

UNIVERSITY OF LJUBLJANA  
SCHOOL OF ECONOMICS AND BUSINESS

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**EXPLORING DETERMINANTS OF FUNDING SUCCESS IN  
CROWDFUNDING CAMPAIGNS**

DOCTORAL DISSERTATION

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## AUTHORSHIP STATEMENT

The undersigned SAIMA HAFEEZ, a student at the University of Ljubljana, School of Economics and Business, (hereafter: SEB LU), author of this written final work of studies with the title “Exploring determinants of funding success in crowdfunding campaigns”, prepared under supervision of Professor Dr. MATEJA DRNOVŠEK.

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*“Was mich nicht umbringt, macht mich stärker”*

— Friedrich Nietzsche

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## SUMMARY

Emotions have emerged as one of the vital and complex factors in shaping outcomes in digital fundraising platforms (Lu et al., 2024; Raab et al., 2020). In this dissertation, we examine how emotional factors contribute to the success of crowdfunding campaigns, with a particular focus on the signaling role of emotional expressions and their influence on the decision-making processes of potential backers. Grounded in the theoretical frameworks of signaling theory (Spence, 1973), framing theory (Entman, 1993; Goffman, 1974) and emotion contagion theory (Hatfield et al., 1993), we adopt a multi-method approach across four chapters (three studies): a bibliometric analysis, a review and reflection on signaling theory in the crowdfunding context, a quantitative survey-based empirical study, and a qualitative exploration of emotional transitions during crowdfunding engagement. Collectively, these chapters provide a holistic understanding of how individual signals shape perceptions of legitimacy, trust, and support in crowdfunding campaigns.

In Chapter 2, we provide a comprehensive overview of how emotions have been studied in crowdfunding literature over the past decade. Using bibliometric analysis of 269 documents sourced from the Scopus database (2013–2023), we map the intellectual landscape of research at the intersection of crowdfunding and emotions. We identify several key insights: first, scholarly interest in the role of emotions in crowdfunding has grown significantly, especially during and after the COVID-19 pandemic, with emotional themes like empathy, enthusiasm, and trust gaining prominence. Second, the review of existing literature shows an increasing integration of behavioral sciences and data science approaches, such as sentiment analysis and natural language processing, in understanding crowdfunding success. Third, the analysis identifies clusters of research findings around themes such as emotional storytelling, platform-specific dynamics (e.g., Kickstarter, GoFundMe), and signaling strategies through product narratives and entrepreneurial behavior. The bibliometric evidence highlights that emotions are not peripheral but central to crowdfunding dynamics, especially in reward and charitable contexts. In this chapter, we emphasize the need for future researchers to move beyond descriptive work and to develop theory-driven models that consider the emotional dimensions of backers' behavior. Drawing on the findings of our study, we conclude with a call for more interdisciplinary research that integrates psychology, marketing, and entrepreneurship in the study of crowdfunding. In Chapter 3, we dedicated a full chapter to signaling theory, which serves as the central theoretical framework for this study. This chapter provides a comprehensive review of the theory within the crowdfunding landscape. It highlights how the impact of signals varies significantly depending on critical moderators (such as backer motivations, entrepreneurial traits, the dynamics, etc.) of the platform environment. The signal combinations and their alignment with other aspects of crowdfunding significantly enhance the legitimacy and funding success of campaigns. Hence, Chapter 3 signifies the strategic value of tailoring signal deployment to specific crowdfunding environments.

Building upon the insights derived from the bibliometric analysis in Chapter 2 and a review of signaling theory in Chapter 3, the empirical investigation in Chapter 4 examines how emotional expressions (particularly displayed passion) act as signals that influence backers' perception of product usefulness and, ultimately, their decision to fund a campaign. Integrating signaling theory and framing theory, we test a mediation model using data from a structured survey of reward-based crowdfunding participants. The results reveal that displayed passion has a direct and significant impact on backers' funding decisions, confirming prior findings that emotional cues enhance perceived legitimacy and credibility. More importantly, product usefulness emerges as a key mediating variable as passionate entrepreneurs are seen as more committed (B.C. Davis et al., 2017; J.J. Li et al., 2017), leading backers to evaluate the product as more useful and innovative. This product usefulness then positively influences the likelihood of financial support. In Chapter 4, we contribute empirically to crowdfunding research by quantifying the link between emotional signaling and backer behavior, a dimension often discussed theoretically but underexplored in large-scale studies. Furthermore, we introduce a structured framework to distinguish between direct emotional (i.e., passion) impact and indirect cognitive appraisal (i.e., product usefulness), adding nuance to our understanding of how crowdfunding campaigns function as affective persuasion tools.

While the previous chapter quantified backer responses to emotional signals, Chapter 5 discusses the temporal dimension of emotions specifically, how backers' feelings evolve over time during their engagement with a crowdfunding campaign. Using a qualitative research design, we analyze text-based responses from crowdfunding backers to uncover patterns of emotional transitions. We reveal that the durability of emotional appeal depends on campaign transparency, fulfillment of promises, and continued engagement. This reinforces the importance of authenticity and relational signaling, suggesting that entrepreneurs must go beyond initial emotional displays to maintain investment over time. Importantly, we extend the application of signaling theory to crowdfunding, arguing that campaign-related events (e.g., updates, delays, responses) serve as emotional triggers that can either reinforce or erode support. We propose rich insights for platform designers and campaign creators on managing emotional continuity and setting realistic backer expectations.

Altogether, the chapters build a cohesive narrative highlighting the centrality of emotions to crowdfunding success, not only in attracting initial interest but in shaping backers' ongoing perception and support. Emotions act both as signals of trust, passion, and commitment, and as mechanisms that influence backer cognition and behavior. Through bibliometric analysis, statistical modeling, and narrative inquiry, we demonstrate that crowdfunding operates equally as an emotional marketplace and a financial one. By combining quantitative and qualitative methods and integrating theories from psychology and communication, we make a significant contribution to the evolving field of crowdfunding. We highlight the power of emotional storytelling, the importance of authenticity and conclude the need for continuous

emotional engagement, all of which are crucial for entrepreneurs seeking to navigate the complex terrain of modern digital fundraising.

Our research makes significant theoretical and practical contributions to the field of crowdfunding by demonstrating that emotional expressions (particularly displayed passion) serve as powerful signals that influence backers' perceptions of product usefulness and their funding decisions. Theoretically, we emphasize that signaling theory, framing theory, and emotion contagion theory provide valuable frameworks for explaining how emotional cues function across different stages of backer engagement. We propose that backers do not rely on isolated signals but rather assess how these signals align with each other to form coherent perceptions of trust and value. In doing so, this study advances signaling theory by incorporating cognitive perspectives and offers a platform for future research to explore how emotional and informational signals interact to influence funding behavior. It also identifies areas in the existing literature that remain underexplored and outlines practical implications for enhancing campaign design and backer communication.

Practically, we provide actionable insights for entrepreneurs and platform designers, showing that authentic emotional storytelling, sustained emotional engagement, and clear communication of product value can significantly enhance campaign success. Our findings offer a roadmap for crafting emotionally resonant and strategically effective crowdfunding campaigns. In addition, this research contributes to a more comprehensive understanding of crowdfunding by framing it not merely as a financial exchange, but as an emotionally-driven interaction between entrepreneurs and backers. By highlighting the centrality of emotional signaling, rather than treating it as a secondary factor, our work urges scholars and practitioners to rethink how crowdfunding campaigns are designed, analyzed, and communicated. As such, our study paves the way for future research to further explore emotional dynamics in crowdfunding, and for entrepreneurs to build strategies that prioritize authentic emotional engagement alongside financial planning. Our dissertation also shares the limitations of the research that open opportunities for future research.

*Keywords:* crowdfunding, reward-based crowdfunding, funding success, decision-making, emotions, signaling theory, framing theory, emotion contagion theory

## POVZETEK

Čustva so ključen dejavnik pri oblikovanju izidov na platformah množičnega financiranja (Lu et al., 2024; Raab et al., 2020). V tej disertaciji preučujemo, kako s čustvi povezani dejavniki prispevajo k uspehu kampanj množičnega financiranja, s posebnim poudarkom na signalni vlogi čustvenih izrazov in njihovem vplivu na odločitvene procese podpornikov (to je podpornikov kampanj). Izhajajoč iz teorije signaliziranja (Spence, 1973), teorije uokvirjanja (Entman, 1993; Goffman, 1974) in teorije nalezljivosti čustev (Hatfield et al., 1993) v štirih poglavjih predstavimo spoznanja na osnovi bibliometrične analize, pregleda teorije signaliziranja v kontekstu množičnega financiranja, kvantitativne raziskave med podporniki kampanj množičnega financiranja in kvalitativne raziskave čustvenih prehodov, ki jih občutijo podporniki v kampanjah množičnega financiranja. V poglavjih bralcem predstavimo celostno razumevanje, kako signali podjetnikov oblikujejo zaznave legitimnosti in zaupanja podpornikov v kampanjah množičnega financiranja.

V drugo poglavju podamo celovit pregled spoznanj obstoječih raziskav čustev v literaturi o množičnem financiranju v zadnjem desetletju. Z uporabo bibliometrične analize 269 dokumentov iz baze Scopus (2013 – 2023) razvijemo intelektualno krajino raziskav na presečišču množičnega financiranja in čustev. Predstavimo več ugotovitev: prvič, akademski interes za vlogo čustev v množičnem financiranju je močno narasel, zlasti med in po pandemiji COVID-19, pri čemer so teme, kot so empatija, navdušenje in zaupanje, postale izrazitejše. Drugič, pregled obstoječe literature kaže na vse večje vključevanje vedenjskih znanosti in pristopov podatkovne znanosti, kot sta analiza sentimenta in obdelava naravnega jezika, za razumevanje uspeha množičnega financiranja. Tretjič, analiza izpostavlja grozde raziskav okoli tem, kot so pripovedovanje zgodb, dinamika specifična za platforme (npr. Kickstarter, GoFundMe) in strategije signaliziranja preko predstavitve izdelka in podjetniškega vedenja. Spoznanja te analize poudarjajo, da so za dinamiko množičnega financiranja v kontekstu nagrajevanja in dobrodelnosti, čustva osrednji odločitveni dejavnik. Obstoječe raziskave izpostavljajo potrebo za razvoj na teoriji utemeljenih modelov, ki upoštevajo vpliv čustev na vedenje podpornikov. Poglavje zaključimo s predlogi k interdisciplinarnemu raziskovanju, ki povezuje psihologijo, trženje in podjetništvo pri preučevanju množičnega financiranja.

Na podlagi spoznanj iz bibliometrične analize v drugo poglavju in pregleda teorije signaliziranja v tretjem poglavju druga študija (četrto poglavje) raziskuje, kako čustveni izrazi, kot je na primer strast, delujejo kot signali, ki vplivajo na zaznavo uporabnosti izdelka s strani podpornikov in na njihovo odločitev za finančno podporo kampanj. Z integracijo teorije signaliziranja in teorije uokvirjanja preizkusimo model strukturnih enačb z uporabo anketnih podatkov med udeleženci kampanj z nagradnim množičnim financiranjem. Rezultati kažejo, da ima izražena strast neposreden in pomemben vpliv na odločitve podpornikov o financiranju, kar potrjuje prejšnje ugotovitve, da čustva povečujejo zaznano legitimnost in verodostojnost podjetnikov s strani podpornikov. Še pomembneje pa je, da se uporabnost izdelka izkaže kot ključna mediacijska spremenljivka, saj so podjetniki, ki

izražajo strast do svojih izdelkov zaznani kot bolj predani (B.C. Davis et al., 2017; J.J. Li et al., 2017), kar vodi do prepričanja podpornikov, da je izdelek bolj uporaben in inovativen. Ta uporabnost izdelka nato pozitivno vpliva na verjetnost finančne podpore kampanje. V četrtem poglavju empirično prispevamo k raziskavam množičnega financiranja s kvantificiranjem povezave med signaliziranjem čustev in vedenjem podpornikov. Ta vidik kampanj množičnega financiranja je pogosto teoretično obravnavan, a redko empirično raziskan na večjih vzorcih. Poleg tega uvajamo strukturiran okvir za razlikovanje med neposrednim čustvenim vplivom in posredno kognitivno presojo (tj. uporabnost), s čimer dodajamo kompleksnost razumevanju, kako so čustva orodja prepričevanja v kampanje množičnega financiranja.

Medtem ko četrto poglavje kvantitativno ovrednoti odzive podpornikov na čustvene signale, peto poglavje obravnava časovno dimenzijo čustev, kako se občutki podpornikov spreminjajo v času sodelovanja v kampanji. Z uporabo kvalitativnega raziskovalnega pristopa analiziramo odgovore podpornikov množičnega financiranja, da bi odkrili vzorce čustvenih prehodov. Ugotovimo, da je čustvena privlačnost povezana s transparentnostjo kampanje, izpolnjevanju obljub in nadaljnjem vključevanju podpornikov. To krepi pomen avtentičnosti podjetnikov za ohranitev čustvene podpore podpornikov v času. Pomemben prispevek je uporaba teorije signaliziranja v množičnem financiranju, saj ugotovimo, da dogodki povezani s kampanjo (npr. posodobitve, zamude, odzivi) delujejo kot čustveni sprožilci, ki lahko bodisi okrepijo ali spodkopljejo podporo. Na osnovi uvidov lahko predlagamo dragocene usmeritve za oblikovalce platform množičnega financiranja in ustvarjalce kampanj o upravljanju čustvene kontinuitete in zagotavljanju realnih pričakovanj podpornikov.

Vsa poglavja prispevajo k zaokroženim spoznanjem o pomembni vlogi čustev v kampanjah množičnega financiranja. Izpostavimo, da so čustva osrednjega pomena za uspeh množičnega financiranja, ne le pri pritegnitvi začetnega zanimanja, temveč tudi pri oblikovanju dolgoročnih pričakovanj in podpore podpornikov. Čustva delujejo tako kot signali zaupanja, strasti in predanosti, kot tudi kot mehanizmi, ki vplivajo na razmišljanja in vedenje podpornikov. Z bibliometrično analizo, empirično raziskavo in kvalitativno raziskavo pokažemo, da se podporniki na platformah množičnega financiranja odzivajo na čustva na podoben način kot investitorji na finančnih trgih. Z združevanjem kvantitativnih in kvalitativnih metod raziskovanja ter integracijo psiholoških teorij pomembno prispevamo k razvijajočemu se področju množičnega financiranja. Izpostavimo moč čustev v pripovedovanju zgodbe množičnega financiranja, pomen avtentičnosti podjetnikov in potrebo po neprekinjenem čustvenem podpornikov, vse to je pomembno za podjetnike, ki želijo uspeti v kompleksnem okolju množičnega financiranja.

Naše raziskovanje pomembno prispeva tako k teoriji kot praksi množičnega financiranja, saj pokažemo, da so čustva, še posebej strast, močni signali, ki vplivajo na zaznavo uporabnosti izdelka in na pozitivne odločitve podpornikov financiranja. V razlagi delovanja čustev podpornikov v različnih fazah vključevanja podpornikov integriramo teorijo signaliziranja,

teorijo uokvirjanja in teorijo nalezljivosti čustev. Predlagamo, da se podporniki množičnega financiranja ne zanašajo na posamezne signale, temveč ocenjujejo, kako ti signali skupaj tvorijo koherentno zaznavo zaupanja in vrednosti. Naša raziskava prispeva k nadaljnjemu razvoju teorije signaliziranja z izpostavitvijo mehanizmov simultane integracije čustvenih signalov in ponuja konceptna izhodišča za prihodnje raziskave, ki bodo preučevale, kako čustveni in informacijski signali skupaj vplivajo na vedenje podpornikov. Prav tako prepoznava vrzeli v trenutni literaturi in podaja praktične usmeritve za izboljšanje zasnove kampanj in komunikacije s podporniki.

Med praktičnimi nasveti prispevamo uporabne vpoglede za podjetnike in oblikovalce platform, saj pokažemo, da lahko avtentična in stalna komunikacija čustev ter jasna komunikacija vrednosti izdelka, pomembno prispeva k uspešnosti kampanj. Naše ugotovitve ponujajo smernice za oblikovanje čustveno privlačnih in strateško učinkovitih kampanj množičnega financiranja. Poleg tega naša raziskava prispeva k bolj celostnemu razumevanju množičnega financiranja, saj ga opredeljuje ne le kot finančno izmenjavo, temveč tudi kot čustveno interakcijo med podjetniki in podporniki. Z izpostavljanjem osrednje vloge čustvenega signaliziranja, ki ni zgolj obstranski dejavnik, naše delo spodbuja raziskovalce in praktike k ponovnemu razmisleku o tem, kako se kampanje množičnega financiranja načrtujejo, analizirajo in komunicirajo. S tem doktorska disertacija utira pot prihodnjim raziskavam čustvene dinamike v množičnem financiranju in podjetnikom omogoča, da razvijejo strategije, ki dajejo prednost avtentičnemu čustvenemu vključevanju poleg finančnega načrtovanja. Disertacija prav tako navaja omejitve raziskave, ki obenem odpirajo priložnosti za prihodnje raziskovanje.

*Ključne besede:* množično financiranje, množično financiranje v zameno za nagrado, uspeh množičnega financiranja, odločanje, čustva, teorija signaliziranja, teorija uokvirjanja, teorija nalezljivosti čustev



## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>2</b>	<b>SHARING WITH CROWDS: BIBLIOMETRIC INSIGHTS INTO THE ROLE OF EMOTIONS IN CROWDFUNDING</b> .....	<b>9</b>
<b>2.1</b>	<b>INTRODUCTION</b> .....	<b>9</b>
<b>2.2</b>	<b>LITERATURE REVIEW</b> .....	<b>11</b>
<b>2.3</b>	<b>METHODOLOGY OF BIBLIOMETRIC ANALYSIS</b> .....	<b>12</b>
<b>2.4</b>	<b>SCIENCE MAPPING AND NETWORK ANALYSIS</b> .....	<b>16</b>
2.4.1	Citation and co-citation analysis (CA–D and CCA–R).....	16
2.4.2	Co-occurrence analysis of keywords (COA–K).....	24
2.4.3	Clusters of knowledge .....	31
2.4.4	Analysis of trending and popular research terms and their thematic progression .....	32
2.4.5	Bibliographic coupling analysis of sources (BCA–S).....	37
<b>2.5</b>	<b>DISCUSSION</b> .....	<b>39</b>
2.5.1	Theoretical and practical implications.....	40
2.5.2	Limitations and future research .....	42
<b>2.6</b>	<b>CONCLUSION</b> .....	<b>43</b>
<b>3</b>	<b>OVERVIEW OF SIGNAL CATEGORIES IN CROWDFUNDING STUDIES</b> . <b>45</b>	
<b>4</b>	<b>SIGNALS THAT MATTER: EXPLORING THE INTERPLAY OF DISPLAYED PASSION AND PRODUCT USEFULNESS IN REWARD-BASED CROWDFUNDING DECISIONS</b> .....	<b>57</b>
<b>4.1</b>	<b>INTRODUCTION</b> .....	<b>57</b>
<b>4.2</b>	<b>CUES IN REWARD-BASED CROWDFUNDING</b> .....	<b>60</b>
<b>4.3</b>	<b>THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT</b> .....	<b>60</b>
4.3.1	Displayed passion as a signal in reward-based crowdfunding .....	62
4.3.2	Product usefulness as a signal in reward-based crowdfunding (RBCF) .....	62
4.3.3	Funding decision of backers .....	63
<b>4.4</b>	<b>METHODS</b> .....	<b>66</b>
4.4.1	Data.....	66
4.4.2	Measures.....	68
4.4.3	Statistical analysis .....	69
<b>4.5</b>	<b>RESULTS OF THE STUDY</b> .....	<b>70</b>
<b>4.6</b>	<b>DISCUSSION</b> .....	<b>72</b>
4.6.1	Implications for theory and practice.....	74
4.6.2	Limitations and future research opportunities .....	75
<b>4.7</b>	<b>CONCLUSION</b> .....	<b>76</b>

<b>5</b>	<b>WHEN EXCITEMENT FADES: A QUALITATIVE STUDY OF TRANSITIONS IN BACKERS' EMOTIONS DURING CROWDFUNDING ENGAGEMENT.....</b>	<b>77</b>
<b>5.1</b>	<b>INTRODUCTION .....</b>	<b>77</b>
<b>5.2</b>	<b>CONCEPTUAL BACKGROUND .....</b>	<b>79</b>
5.2.1	Temporal and emotional signals in crowdfunding.....	80
5.2.2	Transitions in backers' emotions.....	81
<b>5.3</b>	<b>METHODOLOGY .....</b>	<b>81</b>
<b>5.4</b>	<b>DATA COLLECTION AND ANALYSIS.....</b>	<b>82</b>
<b>5.5</b>	<b>RESULTS.....</b>	<b>83</b>
5.5.1	Phase 1: Initial exposure phase (pre-contribution engagement) .....	85
5.5.2	Phase 2: Funding commitment phase.....	90
5.5.3	Phase 3: Sustained emotional engagement (post-contribution engagement) ..	95
<b>5.6</b>	<b>DISCUSSION.....</b>	<b>100</b>
5.6.1	Theoretical and practical implications .....	101
5.6.2	Limitations and future directions .....	103
<b>5.7</b>	<b>CONCLUSION.....</b>	<b>103</b>
	<b>GENERAL DISCUSSION AND CONCLUSION.....</b>	<b>104</b>
	<b>REFERENCE LIST .....</b>	<b>113</b>
	<b>APPENDICES .....</b>	<b>144</b>

## **LIST OF TABLES**

Table 1:	Global crowdfunding investment: Historical and regional overview .....	2
Table 2:	Top 10 most cited research documents (descending order).....	17
Table 3:	Top cited emerging keywords.....	27
Table 4:	Identified themes for each year (2013–2023) .....	30
Table 5:	Clusters of knowledge.....	32
Table 6:	Thematic progression of items based on relevance scores (RS).....	33
Table 7:	Categorization of signals in crowdfunding research (authors in alphabetical order) .....	47
Table 8:	Demographic information of survey participants (n = 363) .....	67
Table 9:	Descriptive Statistics and Correlations (n = 363) .....	69
Table 10:	Results of hypotheses testing (H1, H2a, H2b).....	71
Table 11:	Mediation analysis summary (H3).....	71
Table 12:	Mean differences in values based on video groups (n = 363).....	72
Table 13:	Overview of phases in backers' emotional journey .....	84
Table 14:	Phase 1 – Initial exposure .....	86
Table 15:	Phase 2 – Funding commitment phase.....	91
Table 16:	Sub-themes generated from “encountering apprehension”.....	93
Table 17:	Phase 3 – Sustained emotional engagement .....	96

## LIST OF FIGURES

Figure 1: Global crowdfunding market size (2015-2030).....	3
Figure 2: Research framework of bibliometric analysis.....	15
Figure 3: Clustered network of cited references based on their co-citation analysis .....	21
Figure 4: Annual scientific productions .....	23
Figure 5: Annual citations .....	23
Figure 6: Clustered network of keywords based on their co-occurrence .....	25
Figure 7: Density visualization map of emerging keywords.....	26
Figure 8: Overlay visualization based on keywords and average publication year (timeline analysis).....	29
Figure 9: Network visualization map based on terms. Colours indicate clusters of related terms .....	35
Figure 10: Visual map of bibliographic coupling of sources over past 5 years .....	37
Figure 11: Proposed conceptual model .....	66
Figure 12: Phases – Transition in backers’ emotions (first cycle) .....	85

## LIST OF APPENDICES

Appendix 1: Daljši povzetek .....	1
Appendix 2: Literature search query — crowdfunding and emotions .....	13
Appendix 3: Types of publications and subject areas .....	14
Appendix 4: Top 10 co-cited references (descending order) .....	15
Appendix 5: Top 12 productive sources.....	16
Appendix 6: Harman’s single-factor test.....	17
Appendix 7: Scale reliability statistics (Displayed Passion — DP).....	18
Appendix 8: Scale reliability statistics (Product Usefulness — PU) .....	19
Appendix 9: Description of measurement items .....	20
Appendix 10: Detailed analysis based on control variables.....	21
Appendix 11: Interview protocol.....	27
Appendix 12: Questionnaire.....	29

## LIST OF ABBREVIATIONS

**RBCF** – Reward-based Crowdfunding

**CAGR** – Compound Annual Growth Rate

**CA-D** – Citation Analysis of Documents

**CCA-R** – Co-citation Analysis of References

**COA-K** – Co-occurrence Analysis of Keywords

**BCA-S** – Bibliographic Coupling Analysis of Sources/Journals

**DP** – Displayed Passion

**PU** – Product Usefulness

**FD** – Funding Decision

**CMV** – Common Method Variance

**M** – Mean

**SD** – Standard Deviation

**Std. Error** – Standard Error

**CV** – Coefficient of Variation

**RMSEA** – Root Mean Squared Error of Approximation

**CFI** – Comparative Fit Index

**SRMR** – Standardized Root Mean Square Residual

**$\beta$**  – Standardized Estimate of Regression Coefficient

**$\chi^2$**  – Chi-square Statistic

**df** – Degrees of Freedom

**Sig.** – Statistical Significance

**N** – Sample Size

**H** – Hypothesis

**JASP** – Jeffrey’s Amazing Statistics Program

# 1 INTRODUCTION

Over the past decade, crowdfunding has emerged as a transformative model for financing entrepreneurial ventures, democratizing access to capital beyond traditional funding institutions (Hoque, 2024). Crowdfunding manifests in several distinct forms, with existing literature identifying four principal types: reward-based, equity-based, debt-based, and donation-based crowdfunding (Böckel et al., 2021). Among the various forms of crowdfunding, equity-based crowdfunding stands out due to its unique financial structure and associated risks (Mochkabadi & Volkmann, 2020). Consequently, the inherent financial risks make equity crowdfunding less attractive compared to reward-based crowdfunding (Mochkabadi & Volkmann, 2020). Thus, the potential risks involved take away the credit of equity-based crowdfunding in comparison to reward-based crowdfunding (Bapna, 2017), where contributors typically receive tangible rewards or are refunded if funding goals are unmet. In reward-based models, backers usually offer modest financial support to assist entrepreneurs and gain early access to innovative products or receive non-financial incentives (Bi et al., 2017; Frydrych et al., 2014). This form is set apart by its emphasis on offering novel products or services as rewards, unlike donation-based crowdfunding, which involves altruistic giving, or lending and equity-based forms, which are linked to financial returns and corporate ownership (R. Brown et al., 2019).

