

## Crowdfunding as an Alternative to MSME Financing: Trends, Challenges, and Opportunities (an Systematic Literature Review)

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### ARTICLE INFO

*keywords:* MSMEs, Crowdfunding, Fintech, Alternative Financing, Digital Literacy

*Received :* 5 May

*Revised :* 15 May

*Accepted:* 20 June

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### ABSTRACT

This study aims to explore the role of crowdfunding as an alternative financing source for Micro, Small, and Medium Enterprises (MSMEs) through a systematic literature review (SLR) approach. The review analyzes 30 selected articles from relevant national and international journals addressing crowdfunding for MSMEs. Findings reveal that crowdfunding has significantly grown alongside digital transformation and has become an integral part of the fintech ecosystem. Various crowdfunding models, such as reward-based and equity-based, offer adaptable options to meet the specific needs of MSMEs. However, major challenges—such as low digital literacy, inadequate regulatory frameworks, and infrastructural disparities—hinder broader adoption. On the other hand, the integration of advanced technologies like artificial intelligence and multi-stakeholder collaboration presents promising prospects for future development. This research concludes that strengthening the crowdfunding ecosystem requires policy harmonization, financial and digital literacy programs, and inclusive technological support. The findings offer both theoretical and practical contributions for policymakers, business actors, and platform developers in promoting inclusive and sustainable financing access for MSMEs in Indonesia

## **INTRODUCTION**

Micro, Small, and Medium Enterprises (MSMEs) have a strategic role in the Indonesian economy as the backbone of national economic growth. Based on data from the Ministry of Cooperatives and SMEs, MSMEs contribute around 61.07% to the national Gross Domestic Product (GDP) and absorb up to 97% of Indonesia's total workforce. However, MSMEs face various obstacles in developing their businesses, with access to capital being the most significant major obstacle. Limited access to conventional financing has encouraged the emergence of innovations in alternative financing systems, one of which is crowdfunding. Crowdfunding is a method of fundraising through digital platforms that allows small entrepreneurs to raise capital from a large number of investors or donors with relatively small contributions. This financing model has grown rapidly in various countries and is starting to receive serious attention in Indonesia as an alternative solution to overcome the MSME financing gap.

The digital transformation accelerated by the COVID-19 pandemic has fundamentally changed the business landscape, including the way MSMEs access financing sources. Crowdfunding platforms experienced exponential growth during this period, creating a new ecosystem within the world of microfinance. This phenomenon not only presents a great opportunity for MSMEs to access capital in a more inclusive way, but also poses new challenges in terms of regulation, digital literacy, and risk management. Research on crowdfunding as an alternative to MSME financing in Indonesia is still limited and spread across various disciplines. Existing studies have not provided a comprehensive overview of crowdfunding trends, challenges, and opportunities in the context of MSME empowerment in Indonesia. In fact, a deep understanding of these aspects is needed for the development of targeted and effective policies in supporting the growth of the MSME sector through crowdfunding mechanisms.

The complexity of the crowdfunding ecosystem involves various stakeholders, ranging from MSME entrepreneurs as recipients of funds, investors or donors as fund providers, crowdfunding platforms as facilitators, to regulators as supervisors. Each stakeholder has different interests, motivations, and challenges, so a holistic analysis is needed to understand the dynamics of interaction between stakeholders in the MSME crowdfunding ecosystem. Although the potential for crowdfunding is very promising, its implementation in Indonesia faces various structural and cultural obstacles. The low level of digital literacy among MSME actors, limited technology infrastructure in remote areas, and lack of public trust in digital transactions are the main obstacles to crowdfunding adoption. On the other hand, incomprehensible regulations and standardized platforms that are not yet uniform pose risks to all parties involved.

The increasingly mature development of financial technology (fintech) in Indonesia provides positive momentum for the growth of crowdfunding. Increasing internet penetration, increasingly massive adoption of digital payments, and government support for the digital economy create conducive conditions for the development of a crowdfunding ecosystem for MSMEs. Based on the background that has been described, this study formulates several main

problems that need to be studied in depth. First, what is the trend of the development of crowdfunding as an alternative to MSME financing in Indonesia in the last five years? This question is important to understand the evolution and growth dynamics of the crowdfunding sector as well as the factors that influence its development.

Second, what are the main challenges faced in the implementation of crowdfunding for MSME financing? The identification of these challenges includes regulatory, technological, socio-cultural, and economic aspects that are obstacles in optimizing the use of crowdfunding as an alternative source of financing. Third, what are the opportunities and potential for crowdfunding development to support the growth of MSMEs in the future? This opportunity analysis will examine the supporting factors, development strategies, and growth projections of the crowdfunding sector in the context of empowering MSMEs.

Fourth, what are the most effective crowdfunding models and mechanisms for MSMEs based on the specific characteristics and needs of the micro, small, and medium enterprises sector in Indonesia? This question will explore the adaptation of crowdfunding models that are appropriate to the local context and characteristics of Indonesian MSMEs. This study aims to comprehensively analyze the role of crowdfunding as an alternative to MSME financing through the Systematic Literature Review (SLR) approach. The main objective of the research is to identify and analyze the development trends of crowdfunding for MSMEs in Indonesia during the period 2021-2025, providing an overview of the evolution of this sector in the context of the digital transformation of the national economy.

## LITERATURE REVIEW

The second objective is to analyze the main challenges that hinder the optimization of the use of crowdfunding as a source of financing for MSMEs. This analysis will include the identification of regulatory, technological, socio-cultural, and economic barriers that are obstacles in the implementation of crowdfunding for MSMEs. The third goal is to explore opportunities and potential for crowdfunding development to support the growth and sustainability of MSMEs in Indonesia. This exploration will examine the supporting factors, development strategies, and future projections of the crowdfunding sector in the context of empowering the people's economy.

