however, AI credit scoring could be a solution to make credit more accessible by using alternative data sources and digital information about the business.

But, this research emphasizes that AI's role in financial inclusion is not guaranteed. While participants acknowledged the potential advantages of AI-driven credit assessment, such as speed and more comprehensive evaluation, they also pointed out potential concerns about algorithmic bias, data inaccuracies, privacy issues, lack of transparency, and potential exclusion of entrepreneurs with low digital footprints. These findings suggest that technological progress will not be sufficient to guarantee financial justice without responsible governance systems to develop and implement AI systems.

Financial justice is a multidimensional concept identified as a key contribution of this research, especially in the context of AI-powered lending. Participants linked financial justice to credit access, as well as transparent decision making, explain ability, accountability and challenge unfair outcomes. Hence, there is a need for a balance between the technological efficiency and human-centric decision making in the credit assessment process using AI.

The study adds to the growing body of literature on responsible AI and financial inclusion by offering empirical insights from the young entrepreneurs' point of view in a developing urban context. This study differs from earlier research on AI credit models, which mainly concentrates on the predictive capabilities of AI models, by emphasizing the social and ethical aspects of AI adoption in the financial sector. The results indicate that AI-based credit scoring systems should be used as a tool to aid in decision making and not as a replacement for human decision making. In practical terms, financial institutions and fintech service providers should prioritize transparent AI governance frameworks, responsible data practices, rational explanations for credit-related decisions, and appropriate human oversight mechanisms. Policymakers should also incentivize policies that foster equitable, transparent and accessible access to digital financial services for start-ups. This study has a number of limitations. The qualitative design and context-specific sample from Dhaka City restricts the generalization of the findings to other entrepreneurial population or geographical context. Future studies could build upon this research by conducting more comprehensive mixed-methods analyses, comparing results across regions, and testing AI credit scoring models against actual lending results.

To conclude, AI-powered credit scoring holds great promise for revolutionizing entrepreneurial finance, by leveraging a broader spectrum of data to make credit decisions. However, whether these systems are transparent, accountable, inclusive and human values-oriented, is the key to its promotion of financial justice. The key to equitable financial opportunities for young entrepreneurs is not just the adoption of technology but the responsible integration of AI.

REFERENCES

- [1].Arrieta, A. B., Díaz-Rodríguez, N., Del Ser, J., Bennetot, A., Tabik, S., Barbado, A., García, S., Gil-López, S., Molina, D., Benjamins, R., Chatila, R., & Herrera, F. (2020). Explainable Artificial Intelligence (XAI): Concepts, taxonomies, opportunities and challenges toward responsible AI. *Information Fusion*, 58, 82–115. <https://doi.org/10.1016/j.inffus.2019.12.012>
- [2].Barocas, S., & Selbst, A. D. (2016). Big data's disparate impact. *California Law Review*, 104(3), 671–732. <https://doi.org/10.15779/Z38BG31>
- [3].Berg, T., Burg, V., Gombović, A., & Puri, M. (2020). On the rise of fintechs: Credit scoring using digital footprints. *The Review of Financial Studies*, 33(7), 2845–2897. <https://doi.org/10.1093/rfs/hhz099>
- [4].Fuster, A., Goldsmith-Pinkham, P., Ramadorai, T., & Walther, A. (2022). Predictably unequal? The effects of machine learning on credit markets. *The Journal of Finance*, 77(1), 5–47. <https://doi.org/10.1111/jofi.13090>
- [5].Hand, D. J., & Henley, W. E. (1997). Statistical classification methods in consumer credit scoring: A review. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 160(3), 523–541. <https://doi.org/10.1111/1467-985X.00078>
- [6].Lessmann, S., Baesens, B., Seow, H. V., & Thomas, L. C. (2015). Benchmarking state-of-the-art classification algorithms for credit scoring: An update of research. *European Journal of Operational Research*, 247(1), 124–136. <https://doi.org/10.1016/j.ejor.2015.05.030>
- [7].Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021). A survey on bias and fairness in machine learning. *ACM Computing Surveys*, 54(6), Article 115. <https://doi.org/10.1145/3457607>
- [8].Rudin, C. (2019). Stop explaining black box machine learning models for high stakes decisions and use interpretable models instead. *Nature Machine Intelligence*, 1(5), 206–215. <https://doi.org/10.1038/s42256-019-0048-x>
- [9].Thomas, L. C., Crook, J. N., & Edelman, D. B. (2017). *Credit scoring and its applications* (2nd ed.). Society for Industrial and Applied Mathematics