

Polarized Distinctiveness: How Platform Designs and Superstar Connections Shape Crowdfunding Success

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Abstract

Crowdfunding platforms often see a few top campaigns succeed while most struggle. Optimal distinctiveness theory (ODT) suggests campaigns need to balance fitting in and standing out, but platform designs can interfere with this balance. This study examines how Indiegogo's "keep-what-you-raise" model changes optimal distinctiveness levels. We find a U-shaped relationship between distinctiveness and crowdfunding success. In contrast to the "all-or-nothing" model that favors moderate distinctiveness, the "keep-what-you-raise" model demands that campaigns either closely conform or be exceptionally distinct to succeed. Collaborations with superstars steepen this U-shape, amplifying penalties for moderate distinctiveness while boosting gains for extremes through knowledge transfer and legitimacy spillovers. We extend ODT theoretically to demonstrate how platform dynamics disrupt conventional balancing acts by incentivizing strategic extremism. Methodologically, we advance the distinctiveness measurement through a contextualized heterogeneous graph neural network. Practically, our findings guide campaigners to adopt platform-specific distinctiveness strategies and advise platforms to design mechanisms that support niches.

Keywords: crowdfunding, optimal distinctiveness, GNN, superstar, niche.

1. Introduction

Crowdfunding plays an increasingly important role in entrepreneurial financing, enabling ventures to directly appeal to a distributed pool of backers. Yet, this democratization of funding comes with a paradox: while a select few campaigns achieve runaway success—often exceeding funding goals by orders of magnitude—the majority struggle. Recent data reveals that nearly 78% of campaigns fail to meet their targets, with a small cohort of superstar campaigns dominating attention and resources (Fundly, 2023). These superstar campaigns

benefit from a halo effect, creating a self-reinforcing cycle where prior success amplifies trust and visibility, while newcomers and niche projects are marginalized (Doshi, 2023; Xiao et al., 2021). In the long run, newcomers and niche campaigns face steep barriers, eroding diverse innovation in crowdfunding ecosystems (Lu et al., 2017; Safadi et al., 2021; Solomon et al., 2016).

This tension between democratization and polarization raises critical questions about how campaigns can strategically position themselves to succeed. Optimal distinctiveness theory (ODT), originally developed in organizational identity research, suggests that new ventures must balance legitimacy and differentiation, conforming to audience expectations while standing out from competitors to attract resources (Brewer, 1991; Tauscher et al., 2021). In crowdfunding's power-law ecosystem, this equilibrium may be disrupted by platform design. In the traditional "all-or-nothing" model like Kickstarter, where campaigns must meet thresholds to secure funding (Haans, 2019), campaigns face immense pressure to appear legitimate and generate early momentum to signal viability and attract further investment, aiming to hit that crucial threshold. The midpoint between legitimacy and differentiation is heavily weighted by the need to overcome the all-or-nothing hurdle. In contrast, crowdfunding platforms like Indiegogo, which operate on a "keep-what-you-raised" model—allowing campaigns to retain funds even when goals are unmet—introduce unique pressures.

By contrast, the "keep-what-you-raised" model removes this threshold and intensifies competition for attention, shifting the focus from simply meeting a goal to maximizing the total amount raised, as every dollar contributes to the project's viability. Lack of legitimacy is no longer a fatal flaw, but mediocrity is. As a result, the "optimal" midpoint predicted by ODT may break down: campaigns face a bifurcated choice between radical differentiation or strict conformity, as moderate distinctiveness leaves them vulnerable to both legitimacy deficits and competitive saturation (Fu et al.,

2021; Haans, 2019). This reconfigured strategic landscape necessitates a refined understanding of distinctiveness. We specifically use superstars as the reference group for campaign positioning. Rather than comparing themselves to the undifferentiated crowd, campaigns must distinguish themselves from the mainstream of success—the collective prototype embodied by superstars that defines “what success looks like”. It is this deviation from the successful center—not from the average—that becomes the key to strategic positioning in a polarized funding environment.

Beyond focusing on the unique “keep-what-you-raised” model, we also propose that learning from superstars serves as a key mechanism for non-superstars to refine their distinctiveness. While analyzing superstar campaign reward structures and communication patterns can reveal institutionalized success factors (Wei et al., 2022), close imitation risks eroding distinctiveness. Tacit knowledge, such as nuanced strategies for backer engagement or algorithmic gaming is necessary but often inaccessible through observation alone (Zhang et al., 2019). More crucially, collaborations with superstars can function as a powerful endorsement signal for feasibility and credibility to a distributed pool of potential backers, given the challenges non-superstars face in establishing trust and overcoming the halo effect enjoyed by established campaigns. By associating with a known success, niche campaigners can mitigate legitimacy deficits (Zhang et al., 2019), while internalizing actionable insights to strategically refine their own distinctiveness, transforming radical deviations into intentional innovation (Vismara, 2018).