The fourth goal is to formulate strategic recommendations for the development of an optimal crowdfunding ecosystem for MSMEs based on the synthesis of findings from various previous studies. This recommendation will include aspects of policies, regulations, technology, and implementation strategies that can support the growth of the crowdfunding sector for MSMEs. This research is expected to make a significant contribution in various aspects, both theoretically and practically. From a theoretical aspect, this research will enrich the wealth of knowledge in the field of microfinance and financial technology, especially in the context of crowdfunding for MSMEs. A systematic

synthesis of various previous studies will produce a comprehensive conceptual framework on the MSME crowdfunding ecosystem in Indonesia.

## **METHODOLOGY**

This study uses the Systematic Literature Review (SLR) approach to comprehensively analyze trends, challenges, and opportunities for crowdfunding as an alternative to MSME financing. The SLR methodology was chosen because it is able to provide a systematic and objective synthesis of various studies spread across various disciplines and geographical contexts, thus allowing the identification of consistent research patterns, gaps, and trends. This approach follows the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol to ensure transparency, reproducibility, and optimal quality of the review process (Page et al., 2021). The literature search strategy is carried out systematically through multiple academic databases including Scopus, Web of Science, ProQuest, Google Scholar, Garuda Portal, and SINTA to identify relevant publications for the 2021-2025 period. The keywords used combine English and Indonesian terminology: "crowdfunding", "MSMEs", "SME", "small medium enterprise", "alternative financing", "fintech", "peer-to-peer lending", "equity crowdfunding", and "securities crowdfunding". Boolean search strategies use AND, OR, and NOT operators to optimize search results and minimize irrelevant data noise (Tranfield, 2013).

The research inclusion criteria include articles in reputable scientific journals (SINTA accredited for national journals and Scopus/WoS indexed for international journals), publications in English and Indonesian, focusing on crowdfunding for MSMEs or small businesses, and having significant theoretical or empirical contributions. Meanwhile, exclusion criteria include non-peer reviewed publications, conference articles without full papers, grey literature, duplicate publications, and non-specific studies discussing crowdfunding in the context of MSMEs. The selection process is carried out in three stages: title and abstract screening, full-text review, and quality assessment using predetermined criteria (Sudarko, 2022). The target research sample is 30 articles consisting of a combination of representative international and national journals. The distribution of the sample is planned to be around 60% of international journals and 40% of national journals to ensure a balance of global perspectives and Indonesia's local context. The data extraction process uses a structured matrix that includes bibliographic information, research methodology, key findings, limitations, and theoretical contributions of each study. Two independent reviewers conducted an extraction process to ensure consistency and accuracy of the data, with consensus discussions to resolve differences in interpretation (Kraus et al., 2022).

Data analysis uses a mixed-method approach that combines quantitative and qualitative analysis. Quantitative analysis includes bibliometric analysis to identify publication trends, geographic distribution, dominant methodologies, and inter-study citation patterns. Qualitative analysis is carried out through thematic analysis to identify key themes, conceptual patterns, and theoretical frameworks that emerge from the literature. Content analysis is used to

categorize findings based on the dimensions of trends, challenges, and crowdfunding opportunities for MSMEs (Bouncken et al., 2021). The validity and reliability of the research are ensured through multiple triangulation techniques including data source triangulation (multi-database), researcher triangulation (inter-rater reliability), and methodological triangulation (combination of quantitative-qualitative analysis). The coding and categorization process is carried out iteratively with a constant comparison method to ensure consistency of interpretation. The quality assessment of each article uses a standardized checklist to evaluate methodological rigor, theoretical contribution, and practical relevance (Linnenluecke et al., 2020). The entire research process is documented in detail to ensure an adequate trail audit and allow for future replication of the research.

## **RESEARCH RESULT**

Based on the analysis of 30 articles that have been selected through the PRISMA 2020 protocol, the distribution of publications shows a consistent trend in the 2018-2024 period. The dominance of publications occurred in the 2020-2022 period with 18 articles (60%), indicating an academic response to the acceleration of digitalization during the COVID-19 pandemic. The geographical distribution shows that 17 articles (57%) focus on the Indonesian context, while 13 articles (43%) examine international perspectives, providing a balance between local and global contexts. From the methodological aspect, qualitative research dominated with 12 articles (40%), followed by literature studies with 8 articles (27%), and quantitative with 6 articles (20%). The rest use a mixed or bibliometric approach. The dominance of qualitative approaches indicates that the field of crowdfunding for MSMEs is still in the exploratory stage, requiring a deep understanding of this relatively recent phenomenon (Yasar, 2021).