Although prior research has thoroughly classified the different forms of crowdfunding, a comprehensive understanding of their practical relevance necessitates an exploration of global market dynamics. Beyond theoretical distinctions, the crowdfunding ecosystem has undergone substantial transformation in terms of scale, regional growth, and investor behavior. Examining historical data and future projections helps reveal how various crowdfunding types have shaped and continue to shape the evolution of the global crowdfunding landscape. *Table 1* presents a categorized summary of estimated crowdfunding investments across major types and global regions, highlighting historical volumes and evolving market trends.

*Table 1: Global crowdfunding investment: Historical and regional overview*

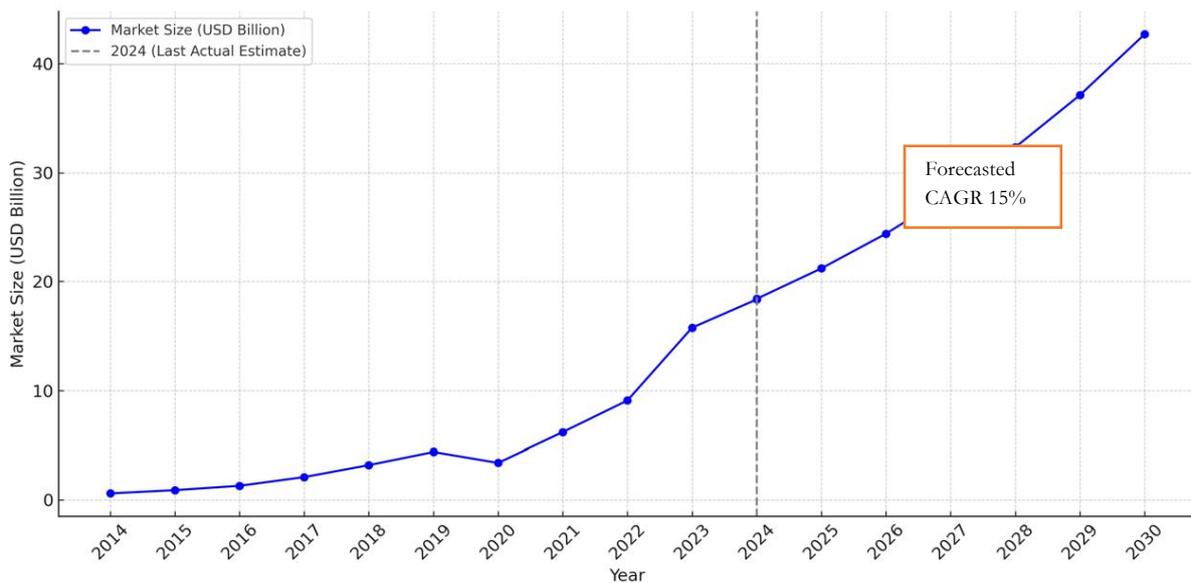
<b>Crowdfunding type</b>	<b>Sub-type</b>	<b>Region</b>	<b>Time period</b>	<b>Approx. volume</b>	<b>Source/note</b>
Reward-based	General	Global	2012–2015	\$5.5 billion	Kickstarter, Indiegogo; early dominance in volume
Donation-based	General	Global	2012–2015	Included in \$5.5B	Combined with reward-based in most reports
Equity-based	General	Global	2012–2015	\$2.5 billion	Early stage equity crowdfunding
Equity-based	Startup equity	United Kingdom	2020	£550 million	Mostly via Crowdcube and Seedrs
Equity-based	General	United States	2017	\$1.4 billion	Jumpstart Our Business Startups (JOBS) Act impact
Equity-based	General	United States	2022	\$5 billion	Expansion in regulated markets
Equity-based	Real estate equity	United States	By 2019	\$1.1 billion+	Fundrise platform alone (not entire market)
Equity-based	Mixed	Australia	2017–2023	AU \$218 million	Birchal platform, 300+ offers
Debt-based	General	Global	2023–2024	~60% of \$18.4B market	Dominant share in global volume
All types	Combined	Global	2023	\$15.7 billion	Total market estimate (reward + equity + debt)
All types	Combined	Global	2024	\$18.4 billion	Continued growth trend
All types	Combined	Global	2025 (projected)	\$20.46 billion	The Business Research Company (2024); projected *CAGR ≈ 11.2% from 2024

*Source: Own work compiled from multiple industry and market research reports, including Crowdfunding Market Size & Share | Industry Report, DataHorizon Research (2025).*

The global crowdfunding market has experienced significant evolution over the past decade, transitioning from dominance by reward- and donation-based crowdfunding, which collectively raised approximately \$5.5 billion globally between 2012 and 2015, to a more diversified landscape where equity- and debt-based models now play substantial roles. During the early 2010s, equity crowdfunding was still emerging, raising around \$2.5 billion globally. However, with regulatory reforms and platform growth, equity-based crowdfunding (especially real estate and startup equity) has surged, with cumulative

platform-level funding (e.g., Seedrs, Fundrise, Estateguru) exceeding \$8 billion by 2025. In recent years, debt-based crowdfunding (e.g., peer-to-peer lending) has become the dominant model, accounting for approximately 60% of the global market volume in 2023–2024. In *Figure 1*, the line graph illustrates the historical and projected growth of the global crowdfunding market from 2014 to 2030. Beginning at approximately \$0.6 billion in 2014, the market experienced steady expansion, reaching \$18.4 billion by 2024, a nearly 30-fold increase over a decade. From 2025 onward, the market is projected to grow at a CAGR of around 15%, culminating in an estimated size of \$41.3 billion by 2030. This sustained growth trajectory reflects the sector’s resilience and rising global relevance, driven by broader adoption of crowdfunding platforms, diversification of funding models, and advances in financial technology and digital infrastructure.

*Figure 1: Global crowdfunding market size (2015 – 2030)*



*Source: Crowdfunding Market Report – Research and Markets (2025) and DataHorizon Research (2025).*

A major driver behind the substantial growth of the crowdfunding market from 2024 onward is anticipated to be the rising reliance on social media platforms to boost visibility and engagement for upcoming campaigns. Platforms such as Facebook, Instagram, LinkedIn, Reddit, and Twitter are playing an increasingly central role in attracting backers and disseminating information about crowdfunding initiatives. Simultaneously, technological innovations, particularly the integration of machine learning and artificial intelligence (AI) into crowdfunding platforms, will also significantly drive market expansion by enhancing

campaign targeting, user engagement, and operational efficiency (Crowdfunding Market Report - Research and Markets, 2025).

As a financing mechanism, crowdfunding not only reshapes entrepreneurial financing but also offers rich insights into the behavioral dimensions of funding decisions in digital contexts (Kuppuswamy & Bayus, 2017; Vismara, 2018). Key decision factors such as the perceived potential of the product, the credibility of the entrepreneur, and the project alignment with the backer's values have been widely recognized as influencing funding choices (Hoegen et al., 2018). Affective elements like emotions have played a significant role in crowdfunding, often serving as the invisible force that drives backers' behavior and decisions, especially in the absence of traditional investment indicators (Lu et al., 2024; Wuillaume et al., 2019b). With the rapid growth of emotionally-driven content on social media platforms such as TikTok, emotions are becoming even more central in shaping crowdfunding dynamics. These platforms facilitate emotional storytelling at scale, allowing campaigns to go viral and attract support based on resonance rather than rational evaluation. This "emotionalization" of funding behavior aligns with recent statistical trends showing significant growth in crowdfunding volumes (projected to exceed \$20 billion by end of 2025) suggesting a parallel rise in emotionally influenced participation.

However, establishing legitimacy or credibility is another objective behind the incorporation of emotional signals in crowdfunding videos (Frydrych et al., 2014). Recently, emotions have gained increased importance in crowdfunding research by emphasizing their role in the performance of crowdfunding campaigns (Allison et al., 2022; J.J. Li et al., 2017; Raab et al., 2020). Emotional cues embedded in crowdfunding narratives, images, and videos significantly influence the funding behavior of the backers (Allison et al., 2017; B.C. Davis et al., 2017). Entrepreneurs often employ emotional storytelling techniques (Manning & Bejarano, 2017; Robiady et al., 2021) to forge a sense of connection and legitimacy (Taeuscher et al., 2021), which enhances the likelihood of funding success (Mitra & Gilbert, 2014). Moreover, the emotional appeal of a project can act as a heuristic shortcut for backers, especially under conditions of uncertainty and limited information (Su et al., 2024; Xiang et al., 2019). Affective responses to campaign videos, facial expressions, and tone of voice can lead to higher engagement and willingness to contribute (Rhue & Robert, 2018; K. Zhao et al., 2022). Importantly, emotions are not merely peripheral; they interact with cognitive evaluations and shape risk perception, thus influencing both initial support and continued engagement throughout the campaign lifecycle (Rick & Loewenstein, 2008; Tuckett & Taffler, 2012). While existing research has explored various aspects of emotional influence in crowdfunding, there is still a lack of understanding of how these affective factors dynamically interact with other decision-making processes in real-world scenarios. With our study, we aim to expand the ongoing conversation about the critical role emotions play in driving engagement, shaping perception, and ultimately influencing the funding success of crowdfunding campaigns. We start from the realisation that affective factors play a significant role when it comes to influencing the engagement, perception, and ultimately the

funding success of supporters. While extant literature has increasingly acknowledged the critical role of different emotions in shaping the outcomes of crowdfunding campaigns (Hafeez & Drnovšek, 2025; Lu et al., 2024; Raab et al., 2020), a deeper understanding remains elusive regarding how these emotional responses interact with product-specific attributes to influence backer behavior. Most studies have examined emotions in isolation, often overlooking the evaluative judgments that accompany product assessments, such as product usefulness. To extend the existing conversations in the literature, we adopt an integrative perspective that considers both affective and cognitive dimensions in the decision-making process.

Specifically in the dissertation, we investigate the intersection of emotional cues and product usefulness within the context of reward-based crowdfunding. We do so by developing and empirically testing a set of main research questions across three interrelated studies to address the following research questions (RQs):

*RQ 1.* What are the emerging themes that have originated from the current trends in academic research of crowdfunding and emotions? How can existing crowdfunding research that focuses on the role of emotions in crowdfunding campaigns inform future studies?

*RQ 2.* How does product usefulness interact with displayed passion and the funding success of the campaign?

*RQ 3.* How do backers' emotions change as they engage with crowdfunding campaigns, from initial exposure to the decision to support?

We address these research questions by conducting three different studies. We start by providing a conceptual foundation for our empirical investigations through a systematic review of the literature. Through this review, we aim to critically evaluate and synthesize the existing research on emotions in crowdfunding, with a focus on theoretical frameworks, methodological approaches, and emerging trends in the field (Paul & Criado, 2020; Snyder, 2019). A structured review is essential not only for mapping the intellectual landscape of crowdfunding and highlighting key contributions and limitations, but also for positioning this study within the broader academic discourse on entrepreneurial and backer psychology. Insights from the review informed the development of our research questions and guided the design of the subsequent quantitative and qualitative studies. Additionally, the review helped identify underexplored themes, particularly the combined influence of emotional signaling and product evaluation.

Our first study, a bibliometric analysis reveals that, despite growing scholarly interest in emotions and signaling in crowdfunding (e.g., Anglin et al., 2018; J.J. Li et al., 2017; Thies et al., 2016), the literature still lacks a comprehensive synthesis of how emotional and cognitive factors jointly influence funding outcomes. In advancing this line of inquiry, we

draw on well-established theoretical frameworks, including signaling theory (Spence, 1973), framing theory (Entman, 1993; Goffman, 1974), and emotion contagion theory (Hatfield et al., 1993). In our second study, this theoretical integration allows us to examine the role of displayed passion in crowdfunding, specifically through the lens of these theories, while considering product usefulness as a mediating factor. The findings of our quantitative study emphasize the role of product usefulness and empirically test its mediating role in the relationship between displayed passion and funding success, which was a novel point of discussion in crowdfunding literature. In our third study, we explore transitions in backers' emotions during crowdfunding engagement. While prior research has emphasized the importance of initial emotional cues in attracting backers (Sitruk et al., 2025; Xiang et al., 2019), there is limited research on how backers' emotions evolve throughout their journey, from initial exposure to a campaign, through the funding decision, and into the post-contribution phase. Crowdfunding is not a one-time interaction but a dynamic, emotionally charged process in which backers continuously interpret and reinterpret both narrative and visual cues (Kaminski & Hopp, 2020). This third study addresses this overlooked dimension by examining how emotional trajectories influence decision-making over time. Drawing on signaling theory (Spence, 1973), we examine how shifts in affect, such as increasing empathy, excitement, or doubt, influence backers' attitudes and behaviors. We consider how these emotional transitions are triggered not only by campaign content but also by interactive elements, social proof, and updates shared throughout the funding period. This temporal perspective on emotions provides deeper insight into when and how emotional resonance is most impactful, enriching our understanding of engagement patterns and psychological commitment in crowdfunding contexts.

Collectively, the three studies presented in this dissertation offer significant theoretical contributions to the crowdfunding literature by deepening our understanding of the role of emotions play in backer decision-making. The first study provides a theoretical integration by systematically reviewing the literature and mapping the emotional dimensions in crowdfunding. It reveals that despite increased scholarly attention, emotional cues are often under-theorized or treated as isolated phenomena (Hafeez & Drnovšek, 2025). This review identifies a fragmented field and calls for a more structured application of established emotion-related theories within crowdfunding research. Building upon this, the second study discusses a theoretical framework by linking signaling theory (Spence, 1973), and framing theory (Entman, 1993; Goffman, 1974) to explain how displayed passion functions as a non-verbal signal that influences backer perceptions under conditions of information asymmetry (Courtney et al., 2017; Davies et al., 2018). By incorporating product usefulness as a mediating cognitive factor, this study makes a unique contribution to the literature. It shifts the discussion from emotion in isolation to a dual-process theoretical model, in which affective displays interact with rational appraisals of the product's qualities (Stanko & Henard, 2016; H. Zhang & Chen, 2019; Zvilichovsky et al., 2018). The research also supports framing theory (Entman, 1993; Goffman, 1974) by elucidating how emotional framing in campaign narratives shapes the meaning-making process of potential backers.

This integration reflects a more holistic view of decision-making, bridging gaps between emotional resonance and instrumental evaluation in backer behavior. The third study further advances the theoretical discourse by moving beyond static expressions of passion and investigating emotional transitions over time. This dynamic perspective draws on emerging insights from affective psychology and signaling theory (Spence, 1973), illustrating how backer emotions shift throughout the crowdfunding journey in response to cues such as campaign updates, storytelling elements, and social feedback (Rhue & Robert, 2018; K. Zhao et al., 2022). This study redefines engagement as a continuous emotional journey, offering a fresh perspective compared to earlier models that focus on single emotional triggers. Together, these studies contribute to crowdfunding theory by offering an integrative emotional-cognitive framework. This framework, anchored in established social and psychological theories, explains not only initial funding decisions but also sustained engagement and overall campaign success. This theoretical synthesis advances the field by offering a richer, temporally sensitive, and psychologically grounded model of how emotions function within entrepreneurial finance contexts (Ahlers et al., 2015; Mollick, 2014; Thies et al., 2016).

Beyond theoretical advancements, this dissertation offers several practical contributions that are highly relevant for crowdfunding practitioners, platform designers, and entrepreneurs. Firstly, a systematic literature review provides a consolidated and accessible knowledge base for practitioners seeking to understand the role of emotions in campaign success. The review in study 1 synthesizes scattered insights into a coherent framework, providing entrepreneurs with evidence-based guidance on the emotional elements that are most likely to resonate with backers. This clarity is essential in a context where entrepreneurs often operate without formal marketing training and must make intuitive decisions about campaign content. Second, study 2 offers actionable insights into how entrepreneurs can strategically use emotional displays, particularly passion, to signal authenticity and commitment in a manner that enhances trust and credibility under conditions of information asymmetry (Courtney et al., 2017; Di Pietro & Tenca, 2024). By demonstrating the mediating role of product usefulness, the study highlights the importance of not only showcasing passion but also clearly communicating the product's practical value. Thus, a well-crafted narrative can make potential backers emotionally invested in the project's success, which supports the research done by (Anglin, 2017; Majumdar & Bose, 2018). This dual focus encourages campaign creators as well as nascent entrepreneurs to balance emotional storytelling with informative content, thereby appealing to both affective and rational dimensions of backer decision-making (Anglin et al., 2018; J.J. Li et al., 2017). For platform designers, these findings imply the need to optimize interfaces and campaign templates that allow space for both narrative and product-focused communication. Finally, study 3 brings to light the temporal dynamics of emotional engagement, showing that emotions are not fixed at the point of campaign launch but evolve through continuous interactions, updates, and community feedback (Rhue & Robert, 2018; K. Zhao et al., 2022). This highlights the importance of maintaining emotional connection throughout the funding period by regularly updating supporters,

responding empathetically to comments, and generating a sense of co-creation. For practitioners, this suggests that successful crowdfunding requires active emotional management, not just compelling initial storytelling. The practical implication here is the development of communication strategies that sustain momentum and emotional resonance over time. Collectively, these studies offer a multi-dimensional toolkit for entrepreneurs, emphasizing that crowdfunding success depends not only on financial incentives or technical specifications, but also on the strategic orchestration of emotional and cognitive engagement throughout the campaign lifecycle.

## 2 SHARING WITH CROWDS: BIBLIOMETRIC INSIGHTS INTO THE ROLE OF EMOTIONS IN CROWDFUNDING<sup>1</sup>

### 2.1 Introduction

Crowdfunding is “the solicitation of small donations from a large number of potential investors to raise capital in a significant and time-saving manner” (Chandler et al., 2021, p. 1; Hecht, 2020). There is a notable evolution in the literature on crowdfunding, moving from an initial stage (2013–2016) in which the issues were identified and researched, to a more advanced stage characterized by greater maturity, rigor and extensive research into the issues in the years before and after the pandemic (2017–2023).

A distinctive feature of crowdfunding campaigns in recent years is the use of emotion as an effective means of attracting potential backers, building brand image and promoting the success of the campaign (Xiang et al., 2019). Emotional content seems to attract attention, maintain audience interest and increase motivation (Lei et al., 2018). Campaigns that evoke strong emotions are more likely to be shared and talked about, increasing their visibility and reach. Evidence from the field suggests that crowdfunding campaigns that evoke a desire to be part of a community can motivate people to take immediate action and support the project (Varsamis, 2021).

While previous research has investigated the influence of sentiments and emotions in crowdfunding (Adamska-Mieruszevska et al., 2021; Neuhaus et al., 2022; Rhue & Robert, 2018), the impact of emotional factors on the success of crowdfunding campaigns, has not yet been extensively studied. In a recent study, Elbardai and colleagues (Elbardai et al., 2021) explored bibliometric trends in rational and emotional advertising, we do not know enough about how emotions interplay with crowdfunding success. This understanding is of particular practical importance in the post-pandemic era which accelerated the growth and diversification of crowdfunding platforms and led to the emergence of niche markets as crowdfunding proved more resilient as a funding method compared to traditional funding methods (Al Nawayseh, 2020; Elmer et al., 2020; Igra et al., 2021). This resilience is partly due to the emotional narratives that campaigns can utilize, which can foster a sense of urgency and community support. Overall, it seems that crowdfunding campaigns are a multi-layered phenomenon that includes both informational and motivational factors. While informational appeals focus on communicating facts, product features and values, emotional appeals evoke feelings, desires and personal connections (Xiang et al., 2019). This multi-layered nature of crowdfunding calls for a better understanding of the underlying

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<sup>1</sup> Hafeez, S., & Drnovšek, M. (2025). Sharing with Crowds: Bibliometric Insights into the Role of Emotions in Crowdfunding. *Economic and Business Review*, 27(1), 25-49.

<https://doi.org/10.15458/2335-4216.1351>

mechanisms linking emotions and crowdfunding and can help drive future programmatic research in this area.

In this study, we have applied bibliometric methods to the literature on emotions and crowdfunding to answer the following research questions. First, what are the most cited publications that contribute to the understanding of crowdfunding and emotions? Second, what are the emerging themes that dominate crowdfunding research? Third, what are the leading journals that focus on the interdisciplinary study of crowdfunding and emotions? Fourth, how can existing crowdfunding research that focuses on the role of emotions in crowdfunding campaigns inform future studies? To answer these questions, we conducted a bibliometric assessment by analyzing 269 research papers on crowdfunding from the Scopus database to understand the evolution and maturity of topics in crowdfunding and emotions. Using the VOSviewer application, we highlight the trends, differences and gaps and make suggestions for future research.

The contributions of our study on crowdfunding and emotions will likely provide a new perspective for understanding this evolving field. The main objective of this paper is to provide researchers with a comprehensive understanding of how the literature on emotional aspects in crowdfunding has evolved over the last decade. It aims to provide a clear and detailed overview of the developments and trends in the field so that researchers can grasp the development and current state of knowledge in this area. Our main contribution to this area of research is that the journals with the highest productivity at the intersection of emotion and crowdfunding are in the fields of business, bioinformatics and medical research. An interesting finding emerged when we analyzed the keywords. By analyzing previous studies, we showed that emotions are key to understanding backers' motivations and reasons for participating in crowdfunding campaigns. We found that the terms "COVID-19" and "pandemic" increased in importance during the pandemic, suggesting that emotions such as "sadness," "passion," "trust," "empathy," and "enthusiasm" emerged in response to new situations. Based on these findings, we hypothesize that the increased use of these terms during and after the pandemic indicates a shift in the use of emotions in crowdfunding, as potential backers appear to have become more empathetic towards crowdfunding campaigns that address social issues. This study is original because it focuses on the emotional side of crowdfunding, which has not been studied before. We have identified the most influential journals and authors, providing a valuable resource for future researchers. In addition, our study offers actionable recommendations for future research, such as delving deeper into the impact of entrepreneurial passion, exploring the role of emotion in social entrepreneurship, and examining the influence of platform choice on campaign outcomes. These suggestions aim to stimulate further research and contribute to a more comprehensive understanding of the emotional dynamics of crowdfunding.

The rest of the chapter is organized as follows: First, we provide a brief overview of the existing literature on emotions, with a particular focus on the role of displayed emotions. We

then present our methodology and summarize the results. We conclude with a discussion of contributions and implications.

## **2.2 Literature review**

Emotion, often described as a “gut feeling,” plays a crucial role in every aspect of cognition and perception, and helps in reliable and accurate decision making (Tuckett & Taffler, 2012), especially in crowdfunding campaigns (Rhue & Robert, 2018; K. Zhao et al., 2022). Literature suggests that emotions shape individuals’ choices, inform values, and provide depth to the decision-making process. Howard (1993) and Van de Laar and De Neubourg (2006) examined the theoretical perspective of emotions as a complementary factor to rational decision-making processes and empirically demonstrated the involvement of emotional elements in decisions related to investments. There was already substantial research backing the concept that “immediate emotions” also have a significant impact on decision-making (Niedenthal & Ric, 2017; Rick & Loewenstein, 2008, p. 138). Overall, given that emotions influence individuals’ intuition, these intuitive responses guide them toward the right decision without conscious analysis. Hence in the crowdfunding context, emotions are likely to be a potent instrument for engaging backers, enhancing brand image, and ensuring the success of campaigns.

This expectation is supported by recent studies about the display of emotions in crowdfunding, which have experienced a notable surge over recent years. Emotions displayed by crowdfunding entrepreneurs impact the backers’ decision-making process (K. Zhao et al., 2022). This is because when there exists a profound personal connection and sense of ownership towards the supported project, backers develop a kind of bond with the entrepreneur (Huvaj et al., 2023). Communication of emotions made during videos involves no direct cost but is very effective for the transmission of information related to business ideas and product information. Recently, emotions have gained increased importance in crowdfunding research as their role in the performance of crowdfunding campaigns has been emphasized (J.J. Li et al., 2017; Oo & Allison, 2022; Raab et al., 2020). The literature on crowdfunding has mentioned various theories mainly signaling theory (Spence, 1973), emotion contagion theory (Hatfield et al., 1993), narrative theory, (Fisher, 1984) and affective event theory (Weiss & Cropanzano, 1996) and explored the role of emotions. The research discovered that displayed passion in crowdfunding videos is important in influencing the backers’ perception of a product and hence, can impact the crowdfunding performance (J.J. Li et al., 2017; Raab et al., 2020). This effect resonates with the emotion contagion theory (Hatfield et al., 1993) which states the emotional expressions displayed by entrepreneurs can have an impact on the potential backers, shaping their emotional responses and decision-making. Additionally, the emotion contagion theory and narrative theory (Anglin et al., 2023) also highlight the importance of authenticity and transparency in crowdfunding (Lee & Theokary, 2021; Moritz et al., 2015; Rhue & Robert, 2018). Narrative theory emphasizes the use of emotional elements in storytelling (Robiady et al., 2021) while

pitching a product or an idea. Crowdfunding campaigns that evoke emotions such as passion, empathy, excitement, inspiration, and so forth, are more likely to succeed (S. Chen et al., 2023; Xiang et al., 2019). A well-crafted narrative can make potential backers emotionally invested in the project's success.

The fact that entrepreneurs should strategically tailor their appeals and storytelling to connect with backers on both rational and emotional levels is supported by the findings of B.C. Davis et al. (2017), which indicate that entrepreneurs who exhibit enthusiasm, confidence, and passion are more likely to be successful in their crowdfunding campaigns, and tend to receive higher levels of funding. Additionally, Griskevicius et al. (2010) found that investors usually invest in those projects that evoke positive emotions, such as joy and enthusiasm. In contrast, projects eliciting negative emotions, such as fear and anger, tend to receive lower levels of investment. Ceballos et al. (2017), Lu et al. (2023), and Mavlanova et al. (2012) have discussed how emotions have been used as signals in conveying information about commitment, trustworthiness, and the perceived value of a crowdfunding project. Establishing legitimacy is another objective behind the incorporation of signals in crowdfunding videos (Frydrych et al., 2014). These emotional signals include demonstrating the entrepreneur's own expertise, explaining prototypes of the product, sharing their testimonials, or expressing genuine enthusiasm about the whole campaign. Entrepreneurs and backers use emotions strategically to influence each other's decisions and foster a sense of connection and community within the crowdfunding ecosystem.

As an alternative method of funding, crowdfunding is crucial for entrepreneurial research, especially when combined with interesting topics in emotions (Gorgievski & Stephan, 2016; Hartmann et al., 2022). In opposition to researchers such as J.J. Li et al. (2017), Oo and Allison (2022), and Raab et al. (2020), who support the view that emotions displayed by entrepreneurs are necessary to run a successful crowdfunding campaign, K. Zhao et al. (2022) found the advantage of verbal expression over visual expression in conveying emotions when it comes to explaining success. In summary, prior literature suggests that when it comes to describing or communicating emotions related to achievements or success, using words, language (verbal expression) and body language is more effective than using visual cues or imagery (visual expression). In other words, when people want to convey their emotions about success, using words to explain or describe those emotions is more powerful and meaningful than relying solely on images, pictures, or other nonverbal forms of communication. This finding indicates that verbal communication is particularly effective in capturing distinctive and complex emotional experiences, through tone modulation and nonverbal cues, such as facial expressions and body language, that also convey emotions.