We employ a heterogeneous graph neural network (GNN) to quantify campaign distinctiveness relative to the prototypical mainstream of superstar campaigns across 105,804 Indiegogo campaigns from May 2016 to November 2023, capturing both semantic and structural features, and conduct a fixed-effects model to examine the theorized non-linear relationships between campaign distinctiveness and crowdfunding success. Our analysis reveals a U-shaped curve: moderately distinctive campaigns underperform due to legitimacy deficits and competition, while extreme distinctiveness drives success by escaping saturation and attracting niche backers. Collaborations with superstars steepen this U-shaped curve, intensifying penalties for moderate distinctiveness but accelerating gains for radical differentiation, as tacit knowledge transfers legitimizes unconventional strategies. Specifically, the endorsement brought by superstar connections plays a pronounced role in IT categories, where trends and hot topics are constantly evolving, effectively legitimizing the extreme distinctiveness needed for breakthrough innovation in this domain.

Our research makes three substantive contributions. First, we extend ODT to the crowdfunding context under a “keep-what-you-raised” model, showing that optimal distinctiveness is not a midpoint but a polarized threshold. Second, we introduce a contextualized GNN framework that captures interdependencies between niche and superstar campaigns, moving beyond isolated analyses to quantify latent synergies. Finally, our findings not only advise platforms and policymakers to mitigate the polarization by encouraging senior-junior partnership, but also offer actionable insights for campaigners to adopt platform-specific distinctiveness strategies. The rules of the game are dictated by platform design, and success belongs to those who understand how to play by them.

2. Theory and Hypothesis Development

2.1. Crowdfunding

By democratizing access to capital, crowdfunding has emerged as a critical tool for early-stage ventures, leveraging collective participation to fund various campaigns. Extant research has extensively examined the drivers of superstar success, emphasizing signaling mechanisms such as prior success (Dai & Zhang, 2019; Wang et al., 2021), social proof (Lin & Viswanathan, 2016) and founder credibility (Thies et al., 2016), as well as campaign designs such as reward pricing (Hu et al., 2015; Yang et al., 2020), dynamic updates (Wang et al., 2021; Xiao et al., 2021) and narrative framing (Conboy et al., 2022; Frimpong et al., 2024). However, this literature largely assumes a level playing field, overlooking how platform dynamics reinforce inequality. Superstars benefit from network effects and algorithmic amplification, creating a self-reinforcing cycle where success begets more success (Doshi, 2023; Soubliere & Gehman, 2020; Xiao et al., 2021). Meanwhile, non-superstar campaigns—lacking visibility and resources—face an uphill battle, often conforming to mainstream expectations at the expense of innovation (Soubliere et al., 2024).

Departing from previous research, our study shifts focus to non-superstars, examining how they can thrive through *strategic distinctiveness*. While superstars dominate with broad appeal, non-superstars can carve out niches by balancing differentiation and legitimacy. Rather than competing directly, they can exploit specialized resources more efficiently, fostering a symbiotic relationship that enhances platform diversity. This symbiotic relationship extends crowdfunding research beyond a winner-take-all narrative, offering a pathway for underrepresented ventures to succeed.

2.2. Optimal Distinctiveness Theory

ODT, originating from social identity research, proposes that individuals and organizations must balance conformity and distinctiveness to achieve social and competitive legitimacy (Brewer, 1991). Overly distinct entities risk illegitimacy, while overly conforming ones lose competitive advantage. Early work extended ODT to political and cultural domains, showing how minority groups negotiate uniqueness while maintaining social belonging (Abrams, 1994, 2009; Leonardelli et al., 2010). A branch of literature also applies ODT to organizational strategy and entrepreneurship, supporting moderate distinctiveness to maximize performance, though the “optimal” level varies by industry density, audience expectations, and institutional pressures (Goldenstein et al., 2024; Haans, 2019; Zhao & Glynn, 2022).

In the context of crowdfunding, ODT provides a framework exploring how ventures navigate tensions between novelty and conformity to attract backers. Literature shows that campaigns moderately distinct from peers gain legitimacy and funding, while highly distinctive projects require external endorsements to buffer legitimacy risks (Mochkabadi et al., 2024; Soubliere & Gehman, 2020; Tauscher et al., 2021). However, conflicting findings also emerge. While most studies find an inverted U-shaped relationship, where moderately distinct campaigns perform best (Barlow et al., 2019; Tauscher et al., 2021; Zhao et al., 2018), others also report a U-shaped effect, favoring either extreme conformity or radical differentiation (Haans, 2019; Pan et al., 2019). Still, some even observe linear advantages for extreme distinctiveness in fragmented categories (Alexiou et al., 2024). These inconsistencies highlight the role of platform-specific norms and funding mechanisms.

In our case of Indiegogo, the unique “keep-what-you-raised” model may reshape the application of ODT in crowdfunding. Unlike “all-or-nothing” platforms like Kickstarter, where rigid success benchmarks penalize niche campaigns, Indiegogo’s design enables highly distinctive campaigns to incrementally build legitimacy. This design lowers barriers for niche campaigns, allowing them to pursue differentiation without the existential risk of total funding failure (Li & Wang, 2019; Li et al., 2020).

This unique context necessitates a rethinking of “distinctiveness”. Prior literature typically considers all campaigns as the relevant reference group. However, the central reference point based on the broad crowd may be pulled heavily towards mediocrity by the large number of clones and failures, rendering its value for learning and reference. By defining the superstar set as our benchmark, we move from measuring difference

from the average to measuring deviation from the ideal. These superstars, by virtue of their extreme success and visibility, collectively define the mainstream category norms and establish “what success looks like” for audiences (Geva et al., 2024). Algorithmic biases on platforms further perpetuate the visibility of these campaigns, solidifying their role as a central reference point (Fu et al., 2021). This reframing allows us to precisely measure a campaign’s strategic choice to leverage or deviate from the established blueprint for success.