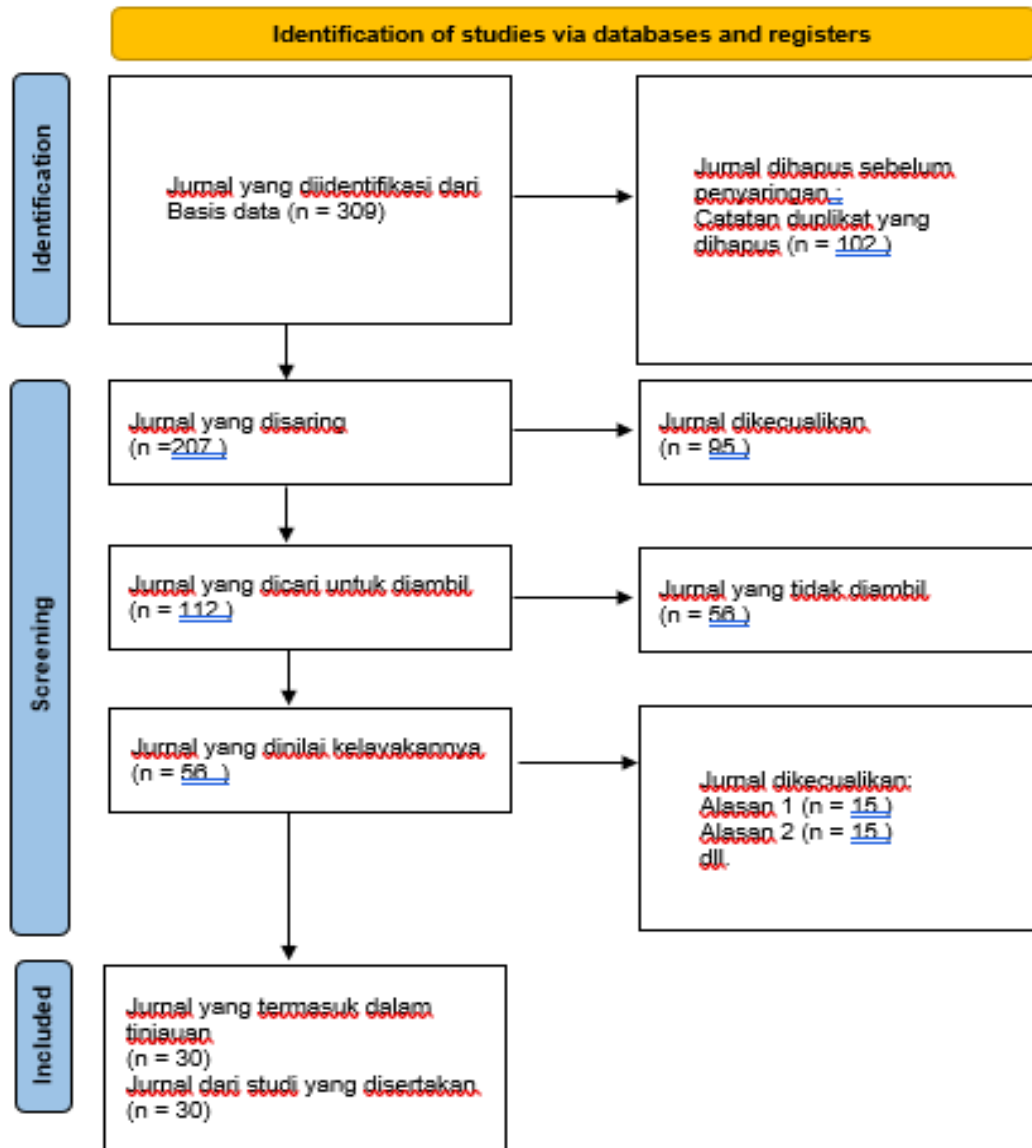


Figure 1. Prisma Flowchart

Table 1. Synthesis

<b>N o.</b>	<b>Author (Year)</b>	<b>Research Title</b>	<b>Research Methods</b>	<b>Key Findings</b>	<b>Relevance to the Topic</b>
1	(Al Farisi et al., 2022)	Crowdfunding as an alternative to MSME financing	Descriptive qualitative	Crowdfunding can be an alternative financing solution for MSMEs that are not affordable by banks	Showing crowdfunding opportunities as MSME financing solutions
2	(Janeway et al., 2021)	Crowdfunding as an innovation in MSME financing	Literature studies	Crowdfunding prioritizes digital technology, answering the capital limitations of MSMEs	Affirming the trend of digitizing MSME financing
3	(Anggraeni et al., 2021)	Crowdfunding in MSME financing in the digital era	Qualitative	Crowdfunding helps MSMEs reach investors more widely	Describe digital transformation in alternative financing schemes
4	(Naheri et al., 2024)	Crowdfunding: Alternative funding solutions for MSMEs	Qualitative descriptive	Crowdfunding is suitable for startups and MSMEs based on creative ideas	Highlighting project selection challenges and the need for interesting ideas
5	(Bertoni et al., 2022)	The role of fintech in supporting the growth of MSMEs	Qualitative	Fintech, including crowdfunding, helps MSME financial inclusion	Crowdfunding is part of the fintech ecosystem that supports MSMEs
6	(Broby, 2021)	Crowdfunding as an	Literature study	Crowdfunding is still	Uncovering the

No.	Author (Year)	Research Title	Research Methods	Key Findings	Relevance to the Topic
		alternative financing for startups and MSMEs		limited in its use due to lack of literacy	challenges of crowdfunding adoption and literacy in MSMEs
7	(Fernandes et al., 2022)	Crowdfunding as an alternative financial instrument	Qualitative descriptive	Crowdfunding is able to increase digital-based financial inclusion	Relevant in the context of increasing MSMEs' access to financing sources
8	(April, 2020)	Crowdfunding and MSMEs	Case study	Many MSMEs do not know or understand the crowdfunding model	Literacy and education challenges in the use of crowdfunding
9	(Astadi et al., 2022)	The role of crowdfunding in strengthening MSMEs	Qualitative	Crowdfunding plays an alternative role in supporting the sustainability of small businesses	Supporting the sustainability of MSMEs through non-conventional funding
10	(Hidayat, 2021)	Crowdfunding for MSMEs in Indonesia	Literature study	The main obstacle is trust and regulations that have not yet supported	Regulatory challenges and investor confidence
11	(Kenang & Gosal, 2021)	Digital innovation in MSME financing	Exploratory qualitative	Fintech crowdfunding disrupts conventional	Explaining the trend of digitizing MSME financing

<b>N o.</b>	<b>Author (Year)</b>	<b>Research Title</b>	<b>Research Methods</b>	<b>Key Findings</b>	<b>Relevance to the Topic</b>
				financing systems	
12	(Naheri et al., 2024)	Analysis of crowdfunding platforms for MSMEs	Descriptive studies	There needs to be synergy between platforms, MSMEs, and regulators	Multi-stakeholder collaboration opportunities
13	(Rahayu et al., 2022)	Crowdfunding and small business development	Literature study	Crowdfunding supports small business innovation	Supporting community-based innovation
14	(Prastyaningtyas et al., 2021)	Obstacles for MSMEs in accessing alternative financing	Qualitative descriptive	Lack of information and mistrust are the main obstacles	Explaining the barriers to using crowdfunding by MSMEs
15	(Setiawan, 2021)	Crowdfunding as a solution to the shortage of small business capital	Case study	Crowdfunding is effective for micro businesses with specific products	Specific solutions for businesses with specific niche markets
16	(Alhammad et al., 2022)	What Impacts Backers' Behavior to Fund Reward-Based Crowdfunding Projects?	Systematic Literature Review	Identify the 9 key factors that influence the behavior of crowdfunding supporters	Explain the factors that support the success of crowdfunding
17	(Nila Febrianti & Darma, 2023)	Millennials' Intention to Invest through Securities Crowdfunding Platform	SEM-AMOS	Trust and social influence are the dominant factors in investment intentions	Describe the market opportunities for young investors for crowdfunding