### **2.3 Methodology of bibliometric analysis**

To comprehensively examine the literature on crowdfunding and emotions, we conducted a bibliometric analysis, which offers greater objectivity than traditional qualitative literature

reviews. Highly cited studies such as Aria and Cuccurullo (2017), Donthu et al. (2021) and Mukherjee et al. (2022) have followed the general Zupic & Čater's (2015) workflow for conducting systematic literature reviews and science mapping techniques. We adopted their five-step process because it offers a clear and systematic approach to conducting bibliometric research. This methodology covers all major aspects of bibliometric research from design to interpretation, and the framework can be adapted to various fields and research questions. However, we narrowed it down to four steps. We combined the last two steps, namely visualization and interpretation, into one. This allowed us to explore and analyze the data simultaneously and simplify the process of gaining meaningful insights from visual representations. This method is typically more intuitive and efficient, allowing for a deeper comprehension of the relationships and patterns in the data as they are visualized. In this method, we first defined our research objectives and questions and chose appropriate research methods; second, we gathered data by choosing keywords, selecting a suitable database, and exporting the data; third, we cleaned and analyzed the data; fourth, we visualized the network maps on VOSviewer and interpreted the main findings. This process outlines a structured process for conducting a bibliometric analysis, starting from the initial literature review to the application of various bibliometric techniques and the interpretation of results to ensure the robustness of the analysis. The methodology encourages the exploration of interdisciplinary connections by highlighting how research topics intersect across different disciplines. This is particularly beneficial in fields such as crowdfunding and affective science, where research extends across multiple areas of study.

We applied this framework (*Figure 2*) to conduct a bibliometric analysis. This four-step structured approach enabled us to systematically investigate the literature in our fields of interest. To comprehend the research direction and hot spots in crowdfunding studies, we utilized the VOSviewer software (Valenzuela et al., 2017). Donthu et al. (2021) and Zupic and Čater (2015) divided the bibliometric analysis method into two main categories—science mapping and network analysis. Science mapping explores relationships between contributors through various techniques such as citation analysis, co-citation analysis, keyword co-occurrence analysis and bibliographic coupling. Network analysis uses network metrics, clustering, and visualization to enhance bibliometric assessment by identifying important contributors who might be missed in analyses that focus solely on publications or citations. These methods collectively provide a thorough approach to analyzing research in each field.

We started the analysis with a preliminary literature review on crowdfunding and affective science (emotions). This review revealed that the literature in these collaborative fields is extensive and scattered across various disciplines. The absence of a comprehensive overview and clear insights into the field's origins and current state made it an ideal subject for our bibliometric study. Based on the knowledge we acquired; research questions were formulated. We then examined the sample publications using four distinct bibliometric

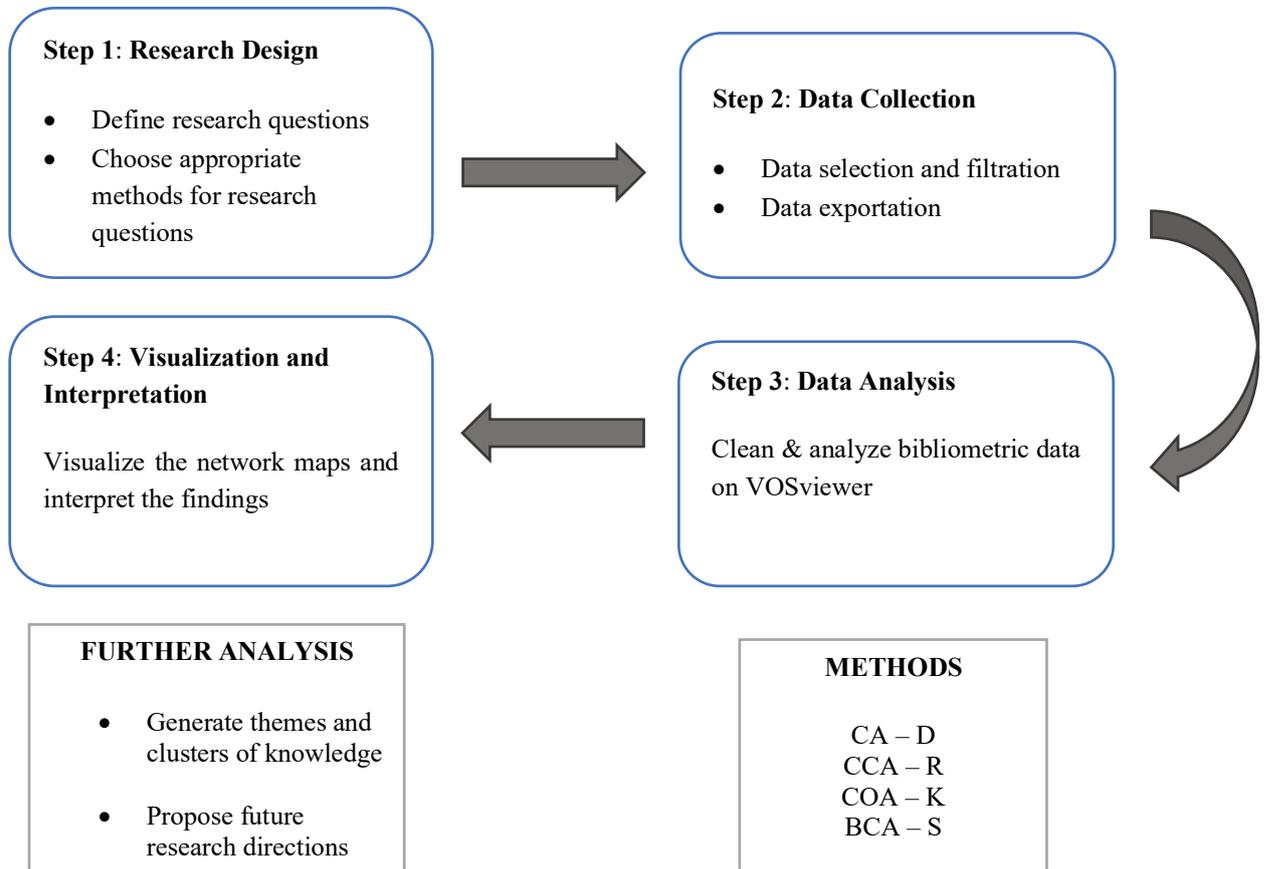
methodologies: co-citation analysis, co-occurrence analysis, bibliographic coupling, and citation analysis.

In the second step of this process, we chose the database that would be most appropriate to collect articles pertaining to the fields of crowdfunding and emotions. We opted for Elsevier's *Scopus* database because it offers access to a larger pool of indexed journals compared to alternatives such as Web of Science. Additionally, Scopus is recognized for its reliability and versatility, offering multiple sorting, ranking, and refining functionalities (Harzing & Alakangas, 2017). Scopus is a widely acknowledged research tool that has been extensively utilized in other bibliometric studies due to its proper and accurate categorization of articles (Bargoni et al., 2024; Buttice & Ughetto, 2021). Moreover, Scopus serves as a user-friendly and consistent searching tool (Gorraiz & Schloegl, 2008). Data was retrieved on December 10, 2023. A combination of the most generic keywords related to the field of crowdfunding and emotions is used to extract the data from the Scopus database. We set the disciplines in the search strategy to select studies related to the emotional aspect of crowdfunding success. Documents were shortlisted based on the eligibility criteria applied (Bargoni et al., 2024). All the titles published from 2013 to 2023 were searched, covering exactly 10 years of crowdfunding. The rationale for opting for this specific decade is that although the concept of crowdfunding came into existence around 2005–2006, scholarly exploration in this field began to gather steam only around 2012 (Vijaya and Mathur, 2023). A total of 4271 documents were found when we used “search within all fields.” To narrow down the search, we used the drop-down option “search within article title, abstract, keywords.” We restricted the search only to publications in the English language to better understand and analyze the results. Finally, a database of 306 English documents was extracted. After deleting the irrelevant publications, we managed to collect 269 documents. The database includes 194 articles, 62 conference papers, 10 book chapters, 2 books, and 1 review. The list of documents was downloaded in the RIS, CSV, and BiB formats.

In the third step of the bibliometric analysis process, we put forward an augmented bibliometric approach (Anand & Dumazert, 2022; Sottini et al., 2024) by combining four relational techniques: 1) Citation Analysis of Documents (CA-D) 2) Co-Citation Analysis of References (CCA-R), 3) Co-Occurrence Analysis of Keywords (COA-K) and 4) Bibliographic Coupling Analysis of Sources (BCA-S). To investigate the evolution of crowdfunding and emotions research, we utilized co-citation analysis of references to uncover past developments and bibliographic coupling in order to highlight current trends. We examined the connections between key research papers and references in the field, using co-citation analysis. We also conducted a keyword co-occurrence analysis to support our findings. All these analyses were enhanced by network visualization techniques, which improved our understanding of the structure and relationships within both fields. Using the VOSviewer software, we performed the coupling and keyword co-occurrence analysis to deeply explore and examine the intellectual structures of the addressed research field (Valenzuela et al., 2017). We enhanced our methodology by incorporating a qualitative layer

to our analysis, conducting a thematic exploration using our bibliometric sample. This enabled us to offer a more extensive overview of the fields.

Figure 2: Research framework of bibliometric analysis



Source: Adapted from Zupic and Čater's (2015) methodology.

In the final step, we visualized the network maps and discussed the findings. Network analysis generates visual representations of scientific domains, where nodes of the same color symbolize analytical units such as documents, authors, journals, or words, and connections between nodes indicate similarities. VOSviewer uses colors to indicate the cluster to which a node has been assigned (Van Eck & Waltman, 2011). The strength of these connections determines the proximity of nodes in the visualization. By varying the units of analysis, we created diverse maps of documents, each offering unique insights into its structure and relationships (Donthu et al., 2021; Zupic & Čater, 2015).

## 2.4 Science mapping and network analysis

The integration of emotions into crowdfunding studies has further enriched this field, shedding light on how affective factors influence backer decisions and campaign success. In this context, exploring the diversity of publication types and thematic areas provides valuable insights into the academic landscape and prevailing research trends. The types of publications and top 10 major areas of study within which researchers have published documents on crowdfunding and emotions are listed in *Appendix 3*. Business, management, accounting and computer science are the most popular research directions. The number of publications for business, management, and accounting is 131, and this accounts for 49%, while the number of publications for computer science is 99, which is 37% of total publications. Furthermore, research is also conducted in sectors of social sciences (61), economics, econometrics, and finance (55), decision sciences (37), engineering (29), mathematics (17), psychology (16), arts and humanities (14), and medicine (13). Since some publications cover multiple research fields, the sum of all the subject areas exceeds 100%.

Analyzing the categories from *Appendix 3* reveals how research has evolved in different research areas on the topics of crowdfunding and emotions and provides insights into areas that have been investigated concerning these two subjects. Given that the main purpose of crowdfunding is to meet business needs, it is not surprising that the most productive research areas fall within business, management, accounting, computer science, social sciences, economics, econometrics, finance, and decision sciences. However, these research areas reflect crowdfunding's multidisciplinary nature, including both business and affective science fields.

### 2.4.1 Citation and co-citation analysis (CA–D and CCA–R)

CA-D involves evaluating the influence of research by quantifying how many times a document, author, or source has been referenced by other documents, authors, or sources. *Table 2* shows the list of the top 10 most cited research documents.

Table 2: Top 10 most cited research documents (descending order)

<b>Title</b>	<b>Author</b>	<b>Journal</b>	<b>Subject area</b>	<b>Total citations</b>
Resolving information asymmetry: Signaling, endorsement, and crowdfunding success	Courtney et al., (2017)	Entrepreneurship Theory and Practice	Business, Management and Accounting	485
Funders' positive affective reactions to entrepreneurs' crowdfunding pitches: The influence of perceived product creativity and entrepreneurial passion	B.C. Davis et al., (2017)	Journal of Business Venturing	Business, Management and Accounting	366
Not just an ego-trip: Exploring backers' motivation for funding	Bretschneider and Leimeister, (2017)	The Journal of Strategic Information Systems	Business, Management and Accounting	187
Catching fire and spreading it: A glimpse into displayed entrepreneurial passion in crowdfunding campaigns	J.J. Li et al., (2017)	Journal of Applied Psychology	Psychology	182
Understanding the importance of interaction between creators and backers in crowdfunding success	N. Wang et al., (2018)	Electronic Commerce Research and Applications	Business, Management and Accounting	160
Empathy or perceived credibility? An empirical study on individual donation behavior in charitable crowdfunding	L. Liu et al., (2018)	Internet Research	Social Sciences	153

To be continued

Table 2: Top 10 most cited research documents (descending order) (cont.)

<b>Title</b>	<b>Author</b>	<b>Journal</b>	<b>Subject area</b>	<b>Total citations</b>
User entrepreneurs' multiple identities and crowdfunding performance: Effects through product innovativeness, perceived passion, and need similarity	Oo et al., (2019)	Journal of Small Business Management	Business, Management & Accounting	112
My words for your pizza: An analysis of persuasive narratives in online crowdfunding	Majumdar and Bose, (2018)	Information and Management	Business, Management & Accounting	90
Bellwether and the herd? Unpacking the u-shaped relationship between prior funding and subsequent contributions in reward-based crowdfunding	Chan et al., (2020)	Journal of Business Venturing	Business, Management & Accounting	87
Predicting outcomes in crowdfunding campaigns with textual, visual, and linguistic signals	Kaminski and Hopp, (2020)	Small Business Economics	Business, Management and Accounting	86

Source: Own work.

The most cited document was authored by Courtney et al. in 2017 and published in Entrepreneurship Theory and Practice. The authors discuss the concept of information asymmetry in crowdfunding. The research paper explores how entrepreneurs can bridge the gap by using signals or endorsements. Signals such as showcasing expertise, prototypes, or enthusiasm convey trustworthiness and competence. The authors describe the backers' positive emotions that are expressed in the comments, which serve as an external validation of the project's characteristics and the founder's credibility (Courtney et al., 2017). Backer comments in a crowdfunding context can offer valuable insights into specific features that

are distinctive to the product. Additionally, backers may provide suggestions aimed at enhancing the design and usability of the product. Essentially, these comments act as a direct channel through which potential users or supporters communicate their thoughts, preferences, and ideas, contributing to the iterative improvement of the project. This feedback loop between creators and backers can be instrumental in refining and tailoring the product to better meet the needs and expectations of the target audience.

The second document was authored by B.C. Davis et al. (2017) and published in the *Journal of Business Venturing*. This paper focuses on the emotional responses of backers while they observe the crowdfunding pitches. The study explores how the perception of product creativity and the entrepreneur's passion influence funders' positive emotions. Positive emotions are crucial in crowdfunding, as they can lead to higher levels of trust, support, and funding. The paper also explains how entrepreneurs can effectively convey their product's creativity and their passion to evoke positive reactions in potential backers.

The third listed document, written by Bretschneider and Leimeister (2017) and published in *The Journal of Strategic Information Systems*, explores the motivations of backers who fund projects on incentive-based crowdfunding platforms. The study aims to understand the diverse motivations beyond just financial incentives, such as the desire for social interaction, altruism, or the opportunity to support innovation and creativity. These connections enhance their commitment and satisfaction, motivating them to support projects beyond financial incentives. The paper discusses the impact of herd behavior on the motivation of the crowd.

Each of these papers appears to investigate different aspects of crowdfunding, such as information sharing, emotional appeal, and motivations, to understand how they influence crowdfunding outcomes and success. Each paper highlights the importance of understanding and leveraging backers' emotions in crowdfunding campaigns. The studies affirm that positive emotions, such as trust, enthusiasm, optimism, and altruism play a powerful role in attracting backers and securing funding. The papers discuss how entrepreneurs can effectively communicate with potential backers through various signals, language, and endorsements. These signals include portraying expertise, passion, creativity, and so forth, which forms backers' attachment to the project. Strategies to enhance credibility and trustworthiness are discussed in all three papers. Whether through signals, emotional appeals, or emotional drivers, the goal is to build confidence among backers, thereby increasing support and funding for the project. Overall, these papers converge on the idea that successful crowdfunding campaigns involve not only presenting a compelling product or idea but also effectively managing emotional responses, communicating trustworthiness, and actively engaging with backers to foster a sense of community and support.

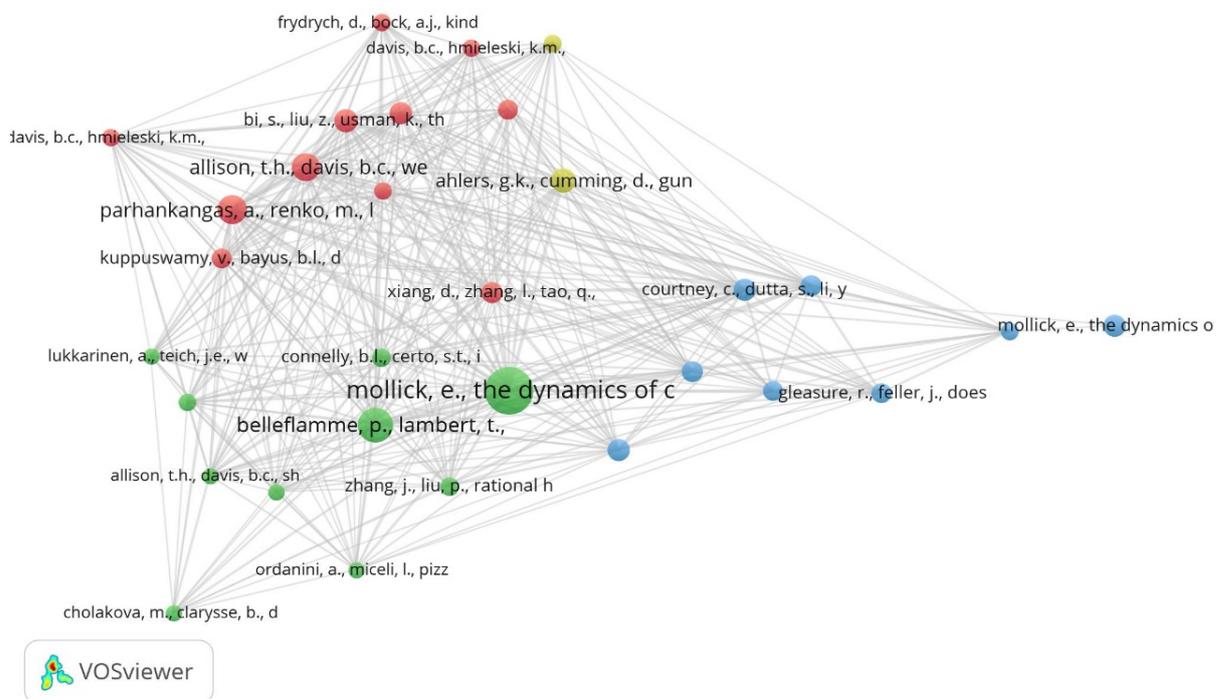
In explaining the variations in crowdfunding success, several determinants such as information asymmetry and signals (Courtney et al., 2017), emotional responses and perceptions of creativity and passion (B.C. Davis et al., 2017), and altruism and sense of community (Bretschneider and Leimeister, 2017) are explored. These differences in focus

areas, variables studied, emphasis on feedback and effective communication strategies highlight the diverse perspectives and research interests within the field of crowdfunding studies. Understanding these differences in literature, can guide future research efforts and help scholars contribute to knowledge advancement in the field of crowdfunding. The findings from these studies can be valuable for both entrepreneurs seeking crowdfunding and emotions and researchers interested in understanding the dynamics of crowdfunding campaigns.

Co-citation refers to two authors/journals/references/sources having been cited in one paper concurrently (Li & Xu, 2021). In other words, two documents can be considered co-cited when a third document has cited both of them together (Donthu et al., 2021; Rabbani et al., 2022). We have performed a CCA-R in VOSviewer (version 1.6.20). This method measures how frequently two articles are cited together in other scholarly works. We have selected the option of at least 8 citations of every cited reference, and 36 documents meet the threshold. However, we have chosen to present only the top 10 references. To highlight the most impactful and significant contributions to the field, we limit our presentation to the ten most influential references.

*Appendix 4* displays the highest-ranking outcomes of our CCA-R. This in-depth analysis of reference co-citations explains the foundational elements of the research field by pairing articles within the same thematic clusters. Within this analysis, we have included the number of citations each reference has received within a sample of publications obtained from the Scopus database, along with their associated link strength. Link strength signifies the strength of the connection between the articles and indicates a level of association, even if it is a distant one. VOSviewer identifies a close relationship between the items by calculating the strength of their association, which is defined as the ratio of the actual co-occurrences between items to the expected co-occurrences between them, assuming they are “statistically independent” (Kirby, 2023, p. 5).

Figure 3: Clustered network of cited references based on their co-citation analysis



Source: Scopus (2023). VOSviewer analysis.

At the pinnacle of the list is the article “The Dynamics of Crowdfunding: An Exploratory Study” by Ethan Mollick, which has garnered 64 citations within the sample. Following closely behind is “Crowdfunding: Tapping the Right Crowd,” co-authored by Paul Belleflamme, Thomas Lambert, and Armin Schwienbacher, with 35 citations.

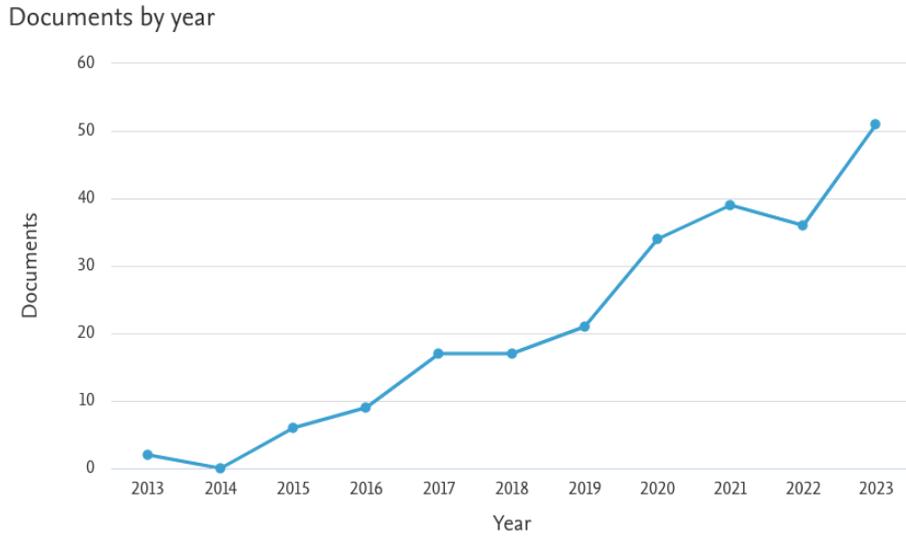
Figure 3 illustrates the co-citation relationships among the top articles. The first cluster (red) includes eleven documents attributed to studies in displayed passion, backers’ affective reactions and power of positivity in crowdfunding. While documents authored by Parhankangas and Ehrlich (2014) and Kuppuswamy and Bayus (2017) suggest how to structure communication or understand backers’ behavior to maximize funding success, they also highlight the complexity of crowdfunding dynamics and the various layers, ranging from linguistic strategies to psychological perceptions, that can influence campaign outcomes. Both studies emphasize the importance of backer engagement and perception, employing empirical research methods to analyze data from real crowdfunding campaigns. Thus, this cluster can be categorized as “affective factors influencing crowdfunding success and failure.”

The second cluster (green) consists of ten documents. The presence of documents such as Belleflamme et al. (2014) and Mollick (2014) contributes to understanding the mechanisms and impact of crowdfunding but from slightly different angles; Mollick's paper from a broader exploratory perspective and Belleflamme et al.'s from a more theoretical and model-based approach. The red and green clusters share a co-cited document by Allison et al. (2017). This document builds on the foundations established by the papers in both clusters by focusing on the role of persuasion in crowdfunding performance. This paper extends Mollick's and Belleflamme et al.'s discussions by applying the Elaboration Likelihood Model of persuasion to understand how the effectiveness of crowdfunding campaigns can be influenced by the persuasion strategies used in the campaign messages. This perspective links the earlier works' exploration of crowdfunding mechanisms and success factors to a more detailed analysis of how persuasion impacts campaign performance and backers' behavior.

The documents written by Majumdar and Bose (2018), Courtney et al. (2017) and Gleasure and Feller (2016) in the third cluster (blue) which consists of eight documents, are interconnected through their focus on factors influencing crowdfunding success. These studies present different forms of communication and signaling such as persuasive narratives, endorsements, and emotional versus rational appeals and discuss their respective levels of impact on the effectiveness of crowdfunding campaigns. By referring to these studies, researchers can highlight how understanding emotional dynamics and communication strategies are crucial for successful crowdfunding, linking emotional engagement to overall campaign effectiveness.

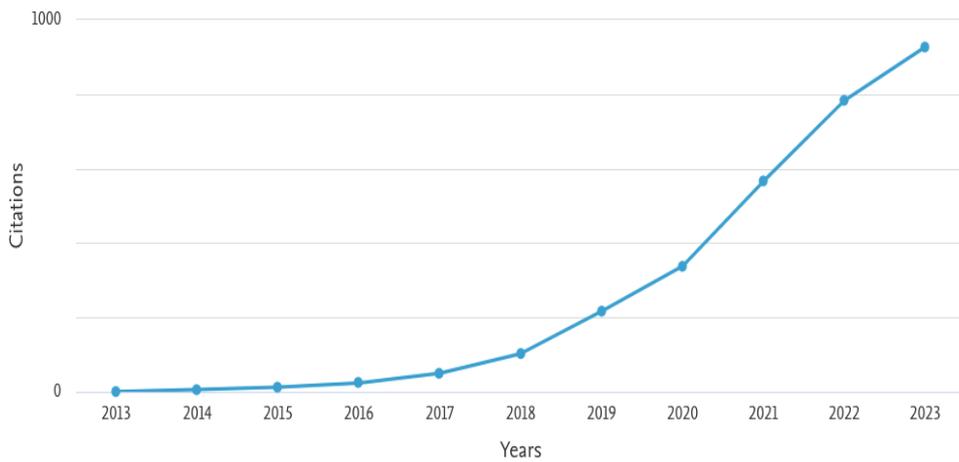
The smallest cluster (yellow) includes two items that explore how language and signaling play critical roles in shaping perceptions and behaviors, though Tausczik and Pennebaker (2010) focus on textual analysis broadly, while Ahlers et al. (2015) apply this concept specifically to crowdfunding contexts. These two documents reflect the connection between language use and emotions in the context of crowdfunding. Tausczik and Pennebaker (2010) provide a framework for analyzing the psychological impact of language through tools such as LIWC, which can be applied to understand emotional content in crowdfunding communications. Ahlers et al. (2015), on the other hand, explore how signaling and communication affect investor decisions in equity crowdfunding, which inherently involves emotional and psychological factors. By referring to these documents, researchers have illustrated how textual analysis and signaling strategies in crowdfunding are intertwined with emotional responses, offering insights into how language influences both backer engagement and investment outcomes.