Campaigns still need to balance differentiation and conformity. Distinctiveness may initially attract backers seeking novelty (Wei et al., 2022), but excessive deviation from category norms risks alienating risk-averse audiences (Tauscher et al., 2021). Audiences inherently question deviations from prototypical category norms (Lounsbury & Glynn, 2001). Conformity ensures legitimacy (Deepphouse, 1999), but campaigns clustered near the category center face fierce competition. Indistinct campaigns compete for identical resources and attention, resulting in overcrowding and suppressed performance.

Small deviations from mainstream approaches seem insufficient to resolve this tension, as campaigns with moderate distinctiveness still face substantial overlaps with conventional competitors (Haans, 2019). These campaigns suffer the worst of both worlds, bearing the legitimacy penalties of being different while still enduring intense competition from similar projects. This double burden leads to predictably poor performance outcomes. Yet, by moving beyond moderate differentiation, campaigns can escape saturated competitive spaces and enter niche territories where rivalry diminishes significantly. Indiegogo’s unique “keep-what-you-raised” model plays a crucial role here, as it reduces the legitimacy risks typically associated with radical differentiation. This platform design allows campaigns with high distinctiveness to gradually build their own legitimacy despite their unconventional approaches.

Thus, these competing forces create a U-shaped performance relationship. At the low level of campaign distinctiveness, campaigns benefit from strong legitimacy that compensates for intense competition. Campaigns in the middle range face both weakened legitimacy and persistent competition, resulting in the poorest performance. At the high end, the dramatic reduction in competitive pressures outweighs remaining legitimacy concerns, especially as the platform’s design helps mitigate skepticism over time. Therefore, we hypothesize that:

Hypothesis 1. *The relationship between distinctiveness and campaign performance is U-shaped.*

Unlike previous studies that explored how to stand out from the competition with superstars (Geva et al., 2024; Solomon et al., 2016), our study also shifts the focus to the potential benefits from collaboration (Zhang et al., 2019). This focus on superstar connections introduces a novel dimension to the application of ODT in the crowdfunding context. Unlike traditional settings where ventures build legitimacy gradually through established institutions or adherence to industry norms (e.g., industry awards or certifications), crowdfunding platforms grant superstar campaigns unparalleled visibility and a powerful form of legitimacy through their success and market dominance (Geva et al., 2024). Collaboration with superstars, thus functioning as the endorsement from established institutions in the ODT literature, creates strong spillover effects. On the one hand, affiliation with superstars lends immediate legitimacy. By associating with these established successes, non-superstars can leverage superstars' fame and reputation as a powerful external validation, overcoming initial skepticism and building credibility with potential backers in a crowded marketplace. On the other hand, collaboration with superstars facilitates experiential learning (Zhang et al., 2019), allowing niche campaigns to adapt superstar strategies to their own value propositions. Superstars' winning formulas, honed through refined reward structures and communication strategies, become institutionalized templates for others to follow (Wei et al., 2022). Niche campaigns, seeking a foothold in a competitive landscape, may look to these superstars for guidance, dissecting their tactics in hopes of replicating their success. However, replicating observable features alone risks diluting uniqueness. Non-superstars may pursue collaborative learning—partnering with established superstars to absorb their expertise while preserving their own distinct identity (Vismara, 2018; Zhang et al., 2019).

Yet, this learning mechanism creates asymmetric pressures. Superstar connections tend to raise audience expectations (Ploderer et al., 2010). At low distinctiveness, collaborations provide a clear boost. Even marginally differentiated campaigns benefit from the halo effect of superstar connections, outperforming unconnected peers. At moderate distinctiveness, the same connections backfire. Unlike endorsements from institutions external to the competitive landscape, collaboration with superstars also makes the endorsing entity as a direct benchmark within the same platform ecosystem. While borrowed credibility can elevate performance, it also invites harsher scrutiny in direct comparison to the endorsing superstar, especially when deviations from the norm are perceived as inadequately innovative. The tide turns again at high distinctiveness. Endorsements and tacit knowledge transfer allow niche

campaigns to reframe radical deviations as bold, intentional innovation. The spillover legitimacy counterbalances skepticism, propelling these ventures to standout success. Thus, while unconnected campaigns navigate a gradual trade-off between conformity and differentiation, those with superstar connections experience a steeper U-shape with greater rewards for distinctiveness but stronger penalties for mediocrity. We then hypothesize that:

Hypothesis 2. *The U-shaped relationship between distinctiveness and campaign performance is steeper in campaigns with superstar connections than those without.*

3. Methodology

3.1. Data Description

Our study analyzes a comprehensive dataset from Indiegogo spanning May 2016 to November 2023, comprising 105,804 campaigns, 95,573 campaign owners who posted campaigns through their accounts, and 45,893 other participants listed on the campaign teams. We obtain campaign performance from an open-access panel dataset, including the monthly raised funds and backers engaged. Our scraping algorithm also collected all campaign information on the sites, such as the goals and description.