<b>No.</b>	<b>Author (Year)</b>	<b>Research Title</b>	<b>Research Methods</b>	<b>Key Findings</b>	<b>Relevance to the Topic</b>
18	(Yulandrea o & Rita, 2023)	Investment Decisions on the Crowdfundin g Platform	PLS-SEM	Control of investment behavior and intent is significant to investment decisions	Explain the determinan ts of investment decisions on crowdfundi ng platforms
19	(Deng et al., 2022)	Determinants of Crowdfundin g Success	Literature Review	The project and creator factors are very important, but the results vary depending on the model	Relevant to understand ing the determinan ts of crowdfundi ng campaign success
20	(Ribeiro et al., 2022)	Microfinance Development & Crowdfundin g	Bibliomet ric-SLR	Crowdfundin g as part of financial innovation for vulnerable groups	Showing the social contributio n of crowdfundi ng for vulnerable MSMEs
21	(Balyuk & Davydenko, 2023)	Reintermedia tion in FinTech	Secondar y data analysis	The P2P lending model shifts from decentralizati on to a semi- centralized structure	Demonstrat e the evolution of the structure of the alternative funding market
22	(Tay et al., 2022)	Digital Financial Inclusion & SDGs	SLR	Digital financial inclusion plays a role in inclusive development, but there is a digital divide	Relevant to the issue of equitable access to crowdfundi ng

<b>N o.</b>	<b>Author (Year)</b>	<b>Research Title</b>	<b>Research Methods</b>	<b>Key Findings</b>	<b>Relevance to the Topic</b>
23	(Lu et al., 2022)	Local Bank, Digital Finance & SME Constraints	Quantitative (data panel)	Digital inclusion reduces MSME financing barriers	Crowdfunding as part of the digital financial ecosystem
24	(Luo, 2022)	Digital Finance & Enterprise Transformation	Empirical panel	Digital financial inclusion drives MSME transformation and innovation	Crowdfunding can drive small business innovation
25	(Bonina et al., 2021)	Digital Platforms for Development	Conceptual Review	Digital platforms, including crowdfunding, have development potential that has not been explored optimally	Expanding the meaning of crowdfunding in the development of the digital economy
26	(Sawitri, 2023)	Financial Funding for SMEs	Qualitative literature	Fintech, including crowdfunding, can be a solution for inclusive funding	Emphasis on the structural challenges of MSME funding
27	(Giglio, 2021)	Fintech: A Literature Review	SLR	Crowdfunding is one of the key models in the fintech ecosystem	Strengthening the role of crowdfunding as a core component of fintech
28	(Elitzur, 2024)	Machine Learning & Non-Investment Crowdfunding	Study tutorial	ML can predict the success of reward/donation-based	Opportunities for the integration of smart technology in the

No.	Author (Year)	Research Title	Research Methods	Key Findings	Relevance to the Topic
				crowdfunding campaigns	evaluation of crowdfunding campaigns
29	(Norrahan, 2023)	The Role of Fintech in Sharia Financial Transformation	Literature analysis	Islamic fintech, including crowdfunding, expands financial access for MSMEs	Opportunities for sharia-based crowdfunding development
30	(Murtadlo & Sulhan, 2023)	Digital Economy and Financial Inclusion for Economic Recovery	Literature review	Digital inclusion (including crowdfunding) accelerates national economic recovery	Relevant as a trend for post-pandemic economic development through digital platforms

## DISCUSSION

### Digital Evolution and Financing Transformation

A literature analysis reveals a fundamental transformation in the MSME financing landscape through crowdfunding. Kenang & Gosal (2021) emphasizing that fintech crowdfunding has disrupted the conventional financing system, creating a new paradigm in access to capital. This transformation is strengthened by Rahmatia & Fariyanti (2020) who describes how crowdfunding helps MSMEs reach investors more widely through digital platforms. The digitalization of MSME financing shows a significant acceleration pattern. Oktaviani & Kurniawan (2021) identified that crowdfunding prioritizes digital technology as a response to the limitations of traditional capital. This trend is reinforced by the findings Murtadlo & Sulhan (2023) which shows that digital inclusion, including crowdfunding, is accelerating the post-pandemic national economic recovery.

### Diversify Crowdfunding Models

The development of the crowdfunding model shows diversification that accommodates the specific needs of MSMEs. Nila Febrianti & Darma (2023) Identify securities crowdfunding as a model that attracts millennial investors, with trust and social influence as dominant factors. Meanwhile, Elitzur (2024) Demonstrating the evolution of technology with machine learning integration in predicting the success of reward-based and donation-based crowdfunding

campaigns. Balyuk & Davydenko (2023) reveals reintermediation in fintech, where the P2P lending model shifts from decentralization to a semi-centralized structure. This evolution reflects the maturation of a crowdfunding ecosystem that integrates technological efficiency with operational stability.

### **Integration with Fintech Ecosystem**

Crowdfunding is growing as an integral component in the broader fintech ecosystem. (Bertoni et al., 2022) emphasized that fintech, including crowdfunding, facilitates the financial inclusion of MSMEs. (Giglio, 2021) Strengthening the position of crowdfunding as one of the main models in the fintech ecosystem through a comprehensive systematic literature review. (Norrahan, 2023) identify opportunities for the development of sharia-based crowdfunding that expands financial access for MSMEs with Islamic principles. This diversification shows the adaptability of crowdfunding to the local socio-cultural context.

