

Reputation Signaling and Investor Trust: Implications for UMKM Funding Success on Securities Crowdfunding Platforms

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Abstract. The emergence of securities crowdfunding (SCF) represents a crucial alternative funding channel for Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. However, this market is characterized by the fundamental challenge of substantial information asymmetry, which makes it difficult for investors to accurately evaluate the quality and prospects of MSMEs. To overcome this, MSMEs need to project credible signals to foster investor trust, which is a determining factor for fundraising success. This study is designed to empirically investigate the impact of several quality signals—including Business Reputation, ownership of Intellectual Property Rights (IPR), Percentage of Shares Offered, Business Age, and the Number of Directors—on the final funding outcomes of MSMEs on SCF platforms. This research adopts a quantitative methodology, using binary logistic regression analysis on a dataset consisting of 65 MSMEs listed on Indonesian SCF platforms. The dependent variable, funding success, is dichotomously codified (1 for Success, 0 for Failure). Statistical analysis reveals that the regression model collectively has significant predictive power (Chi-square = 13.476; $p = 0.019$) and shows a good fit with the data (Hosmer and Lemeshow test $p = 0.096$). In the partial analysis, IPR ownership was identified as the sole predictor that positively and significantly increases the probability of funding success ($p = 0.019$), with an odds ratio reaching 8.681. The other signals tested did not show a significant statistical influence. IPR ownership serves as the most potent and credible signal in the eyes of investors within the SCF market. The existence of protected intellectual assets dramatically increases the chances for MSMEs to achieve their funding targets. MSMEs intending to seek capital through SCF are advised to prioritize the protection of their intellectual assets and to communicate them effectively as a primary strategy to reduce information asymmetry and build a foundation of investor trust.

Keywords: Securities Crowdfunding, Investor Trust, IPR, Funding, Success, Signaling Theory

1 Introduction

The digital financial revolution has given rise to disruptive innovations, among them securities crowdfunding (SCF), a mechanism that enables startups and MSMEs to raise equity capital from the general public via online platforms [1]. This scheme presents several advantages:

fundraising efficiency, broad market reach, and financial inclusion. In Indonesia, the regulatory framework provided by the Financial Services Authority (OJK) through Regulation No. 10/POJK.04/2022 has legitimized and spurred the growth of this ecosystem [2]. This regulation on Information Technology-Based Public Offerings (Crowdfunding) has provided legal legitimacy and trust in this alternative funding model. It not only protects investors but also opens significant opportunities for MSMEs to grow without relying on conventional banking, which often provides limited access for small-scale entrepreneurs.

Data indicates market enthusiasm, particularly in the culinary sector [3], yet in reality, campaign success rates remain a challenge, with nearly half of all offerings failing to meet their funding targets [4]. Despite the maturing ecosystem and regulations, campaign success rates still show great heterogeneity. Some projects reach their targets quickly, while others stall far below the 100% threshold.

The core problem underlying this uncertainty is information asymmetry, a concept introduced by Akerlof [5]. In the context of SCF, MSME founders (agents) possess in-depth knowledge of their business, while potential investors (principals) must make decisions based on information that is often limited and unverified [6]. This knowledge gap gives rise to economic risks known as *adverse selection*, where low-quality projects might dominate the market, and *moral hazard*, where collected funds are not used as intended [7]. This issue can also deter investor decisions and ultimately lead to the failure of funding campaigns.

To overcome this dilemma, MSMEs must be able to send credible signals about their superior quality. Signaling Theory, as formulated by Spence [8], offers a relevant framework. The theory posits that the better-informed party can undertake observable actions—or send signals—to communicate its hidden qualities. In the SCF arena, signals such as historical reputation, patent ownership, or management team qualifications are designed to build the fundamental pillar of investor trust [9, 10]. It is this trust that ultimately drives the conversion from interest to investment commitment.

This research specifically investigates the effectiveness of five potential signals: reputation, IPR, share offering structure, operational maturity (business age), and human capital capacity (number of directors). The central question to be answered is: "Which signals have the most potent predictive power over the funding success of MSMEs on Indonesia's SCF stage?" By answering this question, this study is expected to provide evidence-based strategic guidance for stakeholders in the SCF ecosystem.