Figure 4: Annual scientific productions



Source: Scopus (2013 – 2023) data.

Figure 5: Annual citations



Source: Scopus (2013 – 2023) data.

*Figure 4* shows the graphic representation of the total number of publications during the period and illustrates the publication landscape within the domains of crowdfunding and emotions from 2013 to 2023. Beginning with a mere handful of publications in 2013, the field experienced a gradual increase until 2016. The years 2017 and 2018 saw a plateau, with approximately 18–20 publications annually. However, from 2019 onwards, the field witnessed significant growth, with publications nearly doubling to around 40 per year by 2020. Despite a slight dip in 2021, possibly due to the impact of the COVID-19 pandemic on research activities, the field rebounded strongly. The years 2022 and 2023 marked a substantial surge, with 2023 reaching a peak of about 50 publications. This overall upward trend, particularly pronounced in recent years, indicates a growing interest and recognition of the importance of emotional factors in crowdfunding research. The graph clearly demonstrates that this interdisciplinary area has gained considerable traction within the academic community over the past decade. Consequently, academic literature on crowdfunding has experienced significant growth in recent years, which is indicative of the escalating interest among researchers in this field. On the other hand, *Figure 5* shows a graph with the annual citations' trend which illustrates a continuous increase in the citations between the years 2017 and 2023. Based on co-citation results, we present the scope and development of research on the use of emotions and crowdfunding in the past 13 years.

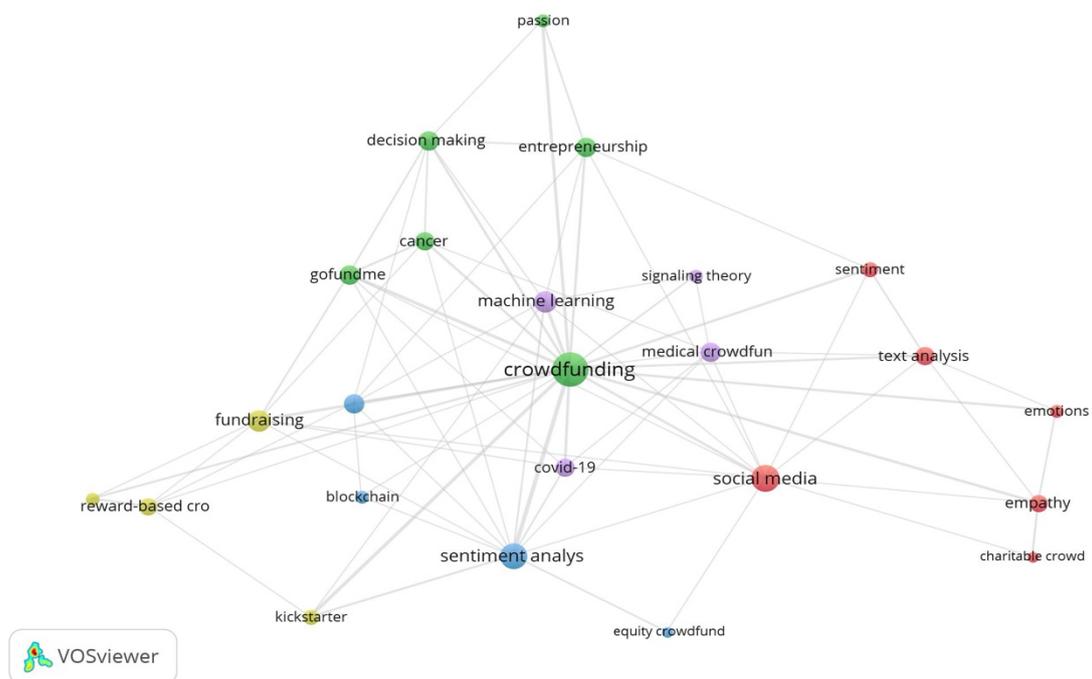
#### 2.4.2 Co-occurrence analysis of keywords (COA–K)

The purpose of keyword analysis is to illustrate the past and current research emphasis and assist future researchers in conducting specific studies guided by the co-occurrence analysis of author keywords (Li and Xu, 2021; Radhakrishnan et al., 2017). The co-occurrence of keywords refers to the frequency of similar words and phrases appearing together within a given dataset of documents (Bashar et al., 2021). To conduct co-occurrence analysis of author keywords (COA–K), we employed the VOSviewer software (version 1.6.19), a comprehensive tool widely employed for network bibliometric analysis (Ding and Yang, 2022). In generating the network map, we set a minimum occurrence threshold of five for each keyword. Out of the 876 keywords available in the dataset under consideration, a total of 24 keywords met this threshold.

The resulting network map consists of five distinct clusters. The first two clusters each contain six keywords, while the third, fourth, and fifth clusters each include four author keywords. *Figure 6* illustrates the network visualization map based on the co-occurrence of author keywords. The red cluster focuses on the emotional and psychological dimensions of crowdfunding, with keywords such as “emotions,” “empathy,” “charitable crowd,” and “sentiment.” It explores how emotional appeals in crowdfunding campaigns influence donor behavior and the role of empathy in engaging potential donors. The presence of “sentiment analysis” suggests a methodological approach to studying these emotional aspects. The green cluster is focused on entrepreneurial aspects linked to crowdfunding, highlighting terms such as “entrepreneurship,” “passion” and “cancer.” The connection between “cancer”

and “GoFundMe” within this cluster likely points to the prevalent use of crowdfunding platforms for medical and health-related fundraising, which involves strong emotional and entrepreneurial narratives to engage donors. The blue cluster centralizes on the technological and operational facets of crowdfunding, including keywords such as “blockchain,” “Kickstarter,” “reward-based crowdfunding,” and so forth. This cluster suggests a focus on the mechanics and platforms of crowdfunding, exploring how different technological solutions and platform choices influence the success and operation of crowdfunding campaigns. The purple cluster assesses the influence of external events such as COVID-19 on medical crowdfunding campaigns. This visualization highlights the multifaceted nature of crowdfunding research, integrating technical, emotional, entrepreneurial, and social dimensions. The purple cluster likely represents a comprehensive analysis of how medical crowdfunding campaigns have adapted and performed during the COVID-19 pandemic, with a specific focus on how theoretical concepts such as signaling and technological tools such as machine learning have been employed to optimize fundraising outcomes. This cluster suggests a dynamic interplay between theory, technology, and practical application in the face of a global health crisis.

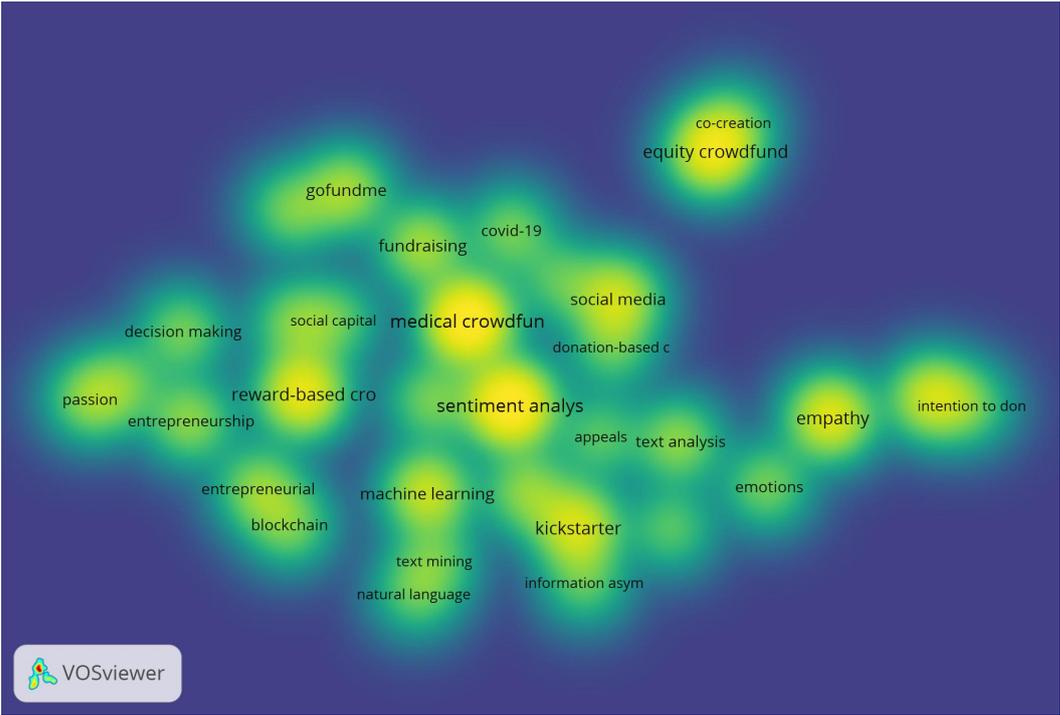
Figure 6: Clustered network of keywords based on their co-occurrence



Source: Scopus (2023). VOSviewer analysis.

Using VOSviewer, we grouped the keywords and studied the emerging themes. In generating the network map, we set a minimum occurrence threshold of four for each keyword. Out of the 876 keywords available in the dataset under consideration, a total of 36 keywords met this threshold. Based on VOSviewer, the visualization of the themes that emerged from 269 publications is shown in *Figure 7*.

*Figure 7: Density visualization map of emerging keywords*



*Source: Scopus (2023). VOSviewer analysis.*

*Table 3* displays the top keywords that frequently appear among the author-provided keywords associated with publications related to crowdfunding and emotions. These keywords are assessed based on their average publication years, with occurrences indicating how frequently they appear in the publications. Link strength indicates the relevance of these keywords to our research.

*Table 3: Top cited emerging keywords*

<b>Keyword</b>	<b>Occurrences</b>	<b>Total link strength</b>	<b>Average publication year</b>
Sentiment analysis	17	30	2019
Medical crowdfunding	17	9	2020
Reward-based crowdfunding	12	10	2019
Equity crowdfunding	12	4	2018
Empathy	11	14	2021
Kickstarter	10	16	2020
Machine learning	9	17	2020
Social media	9	16	2021
Charitable crowdfunding	9	7	2018
GoFundMe	7	18	2021
Passion	6	10	2019
Covid-19	5	12	2021
Signaling theory	5	4	2021
Psychological ownership	5	8	2021

*Source: Own work.*

We excluded the term “crowdfunding” from the density visualization map because it was evident that it would form the largest cluster as it is the most frequently occurring keyword. Other terms for example, sentiment analysis, medical crowdfunding, reward-based crowdfunding, equity crowdfunding, and empathy have high frequencies. The brightness and proximity of nodes indicate the relative importance and interconnectedness of these themes in the current research landscape. This cluster map from VOSviewer provides valuable insights into the research landscape of crowdfunding and emotions. “Medical crowdfunding” and “sentiment analysis” appear as central, bright yellow nodes, indicating they are key focus areas in this research field. Various forms of crowdfunding are represented by “equity crowdfunding,” “reward-based crowdfunding” and “donation-based crowdfunding,” suggesting research covers different crowdfunding models. “Empathy,” “emotions,” and “intention to donate” form a cluster, highlighting the importance of emotional factors in crowdfunding research. “Machine learning,” “blockchain,” “text mining,” and “natural language processing” are present, indicating the use of advanced technologies in analyzing crowdfunding data. “GoFundMe” and “Kickstarter” are prominently featured, suggesting platform-specific studies are common. “Social media,” “text analysis,” and “appeals” form a cluster, emphasizing the role of communication in crowdfunding success. “COVID-19” appears, indicating research on how the pandemic has impacted the crowdfunding. “Entrepreneurship,” “passion,” and “decision making” are grouped, suggesting a focus on the creator’s perspective in crowdfunding. “Information asymmetry” and “social capital” indicate research on the dynamics and structures within crowdfunding ecosystems. “Co-creation” appears near equity crowdfunding, possibly indicating new research directions.

*Figure 8* provides a visual representation of the author-provided keywords associated with crowdfunding and emotions. Each keyword’s color indicates the timeframe in which it was most actively discussed in the literature, forming a temporal gradient from blue (around 2014) to red (around 2023). The years were categorized into five segments, each spanning two years. We present an analysis of the thematic evolution of interdisciplinary studies in crowdfunding and emotions, over the past decade (2013–2023), as reflected in author keywords. *Table 4* provides insights into the shifting and emerging interests of researchers in the respective fields. We have analyzed the visualization by breaking down the themes and their connections.



*Table 4: Identified themes for each year (2013–2023)*

<b>Year</b>	<b>Color</b>	<b>Keyword</b>	<b>Theme</b>
2013 – 2014	Blue	Backing self-efficacy, intention to donate, empathy	Initial exploration of emotional drivers in crowdfunding
2015	Light Blue	Social experience, trust, well-being	The role of social interactions and trust in crowdfunding success
2016	Green	Donation intention, social capital, humanitarianism	Social motivations and the impact of broader humanitarian values
2017	Light Green	Psychological flow, reward-based crowdfunding, guilt	Emotional responses and psychological impacts on donation behavior
2018	Yellow	Medical crowdfunding, language style, emotional contagion	Emotional spread and narrative styles in medical crowdfunding
2019	Orange	Sentiment, charity, social support, fundraising, Covid-19	The rise of digital platforms and their role during global crises
2020	Light Orange	Kickstarter, machine learning, appeals, cryptocurrency	Technological advancements and new financial trends in crowdfunding
2021	Red Orange	Sentiment analysis, natural language processing, textual analysis	Advanced analytics in assessing crowdfunding campaigns
2022 – 2023	Red	Entrepreneurial sentiment, equity crowdfunding, behavioral finance	Market trends and psychological insights in entrepreneurship-focused crowdfunding

*Source: Own work.*

The early years in the fields of crowdfunding and emotions focus on psychological factors such as empathy, backing self-efficacy, and social experiences which influence donation intentions in crowdfunding contexts. Middle years highlight psychological flow and emotional contagion, showing how donors' emotions are influenced and shared through

campaign narratives and community interactions. Machine learning and natural language processing were used to analyze sentiments in crowdfunding campaigns and the role of social media and charity during the COVID-19 pandemic. The latest trends in recent years have brought attention to advanced sentiment analysis techniques and the implications of market trends such as cryptocurrency and equity crowdfunding.

#### 2.4.3 Clusters of knowledge

The clusters shown in *Table 5* represent various thematic areas within the interdisciplinary studies of crowdfunding and affective science. Each cluster groups the keywords based on their relevance and co-occurrence patterns in scholarly literature. The presence of keywords such as “sentiment analysis,” “machine learning” and “natural language processing” in the same cluster reflects their association with analytical methods applied in crowdfunding research. Similarly, keywords related to different types of crowdfunding, such as equity crowdfunding and reward-based crowdfunding, form distinct clusters, indicating their focus areas within the broader research domain. However, “signaling” and “emotional contagion” theories represent different clusters, suggesting their importance as major theoretical frameworks so far in understanding the emotions studied in crowdfunding. Hence, we can propose that more theories are required to be included in future studies of crowdfunding and emotions such as social exchange theory, expectancy theory and goal-setting theory.

Table 5: Clusters of knowledge

Cluster	Emotion related	Action	Theoretical framework	Analytical method	Type of crowdfunding	Platform
<b>Generated keyword</b>	Passion	Perceived credibility	Signaling	Sentiment analysis	Medical crowdfunding	Kickstarter
	Empathy	Personal impulsiveness	Emotional contagion	Machine learning	Reward-based crowdfunding	Social media
	Trust	Donation behavior		Natural language processing	Equity-based crowdfunding	GoFundMe
	Entrepreneurial sentiment	Intention to donate		Textual Analysis	Donation-based crowdfunding	
	Self-efficacy					
	Self-determination					
	Sympathy					
	Guilt					

Source: Own work.

#### 2.4.4 Analysis of trending and popular research terms and their thematic progression

Many crowdfunding researchers have shown interest in more humanistic subjects such as psychology and gender, highlighting the fusion of technology, such as blockchain (Albrecht et al., 2019, 2020; Kolbe et al., 2022), with social science topics within the context of crowdfunding. These research papers have discussed the significance of emotions in the success of blockchain-based crowdfunding. This observation supports the argument for the multidisciplinary nature of crowdfunding research. The pandemic situation has brought to light the vulnerabilities in the healthcare systems of many countries, with a particular

emphasis on medical crowdfunding during the COVID-19 pandemic. These emerging terms have enhanced the significance and applicability of scholarly research in the field of crowdfunding, reaffirming the practical implications of this fundraising method in the medical context. The term “pandemic” has strongly emerged between the years 2021 and 2023, showing a relevance score above 2.00. Over the past four years, the primary emotion under discussion has been “passion,” while the analysis has identified additional positive emotions, including “happiness” “empathy,” “excitement,” “enthusiasm,” and “confidence,” which addresses the importance of displaying emotions in crowdfunding. On the other hand, negative emotions such as “fear” and “sadness” have also emerged, which signifies their role in crowdfunding decision-making, particularly for charitable and medical crowdfunding.

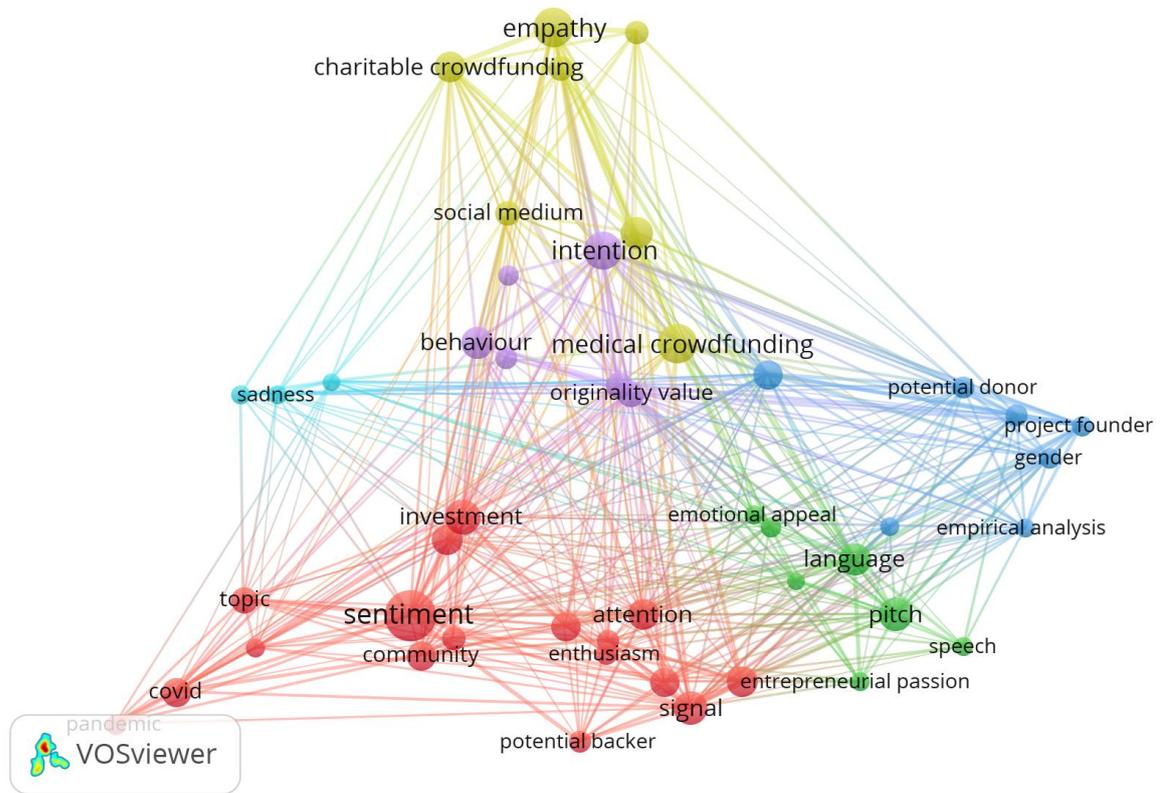
*Table 6: Thematic progression of items based on relevance scores (RS)*

2012 – 2014		2015 – 2017		2018 – 2020		2021 – 2023	
Term	RS	Term	RS	Term	RS	Term	RS
New venture	1.72	Fear	2.30	Information asymmetry	2.06	Pandemic	2.94
Innovation	1.15	Entrepreneurial narrative	1.74	Enthusiasm	1.40	Sadness	2.21
		Happiness	1.27	Passion	1.12	Medical crowdfunding	2.03
		Kickstarter	1.20	Equity crowdfunding	1.02	Empathy	1.67
		Excitement	1.16			Gender	1.58
						Charitable crowdfunding	1.53

*Source: Own work.*

This section identifies the diverse strands of scholarly development within the literature, shedding light on shifts in trends, subject matter, and theoretical perspectives in the interdisciplinary field of crowdfunding and emotions over the years. Our study digs deeper into the evolution of themes related to crowdfunding between 2013 and 2023, employing terms used in titles and abstracts as the basis for analysis. We directly imported the text data file into VOSviewer. We considered “full counting” instead of “binary counting” as we wanted to emphasize the overall frequency and intensity of terms, which would allow us to better analyze the impact of specific terms within the dataset (Perianes-Rodriguez et al., 2016; Van Eck and Waltman, 2011). With “full counting,” the occurrences reflect the total number of times a term appears across all documents, while in the “binary” option, a term is counted only once per document, regardless of how many times it actually appears within that document. The software identified 6224 terms in the data, with 217 of them appearing 10 times. Subsequently, VOSviewer recommends using a default relevance score to choose the top 60% of most relevant terms, which equaled 130 terms in this setting. We decided to include all 130 terms. However, we selected only those terms which are related to our study. *Table 6* presents the terms with the highest relevance scores for each year. To comprehensively examine the progression and changes in themes, we segmented these years into four distinct periods. Terms with high relevance scores exhibit a noticeable inclination towards other specific terms.

Figure 9: Network visualization map based on terms. Colours indicate clusters of related terms



Source: Scopus (2023). VOSviewer analysis.

As a result, it is postulated that within a co-occurrence network, terms with a higher relevance score tend to form clusters, with each cluster representing a specific topic (Van Eck & Waltman, 2011) as shown in Figure 9. VOSviewer’s network visualization map shows a complex web of relationships between terms related to crowdfunding and illustrates how these concepts form different thematic clusters. Each cluster, represented by a different color, highlights a particular aspect of crowdfunding research. In the red cluster, “sentiment” and “investment” are the focal points, with a strong connection to terms such as “community” and “signal.” This suggests that the emotional tone of a crowdfunding campaign and the community’s reaction are critical in determining investment outcomes. Keywords such as “attention,” “enthusiasm,” and “potential backer” highlight how emotional engagement and social signals can drive investment decisions. Moreover, the presence of keywords such as “COVID” and “pandemic” signifies how external factors such as a pandemic contribute to the success or failure of crowdfunding campaigns. In contrast, the blue cluster emphasizes the emotional aspects of crowdfunding, particularly focusing on

“trust,” “sadness,” “fear,” and “negative emotion.” Factors such as “gender” and “project founder,” suggest that demographics and the identity of the entrepreneur can influence donation behavior. The presence of “empirical analysis” implies that studies within this cluster might focus on quantitative evaluations of these factors. This cluster suggests an exploration of the emotional and altruistic motivations behind backers’ support for crowdfunding campaigns.

The green cluster focuses on “pitch” and “entrepreneurial passion,” pointing out that the way a crowdfunding pitch is delivered, and the passion of the entrepreneur play a vital role in attracting backers. Concepts such as “language” and “emotional appeal” suggest that the choice of words and the ability to evoke emotion are crucial to creating successful pitches. The key node in the purple cluster is “intent,” surrounded by terms such as “psychological ownership,” “behavior,” and “originality value.” This means that the research focuses on the behavioral aspects of supporters in crowdfunding, including how the communication of the campaign, the presentation (pitch), and the originality value of the product can influence supporter attention and engagement. The yellow cluster is particularly interesting because it combines key concepts related to crowdfunding and emotions. At the center of this cluster is “empathy,” which is strongly associated with concepts such as “charitable crowdfunding” and “medical crowdfunding.” This suggests that empathy is an important emotional factor that drives contributions to campaigns for social causes or medical needs. Surrounding “empathy” are terms such as “donation intention” and “social media,” suggesting that researchers are investigating how empathic responses, often communicated and amplified via social media, influence the donation intention of potential supporters. The inclusion of “credibility” in this cluster highlights the role of perceived trustworthiness and authenticity in influencing supporter behavior alongside emotional appeals. The close association of “medical crowdfunding” and “charitable crowdfunding” suggests that these types of campaigns, based on compassion and trust, are closely linked to emotional motivators such as empathy that encourage potential backers to participate.