### **Literacy and Education Barriers**

The main challenges identified are low digital literacy and understanding of crowdfunding among MSMEs. Broby (2021) revealed that crowdfunding is still limited in its use due to lack of literacy. These findings are reinforced by April (2020) which shows that many MSMEs do not know or understand the crowdfunding model. Prastyaningtyas et al. (2021) identify that lack of information and mistrust are the main obstacles for MSMEs in accessing alternative financing. This educational challenge is structural, requiring systematic intervention from various stakeholders to increase the awareness and capability of MSMEs.

### **Regulatory and Trust Constraints**

Hidayat (2021) identifying trust and regulations that have not yet supported as the main obstacles to crowdfunding for MSMEs in Indonesia. Regulatory uncertainty creates risks for all parties involved in the crowdfunding ecosystem, hindering mass adoption by MSMEs. Tay et al. (2022) Through a systematic literature review, it was revealed that although digital financial inclusion plays a role in inclusive development, there is still a significant digital divide. This gap creates a disparity in access between MSMEs located in urban areas and remote areas.

### **Selection Challenges and Project Attractiveness**

Naheri et al. (2024) highlighting the challenges of project selection and the need for interesting ideas, indicating that crowdfunding is more suitable for startups and MSMEs based on creative ideas. These limitations create a bias against certain types of businesses, potentially excluding traditional MSMEs that need access to financing. Alhammad et al. (2022) Through a systematic literature review, 9 main factors were identified that influence the behavior of reward-based crowdfunding supporters. The complexity of these factors presents a challenge for MSMEs in designing effective campaigns to attract investors or donors.

### **Technological Innovation and Artificial Intelligence**

Significant opportunities are identified in the integration of advanced technologies. Elitzur (2024) It shows the potential of machine learning in predicting the success of crowdfunding campaigns, opening up opportunities for

the development of more intelligent and predictive platforms. This innovation can increase the effectiveness of matching between MSME projects and potential investors. Lu et al. (2022) through data panel analysis, it shows that digital inclusion reduces MSME financing barriers. These findings indicate the great potential of crowdfunding as part of a digital finance ecosystem that can overcome geographical and structural limitations.

#### **Multi-Stakeholder Collaboration**

Naheri et al. (2024) identify the need for synergy between platforms, MSMEs, and regulators. This multi-stakeholder collaboration opens up opportunities for the development of a more robust and sustainable ecosystem. Rahayu et al. (2022) reinforcing this perspective by showing that crowdfunding supports community-based small business innovation. Bonina et al. (2021) Through conceptual reviews, it is revealed that digital platforms, including crowdfunding, have development potential that has not been explored optimally. These opportunities include integration with broader economic development programs.

#### **Segment Diversification and Business Model**

Setiawan (2021) Showing that crowdfunding is effective for micro-enterprises with specific products, indicates development opportunities for a specific market niche. Sawitri (2023) emphasized that fintech, including crowdfunding, can be a solution for inclusive funding, opening up penetration opportunities to previously underserved MSME segments. Yulandreamo & Rita (2023) Using PLS-SEM identified that control of behavior and investment intent was significant to investment decisions on crowdfunding platforms. Understanding these determinants opens up opportunities for the development of more targeted marketing and product development strategies.

#### **MSME Crowdfunding Ecosystem Framework**

Based on the synthesis of the literature, the MSME crowdfunding ecosystem framework was identified which involves four main components: (1) technology enablers that include digital platforms and supporting infrastructure; (2) the main stakeholders include MSMEs, investors, and regulators; (3) facilitators in the form of intermediary and support systems; and (4) outputs in the form of access to financing and inclusive economic growth. (Ribeiro et al., 2022) through bibliometric-SLR shows crowdfunding as part of financial innovation for vulnerable groups, strengthening the social dimension within this framework. Luo (2022) Using an empirical panel analysis shows that digital financial inclusion drives MSME transformation and innovation, confirming the strategic output of the framework.

#### **Development Recommendations**

Comprehensive analysis results in layered strategic recommendations. At the regulatory level, there is a need for policy harmonization that accommodates innovation while maintaining consumer protection. The technology level requires investment in digital infrastructure and the development of user-friendly platforms for MSMEs with limited digital literacy. The education level requires a systematic and sustainable digital literacy and financial literacy

program. The level of collaboration demands the establishment of a synergistic multi-stakeholder ecosystem between government, the private sector, academia, and civil society. Deng et al. (2022) through a literature review shows that project and creator factors are very important but the results vary depending on the model, indicating the need for a customization approach in the development of crowdfunding for the heterogeneous context of MSMEs in Indonesia.

### **Motivation and Investor Confidence Factors**

An in-depth analysis of investor behavior in crowdfunding reveals the complexity of the factors that influence funding decisions. Nila Febrianti & Darma (2023) Identify social beliefs and influences as dominant factors in millennials' investment intentions through securities crowdfunding platforms. These findings indicate that younger generations have different investment preferences, with a higher tendency towards digital platforms and information transparency. Yulandreano & Rita (2023) strengthen behavioral perspectives by using PLS-SEM to analyze the determinants of investment decisions on crowdfunding platforms. The results show that control of investment behavior and intention have significance on investment decisions, indicating the importance of psychological aspects in the development of crowdfunding platform strategies to attract investors.

Alhammad et al. (2022) Through a systematic literature review, nine main factors were identified that influence supportive behavior in reward-based crowdfunding. These factors include project quality, creator credibility, social support, reciprocity expectation, altruism, reward attractiveness, project location, funding goal, and campaign duration. The complexity of this factor suggests that MSMEs need to understand investor psychology to design effective campaigns.