2 Literature Review and Hypothesis Development

2.1 Theoretical Foundations

The analysis in this study is underpinned by an integration of three primary theories that explain the behavior and dynamics of investment decision-making under conditions of uncertainty.

- Signaling Theory, first proposed by Michael Spence (1973) in the context of the labor market, explains how individuals or entities with superior information can send signals to other parties to reduce uncertainty. The framework of Signaling Theory [8] offers a

powerful analytical lens for understanding markets with high information asymmetry, such as SCF. Investors are confronted with uncertainty regarding the true value and potential of MSMEs. To mitigate this doubt, high-quality MSMEs are incentivized to emit signals that are costly or difficult for low-quality competitors to imitate [12]. A credible signal functions as a reliable marker of quality. The success of a signal lies in its ability to convincingly differentiate between good and bad investment opportunities in the eyes of investors [11]. In the context of financing, this theory has been widely applied to explain the behavior of investors and entrepreneurs in equity crowdfunding. The variables in this study are positioned as signals that have the potential to build this credibility.

Signaling theory clarifies how an informed party (the issuer) sends signals to reduce information asymmetry with a less-informed party (the investor). In the SCF context, a reputation built through performance consistency, positive reviews/ratings, third-party recognition, and legally protected IPR meets these criteria. In SCF, investors often lack direct access to a firm's internal information, compelling them to rely on external signals to assess project quality. Strong signals, such as the quality of the campaign narrative, the credibility of the management team, and financial transparency, can enhance trust and attract more investors [13]. Ahlers et al. (2015) found that projects with clear credibility signals, such as professional videos and complete legal documents, have a higher chance of success [13]. In this research, business reputation is considered one of the most potent signals. Reputation reflects experience, reliability, and a commitment to quality, all of which are crucial in reducing investors' perception of risk.

- Resource-Based View (RBV). From the perspective of the Resource-Based View (RBV), a firm's competitive advantage originates from its control over resources that are valuable, rare, inimitable, and non-substitutable (VRIN) [14]. Rational investors do not merely invest in an idea but in the company's ability to sustain an advantage in the market. In the context of MSMEs, these strategic resources are not always physical but also include intangible assets such as intellectual property rights (IPR), reputation, and management structure.

Intangible assets like IPR (e.g., patents or trademarks) are prime examples of VRIN resources, as they provide legal protection and signify innovative capacity [15]. Similarly, a positive reputation is a social asset built over many years and is difficult for new entrants to replicate [11]. Consequently, funding success can be seen as a reflection of investors' perception of the strength of an MSME's internal resources. Likewise, business reputation is a valuable and inimitable strategic asset. A good reputation is not built overnight but is the result of consistent performance, excellent customer service, and long-term operational success [6]. In SCF, reputation functions as social proof, convincing investors that the company is capable of managing funds responsibly.

- Agency Theory. This theory highlights the potential conflicts that arise from the separation of ownership and control [16]. In SCF, thousands of investors delegate control over their capital to the MSME's management, which creates a principal-agent problem. The investors (principals) bear the risk that the management (agents) may not always act in their best interests. To minimize this risk, control mechanisms such as transparency, a solid management structure, and a good reputation are necessary. The number of directors, for instance, can be regarded as an indicator of professionalism and managerial accountability. A complete board structure suggests that the company has an adequate internal oversight system.

However, in the context of culinary MSMEs, which are often family-owned or sole proprietorships, a formal management structure may not be a top priority. Therefore, the role of reputation becomes more critical as a substitute for, or complement to, such formal structures. Signals like a strong board of directors or founder commitment (reflected in the portion of shares retained) can serve as mechanisms to mitigate these agency problems. These signals reassure investors that there is adequate oversight and alignment of interests to protect their investments.