We leverage a contextualized GNN framework to model the complex relationships between campaigns, owners, and participants. On crowdfunding platforms such as Indiegogo, campaigns are often semantically and structurally connected. On the one hand, textual content, such as titles, descriptions, and categories, reflects a project's topic and characteristics. On the other hand, interpersonal and community-level interactions, such as the user–project–user structures, provide deeper structural signals. To better understand the association between superstar campaigns and non-superstars, we construct a heterogeneous GNN that integrates both semantic and structural features to measure similarity and latent connection strength between campaigns. The heterogeneous network comprises three node types—campaigns, campaign owners and other participants, where all nodes are interconnected via directed edges. Each campaign node integrates multi-modal features, including text embedding, categorical attributes, and structural relationships. Superstar campaigns—those in the top 10% of cumulative funding within their category—are flagged with a binary indicator, enabling dynamic identification of market leaders. The 3-D visualization of the network is shown in Figure 1.

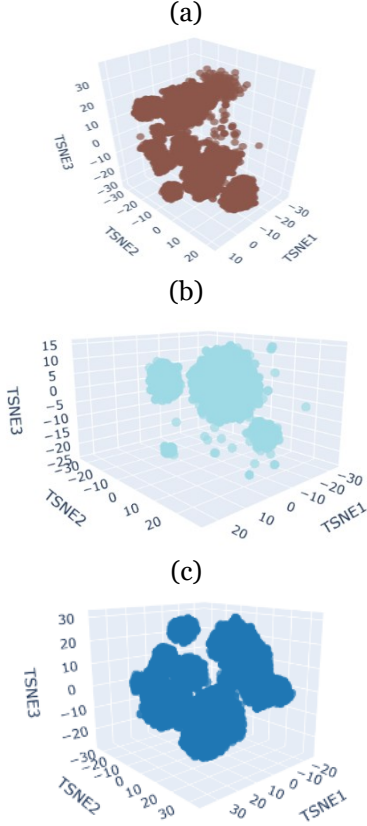


Figure 1 Visualization of Heterogeneous GNN via t-SNE Projection, by Parent Category

Notes. These figures visualize the 3D t-SNE projection of all Indiegogo campaigns for January 2017. Each point represents a campaign's position in the 64-dimensional embedding space generated by our Heterogeneous Graph Transformer (HGT), which has been reduced to three dimensions for visualization purposes only; all analyses were conducted on the full 64-dimensional embeddings. The HGT embeddings fuse textual content (e.g., 768-dimensional narrative vectors), categorical attributes (e.g., parent category), and structural relationships (e.g., owner-campaign-participant edges). The axes (TSNE1, TSNE2, TSNE3) collectively capture pairwise similarities based on both content attributes and network topology. Figure (a), (b) and (c) represent campaigns in Category "Tech & Innovation"; "Creative Works", and "Community Projects", respectively.

The distinctiveness of a campaign is computed using a two-step process. First, we generate 64-dimensional embeddings for all projects via a Heterogeneous Graph Transformer (HGT), which fuses textual, categorical, and network features. The HGT model employs type-specific attention mechanisms to aggregate signals from owners, members, and reverse edges. These embeddings encode both semantic content and structural proximity. Second, distinctiveness is

¹ The reference group for the similarity is the set of superstar campaigns. Let $h_i \in \mathbb{R}^{64}$ be the final embedding vector of project i , and S be the index set of all superstar projects. Then, Apply L_2 normalization to the vectors: $\hat{h}_i = \frac{h_i}{\|h_i\|_2}$. Let $|S|$ denote the number of superstar projects, and \hat{h}_s the normalized vector of any superstar project. *Average Similarity* of project i with respect to the superstar set is defined as:

defined as $1 - \text{Average Similarity}$, where *Average Similarity* is the mean cosine similarity between the embedding of campaign i and the embeddings of all superstar campaigns (Taeuscher et al., 2021)¹.

The dependent variable, campaign performance, is captured by two monthly outcomes: (1) funds raised (log-transformed USD) and (2) number of backers. For the learning mechanism, we consider a binary moderator, indicating whether a campaign's owner previously collaborated with superstars. Meanwhile, to isolate the effect of distinctiveness, we account for campaign-specific factors like funding goals, story length, video inclusion, pre-order activity, and cross-platform presence. Variable definitions are in Table A1 (in Appendix).

3.2 Model Specification

To test the hypothesized U-shaped relationship between distinctiveness and performance, we estimate a fixed-effects regression:

$$\ln(Y_{ijt}) = \beta_0 + \beta_1 D_{it-1} + \beta_2 D_{it-1}^2 + \beta_3 (D_{it-1} \times S_{jt-1}) + \beta_4 (D_{it-1}^2 \times S_{jt-1}) + \delta X_{ijt-1} + \gamma_i + \tau_j + \varphi_t + \gamma_i \varphi_t + \varepsilon_{ijt}$$