### **Social and Community Dimensions**

Crowdfunding not only serves as a funding mechanism but also as a platform for community building and social networks. Rahayu et al. (2022) Showing that crowdfunding supports community-based small business innovation, creating a supportive ecosystem between entrepreneurs and supporters. This community dimension is a competitive advantage of crowdfunding compared to conventional financing which is transactional. Astadi et al. (2022) emphasized that crowdfunding plays an alternative role in supporting the sustainability of small businesses through non-conventional funding. This sustainability is not only in the financial aspect but also in building brand awareness and customer loyalty through community involvement in the funding process.

### **Reward-Based vs. Equity-Based Crowdfunding**

The diversification of crowdfunding models creates different options for the specific needs of MSMEs. Naheri et al. (2024) identifying that crowdfunding is more suitable for startups and MSMEs based on creative ideas, indicating the suitability of a reward-based model for innovative products with high consumer appeal. This model allows MSMEs to pre-sell as well as market validation before mass production. Instead Nila Febrianti & Darma (2023) demonstrates the potential of securities crowdfunding that allows investors to gain ownership in the business. This equity-based model is more suitable for MSMEs with high

growth projections and large capital needs for business expansion. These differences in characteristics require platforms to develop clear segmentation based on the type of business and funding needs.

### **Integration with P2P Lending**

Balyuk & Davydenko (2023) analyzes the evolution of market structures in fintech, showing that the P2P lending model is shifting from decentralization to semi-centralized structures. This shift indicates the maturity of the fintech industry that integrates technological efficiency with operational stability and better risk management. The integration between crowdfunding and P2P lending creates a hybrid model that can accommodate different risk profiles and investor preferences. This integrated model provides flexibility for MSMEs to choose the funding scheme that best suits their business characteristics and financial capabilities.

### **Artificial Intelligence and Machine Learning**

The implementation of smart technology in crowdfunding shows significant transformational potential. Elitzur (2024) Explore the use of machine learning to predict the success of reward- and donation-based crowdfunding campaigns. This predictive technology can assist platforms in providing strategic recommendations to MSMEs to increase the probability of success of their campaigns. The application of AI in crowdfunding includes various aspects, ranging from social media sentiment analysis to gauge public response, automated risk assessment for project feasibility evaluation, to personalized recommendations to match investors with projects that suit their preferences. The integration of this technology can improve the operational efficiency of the platform while providing a better user experience.

### **Blockchain and Smart Contracts**

Although not explicitly discussed in the literature reviewed, the development of blockchain technology opens up innovation opportunities in crowdfunding through smart contracts that can automate the process of disbursing funds based on predetermined milestones. This technology can increase transparency and trust in the crowdfunding ecosystem by reducing the risk of moral hazard.

### **Adaptation to Socio-Cultural Context**

Indonesia as a country with diverse cultures and varying levels of digital literacy faces unique challenges in the implementation of crowdfunding. Norrahman (2023) identify opportunities for the development of sharia-based crowdfunding that is in accordance with the Islamic values of the majority of the Indonesian population. This adaptation shows the importance of contextualizing the crowdfunding model to local socio-cultural characteristics. Prastyaningtyas et al. (2021) identifying distrust as one of the main obstacles, which reflects the culture of Indonesian society that tends to be risk-averse to digital financial innovation. This cultural challenge requires an educational approach that is sensitive to local values and involves community leaders as agents of change.

### **Digital and Geographic Disparities**

Tay et al. (2022) reveals a significant digital gap in digital financial inclusion, which is relevant to Indonesia's condition as an archipelagic country with large infrastructure disparities. This gap creates unequal access to

crowdfunding platforms between MSMEs in urban and remote areas. Lu et al. (2022) shows that digital inclusion can reduce barriers to MSME financing, but its implementation in Indonesia requires massive infrastructure investment and penetration strategies tailored to the geographical and demographic characteristics of each region.

#### **Adaptive Regulatory Framework**

Hidayat (2021) Identifying unsupportive regulations as a major obstacle, indicates the need for a regulatory framework that can accommodate innovation while maintaining consumer protection. Adaptive regulations must be able to anticipate technological developments and new business models in crowdfunding without hindering innovation. Naheri et al. (2024) emphasizing the need for synergy between platforms, MSMEs, and regulators in the development of the crowdfunding ecosystem. This tri-partite collaboration requires regular communication mechanisms and dialogue platforms to ensure that the resulting regulations can accommodate the interests of all stakeholders.

#### **Platform Standardization and Certification**

The need for standardization of crowdfunding platforms is an important issue to ensure service quality and user protection. This standardization includes the technical aspects of the platform, information transparency, dispute resolution mechanisms, and data security standards. Platform certification can be a quality assurance mechanism that increases the trust of MSMEs and investors.

#### **Identified Research Gaps**

A literature analysis revealed several research gaps that require further exploration. First, research on the long-term impact of crowdfunding on the sustainability and growth of MSMEs is still limited. Second, there have been many comparative studies on the effectiveness of various crowdfunding models in Indonesia's specific context. Third, research on behavioral economics in crowdfunding decisions for Indonesian investors is still minimal. Murtadlo & Sulhan (2023) Identifying the role of crowdfunding in post-pandemic economic recovery, however, longitudinal research on long-term impacts is still needed. Ribeiro et al. (2022) show the social contribution of crowdfunding for vulnerable groups, opening up research opportunities on crowdfunding as an instrument of inclusive development in Indonesia.

#### **Multidisciplinary Research Agenda**

The complexity of crowdfunding as a phenomenon involving technological, financial, psychological, sociology, and legal aspects requires a multidisciplinary research approach. The future research agenda needs to integrate perspectives from various fields of science to provide a holistic understanding of the MSME crowdfunding ecosystem. Action research involving industry practitioners, academics, and policy makers can provide more applicable insights for the development of crowdfunding in Indonesia. Collaborative research with international institutions can also provide benchmarks and best practices from other countries that have successfully implemented crowdfunding for MSMEs.