2.2 Hypothesis Development

Based on these theoretical foundations, the following hypotheses are formulated:

- H1 (Business Reputation): Reputation is the collective perception of stakeholders, formed from past interactions and performance [11]. A positive reputation can function as an implicit guarantee of quality, thereby lowering the level of risk perceived by investors. Research in the crowdfunding domain has shown that reputation, both personal and organizational, is positively correlated with campaign outcomes [17]. Therefore, it is hypothesized:
 - H1: Business reputation has a positive and significant effect on the funding success of MSMEs.
- H2 (Intellectual Property Rights): IPR is a formal signal that indicates the presence of defensible innovation and competitive advantage [15]. The complex and costly process of obtaining IPR makes it a highly credible signal, as it is difficult to forge. Studies in the field of venture capital financing have consistently shown that patent ownership increases a startup's likelihood of securing funding [18]. The same logic is assumed to apply in the SCF market.
 - H2: The ownership of IPR has a positive and significant effect on the funding success of MSMEs.
- H3 (Percentage of Shares Offered): From a signaling theory perspective, a founder's decision to retain a large portion of equity can be interpreted as a signal of confidence in the company's prospects [19]. Offering an excessively large percentage of shares to the public could be perceived as a distress signal, indicating that the founders believe the company will not grow rapidly in the future [12].
 - H3: The percentage of shares offered has a negative and significant effect on the funding success of MSMEs.
- H4 (Business Age): The operational maturity of a company is often considered a proxy for stability and experience. An older company has proven its ability to survive the critical initial phase (the *liability of newness*) [20]. A longer operational track record provides more data for investors to evaluate, thus reducing uncertainty.
 - H4: Business age has a positive and significant effect on the funding success of MSMEs.

- H5 (Number of Directors): The size of the board of directors can signal the wealth of a company's human capital and network. A larger board has the potential to bring more diverse expertise and provide a stronger oversight mechanism over management, which can increase investor confidence [20].
 - H5: The number of directors has a positive and significant effect on the funding success of MSMEs.

3. Research Methodology

This study applies a quantitative approach with an explanatory design to validate the formulated hypotheses. This research utilizes a quantitative method to test the causal relationships between variables. The target population includes all MSMEs that have conducted securities offerings through registered SCF platforms in Indonesia. Through a purposive sampling technique, a total of 65 MSMEs were selected as the research sample.

Variables and Measurement:

- Dependent Variable (Y): Funding Success, which is a dichotomous variable measured as: 1 = Funding target achieved or exceeded; 0 = Funding target not achieved.
- Independent Variables (X):
 - X1: Business Reputation (measured through a relevant scale or proxy).
 - X2: IPR (dummy variable: 1 = Has registered IPR; 0 = Does not have).
 - X3: Percentage of Shares (measured as a % of the total shares offered).
 - X4: Business Age (measured in years since establishment).
 - X5: Number of Directors (measured as the count of individuals on the board of directors).

Data Analysis Technique: The data was analyzed using Binary Logistic Regression with the aid of SPSS software. This method was chosen because the dependent variable is categorical (binary). The logistic regression model equation is as follows:

$$\text{Logit}(P(\text{Success}=1)) = \alpha + \beta_1(\text{Reputation}) + \beta_2(\text{Percentage}) + \beta_3(\text{IPR}) + \beta_4(\text{Age}) + \beta_5(\text{Director}) + e$$

Where P is the probability of funding success. The model was evaluated through model fit tests (Omnibus Test and Hosmer and Lemeshow Test) and the coefficient of determination (Nagelkerke R Square), while hypothesis testing was conducted by examining the Wald significance value.

4. Result and Discussion

4.1 Descriptive Analysis & 4.2 Model Fita Evaluation

Out of the 65 MSMEs analyzed, 39 of them (60%) successfully achieved their funding target. The evaluation of the regression model's feasibility showed satisfactory results. The Omnibus Test of Model Coefficients yielded a Chi-square value of 13.476 with a significance of 0.019,

which confirms that the model with all five predictors is significantly better than a model without predictors. The Hosmer and Lemeshow Test provided a significance value of 0.096 (above 0.05), indicating that there is no significant difference between the observed and predicted outcomes, thus the model is considered to have a good fit. The Nagelkerke R Square value of 0.253 implies that approximately 25.3% of the variance in funding success can be explained by the five signaling variables tested.