This analysis suggests that crowdfunding is gaining interest as a subject of study in various areas beyond its traditional domains. This means that researchers are recognizing the relevance and applicability of crowdfunding in various fields, including services, technology and business development. This expansion of crowdfunding as a research focus indicates its growing influence and applicability in different industries and sectors, adapting to different contexts beyond the original concept of fundraising for entrepreneurial projects. Essentially, this emphasizes the interdisciplinary nature of crowdfunding research and its adaptability to a wide range of fields. The current observation is in line with the thematic progression analysis presented in *Table 6*. The emotion-related terms “passion,” “trust,” “fear,” “enthusiasm,” and “sadness” were identified as emerging keywords, indicating their growing importance in the context of crowdfunding research. This means that the importance of innovation and new ventures in crowdfunding, already identified in 2012–2014, has evolved into different types of crowdfunding. This development over time, especially post-pandemic,

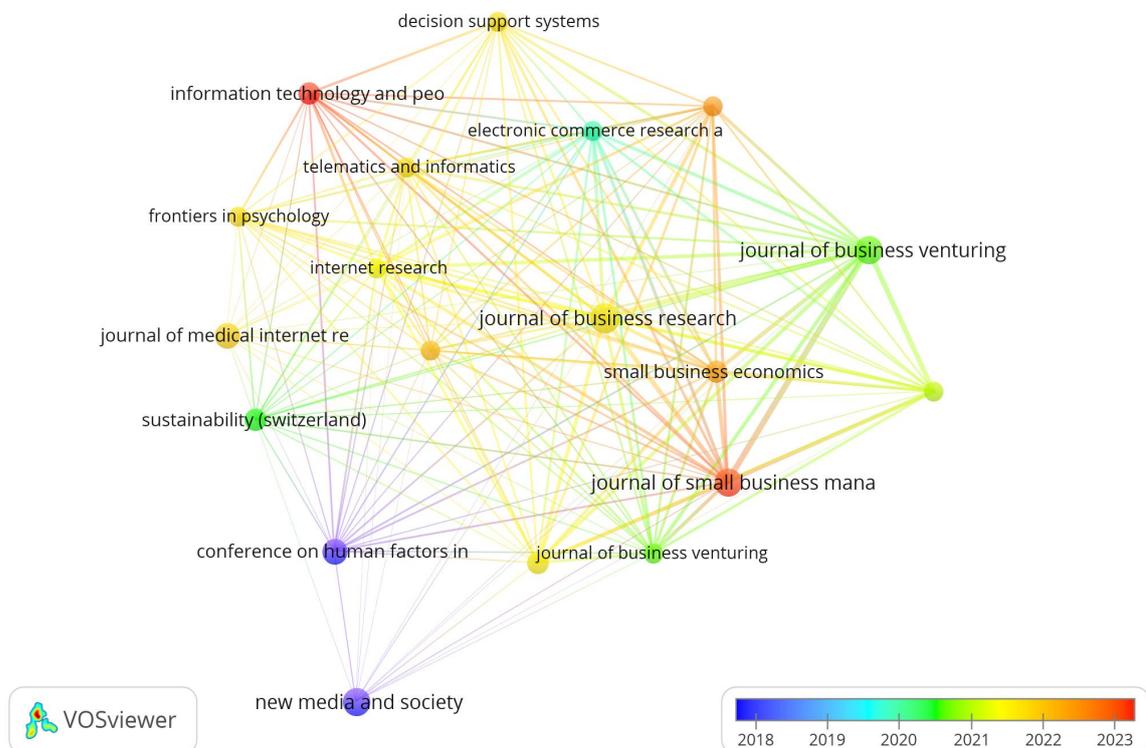
suggests that the intersection of different types of crowdfunding has become a significant area of interest, underpinning the idea that crowdfunding plays an increasingly important role in medical and charity-related projects, fundraising, or initiatives.

#### 2.4.5 Bibliographic coupling analysis of sources (BCA-S)

The data include the number of citations received by each source and the link strength, indicating the relevance of the publications to the subject matter. It also provides information on the total number of publications in each journal, the number of citations those journals have received in the context of crowdfunding and emotions, and the average number of citations per document. We present the leading journals in terms of publication output in the fields of crowdfunding and emotions using bibliographic coupling of sources (BCA-S).

*Appendix 5* displays the top 12 results from the bibliographic coupling analysis. This approach assesses the similarity between two sources (journals) based on their publications.

*Figure 10: Visual map of bibliographic coupling of sources over past 5 years*



*Source: Scopus (2023). VOSviewer analysis.*

The *Journal of Business Research* leads the ranking with seven publications accounting for 13% of the top 12 sources and 3% of the total sample publications. The top-cited article in this journal is “The Effects of Brand Prominence and Narrative Features on Crowdfunding Success for Entrepreneurial Aftermarket Enterprises” by Moradi and Badrinarayanan (2021). This research paper explores how brand prominence and narrative features impact the success of crowdfunding campaigns for entrepreneurial aftermarket enterprises, focusing on how emotionally compelling narratives can enhance donor engagement and funding outcomes. This study highlights the critical role of emotional appeal in the storytelling elements of crowdfunding projects.

The *Journal of Business Venturing* stands second with six publications dedicated to the topics of crowdfunding and emotions. These publications constitute 11% of the top 12 sources and 2% of the entire sample of publications. The most frequently cited article in the *Journal of Business Venturing* is titled “Fundlers’ Positive Affective Reactions to Entrepreneurs’ Crowdfunding Pitches: The Influence of Perceived Product Creativity and Entrepreneurial Passion,” authored by B.C. Davis et al., 2017) with 366 citations in the Scopus database. This paper investigates how funders’ positive emotional responses are influenced by the perceived creativity of the product and the passion of the entrepreneur presenting the pitch. This research understands the significance of emotional engagement in crowdfunding, demonstrating how entrepreneurial passion and innovative product ideas can effectively attract and inspire potential backers.

Though *Entrepreneurship Theory and Practice* has the highest number of citations per document (167), the *Journal of Business Venturing* has the highest link strength (1202) compared to other sources within the top 12 list, which signifies that the articles published there are more relevant to the fields of crowdfunding and emotions. On the other hand, the journal *Entrepreneurship Theory and Practice* stands out with the highest number of citations per document and the second-highest number of forward citations (501), indicating its popularity among researchers worldwide in these fields. Furthermore, the inclusion of journals such as *New Media and Society*, *Electronic Commerce Research and Applications*, *Information Technology and People*, and the *Journal of Medical Internet Research* in the top 12 list indicates that the domain of affective science (emotions) in crowdfunding extends beyond entrepreneurship, business, and management, including areas such as new media development, information technology and digitalized medicine.

We also present a visual map in *Figure 10*, depicting the results of the bibliographic coupling of sources based on their average publication year. Notably, the journals *Journal of Business Research* and *Journal of Business Venturing* are prominently shown representing strong connections with the domains of crowdfunding and emotions. These findings align with those in *Appendix 5*.

The *Journal of Small Business Management*, *Information Technology and People*, *Small Business Economics*, and *Journal of the Academy of Marketing Science* are represented in

orange and red colors, which indicates articles published in the years 2022–2023 and highlights their popularity among academics and researchers in recent times. The rest of the journals exhibit an average publication year between 2018 and 2021.

We have used this visualization to gauge the scholarly impact and relevance of journals in their fields of study. Overall, the visualization appears to provide information about the recent popularity of various academic sources in the fields of crowdfunding and emotions. It offers a quick way to identify influential journals and articles and understand their publication timelines.

## **2.5 Discussion**

The purpose of this research is to review and integrate existing research on the use of emotions in crowdfunding in order to summarize the state of the art of knowledge. To this end, we illustrate the emergence of distinct subfields centered around essential concepts found in specific seminal papers. Our first research question refers to an understanding of how the literature on crowdfunding and emotions developed over time by reviewing the most cited publications. We find that crowdfunding research has grown steadily since its inception, with an increasing number of research papers published each year, within business, management, accounting, computer science, economics, econometrics, finance, social sciences, decision sciences and engineering.

The scientific literature on crowdfunding and emotions saw steady growth until 2021, with a stagnant phase between 2017–2018 and a slight decline between 2021 and 2022 due to the COVID-19 pandemic. However, publication numbers rebounded after 2022, reflecting a renewed interest in the emotional dynamics of crowdfunding, particularly in medical and socially oriented campaigns. This upward trend highlights the growing recognition of emotions' critical role in crowdfunding success. Our analyses focused on journals, author keywords, and citations, reveal that journals with high productivity in this area primarily belong to the fields of business, information technology, and medical research. We also examined the most frequently cited references and articles published during this period, as well as the journals consistently known for publishing high-quality content on this topic. These research areas signify crowdfunding's multidisciplinary nature, in both areas of business and affective science.

Future researchers can consider employing more diverse and complex analyses in platform-specific studies, particularly as the field increasingly emphasizes the emotional and psychological dimensions of crowdfunding that influence backers' behavior and campaign success. Incorporating advanced techniques such as sentiment analysis and text analysis can provide deeper, data-driven insights into how external circumstances, such as the impact of COVID-19, shape crowdfunding dynamics. Additionally, exploring various types of crowdfunding, including equity, medical, and charitable, will help highlight the adaptability of strategies across different contexts and needs. This approach reflects the ongoing

maturation and diversification of the field, encouraging a better understanding of crowdfunding mechanisms.

Our second research question explores the emerging topics that have dominated crowdfunding research over the years. We find that in the early years of crowdfunding research, the focus was on understanding the nature, meaning, and role of crowdfunding, as well as the evolution of the different types of crowdfunding. In contrast, more recent studies have focused on exploring the determinants of crowdfunding success and risks, employing models from economics, psychology, and sociology, and relating the phenomenon to macroeconomic issues such as sustainability, gender equality, and access to health care. The most frequently cited papers address topics such as resolving information asymmetries between entrepreneurs and backers, signaling, positive affective reactions of backers to crowdfunding pitches, the power of emotions portrayed through crowdfunding, signaling theory in crowdfunding, empathy as an emotion among backers, emotion contagion theory, funding decisions, intrinsic and extrinsic factors, and more. Emerging topics in the recent literature include blockchain, pandemic, medical crowdfunding, emotions, and charitable crowdfunding. These themes are indicative of recent advances in two different forms of crowdfunding, medical and charitable crowdfunding: both are based on the theory of emotion contagion. In short, crowdfunding has evolved into an area of research that examines both entrepreneurial behavior and the decision-making processes of backers. This demonstrates the untapped potential for academic research in this area that addresses both entrepreneurial and social/humanitarian behavior. We also linked the topics to the most prominent journals engaged. We find that there are many interdisciplinary studies of crowdfunding and emotions published in top journals, which addresses our third research question.

Finally, as a part of the last research question, we aimed to address how the existing body of research in crowdfunding, with a focus on the role of emotions in crowdfunding campaigns, informs future studies. Based on our findings, we suggest several avenues for future research. One potential study could examine how the visible passion of entrepreneurs, as conveyed through campaign materials and communication, influences backers' engagement and the overall success of crowdfunding campaigns, especially in social or humanitarian contexts. Additionally, future studies can explore how social entrepreneurs use crowdfunding to scale their ventures, with a focus on the role of emotional and social appeals in attracting support. Researchers should also consider investigating the impact of platform choice on campaign success in the context of social entrepreneurship. We further discuss specific theoretical and practical implications.

### 2.5.1 Theoretical and practical implications

The bibliometric analysis of emotions in crowdfunding research offers significant theoretical implications for future scholars who want to conduct research on affective science and

crowdfunding as well as interdisciplinary bibliometric studies. Our research provides a comprehensive overview of the field, mapping its intellectual structure by identifying key contributors, influential works, and prevailing trends. Highlighting gaps and underexplored areas, such as backers' emotional responses to crowdfunding campaigns or how emotions change over time in crowdfunding, encourages new research directions and theoretical developments. Our study not only synthesizes existing knowledge but also lays a solid foundation for future theoretical advancements in the study of emotions in crowdfunding, potentially leading to new models and frameworks that can enhance the understanding of this multidisciplinary field.

More comprehensive theories should be included that account for the complex interplay between entrepreneurial behavior, backer motivations, and emotional appeals in crowdfunding. Theories such as social exchange theory (Homans, 1958, 1974), expectancy theory (Vroom, 1964) and goal-setting theory (Locke, 1968; Locke & Latham, 2002) need more attention in upcoming studies. Research could explore how the principle of reciprocity, a core concept in social exchange theory (Cropanzano et al., 2017; Homans, 1974), influences backers' emotions and behavior in crowdfunding. This could involve examining how emotional appeals in campaigns create a sense of obligation or desire for reciprocity among backers, leading them to contribute to a campaign. The perceived value of the exchange (e.g., emotional satisfaction, social recognition) could be a key focus of their research. The expectancy theory of motivation (Vroom, 1964) postulates that individuals are motivated when they believe their efforts will lead to desired outcomes. In the future, studies could use this theory to explore how backers' expectations regarding the emotional and tangible rewards of contributing to a campaign influence their decisions to support a project. The theory of goal-setting (Locke, 1968; Locke & Latham, 2002) could be used to investigate how clearly defined campaign goals influence the emotional responses of backers. Researchers could investigate whether backers feel more motivated and emotionally connected to campaigns with clear, challenging goals and how these emotions influence their decisions to fund a project. For example, studies could examine how clear communication of potential rewards (e.g., social impact, personal fulfillment, achievement of goal, etc.) affects backers' engagement.

The current body of empirical research on emotions and crowdfunding is predominantly focused on reward-based and medical models, with other forms receiving less attention. This imbalance presents an opportunity for researchers to address the existing gap, particularly in donation and equity-based crowdfunding. These forms of crowdfunding likely involve different backers' motivations and campaign dynamics compared to other types, which makes this a potentially rich area for new studies and insights.

The bibliometric analysis of emotions in crowdfunding research guides future scholars by highlighting influential studies, trends, and gaps, offering a roadmap for aligning with current and emerging research areas. It also identifies underexplored topics, guiding new research directions for potential breakthroughs. Additionally, network visualization

techniques aid in understanding complex relationships within the literature (Butticè & Ughetto, 2021; Zupic & Čater, 2015), helping researchers better contextualize and position their work. Overall, this study not only enhances the efficiency of the research process but also supports the development of more targeted and impactful research projects in the evolving fields of affective science and crowdfunding, enabling scholars to make more significant contributions. Based on our findings, we emphasize key topics to be researched in future crowdfunding research to better understand the emergence of information asymmetries among backers and crowdfunders, the use of signaling strategies, and the combination of signals that entrepreneurs use for a maximum effect. Emotional aspects are often tied to the perception of risk in crowdfunding (Bitterl & Schreier, 2018; Ren et al., 2021). This might help in creating strategies to mitigate risk perception and build trust among backers. Insights from successful emotional appeals in crowdfunding campaigns can assist entrepreneurs in optimizing their campaigns. This includes crafting persuasive messages and designing compelling visuals. Understanding the emotional factors that drive backers' engagement can lead to practical recommendations for fostering a supportive and engaged community around crowdfunding projects.

The bibliometric analysis of emotions in crowdfunding research also provides valuable insights for policymakers. It offers a comprehensive understanding of how emotions influence crowdfunding campaigns, which can inform guidelines for campaign creators. Revealing the psychological factors behind backers' motivations enables policymakers to develop tailored regulations protecting backers from manipulative emotional tactics, ensuring a fair crowdfunding environment. The study also highlights areas needing further research, helping to guide funding priorities. Ultimately, this research equips policymakers with data-driven insights to create informed policies that cultivate a more effective and sustainable crowdfunding ecosystem.

Therefore, this paper stands out as an up-to-date account of the evolution and trends in emotions and crowdfunding research. While other studies have focused on shorter periods and broader domains in crowdfunding to the best of our knowledge, this research represents the most recent and concentrated bibliometric analysis of crowdfunding using the Scopus database. Notably, it captures work published during the pre- and post-pandemic periods, yielding interesting insights into thematic progression in recent years. In summary, the research contributes theoretically by mapping the research landscape, identifying knowledge gaps, and developing frameworks, while offering practical insights for stakeholders involved in optimizing crowdfunding campaigns.

### 2.5.2 Limitations and future research

Usually, studies such as this one face a few limitations that are common in bibliometric analyses. Firstly, the literature for this study is limited to the Scopus database only. To overcome this constraint, future researchers can extend their data acquisition by

incorporating additional databases such as Web of Science, Google Scholar, ProQuest, IEEE Explore, Dimensions API, and ABI/Inform into their research studies. Secondly, the VOSviewer tool excluded the majority of articles published in languages other than English. Another constraint is that we chose the default or specific parameters of VOSviewer. Different parameters in the application can lead to different interpretations of the findings which depend on the results of bibliometric mapping. Moreover, future authors can provide interdisciplinary insights by performing an analysis that includes literature from multiple disciplines. Despite the limitations that we have mentioned, our paper offers a thorough examination of crowdfunding and emotions interdisciplinary research that will prove highly beneficial to both scholars and crowdfunding industry professionals. Additionally, it will contribute to the expansion and progression of research in these fields.

We expect that future research in crowdfunding will extensively rely on integrating emotions to understand intrinsic and extrinsic factors that affect funding decisions. Considering the advent of technologies, we also find that research will likely focus on emerging topics such as blockchain, pandemic, medical crowdfunding, and charitable crowdfunding. Overall, we expect further development of theories explaining the emotional dynamics between backers and project creators.

## **2.6 Conclusion**

This study is the first bibliometric analysis related to crowdfunding and emotions, covering the period from 2013 to 2023. We focused on bibliometric studies related to emotions because emotions have an accentuated significance in the context of crowdfunding. Our major and intense focus on emotions is especially relevant given that crowdfunding campaigns are presented online. Based on the findings of this research, it is evident that emotions play a crucial role in the success of crowdfunding campaigns. The study highlights the growing importance of emotional content in attracting backers and fostering a sense of community, especially in the post-pandemic era. As the field evolves, interdisciplinary approaches that integrate psychological and economic perspectives will be essential in deepening the understanding of backers' behavior and the effectiveness of emotional appeals in crowdfunding. This study provides a foundation for future research to build upon, with a particular focus on the role of emotions in enhancing campaign visibility, backer engagement, and overall campaign success. Furthermore, the analysis identifies a gap in the literature regarding the long-term impact of emotions on backers' loyalty and re-funding. While emotions clearly have an impact on initial funding decisions, the study suggests that future research should investigate how emotional engagement influences the willingness of backers to provide repeat funding for other projects or additional ventures by the same entrepreneur or project creator. This study calls for a deeper examination of cultural and demographic factors recognizing that the emotional triggers vary significantly across different audience segments. This study therefore highlights the need for interdisciplinary

approaches that combine psychological and economic insights to deepen the understanding of emotions in crowdfunding and develop more effective strategies for campaign success.

### **3 OVERVIEW OF SIGNAL CATEGORIES IN CROWDFUNDING STUDIES**

Information asymmetry between entrepreneur and investor has been identified as one of key reasons for “inefficient exchanges” (Lu et al., 2023, p. 4) and unsuccessful funding. In a crowdfunding set-up that is completely virtual, this unbalanced form of information exchange between creators and backers is relatively higher which can cause funding failure (Ahlers et al., 2015). Hence, signals sent by the entrepreneur or a presenter can play an important role in overcoming information asymmetries and reducing the uncertainty in acquiring funds. Signaling theory offers a theoretical framework to understand the mechanisms of trust building and the exchange of information between the entrepreneur and crowdfunding backers.

Signaling theory (Spence, 1973) postulates that an effective signal is determined by several factors, and receivers’ decisions are often built based on alternate viewpoints to evaluate the signal quality: (1) the cost of the signal, and (2) whether the signal is effectively transmitted and communicated, and the receivers thoroughly observe and perceive it (W. Wang et al., 2022). Entrepreneurs should convey the information in such a way that accomplishes both the above conditions in the interest of achieving funding success. The important signals that tend to carry the required information from the entrepreneur to the backer have been of great interest in several studies. In addition to the cost of the signal, the signals from the video presenter should be accurately sent, observed, and understood to reach adequate signal transmission. In his 2021 study, Colombo discusses various signals that help communicate product qualities to prospective backers and build legitimacy. Similarly, Tauscher et al. (2021) argue that legitimacy is a crucial factor for success of new ventures, as it helps them overcome the challenge of lacking traditional legitimacy signals, such as a track record and novelty of successful products. However, entrepreneurs often face the challenge of understanding the backer’s motives for participation in crowdfunding (Yuan et al., 2021).

Supporting traditional signaling theory, which suggests that backers process signals more effectively when combined with rhetorical cues, this emphasizes the role of both product-related and emotional signals. These signals are crucial in building legitimacy and attracting funding support. Moreover, this can also elevate the credibility of the sender (entrepreneur) and intensify the positive impact on the prospective backers. An established stream of research following signaling theory has studied how a signaler’s characteristics and actions can influence the likelihood of obtaining financial resources (Courtney et al., 2017). Building on traditional signaling theory, which suggests that signals function independently, we reinforce the idea that certain signals complement one another by effectively guiding the backer’s attention to them (Colombo, 2021; Steigenberger & Wilhelm, 2018).

Hence, signal quality depends heavily on the observability of the signal (Drover et al., 2018). Within the crowdfunding context, entrepreneurs have the opportunity to effectively communicate their value propositions through both verbal and non-verbal cues (J. Chen et al., 2024), including emotional expressions and body language. Such signals play a critical role in establishing trust and credibility, as they convey meaningful information to potential backers (Bafera & Kleinert, 2022). In this setting, the backers' decision-making processes may be significantly influenced by the perceived emotional authenticity of the entrepreneur and the attributes of the proposed product. Consequently, research on backers' behavior provides valuable insights into why some crowdfunding campaigns succeed in attracting investment while others do not.

We have categorized several other signals (refer to *Table 7*) which were studied across various research works. These studies offer a diverse and distinct understanding of how different types of signals affect funding decisions in crowdfunding contexts. By organizing the literature through the lens of moderators, this table highlights how contextual and individual factors shape the effectiveness of each signal. Moderators such as investor type, campaign timing, product uncertainty, and platform characteristics reveal that signal interpretation is not uniform but contingent upon multiple interacting variables. This general categorization of signals enables a deeper understanding of the signaling mechanisms in crowdfunding and provides a foundation for identifying patterns, gaps, and future directions in the field.

*Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order)*

<b>Author</b>	<b>Description of signal</b>	<b>Moderator</b>	<b>Key finding</b>	<b>Source</b>	<b>Year</b>
Ahlers, Cumming, Günther, and Schweizer	Venture quality signals (financial roadmaps, human capital, social capital, equity offered)	None	Financial disclosure and some quality signals (e.g., human/social capital, equity offered) are positively related to equity-crowdfunding success.	Entrepreneurship Theory and Practice	2015
Allison, Davis, Short, Webb	Intrinsic cues (warmth, passion); extrinsic cues (competence, professionalism)	Backer orientation (prosocial vs. financial)	Intrinsic cues are more effective in attracting prosocially motivated funders, while extrinsic cues appeal more to financially motivated funders.	Entrepreneurship Theory and Practice	2015
Anglin, Short, Drover, Stevenson, McKenny, and Allison	Use of positive psychological capital language	Social capital and human capital	Costless language-based signals positively impact fundraising success. Human capital moderates the relationship, while social capital does not.	Journal of Business Venturing	2018
Anglin, Wolfe, Short, McKenny, and Pidduck	Narcissistic rhetoric in campaign language	Entrepreneur's sex, sexual orientation, and race.	Moderate use of narcissistic rhetoric positively affects crowdfunding performance.	Journal of Business Venturing	2018

To be continued

Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order) (cont.)

Author	Description of signal	Moderator	Key finding	Source	Year
Belleflamme, Lambert and Schwienbacher	Funding momentum (early backers' participation)	Campaign timing / early-stage dynamics	Early support signals project legitimacy and triggers herding behavior among later funders.	Journal of Economics and Management Strategy	2025
Bi, Liu and Usman	Online information (text, video, image quality)	Project category	High-quality visuals signal professionalism and enhance trust, particularly in design-related projects.	Journal of Business Research	2017
Block, Hornuf and Moritz	Campaign updates (e.g., milestone, team, product)	Type of updates; frequency of updates	Posting an update in-creases both the number of investments by the crowd and the investment amount collected. Frequency, kind and clarity of updates is important for crowd participation.	Small Business Economics	2018
Cappa, Pinelli and De Massis	Naratives' style	Narrator's entrepreneurial experience	Narratives positively influence reward-based crowdfunding success, and this effect is significantly enhanced when narrated by experienced entrepreneurs.	Small Business Economics	2021
Cardon, Mitteness and Sudek	Enthusiasm, preparedness, and commitment	Commitment type (cue combinations)	Enthusiasm positively affects angel investment decisions, particularly when combined with signals of preparedness and commitment.	Entrepreneurship Theory and Practice	2017

To be continued

Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order) (cont.)

Author	Description of signal	Moderator	Key finding	Source	Year
Cholakova and Clarysse	Investment model type (equity vs. reward)	Investor preference (financial vs. social return orientation)	The availability of equity investment options does not necessarily crowd out reward-based investments. Investors motivated by non-financial returns continue to support reward-based projects.	Entrepreneurship Theory and Practice	2015
Davis, Hmieleski, Webb, and Coombs	Product creativity	Perceived entrepreneurial passion	Perceived product creativity is positively related to crowdfunding performance, both directly and indirectly, via positive affective reactions of prospective backers	Journal of Business Venturing	2017
Di Pietro and Tenca	Entrepreneurial passion	Entrepreneur's experience and company control	Passion influences investors only when supported by credible signals such as prior entrepreneurial experience and control, which strengthen its perceived legitimacy in equity crowdfunding.	Venture Capital	2024
Frydrych, Bock, Kinder and Koeck	Legitimacy signals (personal passion, preparedness, endorsement)	Project characteristics	Ventures that convey passion, preparedness, and social endorsement achieve higher crowdfunding success, with legitimacy being especially vital for early-stage creative projects.	Venture Capital	2014

To be continued

Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order) (cont.)

Author	Description of signal	Moderator	Key finding	Source	Year
Greenberg and Mollick	Entrepreneur's gender and activist choice	Backer homophily	Female entrepreneurs funded more by female backers.	Administrative Science Quarterly	2017
Hopp, Rose, and Kaminski	Campaign and product-related uncertainties	None	Different types of uncertainty influence backers differently. Product-related uncertainty negatively impacts funding more than campaign-related uncertainty. Backers rely on clarity signals to reduce perceived risk.	Journal of Small Business Management	2022
Kaminski and Hopp	Textual, visual, linguistic quality	Information scarcity in early-stage campaigns as the contextual condition that amplifies the role of linguistic and visual signals.	Linguistic quality (e.g., readability), visual clarity, and consistent messaging predict campaign success while uncertainty negatively affects it.	Small Business Economics	2020
Kang, Gao, Wang and Zheng	Trust signals (platform reputation, info transparency)	Platform-related trust factors	Trust mediates the effect of platform and information quality on backers' investment intentions.	Industrial Management and Data Systems	2016

To be continued

*Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order) (cont.)*

<b>Author</b>	<b>Description of signal</b>	<b>Moderator</b>	<b>Key finding</b>	<b>Source</b>	<b>Year</b>
Li and Wang	Fundraiser engagement and 3rd-party endorsements	Platform social conditions	Signal combinations (e.g., engagement + endorsement) significantly improve campaign performance.	Plos one	2024
Mollick	Preparedness, goal setting, project updates	None	Project quality (e.g., preparedness, realistic goals, timely updates) is positively related to crowdfunding success. Geography also plays a role in project delivery.	Journal of Business Venturing	2014
Moradi, Dass, Arnett and Badrinarayanan	Rhetorical signals (logos, pathos, ethos)	Campaign phase (early vs. later) & backer support (number of backers) as interactive condition	The effectiveness of rhetorical signals (logical, emotional, and credibility appeals) varies over time. Pathos is more effective early in the campaign, while logos gains importance later.	Journal of the Academy of Marketing Science	2024
Parhankangas and Renko	Linguistic style (concreteness, vividness, positivity)	Type of entrepreneur (social vs. commercial)	Linguistic style affects crowdfunding success differently for social and commercial entrepreneurs. Social entrepreneurs benefit more from vivid and concrete language than commercial ones.	Journal of Business Venturing	2017

To be continued

Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order) (cont.)