Here, Y_{ijt} is an aggregated term for the performance of campaign i released by campaigner j in month t , either the funds raised or the backers engaged. D_{it} is the distinctiveness score of campaign i in month t , and D_{it}^2 captures its quadratic effect. The interaction terms, $D_{it} \times S_j$ and $D_{it}^2 \times S_j$, test whether connections steepen the U-shape, while S_j indicates superstar connections of campaigner j . Controls variables (X_{ijt}) account for time-varying factors: campaign-related variables like campaign goals and story length, campaigner-related variables like previous campaign number and previous successful rate. The controls also include category (γ_i), campaigner (τ_j), calendar month (φ_t) and category trend ($\gamma_i \varphi_t$) fixed effects to account for the unobserved characteristics of the campaign heterogeneity and time trends. The error term is indicated by ε_{ijt} . The model is to disentangle two competing forces: legitimacy loss at moderate distinctiveness and competition reduction at extremes. A significant $\beta_2 > 0$ supports the U-shape, while $\beta_4 < 0$ implies connected campaigns face sharper declines at moderate distinctiveness but steeper rebounds at high distinctiveness. Standard errors are

$$\text{Average Similarity}(i) = \begin{cases} \frac{1}{|S|} \sum_{s \in S} \hat{h}_i^T \hat{h}_s, & \text{if } i \notin S \\ \frac{1}{|S|-1} \sum_{s \in S \setminus \{i\}} \hat{h}_i^T \hat{h}_s, & \text{if } i \in S, |S| > 1 \\ 0, & \text{if } i \in S, |S| = 1 \end{cases}$$

Thus, $\text{Distinctiveness}(i) = 1 - \text{Average Similarity}(i)$.

clustered at the campaign level to address autocorrelation, and all regressors are lagged to address reverse causality.

4. Results

Table 1 and 2 present regression results with the dependent variable being the natural logarithm of campaign performance: funds raised (Table 1) and backers engaged (Table 2). Campaign distinctiveness shows a consistent U-shaped relationship with performance whether measured by funds raised or backers engaged.

Table 1. Effect of Distinctiveness on Funds Raised

	ln(Funds Raised)			
	(1)	(2)	(3)	(4)
Distinctiveness	-1.540*** (0.121)	-2.805*** (0.701)	-1.417*** (0.125)	-2.936*** (0.717)
Distinctiveness ²		0.818* (0.447)		0.977** (0.455)
Distinctiveness × Superstar Connection			-0.760** (0.302)	-6.598** (2.878)
Distinctiveness ² × Superstar Connection				4.890** (1.915)
Superstar Connection			-0.415* (0.238)	-3.065*** (1.050)
Previous Campaign	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Previous Successful Rate	-2.109*** (0.027)	-2.109*** (0.027)	-2.075*** (0.027)	-2.075*** (0.027)
Previous Funds	0.016* (0.009)	0.016* (0.009)	0.016* (0.009)	0.016* (0.009)
Previous Backers	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Lagged Funds	-0.058*** (0.009)	-0.058*** (0.009)	-0.057*** (0.009)	-0.057*** (0.009)
Months Left	0.927*** (0.006)	0.927*** (0.006)	0.930*** (0.006)	0.930*** (0.006)
Goal	-0.015 (0.018)	-0.015 (0.018)	-0.016 (0.018)	-0.016 (0.018)
Story Length	0.216*** (0.023)	0.216*** (0.023)	0.204*** (0.023)	0.204*** (0.023)
Video	0.135*** (0.051)	0.135*** (0.051)	0.123** (0.051)	0.124** (0.051)
Pre-Order	0.574*** (0.110)	0.574*** (0.110)	0.621*** (0.110)	0.614*** (0.110)
External	-3.922*** (0.135)	-3.922*** (0.135)	-3.876*** (0.135)	-3.869*** (0.135)
Superstar	-3.946*** (0.033)	-3.945*** (0.033)	-4.013*** (0.033)	-4.012*** (0.033)
Constant	2.801*** (0.111)	3.254*** (0.271)	2.739*** (0.114)	3.286*** (0.279)
Observations	237,971	237,971	237,971	237,971
R-squared	0.629	0.629	0.630	0.630

Note. *** p<0.001, ** p<0.01, * p<0.05. The dependent variable is the natural-logged amount of funds raised. To avoid taking the log of 0, 1 is added to the loan amount before taking logs. Standard errors clustered at the zip code level. Previous Funds, Lagged Funds, Goal, and Story Length are standardized. Fixed effects include category, campaign owner, calendar month and category trend fixed effects. Standard errors are shown in parentheses.

As shown in Table 1, campaign distinctiveness initially exerts a strong negative effect on funds raised, reflecting the legitimacy challenges campaigns face when deviating from category norms. However, the

positive quadratic term in Column 2 suggests that this decline reverses at higher levels of distinctiveness. Campaigns with high distinctiveness can escape competitive saturation, attracting niche backers willing to fund unconventional ideas. Notably, campaigns with superstar connections exhibit a steeper U-shaped curve. In Column 4, the directions of the coefficients on the interaction terms are consistent with those of the linear and quantitative terms, indicating that collaborations with superstars amplify both risks and rewards, leading to a sharp drop in campaign funding when distinctiveness is moderate, but a more pronounced recovery in extreme cases.