4.3 Hypothesis Testing and In-dept Discussion

Table 1. Results of Logistic Regression Analysis

Variables in the Equation		B	SE	Wald	df	Sig	Exp(B)
Step 1 ^a	Reputation	,040	,066	,365	1	,546	1,040
	percentage of shares	-,016	,011	2,288	1	,130	,984
	intellectual property rights	2,161	,919	5,532	1	,019	8,681
	business age	-,072	,051	1,959	1	,162	,931
	total directors	-,797	,768	1,078	1	,299	,451
	Constant	1,458	1,044	1,950	1	,163	4,296

a. Variable (s) entered on step 1: Reputation, percentage of shares, intellectual property rights, business age, total directors

4. Discussion

The data analysis reveals a clear pattern: investors in the Indonesian SCF market highly prioritize signals that are concrete and legally verifiable, while other, softer or more ambiguous signals tend to be disregarded.

- H1 (Reputation): Hypothesis 1 is rejected (Sig. = 0.546). This result contrasts with several previous studies [13], [14] that highlight the importance of reputation. The failure of reputation as a significant signal in this context can be explained by several possibilities. First, the MSMEs on the SCF platform may be too new to have built a strong and recognizable reputation among retail investors. Second, investors in the Indonesian SCF market may prioritize 'hard' and measurable signals, such as financial data and verifiable assets, over 'soft' signals like reputation, which is more subjective.
- H2 (IPR): Hypothesis 2 is accepted (Sig. = 0.019), becoming the primary finding of this research. This result is highly consistent with and reinforces the previous literature that identifies intellectual property as a superior signal of quality in the context of financing for technology companies and startups [5], [15], [16], [17]. The odds ratio of 8.681 demonstrates the convincing power of IPR as a signal. Amidst a sea of uncertain information on SCF platforms, IPR serves as an anchor of credibility. It provides concrete and legally verifiable evidence that the MSME possesses protected innovation and the potential for a sustainable competitive advantage.
- H3 (Percentage of Shares): Hypothesis 3 is rejected (Sig. = 0.130). The non-significance of this variable is in line with the ambiguity of ownership signals in the literature [6], [18].

Retail investors may not have the financial sophistication to interpret equity offerings uniformly. Some may view a low offering as a sign of confidence, while others may see it as a reluctance to share profits. This uncertainty of interpretation makes the percentage of shares an ineffective signal.

- H4 (Business Age) & H5 (Number of Directors): Hypothesis 4 (Sig. = 0.162) and Hypothesis 5 (Sig. = 0.299) are both rejected. This finding challenges the conventional view that often associates age and board size with stability and quality [7], [19], [20]. In the innovation- and high-growth-oriented SCF ecosystem, investors may be more attracted to younger and more agile MSMEs, which are perceived to have greater disruptive potential than older, more established firms. Similarly, a large board of directors could be perceived as bureaucratic and slow, which does not align with investor expectations for a dynamic startup.

5. Conclusion and Implications

5.1 Conclusion

This study tested five quality signals from MSMEs and their influence on funding success on securities crowdfunding platforms. The results of the logistic regression analysis on 65 MSMEs show that, collectively, the proposed model is significant in predicting funding success. However, of the five variables tested, only the ownership of Intellectual Property Rights (IPR) was proven to be a positive and significant predictor. MSMEs with IPR have a much higher chance of funding success. Other signals such as reputation, percentage of shares, business age, and number of directors were not found to have a significant influence.

5.2 Research Implications

- Theoretical Implications: This study enriches the Signaling Theory literature by demonstrating a hierarchy in the effectiveness of signals. In alternative financial markets like SCF, *hard signals* (such as IPR) are empirically proven to be superior to *soft signals* (such as reputation) in reducing uncertainty and building trust.
- Practical Implications:
 - For MSMEs: The protection of intellectual assets should be viewed not just as a legal obligation, but as a vital fundraising tool. Prominently featuring IPR certification in offering materials can be a significant differentiator.
 - For Investors: The presence of IPR can be used as one of the primary criteria in the initial screening process to identify investment opportunities with a more solid foundation.
 - For SCF Platforms: Platform organizers can enhance the integrity and trust of the ecosystem by integrating IPR verification features and providing special visual markers for MSMEs that have been verified.