Author	Description of signal	Moderator	Key finding	Source	Year
Roma, Gal-Or, and Chen	Early crowdfunding performance (success level; degree of funding)	None	Reward-based crowdfunding success signals venture quality to venture capitalists, increasing chances of institutional investment.	Information Systems Research	2018
Rose, Wentzel, Hopp and Kaminski	Psychological distance and mental simulation	Type of mental simulation (process vs. outcome)	Matching backers' psychological distance with the appropriate simulation (process/outcome) significantly improves funding outcomes.	Journal of Business Venturing	2021
Song, Wu, Ma, and Lu	Creator signals (project updates, credibility and competence of creator etc.)  Social-related signals (number of backers, comment volume, and early funding speed.)	Signal interaction effects (forms of signals and backers' sensitivity)	Dynamic, combined signals have synergistic effects on backers' decisions.	Information Technology and People	2020

To be continued

*Table 7: Categorization of signals in crowdfunding research (authors in alphabetical order) (cont.)*

<b>Author</b>	<b>Description of signal</b>	<b>Moderator</b>	<b>Key finding</b>	<b>Source</b>	<b>Year</b>
Steigenberger and Wilhelm	Firm/activity signals	Pathos-based signals/ rhetorical signals	Firm and activity signals are critical information in crowdfunding pathos-based and rhetoric signals can increase signaling effectiveness.	Organisation Science	2018
Tang, Lu, Huang, and Liu	Pricing strategy signals in two-sided crowdfunding platforms	Platform design (two-sided market structure)	Pricing strategies serve as market signals to backers. The effectiveness of these signals varies depending on whether the platform emphasizes backer- or creator-side engagement.	Electronic Commerce Research	2023
Zvilichovsky, Inbar, and Barzilay	Backer endorsement and reciprocity behavior	Project category	Entrepreneurs who have previously backed other campaigns achieve higher success and display reciprocity; backing others is a rewarding strategy.	SSRN	2015

*Source: Own work.*

*Table 7* presents a categorization of signals examined across various studies, organizing empirical findings by authors, types of signals used by entrepreneurs or campaigns, moderating variables, and key outcomes. These signals (ranging from psychological capital, social role, creativity, and passion to trustworthiness, human capital, coachability, etc.) serve as crucial indicators of a venture's legitimacy, potential, and the entrepreneur's credibility. For instance, Anglin et al. (2018) found that the use of costless, language-based signals, such as expressions of psychological capital, positively influences crowdfunding performance, with human capital acting as a significant moderator. Similarly, B.C. Davis et al. (2017) demonstrated that product creativity, a non-verbal entrepreneurial signal, enhances backers' interest by eliciting positive affective reactions. These findings lay down the importance of both verbal and non-verbal cues in shaping backers' perceptions and decisions.

Moderators such as gender, race, investor or backer experience, and impression management play a critical role in the interpretation and effectiveness of these signals. For example, studies by Cardon et al. (2017) and Di Pietro and Tenca (2024) emphasized that displaying entrepreneurial passion can attract external resources, especially when aligned with backers' characteristics or combined with cues of commitment. Signals range from financial disclosures, visual content quality, and narrative style to emotional appeal and legitimacy cues. The purpose of such signaling is to reduce information asymmetry between backers and creators or entrepreneurs by providing indicators of credibility, preparedness, and project potential. For instance, Ahlers et al. (2015) show that detailed financial disclosures and the presence of quality signals enhance trust, while Allison et al. (2015) examined how different types of cues, intrinsic (e.g., emotional appeal or warm-glow language) versus extrinsic (e.g., financial incentives) influence investment decisions in a prosocial microlending environment. Their findings revealed that intrinsic cues, particularly warm-glow appeals that emphasize emotional satisfaction, significantly increased the likelihood of funding. In contrast, extrinsic cues were less effective in this context. This suggests that emotionally-driven rhetoric serves as a powerful signal to backers, especially when their motivations align with altruistic or prosocial goals.

Moderating factors play a critical role in shaping how signals are interpreted by backers. Variables such as investor type, campaign stage, project category, and entrepreneur demographics frequently moderate the effectiveness of signals. For example, Anglin et al. (2018) highlight how human capital enhances the effectiveness of positive language, and Greenberg and Mollick (2017) find that gender homophily affects funding outcomes, with female entrepreneurs receiving more support from female backers. These moderators underline the context-dependent nature of signal reception, suggesting that the same signal can have varied outcomes depending on the surrounding social, temporal, or platform-based environment. Collectively, these studies highlight that the strategic deployment of signals, tailored to the expectations of different backers' types and moderated by contextual factors, significantly contribute to the perceived value and legitimacy of entrepreneurial ventures.

Beyond individual-level characteristics, firm-level and contextual signals also play a crucial role in influencing funding decisions. Studies such as those by Steigenberger and Wilhelm (2018) and Moradi et al. (2024) reveal the importance of rhetorical strategies in shaping backer evaluations. Pathos-based signals in emotional appeals are embedded within entrepreneurial or crowdfunding narratives in order to enhance the effectiveness of more objective signals, such as firm activities or business ideas. Similarly, Roma et al. (2018) demonstrate how early crowdfunding success functions as a performance signal, attracting subsequent investment from institutional sources such as venture capitalists. These firm-level signals serve as crucial indicators of venture viability and market potential. Such findings highlight the interplay between emotional rhetoric and concrete business indicators, highlighting how both narrative strategies and tangible outcomes contribute to signaling effectiveness in crowdfunding environments. Moreover, platform-level signals (such as platform reputation, pricing strategies, and information transparency, etc.) further influence backer trust and decision-making. As seen in studies by Kang et al. (2016) and Tang et al. (2023), trust-related cues stemming from platform design or pricing structures significantly moderate the perception of campaign quality. These signals reduce perceived risk and uncertainty, especially in two-sided markets where both creators and backers engage. Therefore, the credibility of the hosting platform itself acts as a signal that amplifies or dampens the entrepreneur's efforts.

*Table 7* also illustrates that the effectiveness of signaling in the entrepreneurial context is contingent upon intervening variables such as backer expectations, cultural perceptions, and social identity dynamics. These moderators do not reflect a feedback mechanism but rather alter the way signals are interpreted and evaluated by potential backers. For example, Anglin et al. (2018) explored how narcissistic, self-focused rhetoric functions as a linguistic signal in crowdfunding pitches and showed that its effectiveness is shaped by the entrepreneur's sex, sexual orientation, and race. Their findings demonstrate that identical rhetorical cues are evaluated differently depending on the entrepreneur's demographic characteristics, reflecting systematic variation in how audiences interpret such signals. Similarly, Parhankangas and Renko (2017) investigated how the linguistic style of entrepreneurs (specifically concreteness, vividness, and positivity) affects crowdfunding success differently based on whether the entrepreneur is pursuing a social or commercial venture. Their findings reveal that social entrepreneurs benefit more from vivid and concrete language, underscoring the role of audience expectations in moderating signal effectiveness.

Furthermore, Cholakova and Clarysse (2015) examined the effect of investment model type (equity vs. reward-based crowdfunding) and found that backers' motivations, whether oriented toward financial or social returns, moderate how signals are interpreted. Backers motivated by non-financial returns continued to support reward-based projects even when equity options were available. This suggests that contextual preferences and values significantly mediate signal efficacy. Such studies collectively illustrate that signals do not

operate in a vacuum but are deeply contingent on the socio-demographic and motivational characteristics of the backers.

Overall, this broad categorization of signals demonstrates a multifaceted signaling environment in crowdfunding. The signaling effectiveness is shaped not only by the type and quality of signals but also by when, how, and by whom they are delivered. Taken together, this literature emphasizes that successful crowdfunding outcomes depend on the strategic deployment of signals across multiple layers of influence: individual, firm, and platform.

## 4 SIGNALS THAT MATTER: EXPLORING THE INTERPLAY OF DISPLAYED PASSION AND PRODUCT USEFULNESS IN REWARD-BASED CROWDFUNDING DECISIONS<sup>2</sup>

### 4.1 Introduction

Crowdfunding platforms can be categorized into four main types: donation-based, reward-based, peer-to-peer lending, and equity crowdfunding. This classification is based on the returns that backers receive for their contributions (Belleflamme et al., 2014; Mollick, 2014; Shneor & Vik, 2020). Among these types, reward-based crowdfunding (RBCF) stands out distinctly. In RBCF, backers act as consumers making advance purchases. Unlike traditional investors, these backers do not seek a stake or financial return (Lukkarinen et al., 2016; L. Zhao & Ryu, 2020). In RBCF, backers pre-order products with the expectation of receiving them in the future without gaining any ownership stake or claim to future profits. Moreover, unlike traditional investment settings, the contributions are typically small and structured as advance purchases (Lukkarinen et al., 2016). This model contrasts sharply with equity-based crowdfunding, where backers invest capital in exchange for shares and expect long-term financial returns (R. Brown et al., 2019; Lukkarinen et al., 2016).

The risk profiles of backers on different crowdfunding platforms also differ considerably. Investors participating in RBCF are primarily interested in the specific features and benefits of the product itself (Cappa et al., 2023; Chakraborty & Swinney, 2021). The primary risk lies in the potential non-delivery or substandard quality of the promised product (Gutiérrez-Urtiaga & Sáez-Lacave, 2018; Kunz et al., 2017; Tuo et al., 2019). Backers base their decision primarily on whether the product appears useful, relevant, or appealing to them personally (Dey et al., 2017). Conversely, equity backers evaluate the market potential of the product and the business's long-term profitability, seeking capital gain rather than personal utility. This fundamental difference in motivation makes product usefulness a central evaluative criterion in RBCF, a characteristic that does not carry the same weight in equity crowdfunding. Reward-based campaigns typically emphasize tangible incentives and innovative offerings that reduce perceived uncertainty and increase the confidence of potential backers (Steigenberger, 2017). Reward-based backers do not behave as traditional investors. Instead, they function more as early adopters or consumers. Their decisions are primarily driven by emotional resonance and perceived personal relevance (Ahsan et al., 2018; Bitterl & Schreier, 2018). Accordingly, signals that convey the quality and benefits of the product are likely to be particularly influential for these individuals (Sewaid et al., 2021).

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<sup>2</sup> Hafeez, S., & Drnovšek, M. (2025). Signals that matter: Exploring the interplay of displayed passion and product usefulness in reward-based crowdfunding decisions. *Small Enterprise Research*, 1–22. <https://doi.org/10.1080/13215906.2025.2548796>

Therefore, understanding the consumer-like mindset in this form of crowdfunding is critical to identifying the key drivers of support.

A major challenge in the RBCF process is information asymmetry (Cappa et al., 2023), which arises from the typical principal-agent dilemma. Unlike equity crowdfunding, where investors may conduct due diligence or analyze financial statements, reward-based backers usually lack formal mechanisms to verify claims made in the campaign. Backers often lack complete and reliable information about the projects they support, which prevents them from making informed decisions (Butticè et al., 2018; Courtney et al., 2017; Mollick, 2014). Researchers have identified this information gap as a key factor contributing to “inefficient exchanges” and the failure of crowdfunding campaigns (Chung et al., 2021; Sarkar et al., 2023). They rely on campaign materials, especially video pitches and textual descriptions, to gather information (Kolbe et al., 2022; Kunz et al., 2017). The information asymmetry compels backers to rely heavily on observable cues and superficial signals when evaluating RBCF campaigns (Kunz et al., 2017; N. Wang et al., 2021). Among these cues, the video pitch stands out as particularly influential, as it presents both emotional and factual content that helps backers assess the project’s credibility (B.C. Davis et al., 2017; Dey et al., 2017). RBCF involves persuading potential backers to financially support a product in advance. Thus, it closely parallels traditional sales and value communication strategies. As such, pitching in this context can be viewed as a form of selling that involves key principles of persuasion and buyer psychology (T. E. Brown et al., 2017; Kalvapalle et al., 2024). The video pitch serves multiple functions as it acts as the entrepreneur’s first impression, elevator pitch, and trust builder. The video pitch introduces the project and its creators, quickly conveys the concept, and builds credibility with potential backers (Gafni et al., 2019). It also explains how backers will receive their rewards when the campaign succeeds (Bi et al., 2017). This approach helps convert interest into support by addressing the common concerns of backers (B.C. Davis et al., 2017).

Entrepreneurial pitches take multiple forms depending on the funding context, with significant variation in format, delivery mode, and duration (Tsay, 2021). For instance, equity-based settings typically involve extended live presentations to investors, often lasting 8–10 minutes and allowing for real-time interaction (Clark, 2008; Maxwell, 2016). In contrast, entrepreneurs on RBCF platforms, such as Kickstarter and Indiegogo—typically create brief, pre-recorded video pitches. These videos are designed to quickly convey value and appeal to a broad online audience (Allison et al., 2017; Parhankangas & Renko, 2017). Such short videos, typically under two minutes in length, serve as a primary communication tool through which entrepreneurs introduce their products (Dey et al., 2017). These videos also enable entrepreneurs establish legitimacy and persuade potential backers to offer their support. Compelling storytelling and clear reward presentation in short video pitches can strongly boost motivation (Anglin et al., 2023; Dey et al., 2017; Rossolini et al., 2021). Recent research sheds light on the subtle yet powerful elements that contribute to a successful video pitch. For example, factors such as the entrepreneur’s gender (Letwin et al.,

2023) and the storytelling style (Lu et al., 2023) can significantly shape perceptions and influence the outcome of a crowdfunding campaign.

Previous research has also shown that the signals entrepreneurs send out (whether deliberate or unintended) are a powerful tool to cut through the noise. In other words, signals help backers understand the uncertainty and close the information gaps that often cloud crowdfunding campaigns (Agrawal et al., 2014; Sarkar et al., 2023). The study conducted by Colombo (2021) has discussed the multiplicity of signals that help communicate product qualities to prospective backers. The dual nature of emotional and rational signals in RBCF is especially pronounced (Raab et al., 2020). For example, the promise of new and innovative products can evoke excitement and anticipation. In contrast, clear communication about post-campaign rewards helps ease concerns about reliability (Moritz et al., 2015). Previous studies have also explored two main dimensions of emotion display in crowdfunding: acoustic and textual cues (J. Chen et al., 2024). However, the role of non-verbal emotional cues, such as facial expressions, tone of voice, and body language has received comparatively less attention.

In this study, we focus on reward-based crowdfunding (RBCF) to examine the unique decision-making patterns of backers who behave similarly to early adopters or consumers, rather than traditional investors. We examine how emotional cues, specifically the entrepreneur's displayed passion, influence backers' funding decisions, directly and indirectly. Our study focuses on short, pre-recorded pitches, reflecting the most common format used on RBCF platforms. By considering both passion and product usefulness, we offer a more complete view of support drivers in RBCF. Our contributions are threefold.

First, we integrate prior findings regarding the role of signals in crowdfunding. This approach enables us to explore how the presentation of product usefulness in RBCF videos influences backers' emotional engagement. This emotional engagement, in turn, can lead to favorable funding decisions. Specifically, we provide empirical evidence that the display of emotion (i.e., passion) has a strong influence on funding decisions. Our findings expand the existing work on determinants of crowdfunding success (Crosetto & Regner, 2014; Deng et al., 2022; Zhou et al., 2018) by developing a conceptual model. The model suggests that displayed passion in an RBCF video pitch serves as a powerful signal. It can influence a backer's funding decision both directly and indirectly. Second, although existing literature acknowledges the challenge of information asymmetry in RBCF (Butticè et al., 2018; Cason et al., 2025; Courtney et al., 2017), it rarely explores how combined signals can address this issue. Signals such as displayed passion and product usefulness may play a crucial role in bridging the gap. This study contributes to the current literature by empirically investigating the signals that influence backers' perceptions of campaigns and their decisions to fund them. Our practical findings imply that entrepreneurs should recognize that passion can evoke a strong emotional response in potential backers. This emotional connection often

leads to greater trust, higher willingness to contribute, and more successful funding outcomes.

## **4.2 Cues in reward-based crowdfunding**

In RBCF, backers are often more receptive to the emotional cues of entrepreneurs, which can significantly influence their perceptions and decision-making (J. Chen et al., 2024). This is because the emotions displayed are easily transmitted to the backers watching the crowdfunding video (X.-P. Chen et al., 2009; J.J. Li et al., 2017).

Both the voice and the words spoken contain numerous emotional clues that can reveal the emotional state of the speaker (J. Kim et al., 2016). J. Chen et al. (2024) investigated the role of intimacy conveyed through speech in influencing the perception of emotional sincerity, highlighting its essential contribution to emotional expression. This is evident in the use of intimate language, which strengthens the communicator's connection to the message and enhances its authenticity. The importance of intimacy in emotional expression suggests that perceptual language helps recipients more easily process and understand the message (J. Kim et al., 2016). In RBCF, pitches mainly use three types of framing: visual (Y. Huang et al., 2023), linguistic (Kaminski & Hopp, 2020), and paralinguistic (Y. Li & Wu, 2021). Visual framing encompasses close-up shots of the product in action, before-and-after scenarios, and demonstrations of its practical applications. Linguistic framing includes using positive and persuasive language, emphasizing benefits over features, and employing social validation cues (J. Chen et al., 2024).

Previous studies have shown that linguistic framing influences consumers' risk perception, trust, and overall evaluation of a product. In RBCF, linguistic framing often uses phrases that highlight urgency ("limited-time offer"), exclusivity ("be the first to own"), and social proof ("trusted by thousands"). These expressions help shape backers' perceptions of product usefulness. Furthermore, linguistic and paralinguistic cues in crowdfunding videos are strongly linked to emotional appeal (Fotinea et al., 2003; Schuller et al., 2011; Schuller & Batliner, 2013). These cues convey extensive information, including a product or service overview, narrative elements (Anglin et al., 2023), details about the management team (Ralcheva & Roosenboom, 2020), post-campaign reward structures (B.C. Davis et al., 2017), and product quality (J.J. Li et al., 2017).

## **4.3 Theoretical framework and hypothesis development**

This study integrates signaling theory (ST) (Spence, 1978) with framing theory (FT) (Entman, 1993; Goffman, 1974) to offer a more nuanced understanding of communication in crowdfunding contexts. It moves beyond the traditional, static view of signaling in which a single costly action, such as earning a credential, conveys intent, and instead highlights the dynamic, iterative interactions enabled by crowdfunding platforms among entrepreneurs,

backers, and other stakeholders. For example, signals such as displayed emotions and product attributes can interact and reinforce each other, thereby strengthening the entrepreneur's credibility and increasing the likelihood of positive responses from potential backers. In RBCF, these signals play a particularly crucial role, as backers rely on the entrepreneur's communication to assess the project's feasibility (J. Chen et al., 2024). This synergy of multiple signals creates greater trust in both the project and its author (Bafera & Kleinert, 2023). Therefore, although initial signals may be perceived as low cost (a passionate pitch, a prototype screenshot, etc.), they become more expensive to maintain or fake over time (Ahlers et al., 2015). With multiple interactions, entrepreneurs who lack genuine passion or a truly useful product risk revealing inconsistencies. A poorly substantiated claim of "usefulness" is quickly scrutinized by backers who demand clarification or real proof, putting pressure on entrepreneurs to provide credible evidence. Finally, entrepreneurs who display signals not only provide information but also cultivate trust relationships with potential backers by continuously interacting and updating the campaign (Zheng et al., 2016).

Among the types of signals that entrepreneurs can send to their backers via crowdfunding videos, emotional signals have prevailed (J.J. Li et al., 2017; Mollick, 2014; Raab et al., 2020). Emotional signals sent by the entrepreneur, such as passion (Mittens et al., 2012; Oo et al., 2019) and happiness (Warnick et al., 2021), have been observed to play essential roles in formulating positive funding decisions of potential backers. This is because such signals, which create a genuine and ethical impression of the entrepreneur (Colombo, 2021), give potential backers the feeling that the entrepreneur is personally invested in the company. Signals often serve as powerful tools of impression management; a concept well established in investment contexts such as business angel decision-making (Clark, 2008; Mason & Harrison, 2003; Parhankangas & Ehrlich, 2014). This also evokes emotional engagement, which can further motivate the backers.

In addition, signaling in crowdfunding can also be interpreted through the lens of framing theory (Entman, 1993; Goffman, 1974). FT focuses on how the specific signals are presented or "framed" to resonate with the cognitive and emotional preferences of audience (Rossolini et al., 2021). In the context of RBCF, entrepreneurial signals (such as displays of passion or demonstrations of product usefulness) function as frames that direct backers' attention to specific aspects of a project (e.g., novelty, impact, or credibility). As interpretive devices, these frames highlight select themes, such as personal commitment while potentially minimizing others, including limited business experience. By emphasizing emotional engagement, entrepreneurs encourage backers to evaluate the project through an affective lens rather than a purely financial one.

By integrating signaling and framing theory, we move beyond examining signal content alone to investigate how signals are strategically presented for maximum appeal and effectiveness (Connelly et al., 2011). A key benefit of this integration is its capacity to address both the emotional and rational dimensions of signals in RBCF campaigns.

Specifically, ST explains how entrepreneurs mitigate uncertainty by conveying particular cues (Ahlers et al., 2015), while FT focuses on how these cues are organized and communicated to align with backers' motivations (Defazio et al., 2021). For example, entrepreneurs might present their passion as a compelling personal journey to engage emotionally driven backers. Simultaneously, they may highlight concrete product attributes to appeal to more rationally inclined backers. In this way, the interplay between ST and FT ensures that signals do more than merely reach the audience as they are framed and interpreted in ways that can meaningfully influence funding decisions (B.C. Davis et al., 2017; S. Huang et al., 2022).

#### 4.3.1 Displayed passion as a signal in reward-based crowdfunding

Entrepreneurial passion is an intense emotion that can be expressed through enthusiasm and commitment to the business (Murnieks et al., 2014; Newman et al., 2021), as well as the entrepreneurs' level of knowledge and confidence in their ideas. Entrepreneurial passion is communicated through non-verbal signals such as facial expressions, body language, and tone of voice in a quick and effective approach (Colombo, 2021). Di Pietro and Tenca (2024) examined equity crowdfunding campaigns and discovered that entrepreneurs' displayed passion positively affected funding success. This effect was more pronounced when entrepreneurs had prior start-up experience and retained greater control over their companies. In the context of RBCF, J.J. Li et al. (2017) demonstrated that entrepreneurs' displayed passion in online videos positively influences the potential backers' enthusiasm, leading to higher funding contributions and increased social media sharing of the project. Franzoni and Tenca (2023) emphasized that the influence of passion might be specifically effective in RBCF. Passion becomes a vital signal that bridges the gap between entrepreneurs and backers by demonstrating authenticity, commitment, and belief in the project (Dey et al., 2017). Displayed passion in campaign videos and project descriptions can convey a sense of purpose that resonates emotionally with backers, thereby fostering trust and engagement (Cardon & Kirk, 2015; X.-P. Chen et al., 2009).

#### 4.3.2 Product usefulness as a signal in reward-based crowdfunding (RBCF)

Product usefulness in RBCF has been identified as one of the most critical dimensions of new product success (Frimpong et al., 2025; Mollick, 2014). It refers to a product's tangible, practical benefits, such as saving time, conserving energy, or improving convenience (Aubin et al., 2012). Consumers generally spend money on products for their functional value, primarily to address a specific need or solve a pressing problem (Cooper, 1979; G. Li et al., 2015; Szymanski & Henard, 2001). In an RBCF setting, this broader view of perceived usefulness may include emotional and social dimensions, such as eco-friendliness, innovation, or social impact that strongly resonate with backers.

As such, RBCF backers do not benefit from the business's long-term success or profitability. From a user's perspective, product usefulness embodies the belief that a product effectively meets personal requirements or resolves particular issues (Moldovan et al., 2011). This idiosyncratic, utility-driven judgment forms the basis of backers' decision to contribute funds (Gutiérrez-Urtiaga & Sáez-Lacave, 2018; Kunz et al., 2017; Tuo et al., 2019). This stands in contrast to equity crowdfunding, where backers make investment decisions based on the business's future performance and potential financial return (Ahlers et al., 2015; Ralcheva & Roosenboom, 2020). For equity backers, the perceived usefulness of a product holds significance primarily as far as it signals broader market demand and sales potential. Therefore, showcasing product usefulness as a key differentiator in RBCF helps backers justify their financial support (Dey et al., 2017). This, in turn, increases the likelihood of campaign success by offering a clear, practical return on investment. Entrepreneurs not only require displayed passion but also employ strategic framing (Jin et al., 2024) to spotlight the product's tangible benefits, problem-solving capabilities, and unique value proposition. In line with Entman's (1993) concept of selection and salience, entrepreneurs can deliberately choose which aspects of the product to highlight, thereby making them more prominent to shape backers' perceptions. By crafting these elements thoughtfully, entrepreneurs can effectively convey both the practical and emotional aspects of their product's usefulness, thereby appealing to a diverse range of potential backers.

#### 4.3.3 Funding decision of backers

Due to the relatively small individual investments in RBCF, most backers are not driven by financial returns. As a result, they may demonstrate lower risk sensitivity compared to professional investors (Jin et al., 2024). Backers typically finance projects with minimal monetary support to give entrepreneurs early and easy access to a product or to receive a non-financial reward in return. In this context, success does not depend on convincing a single backer but on attracting a large pool of individuals, each contributing relatively small amounts. Unlike traditional investment settings, entrepreneurs must appeal to a larger crowd of individuals, with each person making independent decisions on modest contributions (Mollick, 2014).

The funding decision of backers is usually based on the textual and visual information provided on the campaign pages (J. Chen et al., 2024; Kunz et al., 2017). On the other hand, emotional messages are equally beneficial for potential backers to decide (Allison et al., 2017; Anglin et al., 2018; Xiang et al., 2019). These messages transmit information through emotional contagion (Hubner et al., 2020) and create a trustful relationship between the two parties. Previous research suggests that decision-makers combine multiple signals in evaluating the legitimacy of financial proposals (Cornelissen & Clarke, 2010).