Table 2. Effect of Distinctiveness on Backers Acquired

	ln(Backers Acquired)			
	(1)	(2)	(3)	(4)
Distinctiveness	-0.500*** (0.038)	-0.511** (0.219)	-0.475*** (0.039)	-0.357 (0.224)
Distinctiveness ²		0.245* (0.140)		-0.075 (0.142)
Distinctiveness × Superstar Connection			-0.165* (0.094)	-4.641*** (0.900)
Distinctiveness ² × Superstar Connection				3.085*** (0.599)
Superstar Connection			-0.470*** (0.074)	1.174*** (0.328)
Previous Campaign	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Previous Successful Rate	-0.499*** (0.008)	-0.499*** (0.008)	-0.483*** (0.008)	-0.483*** (0.008)
Previous Funds	0.006** (0.003)	0.006** (0.003)	0.006** (0.003)	0.006** (0.003)
Previous Backers	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Lagged Funds	0.009*** (0.003)	0.009*** (0.003)	0.009*** (0.003)	0.009*** (0.003)
Months Left	0.105*** (0.002)	0.105*** (0.002)	0.107*** (0.002)	0.107*** (0.002)
Goal	0.001 (0.006)	0.001 (0.006)	0.000 (0.006)	0.000 (0.006)
Story Length	0.053*** (0.007)	0.053*** (0.007)	0.048*** (0.007)	0.048*** (0.007)
Video	0.046*** (0.016)	0.046*** (0.016)	0.039** (0.016)	0.039** (0.016)
Pre-Order	-0.216*** (0.035)	-0.216*** (0.035)	-0.194*** (0.035)	-0.190*** (0.035)
External	-0.629*** (0.042)	-0.629*** (0.042)	-0.606*** (0.042)	-0.609*** (0.042)
Superstar	-0.837*** (0.010)	-0.837*** (0.010)	-0.870*** (0.010)	-0.869*** (0.010)
Constant	0.708*** (0.035)	0.712*** (0.085)	0.709*** (0.036)	0.667*** (0.087)
Observations	237,971	237,971	237,971	237,971
R-squared	0.592	0.592	0.593	0.593

Note. *** p<0.001, ** p<0.01, * p<0.05. The dependent variable is the natural log of backers acquired. To avoid taking the log of 0, 1 is added to the loan amount before taking logs. Standard errors clustered at the zip code level. Previous Funds, Lagged Funds, Goal, and Story Length are standardized. Fixed effects include category, campaign owner, calendar month and category trend fixed effects. Standard errors are shown in parentheses.

A similar U-shape emerges for the backer aspect. The linear effect, in Column 1 of Table 2, shows that distinctiveness initially deters risk-averse backers; however, the quadratic effect in Column 2 suggests the weaker rebound at high distinctiveness compared to

funds raised. This suggests that attracting backers relies more on legitimacy signals than competition reduction. Novelty alone is insufficient without perceived credibility. Relatively speaking, superstar connections play a pivotal role in backer engagement. Compared with the effect on funds raised, connected campaigns experience a far steeper U-shape. Extreme distinctiveness drives disproportionately higher backer engagement, indicating that the backer participation responds more strongly to social proof rather than competition dynamics, whereas funds reflect economic confidence in niche viability.

Having established the impact of distinctiveness on campaign performance, we now delve into the underlying mechanisms driving this effect, examining how this relationship varies across categories. We divide three parent categories on the platforms into two types: “Tech & Innovation” as IT category, “Creative Works” and “Community Projects” as non-IT category.

Table 3. Heterogeneous Effects by Parent Categories on Funds Raised

	ln(Funds Raised)			
	(1)	(2)	(3)	(4)
Panel A. Campaigns in IT Category				
Distinctiveness	-1.375*** (0.259)	-3.305** (1.320)	-1.070*** (0.280)	-3.083** (1.390)
Distinctiveness^2		1.447* (0.827)		1.270 (0.858)
Distinctiveness × Superstar Connection			-1.504*** (0.498)	-9.932** (4.617)
Distinctiveness ² × Superstar Connection				7.674** (3.103)
Superstar Connection			1.028*** (0.379)	-3.046* (1.667)
Observations	70,645	70,645	70,645	70,645
R-squared	0.682	0.682	0.682	0.682
Panel B. Campaigns in Non-IT Category				
Distinctiveness	-1.679*** (0.139)	-2.496*** (0.813)	-1.578*** (0.143)	-2.842*** (0.825)
Distinctiveness^2		0.910* (0.520)		0.818 (0.526)
Distinctiveness × Superstar Connection			0.110 (0.388)	-8.076** (3.701)
Distinctiveness ² × Superstar Connection				5.281** (2.452)
Superstar Connection			-1.428*** (0.310)	-4.309*** (1.359)
Observations	167,265	167,265	167,265	167,265
R-squared	0.627	0.627	0.628	0.628

Note. *** p<0.001, ** p<0.01, * p<0.05. The dependent variables is the natural-logged amount of funds raised. Control variables and fixed effects are included in regressions. Standard errors are shown in parentheses.