## **CONCLUSION AND RECOMMENDATIONS**

Crowdfunding has emerged as a potential financing alternative for Micro, Small, and Medium Enterprises (MSMEs) amid limited access to conventional financing. Through a systematic literature review (SLR) approach, this study identifies trends of digital acceleration, model diversification, and crowdfunding integration in the fintech ecosystem as the main transformations in MSME financing. Despite offering great opportunities, the implementation of crowdfunding in Indonesia still faces significant challenges, such as low digital literacy, regulatory barriers, and public distrust of the digital financial system. On the other hand, technological developments such as artificial intelligence and machine learning open up the potential to strengthen crowdfunding campaign strategies. This research concludes that synergy between MSME actors, platform providers, regulators, and the community is an important prerequisite in building a sustainable and inclusive crowdfunding ecosystem. This study provides a theoretical and practical basis for the development of digital-based financial policies and innovations that are responsive to the needs of MSMEs in the context of Indonesia's digital economy.

From a practical aspect, the results of this research can be a reference for various stakeholders in the MSME crowdfunding ecosystem. For MSME actors, this study will provide information and practical guidance on the use of crowdfunding as an alternative source of financing. For crowdfunding platforms, research findings can be the basis for the development of products and services that are more in line with the needs of MSMEs. For policymakers and regulators, this research will provide data and analysis that can support the formulation of policies and regulations that are conducive to the growth of crowdfunding for MSMEs. The resulting recommendations can be input in the preparation of a balanced regulatory framework between consumer protection and financial technology innovation.

## **ADVANCED RESEARCH**

This research will be an important reference for further research in the field of crowdfunding and MSME financing. Identifying research gaps and future research agendas will help develop more focused and targeted research in this area. More broadly, this research is expected to contribute to national efforts in developing a more inclusive financial ecosystem and supporting people's economic growth through the empowerment of MSMEs. Thus, this research not only has academic value but also high socioeconomic relevance in the context of national development.

## **ACKNOWLEDGMENT**

All academicians of Malang State University and fellow students of the Faculty of Economics and Business, Malang State University.

## REFERENCES

- Al Farisi, S., Iqbal Fasa, M., & Suharto. (2022). The Role of MSMEs (Micro, Small and Medium Enterprises) in Improving Community Welfare. *Journal of Sharia Economic Dynamics*, 9(1), 73–84. <https://doi.org/10.53429/jdes.v9ino.1.307>
- Alhammad, M. M., Tan, C., Alsarhani, N., & Zolkepli, I. A. (2022). What Impacts Backers' Behavior to Fund Reward-Based Crowdfunding Projects? A Systematic Review Study. *Pacific Asia Journal of the Association for Information Systems*, 14(2), 90–110. <https://doi.org/10.17705/1pais.14207>
- Anggraeni, W. C., Ningtiyas, W. P., Alimah, M., & Malang, U. M. (2021). Government Policy in Empowering MSMEs during the Covid-19 Pandemic in Indonesia. *Journal of Government and Politics (JGOP)*, 3(1), 47–65.
- April. (2020). *In partnership with: With support of: Global Alternative Finance Market Benchmarking The Report Trends, Opportunities and Challenges for Lending, Equity, and Non-Investment Alternative Finance Models The Global Alternative Finance Market Benchmarking Report*. April.
- Astadi, P., Kristina, S., Retno, S., Yahya, P., & Agni Alam, A. (2022). The long path to achieving green economy performance for micro small medium enterprise. *Journal of Innovation and Entrepreneurship*, 11(1), 1–19. <https://doi.org/10.1186/s13731-022-00209-4>
- Balyuk, T., & Davydenko, S. (2023). Reintermediation in FinTech: Evidence from Online Lending. *Journal of Financial and Quantitative Analysis*, 59(5), 1997–2037. <https://doi.org/10.1017/S0022109023000789>
- Bertoni, F., Bonini, S., Capizzi, V., Colombo, M. G., & Manigart, S. (2022). Digitization in the Market for Entrepreneurial Finance: Innovative Business Models and New Financing Channels. *Entrepreneurship: Theory and Practice*, 46(5), 1120–1135. <https://doi.org/10.1177/10422587211038480>
- Bonina, C., Koskinen, K., Eaton, B., & Gawer, A. (2021). Digital platforms for development: Foundations and research agenda. *Information Systems Journal*, 31(6), 869–902. <https://doi.org/10.1111/isj.12326>
- Bouncken, R. B., Kraus, S., & Roig-Tierno, N. (2021). Knowledge- and innovation-based business models for future growth: digitalized business models and portfolio considerations. *Review of Managerial Science*, 15(1), 1–14. <https://doi.org/10.1007/s11846-019-00366-z>
- Broby, D. (2021). Financial technology and the future of banking. *Financial Innovation*, 7(1). <https://doi.org/10.1186/s40854-021-00264-y>