### ***Direct relationship between displayed passion and funding decision***

Prior studies indicate that the displayed emotions of entrepreneurs and the associated behaviors trigger similar emotions and behaviors (J.J. Li et al., 2017) in backers (Raab et al., 2020). These reactions contribute to the overall emotional experiences and increase the likelihood that the viewers will support the campaigns. Empirical evidence is surging that displayed passion is a crucial aspect of entrepreneurship, furnishing positive behavior and success for entrepreneurs, employees, and ventures (Clarysse et al., 2015; Murnieks et al., 2014). Studies have shown that individuals who display more passion when discussing their businesses tend to receive more positive responses from their backers (Cardon et al., 2017; Murnieks et al., 2014). This is because passion is seen as a sign of dedication to the project, which backers can identify with (Dey et al., 2017; J.J. Li et al., 2017). When entrepreneurs display passion for their projects, it creates a sense of trust and credibility, enhancing the backers' confidence in both the product and the person behind it (Cardon et al., 2009). Specifically, Mitteness et al. (2012) found that passion displayed by entrepreneurs can have a significant and direct positive effect on funding outcomes, as it conveys commitment and, hence, motivates backers to fund. Franzoni and Tenca's (2023) study supports the direct impact of entrepreneurial passion on RBCF success, specifically when passion is paired with a high level of entrepreneurial preparedness. Colombo (2021) demonstrated that passion may lead to greater funding success when combined with other interpersonal signals, such as personal commitment to the venture. Entrepreneurs who express passion while discussing their product or service can effectively generate interest and stimulate trust in their business, encouraging backers to get involved and support their ventures (Park et al., 2017). This emotional engagement can result in a substantial increase in funding contributions (J.J. Li et al., 2017). Overall, passion can be considered as an interpersonal signal (X.-P. Chen et al., 2009; Colombo, 2021). Based on this reasoning, we hypothesize:

***Hypothesis 1 (H1).*** There is a direct positive relationship between displayed passion and funding decision of backers.

### ***Direct relationship between displayed passion and product usefulness***

The displayed passion in a video pitch can enhance the perceived value and usefulness of the product. Backers begin to internalize the entrepreneur's positive emotions and view the product through a similar lens (Allison et al., 2017; Bi et al., 2017; J.J. Li et al., 2017; Xiang et al., 2019). By displaying passion, the entrepreneur can demonstrate their commitment to creating a product that is useful and of the highest quality, which significantly enhances the perceived value of a product (Cardon & Kirk, 2015). This is because when backers feel an emotional connection to the entrepreneur, they are more likely to view the product as something that not only fulfils a need but also aligns with their own values (Xiang et al., 2019), and this emotional alignment can make the product seem more valuable and desirable. Passionate communication can trigger what Cardon (2008) refers to as emotional contagion, whereby an entrepreneur's enthusiasm influences the emotional state of potential backers.

This emotional resonance enhances audience receptivity to the product's attributes, resulting in more favorable judgments of its usefulness (X.-P. Chen et al., 2009). By conveying passion through overt enthusiasm, high energy, and persuasive storytelling, entrepreneurs effectively emphasize a product's core features and benefits (X.-P. Chen et al., 2009). Consequently, this heightened awareness of the product's practical applications, including eco-friendliness, innovation, or unique functionality, encourages backers to associate the entrepreneur's excitement with tangible product value and enhances perceived usefulness (J.J. Li et al., 2017). Hence, this leads us to propose:

***Hypothesis 2a (H2a).*** There is a direct positive relationship between displayed passion and perceived product usefulness.

### ***Direct relationship between product usefulness and funding decision***

In RBCF, when backers perceive a product as highly useful, it has a direct, positive impact on their intention to fund the project. Several studies (S. Chen et al., 2016; G. Li et al., 2015) have further shown that perceived usefulness strongly predicts purchase intentions, including the decision to pledge money in crowdfunding campaigns. This effect occurs because backers who believe a product will fulfill its intended purpose are more likely to view it as a worthwhile contribution. When they also perceive its potential for marketplace success, their willingness to provide financial support increases further (Ordanini et al., 2011). Moreover, a strong perception of usefulness helps mitigate the inherent uncertainty in RBCF. When backers observe tangible evidence that a product can address a real-world problem or improve an existing solution, they gain greater confidence that their contributions will lead to meaningful outcomes. Consequently, the greater the perceived usefulness of a product, the more likely backers are to invest in it. This motivation arises from the anticipated product's practical benefits as well as the belief in its commercial viability.

***Hypothesis 2b (H2b).*** There is a direct positive relationship between perceived product usefulness and funding decision.

### ***The mediation effect of product usefulness***

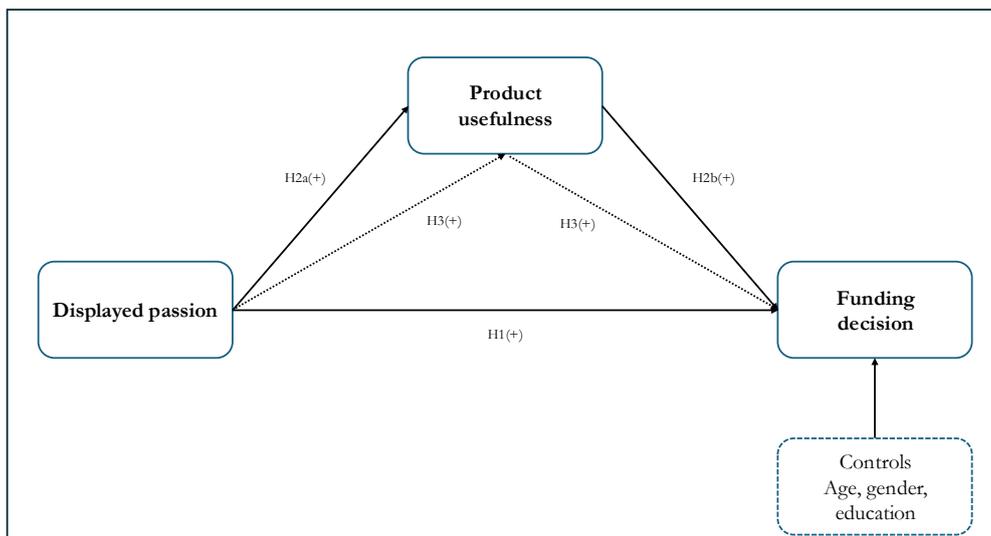
Xiang et al. (2019) emphasize the importance of using both emotional and informational appeals in a pitch, which aligns with the mediation role of product usefulness. To be effective, entrepreneurs must combine both emotional appeals (i.e. displayed passion) and informational cues (i.e. product usefulness) to engage backers on multiple levels. The emotional appeal engages the affective or emotional side of backers, drawing them in through passion (Xiang et al., 2019). The informational aspect, such as the product's usefulness, addresses the cognitive side of decision-making, giving backers concrete reasons to invest. This dual approach is necessary to bridge the gap between emotional attraction and the final decision to fund, thereby justifying the mediation effect of product usefulness.

Hence, we propose:

**Hypothesis 3 (H3).** Perceived product usefulness mediates the relationship between displayed passion and funding decision.

Figure 11 illustrates our conceptual model, which explains how displayed passion influences funding decisions both directly and indirectly through product usefulness. While passion directly impacts the likelihood of funding (H1), this effect is mediated through the product usefulness. When entrepreneurs promote their products with passion, they are more likely to provide detailed and compelling explanations of products' features and benefits, which enhances backers' perception of product usefulness (H2a). This detailed explanation can help potential backers better recognize the practical usefulness of the product, which positively relates to funding decision (H2b). Thus, product usefulness serves as a mediator between the entrepreneur's emotional engagement and the backers' decision to fund the campaign (H3).

Figure 11: Proposed conceptual model



Source: Own work.

## 4.4 Methods

### 4.4.1 Data

The data used in this study were collected in an experimental context, simulating the crowdfunding decision-making process through exposure to short-pitch videos. We collected empirical data using Qualtrics and recruited 380 participants from Prolific in 2022. Participants were pre-filtered for previous crowdfunding experience and English proficiency, ensuring familiarity with crowdfunding platforms and comprehension of the materials. They received fair compensation in accordance with Prolific guidelines.

Following Spierer (2013), we embedded two real crowdfunding videos from Kickstarter and Indiegogo in our questionnaire. These two videos were chosen from an initial pool of 10 based on three criteria: (1) the entrepreneur was the primary presenter, (2) the video was under two minutes, (3) it featured high production quality, and (4) it showcased a technology-based product, and (5) it emphasized early access to the product as a key reward for backers. In line with B.C. Davis et al. (2017), we assessed passion through indicators such as enthusiasm, dynamic nonverbal cues, and a positive tone. One of the two video clips was randomly shown to each of the 380 participants using Qualtrics' randomization function. Participants were required to watch the entire embedded video before accessing the mandatory survey questions, which minimized incomplete data and improved the reliability of the results.

### *Sample characteristics*

We gathered 363 responses, yielding a 95% response rate. According to *Table 8*, 46% of participants ( $n = 166$ ) watched the first video, while 54% of participants ( $n = 197$ ) watched the second video. The overall sample consists of almost equal numbers of male and female participants. There are slightly more male participants ( $n = 86$ , 52%) than female participants ( $n = 80$ , 48%) in the group that watched the first video. The specific demographics are presented in *Table 8*. Nationally, 40.5% were from Europe, 28.8% from the UK, 16.5% from South Africa, 10.4% from the US, with 1.9% from other countries and 1.9% from undisclosed locations.

*Table 8: Demographic information of survey participants (n = 363)*

Demographic variable	Overall		Video 1		Video 2	
	N	%	N	%	N	%
<b>Gender</b>						
Male	183	51%	86	52%	97	49%
Female	179	49%	80	48%	99	50%
Prefer not to mention	1	0%	0	0%	1	1%
<b>Age group</b>						
up to 20 years of age	13	3.6%	4	2.4%	9	4.6%
21 – 40 years of age	258	71.1%	117	70.5%	141	71.6%
41 – 60 years of age	81	22.3%	42	25.3%	39	19.8%
61 years of age or above	11	3.0%	3	1.8%	8	4.1%
<b>Highest level of formal education</b>						
Elementary / High School	76	20.9%	34	20.5%	42	25.3%
Bachelor's degree	178	49.0%	75	45.2%	103	62.0%
Master's degree	98	27.0%	52	31.3%	46	27.7%
Doctorate (Ph.D.)	11	3.0%	5	3.0%	6	3.6%

To be continued

Table 8: Demographic information of survey participants (n = 363) (cont.)

Demographic variable	Overall		Video 1		Video 2	
	N	%	N	%	N	%
<b>Amount willing to fund</b>						
Do not want to invest	124	34.2%	83	50.0%	41	24.7%
Less than \$ 20	82	22.6%	39	23.5%	43	25.9%
\$ 20 – 40	67	18.5%	30	18.1%	37	22.3%
\$ 40 – 60	35	9.6%	11	6.6%	24	14.5%
\$ 60 – 80	14	3.9%	0	0.0%	14	8.4%
\$ 80 – 100	20	5.5%	0	0.0%	20	12.0%
More than \$ 100	21	5.8%	3	1.8%	18	10.8%

Source: Own work.

#### 4.4.2 Measures

Participants rated survey items on a 5-point Likert scale. The items were adapted from established literature to ensure reliability and validity, with scale reliability confirmed using Cronbach’s alpha. The independent variable is *displayed passion* (DP). Prior research suggests that entrepreneurial passion is expressed through a combination of verbal communication and nonverbal cues, such as gestures and tone of voice (X.-P. Chen et al., 2009), which is why we adopted the displayed passion scale from Chen and colleagues. The Cronbach’s alpha of 0.84 indicated good reliability (refer to *Appendix 7*). *Product usefulness* (PU) is a mediator in the relationship between displayed passion and the funding decision. The PU construct refers to the efficiency with which a product fulfils practical needs such as saving time or increasing productivity (Aubin et al., 2012). PU was assessed through respondents’ self-reported evaluations. Participants were asked to indicate the extent to which they perceived the product as valuable, practical, or relevant using items adapted from F.D. Davis (1989). The product usefulness scale comprising eight items showed a Cronbach’s alpha of 0.93 (refer to *Appendix 8*), which reflects excellent internal consistency. *Funding decision* (FD) is defined as the participant’s willingness to invest (Bi et al., 2017) and the extent of financial support offered. Drawing on Baron et al. (2006) and Ciuchta et al. (2018), this variable is measured through a straightforward yes/no question and a follow-up query on the “amount to invest”. This approach captures both categorical and continuous dimensions of the decision, offering insights into backers’ financial commitment. The full descriptions of the measurement items are presented in the *Appendix 9*.

### ***Control variables***

We included control variables that we expect could influence funding decisions in RBCF, specifically participants' age, gender, and education. These demographic factors were controlled because prior entrepreneurial research (Allison et al., 2022; Warnick et al., 2018) highlighted their potential impact on how individuals make funding decisions. *Table 9* presents the descriptive statistics and correlations among the included constructs. Detailed descriptions of the control variables are provided in the *Appendix 10*.

*Table 9: Descriptive Statistics and Correlations (n = 363)*

<b>Variable</b>	<b>Mean</b>	<b>Min</b>	<b>Max</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1 Displayed Passion	4.15	1.25	5.00	.80					
2 Product Usefulness	2.85	1.00	5.00	1.08	.313**				
3 Funding Decision	2.66	1.00	7.00	1.78	.277**	.351**			
4 Gender	1.50	1.00	3.00	.51	.237**	.216**	.09		
5 Age	2.25	1.00	4.00	.57	.097	-.02	.125*	.069	
6 Education	2.12	1.00	4.00	.77	-.085	-.127*	.006	-.014	.077

\*\* $p \leq 0.01$ , \* $p \leq 0.05$ , (two-tailed)

*Source: Own work.*

#### **4.4.3 Statistical analysis**

To mitigate common method variance (CMV), we applied procedural and statistical remedies (Preacher & Hayes, 2008). Respondents were reassured of confidentiality, the study purpose was clarified, and the survey was pre-tested. Scale points and labels were varied, and different scale types (Likert, semantic differential, ranking) were used to maintain engagement and minimize bias. Questions were clear, neutral, and free of ambiguity, with a statement encouraging truthful responses. We assured confidentiality, explained the study's purpose, and pre-tested the survey's design. Scale points were clearly labelled, and varied scale types with different anchors were used to minimize bias. To avoid social desirability bias, anonymity was emphasized (Larson, 2019), and questions were designed to be clear and neutral (Choi & Pak, 2004). We also reassured participants that there were no right or wrong answers, encouraging them to provide honest responses. We utilized IBM SPSS 27.0 and IBM AMOS 28.0 software for the empirical analyses. We

conducted an analysis to assess the convergent and discriminant validity, as well as the reliability of the constructs (Bagozzi et al., 1991), and then proceeded with the measurement models through confirmatory factor analysis to establish model fit. To test our model, we employed structural equation modeling in SPSS AMOS v28. The findings of Harman's single-factor test revealed that the one-factor model explained 45.003% of the total variance, which demonstrates a low probability of CMV (Hoyle, 1995). The results of Harman's single-factor test are shown in *Appendix 6*.

#### **4.5 Results of the study**

We conducted a confirmatory factor analysis on both the measurement and structural models. The values of the fit indices of the final model with correlations among the variables (i.e., prior to hypotheses testing) are the following:  $\chi^2 = 127.261$ ,  $df = 87$ ,  $p = 0.003$ ,  $CFI = 0.988$ ,  $RMSEA = 0.036$ , and  $SRMR = 0.0385$ , which demonstrate the robustness of our results.

Following Hayes (2009), we employed a mediation analysis using the bias-corrected bootstrapping method with 1,000 resamples at a 95% confidence level. This approach was selected due to its statistical rigor and capacity to test indirect effects without assuming normality (Preacher & Hayes, 2008). This approach ensures robust estimation of indirect effects and is particularly suited for evaluating mediation models. The final mediation model demonstrated strong fit indices, indicating that the data adequately supported the proposed structure:  $\chi^2 = 32.041$ ,  $df = 13$ ,  $p\text{-value} = 0.002$ ,  $CFI = 0.973$ ,  $RMSEA = 0.064$  (90% low and high confidence interval: 0.000–0.075), and  $SRMR = 0.029$ . These values suggest that the model provides a reliable representation of the relationships among the variables under investigation.

The empirical results offer strong support for the hypothesized relationships (refer to *Table 10*). First, a significant positive direct effect was found between entrepreneurs' displayed passion and backers' funding decisions ( $\beta = 0.179$ ,  $p < 0.001$ ), thereby supporting H1. This result emphasizes the importance of emotional cues in influencing the funding decisions of backers in crowdfunding campaigns. To test the proposed mediation, we next examined whether perceived product usefulness explains the mechanism through which displayed passion influences funding decisions. In support of hypotheses 2a and 2b, displayed passion significantly predicted perceptions of product usefulness. First, we tested the relationship between displayed passion and product usefulness (H2a), which was found to be positive and significant ( $\beta = 0.270$ ,  $p < 0.001$ ). We also tested the association between product usefulness and funding decision (H2b), which was similarly positive and significant ( $\beta = 0.270$ ,  $p < 0.001$ ).

In testing hypothesis 3, the indirect effect of displayed passion on funding decision via product usefulness was statistically significant ( $\beta = 0.270$ , 95% CI: [0.151, 0.402]). In contrast, the direct effect became non-significant when the mediator was included ( $\beta = 0.520$ ,

$p = 0.003$ ). This pattern indicates full mediation (refer to *Table 11*), meaning that displayed passion influences funding decisions only by enhancing perceptions of product usefulness rather than having a direct effect on its own. The structural model with mediation also exhibited satisfactory model fit ( $\chi^2 = 144.350$ ,  $df = 65$ ,  $p < 0.001$ ;  $CFI = 0.970$ ;  $RMSEA = 0.058$ ;  $SRMR = 0.0471$ ).

*Table 10: Results of hypotheses testing (H1, H2a, H2b)*

Hypothesis	Type of relation	Relation	Estimate	Std. Error	Z-value	Standardized estimate of regression coefficient ( $\beta$ )	P-value
<b>H1</b>	Direct	Displayed Passion → Funding Decision	0.813	0.175	4.646	0.179	< 0.001 ***
<b>H2a</b>	Direct	Displayed Passion → Product Usefulness	0.444	0.093	4.774	0.270	< 0.001 ***
<b>H2b</b>	Direct	Product Usefulness → Funding Decision	0.607	0.108	5.620	0.270	< 0.001 ***

\*\*\*  $p$ -value  $\leq 0.001$

Source: Own work.

*Table 11: Mediation analysis summary (H3)*

Relationship	Direct effect	Indirect effect	Confidence interval		P-value	Conclusion
			Lower Bound	Upper Bound		
DP → PU → FD	0.520	0.270	0.151	0.402	***	Full mediation

\*\*\*  $p$ -value  $\leq 0.05$

Source: Own work.

In addition to testing the core hypotheses, additional analyses examined the effect of campaign presentation (Video 1 vs. Video 2) on the key variables. While the passion shown differed only slightly between the groups  $\{t(361) = -1.35, p = 0.018\}$ , product usefulness  $\{t(361) = -5.79, p < 0.001\}$  and funding decisions  $\{t(361) = -5.98, p < 0.001\}$  were significantly higher for Video 2 (refer to *Table 12*). The large t-values and p-values below 0.001 confirm the robustness of this effect. Participants who watched Video 2, which more clearly emphasized the functional benefits of the product, reported significantly higher perceived usefulness and a greater willingness to fund the project. These results emphasize the central role of product usefulness in funding intentions and suggest that differences in campaign presentation (particularly in the way a product’s value is clearly communicated) can significantly influence backer evaluations. The complete descriptive statistics and t-test results are presented in *Table 12*, and the effects of the control variables are detailed in the *Appendix 10*.

*Table 12: Mean differences in values based on video groups (n = 363)*

Variable	Video	M	SD	t	df	Sig. (2-tailed)
Displayed passion	Video 1	4.09	0.73	-1.35	361.00	0.18
	Video 2	4.20	0.81			
Product usefulness	Video 1	2.71	1.04	-5.79	361.00	***
	Video 2	3.30	0.91			
Funding decision	Video 1	2.63	1.19	-5.98	361.00	***
	Video 2	3.36	1.13			

\* $p \leq 0.05$ , (two-tailed), \*\*\*  $p$ -value  $\leq 0.001$

*Source: Own work.*

## 4.6 Discussion

This study examines how entrepreneurs’ emotional cues (particularly displays of passion) can both directly and indirectly influence the funding decisions of backers in RBCF campaigns. We investigated the simultaneous role of passion and product usefulness, taking a broader look at how emotional and rational factors interact to influence backers’ funding decisions. Drawing on signaling theory and framing theory, we show how backers interpret and respond to both affective and informational cues in the campaign environment. We conclude that both verbal and non-verbal cues influence perception. Therefore, a combination of precise language and expressive framing can significantly enhance the campaign’s overall effectiveness. Our results demonstrate that displayed passion and vocal

cues significantly enhance the success of reward-based campaigns, aligning with the findings of J.J. Li et al. (2017) and J. Chen et al. (2024). Our results also confirm that displayed passion directly influences funding decisions (H1). Moreover, product usefulness fully mediates this effect (H3), indicating that while emotional appeal captures initial interest, funding decisions are ultimately driven by the perceived usefulness of the product.

The significant direct effect of the passion shown on funding decisions (H1) confirms that the expression of emotion acts as a strong signal in the early stages of entrepreneurship. Consistent with signaling theory, the expression of passion serves as a proxy for unobservable traits such as commitment, competence, and authenticity; traits that backers value but cannot directly verify (Connelly et al., 2011). In the information-asymmetric world of reward-based crowdfunding, where backers often make decisions with limited concrete data, emotional signals help reduce uncertainty and shape initial judgments about the entrepreneur's credibility and the project's potential (Courtney et al., 2017; B.C. Davis et al., 2017).

Our findings also align with previous studies, which indicate that product usefulness is a critical determinant of consumer decision-making (F.D. Davis, 1989; Mollick, 2014). This finding suggests that while passion may attract initial interest, backers require additional signals, such as perceived product attributes, before committing financially. These findings highlight the importance of considering multiple factors beyond passion when predicting success in RBCF campaigns. Furthermore, the findings contribute to the growing body of research on crowdfunding, which examines the interaction between emotional appeal and perceived product attributes (S. Chen et al., 2023; Cheng & Jang, 2024). The strong, significant relationships from passion to perceived product usefulness (H2a) and from product usefulness to funding decisions (H2b) suggest a two-stage process: Passion first enhances backers' engagement and receptivity, which subsequently leads them to evaluate product-related information more positively. Taken together, these results show that backers in reward-based campaigns are not simply guided by emotions and do not base their decisions solely on logic or product benefits. Instead, they engage in a hybrid decision-making process (Petty & Cacioppo, 1986) in which emotional signals (passion) act as entry points, and rational frames (product usefulness) solidify the decision to invest. This dual influence supports a more sophisticated understanding of backers' psychology. It points out the importance for entrepreneurs to manage both the signals (their passion and persona) and the frame (how they present the product) (Franzoni & Tenca, 2023; Raab et al., 2020).

The mediation analysis (H3) reveals that product usefulness fully mediates the relationship between the passion shown and funding decisions. This result refines and extends previous research by revealing the cognitive mechanism by which passion is transformed into support. While passion attracts attention and generates initial engagement (Allison et al., 2022; Franzoni & Tenca, 2023), it is the perceived usefulness of the product that ultimately determines whether backers choose to fund a campaign. This aligns with framing theory, which suggests that how information is presented (or "framed") shapes how individuals

interpret and evaluate it (Entman, 1993; Scheufele, 1999). When entrepreneurs clearly present their product as useful by emphasizing its benefits, relevance, and practicality, backers are more likely to view it as valuable (Allison et al., 2017; Parhankangas & Renko, 2017). If they find the product relevant and practical, they believe that it is not only worth seeing but also worth supporting.

Our study is the first to bring together signaling and framing perspectives in the context of RBCF, providing a more comprehensive theoretical framework to understand how campaigns persuade potential backers. It emphasizes that success in this area depends not only on what entrepreneurs communicate, but also on how they communicate it, tone and content wise.

#### 4.6.1 Implications for theory and practice

Our first contribution deepens the theoretical understanding of signaling by emphasizing its dynamic character, a feature uniquely salient in reward-based crowdfunding. Although much of the traditional “costly signaling” framework (Spence, 1973) is built on static, one-time interactions, reward-based crowdfunding functions as a dynamic, interactive environment where entrepreneurs and backers engage in ongoing, iterative exchanges. For instance, entrepreneurs demonstrating passion can continue to reinforce this emotional cue by posting enthusiastic project updates or responding promptly to backer inquiries (Gerber & Hui, 2013; Lagazio & Querci, 2018); conversely, a lack of follow-through can erode the initial positive impression (Choy & Schlagwein, 2016). Similarly, signals of product usefulness may become stronger (or weaker) as new prototypes, reviews, or endorsements surface. By proposing an interplay between signals derived from displayed passion and product usefulness, our work illustrates how crowdfunding signaling is not only temporally extended but also reciprocal. Overall, our results emphasize the notion in the prior literature that signals function in combination rather than in isolation (Kleinert, 2024; Thapa et al., 2025). The study contributes to the growing theoretical discussion on how signals in the RBCF environment reduce information asymmetry, addressing a gap by demonstrating how different types of signals (emotional and rational) interact to influence backers’ decision-making processes.

Our study offers practical implications for entrepreneurs relying on RBCF to bring their products to market. It shows that campaign presentations should effectively influence backers’ funding decisions by integrating passion into videos, narratives, and updates—such as behind-the-scenes clips or detailed blog posts that highlight dedication and real product benefits. Additionally, campaigns should be tailored to different demographic segments. For example, targeting female backers may require strong storytelling and emotional appeal, while appealing to male audiences might benefit from factual, data-driven messaging.

Our findings also suggest that crowdfunding platforms (particularly for RBCF campaigns) should develop training for creators on displaying passion and communicating product

usefulness. Platforms can enhance emotional connections by adding features such as dynamic update feeds, where entrepreneurs share their journey via photos, videos, or brief updates. These tools help entrepreneurs convey their commitment and engage backers, while analytics can track backer responses to refine campaigns in real-time. Together, these elements boost campaign effectiveness and cultivate lasting emotional ties with backers.

During the period between campaign funding and reward fulfilment, backers often develop relational expectations of entrepreneurs, such as regular updates, transparency, and responsiveness (Mollick, 2014). This phase is critical, as trust and perceived credibility are shaped not only by the initial campaign signals (Baah-Pepurah, 2023) but also by ongoing communication and project progress updates (Xu et al., 2014). Entrepreneurs who adopt a proactive communication strategy during this stage can strengthen perceptions of reliability and help mitigate post-funding uncertainty. While RBCF does not inherently establish long-term investor relationships, campaign creators should recognize the value of relationship-building beyond the funding period. Such efforts can transform one-time backers into repeat customers, brand advocates, or future supporters.