When it comes to the funds raised in IT campaigns, a strong U-shaped relationship emerges. As shown in Table 3, moderate distinctiveness sharply reduces funds, while extreme distinctiveness drives recovery. The relatively homogeneous networks of IT category catalyzes backers’ appetite for breakthrough innovation. Superstar connections further amplify this curve, as tacit knowledge helps reframe radical ideas as visionary. In contrast, non-IT campaigns exhibit a weaker U-shape,

with muted rewards for differentiation. Fragmented audiences and diverse themes dilute competition but also limit niche monetization. The patterns reverse for backer acquisition. IT campaigns show no U-shape, with distinctiveness linearly reducing support unless superstars intervene. IT backers prioritize legitimacy over novelty unless collaborations with superstars signal credibility. Meanwhile, non-IT campaigns reveal a U-shape for backers, where extreme distinctiveness attracts niche audiences. Superstar connections further steepen this curve, as collaborations legitimize unconventional campaigns for risk-averse backers.

These findings verify that the optimum depends on category. It bifurcates in IT category but remain a midpoint for non-IT category. The strategy of polarized distinctiveness may play a more salient role in IT category, with critical superstar collaborations legitimizing extreme differentiation. Superstar ties are less impactful in non-IT categories, good for acquiring customers but difficult to monetize.

Table 4. Heterogeneous Effects by Parent Categories on Backers Acquired

	ln(Backers Acquired)			
	(1)	(2)	(3)	(4)
Panel A. Campaigns in IT Category				
Distinctiveness	-0.704*** (0.084)	-0.556 (0.426)	-0.691*** (0.090)	-0.067 (0.448)
Distinctiveness^2		-0.094 (0.267)		-0.394 (0.276)
Distinctiveness × Superstar Connection			-0.343** (0.160)	-6.118*** (1.487)
Distinctiveness ² × Superstar Connection				3.893*** (1.000)
Superstar Connection			-0.181 (0.122)	1.866*** (0.537)
Observations	70,645	70,645	70,645	70,645
R-squared	0.618	0.618	0.619	0.619
Panel B. Campaigns in Non-IT Category				
Distinctiveness	-0.439*** (0.044)	-0.539** (0.256)	-0.410*** (0.045)	-0.506* (0.260)
Distinctiveness^2		0.345** (0.164)		0.062 (0.166)
Distinctiveness × Superstar Connection			0.146 (0.122)	-2.935** (1.166)
Distinctiveness ² × Superstar Connection				2.058*** (0.773)
Superstar Connection			-0.605*** (0.098)	0.500 (0.428)
Observations	167,265	167,265	167,265	167,265
R-squared	0.589	0.589	0.591	0.591

Note. *** p<0.001, ** p<0.01, * p<0.05. The dependent variables is the natural-logged amount of funds raised. Control variables and fixed effects are included in regressions. Standard errors are shown in parentheses.

To ensure the validity of our findings, we conduct several robustness checks, especially alternative operationalizations of our key independent variable. A primary concern might be that our results are an artifact of our specific measure of distinctiveness. To address this, we consider two alternative measures for comparison. We first follow established practices in prior literature and construct a text-based measure of

distinctiveness for comparison (Tauscher et al., 2021; Zhao et al., 2018). Using the same benchmark of superstar campaigns, we calculate the cosine similarity between TF-IDF (Term Frequency-Inverse Document Frequency) vectors of a focal campaign's description and descriptions of all superstar campaigns in its category. The distinctiveness measure is then computed as $1 - \text{Average Similarity}$, mirroring the construction of our primary measure. Secondly, to test the validation of our superstar prototype, we further conduct a measure where the reference group includes all other campaigns. We then calculate a campaign's average similarity using our primary GNN-based embeddings, and define *Distinctiveness* as $1 - \text{Average Similarity}$ again. Results remain consistent when we re-run our main models using these alternative measures, providing strong evidence that our core finding is not dependent on the specific technical choices of our measure.

5. Discussion

Crowdfunding success is not simply a matter of balancing legitimacy and differentiation. Instead, it is a strategic gamble shaped by the very design of the platform itself. Our study, leveraging a contextualized GNN framework and fixed-effects regression analysis of Indiegogo campaigns, reveals a U-shaped performance curve that different from the traditional findings in ODT. While moderate distinctiveness suffers from the dual penalties of legitimacy deficits and competitive saturation, campaigns that embrace extreme differentiation break free, carving out niches that attract dedicated backers. This dynamic is further amplified by collaborations with superstar campaigners, which intensify both the risks and rewards of differentiation.

Theoretically, the findings challenge traditional ODT assumptions, demonstrating that the legitimacy-differentiation trade-off is not a universal continuum but a spectrum heavily influenced by platform mechanics. Unlike traditional “all-or-nothing” models, where campaigns must meet strict funding thresholds to receive any money, Indiegogo’s “keep-what-you-raised” model fundamentally alters strategic incentives. In all-or-nothing environments, moderate distinctiveness may still be viable, as backers are incentivized to support safer bets that meet funding goals. In contrast, Indiegogo’s model allows even niche campaigns to secure partial funding, enabling radical differentiation to thrive. This structural difference reshapes the competitive landscape, privileging strategic extremism over cautious balance.

Methodologically, our work advances the measurement of distinctiveness by introducing a heterogeneous GNN framework that captures both

semantic and structural differentiation. Unlike traditional approaches that treat distinctiveness as a static or one-dimensional construct, our framework dynamically maps how campaigns position themselves within the broader crowdfunding ecosystem, modeling the network topology of crowdfunding campaigns beyond the traditional textual analysis.