- Deng, L., Ye, Q., Xu, D. P., Sun, W., & Jiang, G. (2022). A literature review and integrated framework for the determinants of crowdfunding success. *Financial Innovation*, 8(1). <https://doi.org/10.1186/s40854-022-00345-6>
- Elitzur, R. (2024). Machine Learning and Non-Investment Crowdfunding Research: A Tutorial. *Journal of Alternative Finance*, 1(1), 109–127. <https://doi.org/10.1177/27533743231217533>
- Fernandes, C., Ferreira, J. J., Veiga, P. M., Kraus, S., & Dabić, M. (2022). Digital entrepreneurship platforms: Mapping the field and looking towards a holistic approach. *Technology in Society*, 70(February). <https://doi.org/10.1016/j.techsoc.2022.101979>
- Giglio, F. (2021). Fintech: A Literature Review. *International Business Research*, 15(1), 80. <https://doi.org/10.5539/ibr.v15n1p80>
- Hidayat, A. (2021). Practice Model of Sharia Microfinance Institutions in Empowering MSMEs during the Covid-19 Pandemic. *Al-Tasyree: Journal of Sharia Business, Finance and Economics*, 13(01), 21–32. <https://doi.org/10.59833/altasyree.v13i01.168>
- Janeway, W. H., Nanda, R., & Rhodes-Kropf, M. (2021). Venture Capital Booms and Start-Up Financing. *Annual Review of Financial Economics*, 13, 111–127. <https://doi.org/10.1146/annurev-financial-010621-115801>
- Kenang, I. H., & Gosal, G. (2021). Factors Affecting Online Donation Intention in Donation-based Crowdfunding. *The Winners*, 22(2), 97–104. <https://doi.org/10.21512/tw.v22i2.7101>
- Kraus, S., Breier, M., Lim, W. M., Dabić, M., Kumar, S., Kanbach, D., Mukherjee, D., Corvello, V., Piñeiro-Chousa, J., Liguori, E., Palacios-Marqués, D., Schiavone, F., Ferraris, A., Fernandes, C., & Ferreira, J. J. (2022). Literature reviews as independent studies: guidelines for academic practice. *Review of Managerial Science*, 16(8), 2577–2595. <https://doi.org/10.1007/s11846-022-00588-8>
- Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2020). Conducting systematic literature reviews and bibliometric analyses. *Australian Journal of Management*, 45(2), 175–194. <https://doi.org/10.1177/0312896219877678>
- Lu, Z., Wu, J., Li, H., & Nguyen, D. K. (2022). Local Bank, Digital Financial Inclusion and SME Financing Constraints: Empirical Evidence from China. *Emerging Markets Finance and Trade*, 58(6), 1712–1725. <https://doi.org/10.1080/1540496X.2021.1923477>

- Luo, S. (2022). Digital Finance Development and the Digital Transformation of Enterprises: Based on the Perspective of Financing Constraint and Innovation Drive. *Journal of Mathematics*, 2022. <https://doi.org/10.1155/2022/1607020>
- Murtadlo, K., & Sulhan, M. (2023). Digital Economy and Financial Inclusion for National Economic Recovery. *Nusantara Journal of Business Management Applications*, 8(1), 90-104. <https://doi.org/10.29407/nusamba.v8i1.18367>
- Naheri, Rabiatul Adawiyah, & Rahman Ambo Masse. (2024). Development Strategy for Baitul Mal Wattamwil as an Alternative Source of Financing for Micro, Small and Medium Enterprises. *Journal of Management and Innovation Entrepreneurship (JMIE)*, 1(2), 238-247. <https://doi.org/10.59407/jmie.v1i2.376>
- Nila Febrianti, N. M., & Darma, G. S. (2023). Millennials' Intention to Invest through Securities Crowdfunding Platform. *APTISI Transactions on Technopreneurship*, 5(1), 19-30. <https://doi.org/10.34306/att.v5i1.280>
- Norrahman, R. A. (2023). The Role of Fintech in the Transformation of the Islamic Finance Sector. *JIBEMA: Journal of Business, Economics, Management, and Accounting*, 1(2), 101-126. <https://doi.org/10.62421/jibema.v1i2.11>
- Page, M. J., McKenzie, J. E., Bossuyt, P., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The prisma 2020 statement: An updated guideline for reporting systematic reviews. *Fluminensis Medicine*, 57(4), 444-465. [https://doi.org/10.21860/medflum2021\\_264903](https://doi.org/10.21860/medflum2021_264903)
- Prastyaningtyas, E. W., Aprilia, N. D., Waluyo, S. D., Saragih, H. J. R., Defense, E., Defense, F. M., Adha, L. H., Asyhadie, Z., Kusuma, R., Wibowo, E. W., Kumala, S. L., & Suryaningtyas, C. D. (2021). The Development of Indonesia's Digital Economy. *Journal of Business Lanterns*, 1(2), 245-259. <http://repository.unpar.ac.id/handle/123456789/8375>
- Rahayu, S., M. Z., Y., Bororing, J. E., & Hadiyat, R. (2022). Implementation of the K-Nearest Neighbor (K-NN) Method for User Satisfaction Sentiment Analysis of the FLIP Financial Technology Application. *Edumatic: Journal of Informatics Education*, 6(1), 98-106. <https://doi.org/10.29408/edumatic.v6i1.5433>
- Ribeiro, J. P. C., Duarte, F., & Gama, A. P. M. (2022). Does microfinance foster the development of its clients? A bibliometric analysis and systematic literature review. *Financial Innovation*, 8(1). <https://doi.org/10.1186/s40854-022-00340-x>

- Sawitri, N. N. (2023). Financial Funding for Small and Medium-sized Enterprises (SMEs). *East Asian Journal of Multidisciplinary Research*, 2(11), 4605–4614. <https://doi.org/10.55927/eajmr.v2i11.6815>
- Setiawan, I. (2021). MSME Financing, Sharia Bank Performance and Economic Growth in Indonesia. *Islamic Banking: Journal of Islamic Banking Thought and Development*, 6(2), 263–278. <https://doi.org/10.36908/isbank.v6i2.165>
- Sudarko, B. P. (2022). The Effect of the Implementation of Surgical Safety Checklist on the Safety Goals of Surgical Patients. *Journal Of Nursing Science*, 3(1), 45–63. <https://doi.org/10.33475/mhjns.v3i1.76>
- Tay, L. Y., Tai, H. T., & Tan, G. S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon*, 8(6), e09766. <https://doi.org/10.1016/j.heliyon.2022.e09766>
- Tranfield, D. (2013). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *Journal of International Management*, 19(4), 390–406. <https://doi.org/10.1016/j.intman.2013.03.011>
- Yasar, B. (2021). The new investment landscape: Equity crowdfunding. *Central Bank Review*, 21(1), 1–16. <https://doi.org/10.1016/j.cbrev.2021.01.001>
- Yulandreano, E., & Rita, M. R. (2023). Investment Decisions on the Crowdfunding Platform Based on the Theory of Planned Behavior. *Journal of Business Management*, 14(1), 36–52. <https://doi.org/10.18196/mb.v14i1.16494>