5.3 Limitations and Future Research

This study has several limitations, most notably the moderate sample size, which may affect the generalizability of the results. The research model is also limited to the five predetermined

signals. Future research directions could include: (1) using a larger and longitudinal dataset; (2) adding other signaling variables, such as the educational background and experience of the founding team, social media engagement metrics, and the quality of promotional videos; and (3) employing a mixed-methods approach to understand the "why" behind investor decisions through interviews or surveys.

References

- [1] G. D. Bruton, S. Khavul, D. Siegel, and M. Wright, "New financial alternatives in seeding entrepreneurship: Microfinance, crowdfunding, and peer-to-peer innovations," *Entrepreneurship Theory and Practice*, vol. 39, no. 1, pp. 9–26, 2015.
- [2] Otoritas Jasa Keuangan (OJK), *Peraturan OJK No. 10/POJK.04/2022 tentang Layanan Urun Dana melalui Penawaran Efek Berbasis Teknologi Informasi*, 2022.
- [3] Statista, "Equity Crowdfunding in Indonesia – Statistics & Facts," 2023. [Online]. Available: <https://www.statista.com>
- [4] Otoritas Jasa Keuangan (OJK), "Statistik Fintech Equity Crowdfunding 2023," Jakarta, 2024.
- [5] G. A. Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *The Quarterly Journal of Economics*, vol. 84, no. 3, pp. 488-500, Aug. 1970.
- [6] P. Belleflamme, T. Lambert, and A. Schwienbacher, "Crowdfunding: Tapping the right crowd," *Journal of Business Venturing*, vol. 29, no. 5, pp. 585-609, Sep. 2014.
- [7] A. Agrawal, C. Catalini, and A. Goldfarb, "The Geography of Crowdfunding," *NBER Working Paper*, no. 16820, 2011.
- [8] A. M. Spence, "Job Market Signaling," *The Quarterly Journal of Economics*, vol. 87, no. 3, pp. 355-374, Aug. 1973.
- [9] D. M. G. de Kort, "The Role of Trust in the Securities Crowdfunding Market," *Journal of Financial Regulation and Compliance*, vol. 28, no. 1, pp. 1-18, 2020.
- [10] E. A. G. Mollick, "The dynamics of crowdfunding: An exploratory study," *Journal of Business Venturing*, vol. 29, no. 1, pp. 1-16, Jan. 2014.
- [11] C. Fombrun and M. Shanley, "What's in a Name? Reputation Building and Corporate Strategy," *Academy of Management Journal*, vol. 33, no. 2, pp. 233-258, Jun. 1990.
- [12] B. L. Connelly, S. T. Certo, R. D. Ireland, and C. R. Reutzel, "Signaling Theory: A Review and Assessment," *Journal of Management*, vol. 37, no. 1, pp. 39-67, Jan. 2011. [
- 13] G. K. Ahlers, D. Cumming, C. Günther, and D. Schweizer, "Signaling in equity crowdfunding," *Entrepreneurship Theory and Practice*, vol. 39, no. 4, pp. 955–980, 2015.
- [14] B. Wernerfelt, "A resource-based view of the firm," *Strategic Management Journal*, vol. 5, no. 2, pp. 171–180, 1984.
- [15] M. G. Colombo, M. Meoli, and S. Vismara, "The quality of the prospectus in equity crowdfunding," *Small Business Economics*, vol. 45, no. 2, pp. 385–400, 2015.
- [16] M. C. Jensen and W. H. Meckling, "Theory of the firm: Managerial behavior, agency costs and ownership structure," *Journal of Financial Economics*, vol. 3, no. 4, pp. 305–360, 1976.
- [17] S. Vismara, "Information cascades among investors in equity crowdfunding," *Entrepreneurship Theory and Practice*, vol. 42, no. 3, pp. 467–497, 2018.
- [18] D. H. Hsu and R. H. Ziedonis, "Patents as quality signals for venture capital financing," *RAND Journal of Economics*, vol. 39, no. 4, pp. 1143-1172, 2008.

- [19] S. C. Myers and N. S. Majluf, "Corporate financing and investment decisions when firms have information that investors do not have," *Journal of Financial Economics*, vol. 13, no. 2, pp. 187-221, 1984.
- [20] B. K. Boyd, "Board Control and CEO Compensation," *Strategic Management Journal*, vol. 15, no. 5, pp. 335-344, Jun. 1994.