Practically, these findings also offer actionable insights for campaigners and platforms. For one thing, campaigners must recognize the necessity of adopting platform-specific distinctiveness strategies. Specifically, in the “keep-what-you-raised” platforms like Indiegogo, they should either mimic superstar templates to leverage legitimacy or embrace radical differentiation to exploit niche demand. For another thing, platforms can foster diversity by algorithmically surfacing moderately distinctive campaigns and incentivizing senior-junior collaborations. Hybrid funding mechanisms offer a promising pathway to nurture novel and innovative campaigns.

There are also some limitations in our work. Our focus on Indiegogo’s “keep-what-you-raised” model may limit generalizability to platforms with the “all-or-nothing” model, such as Kickstarter, where moderate distinctiveness could remain viable. Additionally, while our measure of distinctiveness provides a more holistic view of campaign positioning than text-alone methods, it remains a latent representation. Unobserved factors like campaigner charisma or pre-launch marketing efforts may influence results. These limitations show a clear path for future research. Beyond cross-platform comparison and qualitative studies, research can also delve into the typology of distinctiveness, applying clustering techniques to our GNN embeddings to identify archetypes of superstar campaigns and exploring whether differentiating from a specific superstar archetype is more effective than another.

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Appendix

Table A1. Variable Definition

Variables	Definition
Funds Raised	Total funds the campaign raised in a given month (in USD).
Backers Acquired	Total number of backers who contributed to the campaign in a given month.
Distinctiveness	Average degree of distinctiveness of a campaign from superstar campaigns, where superstar projects are defined as those ranked in the top 10% of cumulative funding within all previous and current campaigns up to a given month.
Superstar Connection	Index for whether the campaign owner has collaboration with superstar campaign owners previously. Denote 1 if the campaign owner has collaborated with any superstar campaign owner(s) in prior campaigns, or 0 otherwise.
Previous Campaign	Total number of campaigns that the same campaign owner has participated prior to the current campaign.
Prev. Successful Rate	Proportion of the campaign owner's previous campaigns that met or exceeded funding goals, calculated as: Number of Previous Successful Campaigns / Number of Previous Campaigns.
Previous Funds	Total funds raised across all prior campaigns released by the same campaign owner (in USD).
Previous Backers	Total number of backers who supported prior campaigns released by the same campaign owner.
Lagged Funds	Total funds raised by the campaign in the month(s) preceding the current month (in USD).
Months Left	Number of calendar months left until the campaign's declared end date, measured at the start of the current month.
Goal	The campaign's total funding target set at launch (in USD).
Story Length	Total number of words in the campaign's description text.
Video	Index for whether the campaign includes a video. Denote 1 if the campaign includes at least one embedded video in its description, or 0 otherwise.
Pre-Order	Index for whether the campaign has experienced pre-order activities. Denote 1 if the campaign has offered pre-order options, or 0 otherwise.
External	Index for whether the campaign has been released in other crowdfunding platforms rather than Indiegogo. Denote 1 if the campaign was active on other crowdfunding platforms, or 0 otherwise.
Superstar	Index for whether the campaign has been identified as a superstar. Denote 1 if the campaign is a superstar campaign by the current month, or 0 otherwise.

Table A2. Descriptive Statistics and Correlations

		Mean	S.D.	1	2	3	4	5	6	7
1	Funds Raised	11504.380	232076.900							
2	Backers	8.607	161.000	0.063						
3	Distinctiveness	0.858	0.191	-0.034	-0.042					
4	Previous Campaign	1.329	12.479	-0.003	-0.003	0.046				
5	Prev. Successful Rate	0.093	0.290	0.065	0.058	-0.131	-0.004			
6	Previous Funds	0.000	1.000	0.431	0.067	-0.025	-0.001	0.119		
7	Previous Backers	49.525	643.970	0.233	0.267	-0.049	-0.001	0.190	0.468	
8	Lagged Funds	0.000	0.771	0.392	0.044	-0.021	-0.003	0.085	0.688	0.293
9	Months Left	0.297	1.286	-0.010	0.004	-0.004	-0.018	-0.003	-0.002	-0.006
10	Goal	0.000	1.000	-0.001	-0.001	0.016	0.000	-0.008	-0.001	-0.002
11	Story Length	0.000	1.000	0.049	0.034	-0.219	-0.052	0.095	0.045	0.047
12	Video	0.696	0.460	0.027	0.027	-0.209	0.027	0.074	0.021	0.035
13	Pre-Order	0.014	0.116	0.061	0.005	-0.056	-0.007	0.176	0.038	0.054
14	External	0.019	0.136	0.165	0.011	-0.064	-0.012	0.063	0.025	0.021
15	Superstar	0.057	0.232	0.029	0.075	-0.144	-0.009	0.345	0.070	0.136
				8	9	10	11	12	13	14
9	Months Left			-0.001						
10	Goal			-0.001	-0.001					
11	Story Length			0.034	0.006	-0.001				
12	Video			0.016	-0.004	-0.012	0.212			
13	Pre-Order			0.026	-0.017	-0.003	0.057	0.049		
14	External			0.001	-0.068	-0.004	0.076	0.075	0.229	
15	Superstar			0.078	-0.127	-0.006	0.139	0.114	-0.029	-0.033

Note. Number of observations = 243,533.