#### 4.6.2 Limitations and future research opportunities

The first limitation of this study pertains to the use of only two alternative videos during the data collection, which could have a limiting effect on the results. Future research could be expanded by using a wider variety of videos that cover diverse industries, different product and reward types, and presentation styles to ensure broader applicability of the results. While most reward-based crowdfunding campaigns promote tangible products, some also offer service-oriented experiences such as workshops or subscriptions. In these cases, backers may prioritize the entrepreneur's expertise, reliability, and the perceived experiential value of the offering, rather than physical utility. Evaluation criteria shift from product functionality to trust in the creator's ability to deliver, perceived service quality, and personal relevance. Although this study focuses primarily on product-based campaigns, future research could investigate how perceived usefulness influences backers' decisions in service-based contexts.

Another limitation lies in the use of a binary measure to capture participants' funding intentions. While this approach reflects the fundamental nature of crowdfunding decisions where individuals ultimately choose to invest or not, it may oversimplify the complexity of real-world financial commitments, which can involve varying levels of interest, hesitation, or conditional support. Consequently, the ecological validity of our findings is somewhat limited since in real-world scenarios, factors such as perceived risk, personal budget constraints, and opportunity costs could alter backers' willingness to invest. Future research might address this gap by examining actual monetary contributions in live crowdfunding contexts or by utilizing more refined measures that capture varying levels of financial commitment. For example, future research could incorporate a financial incentive that allows

participants to experience monetary gain or loss based on their investment decisions, thereby simulating real-world behavior more effectively.

Although we have incorporated the identified dimensions of passion through displayed body language, gestures, and tone of voice (Franzoni & Tenca, 2023), which relate to paralinguistic cues, future studies could include different types of verbal or linguistic cues in the presenter's pitch (Colombo, 2021). Furthermore, our study focuses solely on a specific type of crowdfunding (reward-based crowdfunding), which raises the question of whether our results also apply to other types of crowdfunding and/or categories. For example, in the context of social crowdfunding, it would be valuable to explore how the entrepreneur's emotional expressions and persuasive strategies contribute to campaign success.

While our current study focuses specifically on the reward-based crowdfunding context, we acknowledge that post-contribution, relational dynamics between backers and entrepreneurs are complex and may differ across crowdfunding models. In RBCF, the relationship often extends beyond the point of transaction, especially in the period between contribution and reward fulfilment. However, our forthcoming study explores the evolution of backers' emotions during the pre, during, and post-contribution phases, highlighting how emotional engagement can persist even after the contribution is made. Additional research is required to explore whether comparable emotional and relational dynamics persist beyond the delivery of rewards. This also includes examining whether such patterns are present in other types of crowdfunding, such as equity or lending models.

#### **4.7 Conclusion**

Crowdfunding has gradually become a significant alternative financing option for entrepreneurs. Our study sheds light on the critical role of displayed passion and product usefulness in influencing the funding decisions of backers in RBCF campaigns. We demonstrated that while passion is a powerful non-verbal signal that can initially attract backers, it is the perception of the product usefulness that mediates the relationship between displayed passion of the entrepreneur and funding decision of the backers. This finding emphasizes that emotional engagement alone is not sufficient to secure funding, and it must be complemented by clear, practical benefits that align with backers' needs and expectations.

## **5 WHEN EXCITEMENT FADES: A QUALITATIVE STUDY OF TRANSITIONS IN BACKERS' EMOTIONS DURING CROWDFUNDING ENGAGEMENT**

### **5.1 Introduction**

Emotions play a significant role in entrepreneurial fundraising by shaping how potential backers perceive and respond to projects. Positive emotions, in particular, have been shown to enhance backers' receptiveness and support (Cardon et al., 2012). Following Fredrickson's (2004) broaden-and-build theory, positive emotions can expand individuals' thought-action patterns, encouraging more open, exploratory, and supportive behaviors. Such emotions not only help individuals interpret ambiguous situations but also signify the critical role emotions play in shaping decision-making processes (Van Kleef et al., 2010; Guillaume et al., 2019a, 2019b). Research indicates that positive emotions displayed by entrepreneurs often convey confidence and persuasiveness (Cardon et al., 2009; B.C. Davis et al., 2017). This dynamic is particularly evident within crowdfunding contexts. Emotions are not only contagious but also crucial for creating and developing positive affective behavior, nurturing relationships, and increasing backer engagement in crowdfunding initiatives. Entrepreneurs who effectively display positive emotions are more likely to evoke empathy and trust from potential backers (B. Li et al., 2023; Raab et al., 2020) and create a meaningful connection with their audience. This empathetic bond can significantly influence backers' decisions, as feelings of closeness and affinity with the entrepreneur enhance their willingness to provide support (Anglin et al., 2018; B.C. Davis et al., 2017). In the context of crowdfunding, the interplay between emotions and fundraising outcomes has been extensively examined, with evidence pointing to a strong positive relationship (Van Kleef et al., 2010; Guillaume et al., 2019a, 2019b). Campaigns that successfully elicit emotional responses like passion, empathy, excitement, and like tend to attract greater contributions (L. Liu et al., 2018). By giving importance to a sense of shared understanding and emotional resonance in the video pitches since emotions can bridge the communication gap between entrepreneurs and their backers, thereby enhancing their overall effectiveness (Kolbe et al., 2022; Oo & Allison, 2022).

While existing literature highlights the role of emotions in crowdfunding, most studies focus on specific emotional states (e.g., joy, empathy, excitement, passion) or emotional responses at singular moments, such as during pitch evaluations. Less attention has been given to how backers' emotions evolve over the entire campaign, especially the transitions from pre- to post-contribution stages. To fill this gap, our research adopts a processual approach to examine when, how, and why backers' emotions shift throughout their engagement. This contributes to ongoing discussions about the importance of affective experiences in entrepreneurship research (Cardon et al., 2012) and responds to recent calls to incorporate dynamic perspectives into crowdfunding studies (J. Chen et al., 2024; S. Chen et al., 2023). Backers' emotional experiences are not static as they continuously evolve in response to new

information, such as campaign updates, comments, milestone achievements, and changing social cues (Arshad et al., 2023; Oberoi et al., 2022). Tracking these emotional shifts provides deeper insight into backer behavior than traditional static or outcome-based models, which focus more on fixed traits or final results than on unfolding experiences. Practically, recognizing key emotional inflection points allows entrepreneurs to strategically time updates, storytelling, and engagement efforts to maximize campaign effectiveness.

Our first contribution lies in identifying the specific emotional transitions experienced by backers throughout the crowdfunding process. The transitions, such as moving from curiosity to empathy or from doubt to trust, significantly shape backers' commitment and funding decisions. Recognizing these shifts enriches our understanding of the emotional dynamics influencing backer behavior and offers valuable insights into managing and fostering effective backer-entrepreneur relationships (McKenny et al., 2017). By clearly mapping these emotional trajectories, our findings enable entrepreneurs to better anticipate and respond to the evolving emotional needs and expectations of their backers, encouraging long-term and sustainable funding behavior. This ongoing process also reflects a cyclical pattern of emotional engagement, where past experiences continuously shape backers' future willingness to participate and support new crowdfunding campaigns.

Second, we identify the types of emotions that exert the greatest influence at different stages of the crowdfunding journey, highlighting, for example, the early importance of intrigue and curiosity, followed by the later emergence of empathy and trust. These findings advance entrepreneurship research on affective experiences by emphasizing emotions as dynamic and evolving processes (Barrett, 2006), socially constructed (Huy, 2002), and temporally patterned occurrences (Liao et al., 2017). Our study also reinforces the critical role that emotions play in cognitive-emotional decision-making by highlighting their temporal influence on backers' cognitive and behavioral responses throughout the campaign. This aligns with the insights provided by Arshad et al. (2023), which also emphasize that backers' emotional engagement in crowdfunding fluctuates during different campaign stages. Importantly, we suggest that emotions not only precede and shape decision-making but also arise in response to continually evolving entrepreneurial signals, such as campaign updates, transparency, narrative tone, and backer interactions (Pollack et al., 2012).

Third, understanding which emotions most strongly drive support (such as excitement, empathy, passion, and trust) allows entrepreneurs to tailor their messaging and storytelling to intentionally evoke these feelings, increasing the chances of successful funding. By closely examining how backers' emotions evolve across diverse campaign contexts, this study identifies both common and campaign-specific emotional triggers. These insights help entrepreneurs better connect with their audiences by aligning strategies with the emotional tone and expectations of different backer communities. Practically, this nuanced understanding of emotional dynamics provides valuable guidance for creators seeking to design more impactful campaigns and deliver more engaging experiences.

The next section introduces the study's conceptual framework, focusing on crowdfunding and its emotional dynamics. This is followed by a description of the methodology, including participant selection, data collection through structured text-based interviews, and thematic analysis to identify key themes. The findings section presents core results, illustrating how backers' emotions shift throughout their engagement, what triggers these emotions, how they interact with rational decision-making, and the recurring patterns observed across various campaigns. Finally, the paper discusses theoretical contributions and practical implications, acknowledges limitations, and suggests directions for future research.

## **5.2 Conceptual background**

Emotions are intricate, multi-faceted, and ever-changing constructs that influence our decisions and behaviors across diverse domains (So et al., 2015). The emotions arise from individuals' interpretations and evaluations of their situations, regardless of any physiological arousal (Aronson et al., 2005). Emotional cues play a crucial role in the success of crowdfunding campaigns, acting as a bridge between entrepreneurs or campaign creators and backers (J. Chen et al., 2024). Backers' emotional responses to campaign narratives, visual elements, and entrepreneurs' emotions significantly impact funding decisions (B.C. Davis et al., 2017; Mollick, 2014). They evaluate whether the campaign aligns with their personal interests or values (e.g., a social cause or an innovative product) (Manning & Bejarano, 2017).

Research highlights that campaigns that evoke positive emotions such as excitement, empathy, and pride are more likely to resonate with backers and drive contributions (Chan & Parhankangas, 2017). Enthusiasm, trust, and passion may emerge when the campaign resonates with backers' aspirations (Cardon et al., 2005, 2017; Lucas et al., 2016; Reyes & Bahm, 2016), while misalignment could result in disinterest. Backers assess their role and influence in the campaign's success, which may evoke pride or anxiety. A well-structured campaign with clear objectives can generate trust (Choy & Schlagwein, 2016; Mollick, 2014), while ambiguous campaigns may evoke hesitation or doubt (Y. Liu et al., 2024). These emotional transitions as well as their influence on backers' decisions can offer a deeper understanding of how emotions catalyze the financial contributions. In relation to emotions, storytelling is one of the most frequently used strategies in crowdfunding, where entrepreneurs present narratives that connect with potential backers on a personal level (Anglin et al., 2023; Manning & Bejarano, 2017). These narratives often appeal to universal themes such as hope, altruism, and shared values, developing a sense of trust and community (Allison et al., 2015). For instance, social and charitable crowdfunding campaigns that highlight the human impact of contributions often generate higher levels of engagement and support due to their ability to elicit empathetic responses (K. Kim & Viswanathan, 2019).

Backers experience emotional shifts throughout the campaign cycle, moving from excitement and trust to potential disappointment or sustained motivation (Bretschneider et

al., 2014; Guillaume et al., 2019a). Emotional transitions occur as backers appraise different stages of their engagement with crowdfunding campaigns. For instance, initial exposure to a campaign might trigger curiosity or excitement (Bretschneider et al., 2014), while further evaluation might lead to empathy (Van Kleef et al., 2010; Guillaume et al., 2019a, 2019b), trust (Choy & Schlagwein, 2016), or skepticism. These emotional shifts are largely shaped by how backers interpret and evaluate various aspects of a campaign, such as its goals, authenticity, and feasibility. Signaling theory (Spence, 1973) offers a valuable framework for understanding these emotional transitions by explaining how campaign design and the entrepreneur's pitch influence backers' evolving emotional responses. The theory highlights how entrepreneurs use trust-building signals, such as transparency in fund allocation or consistent updates to reduce skepticism and strengthen emotional commitment (Courtney et al., 2017). It also underscores the interaction between emotionally engaged signals and backers' cognitive evaluations, where inconsistent or absent messaging can disrupt emotional alignment and lead to disappointment. In this context, signaling theory helps explain how backers' emotional states shift in response to the entrepreneur's communication strategies and behavioral cues.

### 5.2.1 Temporal and emotional signals in crowdfunding

In crowdfunding, both temporal and emotional cues significantly shape backer engagement and funding decisions. Temporal signals refer to time-related cues that influence perceptions and behaviors of the backers. Several scholarly studies have examined temporal signals in crowdfunding (Kaminski and Hopp, 2020; Moradi et al., 2024; Song et al., 2020; Woods et al., 2020), highlighting how the timing and frequency of campaign updates, communication patterns, and funding dynamics influence backers' behavior and campaign success. While emotional signals are crucial in creating initial resonance, temporal signals (such as timing and delivery patterns) signal credibility and reliability. Understanding how these signals work together helps explain both short-term contributions and long-term engagement.

While emotional signals are central to crowdfunding success, they must be balanced with temporal signals to build credibility and maintain trust (Kasri & Indriani, 2021; Woods et al., 2020). Excessive reliance on emotional persuasion without providing sufficient evidence of feasibility or outcomes can lead to skepticism among the backers. Campaigns that combine emotional storytelling (Robiady et al., 2021) with transparent communication, detailed plans (Y. Zhang et al., 2023; Zhou et al., 2018), evidence of progress, and delivery of product on time are more effective in sustaining long-term backer support. Moreover, emotions also influence backer retention, as those who feel a sense of pride and involvement are more likely to continue supporting future campaigns (Bretschneider & Leimeister, 2017).

### 5.2.2 Transitions in backers' emotions

The concept of transition in emotions refers to the changing emotional states that backers experience throughout the lifecycle of their crowdfunding engagement (Arshad et al., 2023). Previous research indicates that these transitions are influenced by multiple factors, including campaign narratives (Manning & Bejarano, 2017), communication strategies (Moritz et al., 2015; Tafesse, 2021), and perceived progress (Eldridge et al., 2021). Backers often begin their journey with curiosity or excitement, which can shift to more positive or negative feelings during the evaluation phase as they weigh risks and uncertainties (Beaulieu et al., 2015). Once a contribution is made, emotions such as pride and satisfaction may emerge, particularly if the campaign demonstrates transparency and consistent updates (Choy & Schlagwein, 2016). However, delays or unmet expectations can trigger frustration or doubt, highlighting the fragile nature of emotional engagement in crowdfunding. The cyclical progression between optimism, skepticism, and eventual satisfaction or disappointment accentuates the importance of effective communication and trust-building mechanisms. In summary, understanding the trajectory of backers' emotions throughout the crowdfunding process is essential, as these shifts influence the continuity and depth of their engagement and their eventual decision to provide support.

Based on the prior literature, we explore the trajectory in backers' emotions throughout the crowdfunding process by asking the following research question:

*RQ: What emotional dynamics do backers experience during their initial engagement with crowdfunding campaigns, and how do these emotions evolve across different phases of the crowdfunding process?*

This research question motivates an in-depth exploration of how emotional responses emerge, develop, and are interpreted by backers throughout the crowdfunding process. It emphasizes the intertwined emotional and cognitive processes that ultimately shape backers' funding decisions, offering entrepreneurs strategic knowledge to engage more effectively with their audiences.

### 5.3 Methodology

We used a qualitative research design to collect data on the experiences of backers in crowdfunding by employing text-based (asynchronous e-mail) interviews. The text-based responses refer to interviews in which the researcher and participant do not need to be online simultaneously; these are typically carried out through questionnaires and emails (Hunt & McHale, 2007; Jowett et al., 2011). The data were analyzed using thematic analysis (hereinafter TA), a method designed to identify, organize, and interpret patterns of meaning, or themes, within the qualitative dataset (Braun & Clarke, 2022). The process involved data familiarization, coding, and theme development to uncover meaningful insights. While

many patterns can emerge from a dataset, the focus was on identifying those most relevant to the research question. We adopted a reflexive TA approach as outlined by (Braun & Clarke, 2006), as it emphasizes individual experiences, perspectives, and opinions. We chose this methodology as reflexive TA is a versatile and theoretically independent method, and it is not constrained by specific theoretical frameworks (Braun et al., 2023).

A set of interview questions was developed based on existing literature on backers' experiences and emotions in crowdfunding (refer to *Appendix 12*). The aim was to explore the emotional journey of backers across different stages, from their initial encounter with a campaign, through the decision to contribute, and into the post-contribution phase. A thematic analysis identified recurring patterns and themes, offering insights into the emotional dynamics of crowdfunding support. The structured interview protocol consisted of three sections: the first gathered participants' professional backgrounds and project involvement; the second addressed how they discovered crowdfunding and their emotional engagement; and the third explored their emotional journey and decision-making, allowing space for additional reflections.

Interview responses were collected via emailed questionnaires, allowing participants time to reflect and provide thoughtful, detailed answers (Bowden & Galindo-Gonzalez, 2015). Text-based interviews often yield more concise but specific responses compared to verbal formats (Abrams et al., 2015). Although shorter, these written responses offered rich, nuanced insights, particularly valuable for exploring emotional transitions and decision-making. This method suited the exploratory nature of our study, enabling participants to express deeply personal experiences, such as emotions, through the reflective and enduring medium of written language (Amri et al., 2021; Schiek & Ullrich, 2017).

#### **5.4 Data collection and analysis**

Data was collected through 22 structured text-based interviews with backers who had previously supported crowdfunding projects. This sample size balanced depth and diversity, enabling in-depth exploration of each participant's emotional journey while capturing a broad range of perspectives. Following qualitative research principles, 22 interviews were sufficient to reach data saturation, where new insights become limited (Saunders et al., 2018).

Participants were recruited via LinkedIn and crowdfunding groups using a snowball approach to ensure diverse experiences across campaign types (e.g., creative, technological, social causes). All had backed at least one campaign in the past year, with varied experience levels from first-time to frequent backers. Efforts were made to include different geographic and demographic backgrounds for broad representation. Participants were assured confidentiality and anonymity throughout the purposive data collection process.

## *Data analysis*

The analysis of the content began with open coding, as described by Charmaz (2014) and Maher et al. (2018). This process involved assigning codes to sections of text that best captured the participants' thoughts, which is a deductive-inductive approach (Braun & Clarke, 2022). When new codes emerged during this stage, earlier transcripts were revisited and updated accordingly. Open coding was followed by axial coding, based on the approach outlined by Corbin & Strauss (2014), where related codes were grouped and reorganized based on their conceptual connections. The primary goal of the third phase, which was a theme construction, was to combine and consolidate codes into broader or more meaningful patterns, highlighting similarities and relationships. Using QSR NVivo, codes were organized into potential themes, with similar codes grouped under broader categories. In some instances, certain codes were assigned to multiple themes. Throughout the analysis, the codes were occasionally restructured to better align with the themes emerging from the data.

## **5.5 Results**

Our results reveal that backers' emotions are not static but transition as they interpret signals throughout the crowdfunding experience. Initial excitement or curiosity may shift into pride, satisfaction, or frustration, depending on the quality and consistency of signals (e.g., progress updates, transparency in communication). Our findings also indicate that the emotional journey of crowdfunding backers evolves through three distinct phases (refer to *Table 13* and *Figure 12*), reflecting their dynamic responses to the campaign's progress. Initially, excitement and curiosity (as some of the emotions) drive engagement as backers discover compelling campaigns that align with their values or interests (Allison et al., 2015). This initial optimism transitions into deeper emotional connections through regular updates (Choy & Schlagwein, 2016) and milestone achievements, developing pride and satisfaction in backers. However, challenges such as delays and reduced communication can trigger frustration and apprehension, implying the need for transparent and timely interactions. These findings suggest that backers' emotions do not remain static after the reception of initial signals but continuously evolve based on ongoing interactions throughout the campaign.

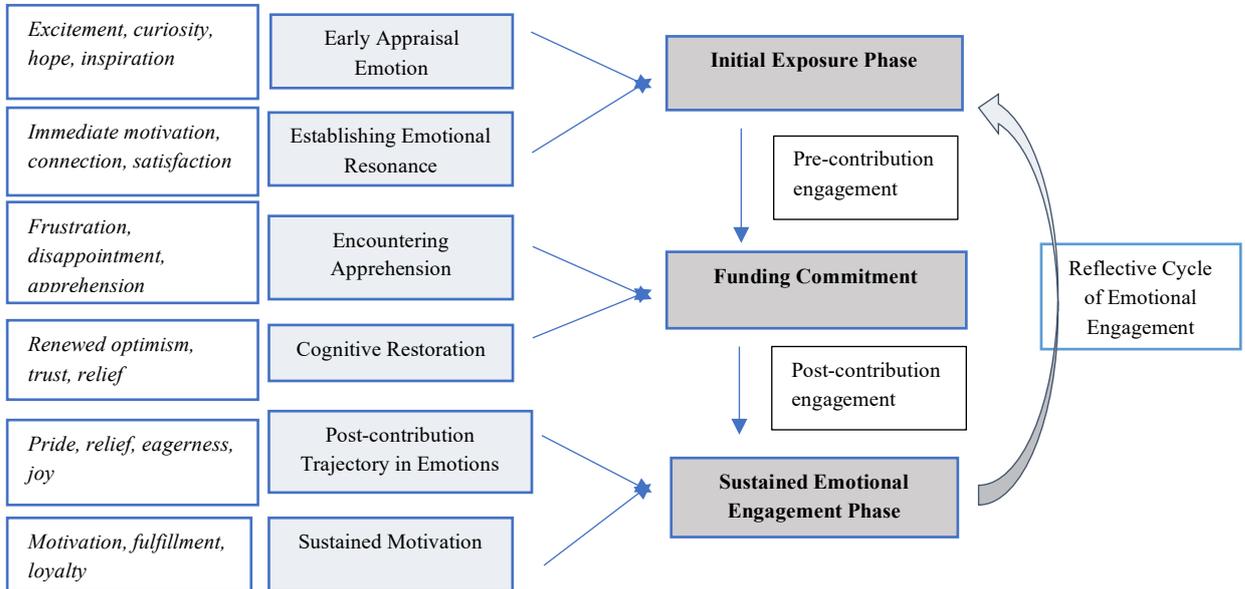
Table 13: Overview of phases in backers' emotional journey

Phase	Sub-theme	Key emotional state	Stimulating factor	Type of signal
<b>Phase 1: Initial exposure</b>	Early appraisal emotion	Excitement, curiosity, hope, inspiration	Discovery of campaign, compelling storytelling	Emotional, behavioral
	Establishing emotional resonance	Immediate motivation, connection, satisfaction	Updates, milestones, community	Informational
<b>Phase 2: Funding commitment</b>	Encountering apprehension	Frustration, disappointment, regret	Delays, poor communication	Negative informational
	Cognitive restoration	Relief, optimism, trust	Transparent communication, visible progress	Positive informational
<b>Phase 3: Sustained emotional engagement</b>	Post-contribution trajectory in emotions	Fulfilment, pride, joy, relief	Delivery, visible impact	Behavioral, informational
	Sustained motivation	Loyalty, trust, confidence, inspiration, motivation	Positive experience, community feedback	Reliability, informational

Source: Own work.

Overall, entrepreneurs' signals form a temporal narrative that shapes how backers emotionally interpret them. Despite setbacks, confidence can be restored through consistent updates and visible progress, renewing trust and optimism. Post-contribution emotions, such as pride, relief, and satisfaction, often arise upon successful delivery, boosting satisfaction and encouraging long-term loyalty and advocacy. Rather than viewing each communication as isolated, backers accumulate signals over time, reassessing earlier impressions as new information appears. For example, initial enthusiasm can spark excitement, but delayed updates or unmet expectations may lead to frustration or disengagement. Our findings highlight the need for signals to be consistently reaffirmed and aligned throughout the campaign. This dynamic emotional process underscores the importance of effective campaign management to guide backers' experiences

Figure 12: Phases – Transition in backers' emotions (first cycle)



Source: Own work.

### 5.5.1 Phase 1: Initial exposure phase (pre-contribution engagement)

The initial exposure phase (presented in *Table 14*) marks the first point of contact between the backer and a crowdfunding campaign. This stage is characterized by spontaneous affective responses such as curiosity, excitement, or intrigue, often triggered by visual storytelling, campaign narratives, or perceived novelty. Backers begin to form preliminary judgments based on surface cues, including the aesthetic appeal, clarity of purpose, and perceived authenticity of the campaign. These early impressions play a remarkable role in shaping subsequent emotional engagement, as they set the tone for deeper cognitive evaluations and the potential progression toward support. Understanding the affective nature of this entry point offers valuable insight into how backers initially connect or fail to connect with a campaign's message and presentation.

Table 14: Phase 1 – Initial exposure

Sub-theme	Key emotional state	Stimulating factor	Signal type	Illustrative quote
<b>Early appraisal emotion</b>	Excitement, curiosity, hope, inspiration	Discovery of campaign, compelling storytelling, creator's passion	Emotional, Behavioral	<i>“When I first saw the campaign video, I felt a mix of excitement and curiosity. The visuals were sleek, and the problem the product aimed to solve, connected with me. The creator’s passion and clarity in explaining their vision were impressive and made me feel confident about contributing.”</i> – P1
	Empathy, passion, enthusiasm	Relatable storytelling, mission alignment	Informational, Behavioral	<i>“I felt inspired by the bakery’s story. They shared images of their family business and the challenges they faced, which made their campaign feel very personal and relatable.”</i> – P13
<b>Establishing emotional resonance</b>	Connection, satisfaction, immediate motivation	Updates, milestones, sense of inclusion	Behavioral, Emotional	<i>“My first reaction to the campaign was that it looked promising but perhaps overly ambitious... The video was professionally made, and the creator came across as very knowledgeable.”</i> – P22  <i>“I felt deeply moved. The visuals showed children studying under trees due to a lack of facilities, and it struck a chord with me as someone passionate about education.”</i> – P12

Source: Own work.

### A. Early appraisal emotion

This phase captures participants' immediate emotional reactions (such as curiosity, excitement, and hope) upon first encountering crowdfunding campaigns. These emotions reflect early-stage cognitive evaluations that precede decision-making and are consistent with appraisal theories of emotion, which posit that emotions arise from individuals' assessments of the personal significance of events (Smith & Lazarus, 1990). By coding participants' narratives line-by-line, these affective states were identified as recurrent and foundational in shaping subsequent engagement.

Research highlights that narratives humanize campaigns, generating empathy and trust (Allison et al., 2015). For instance, participants emphasized how storytelling “*made it easy to imagine using [the product] myself*” (P1) or connected them to a creator's medical journey (P14). These findings align with Allison et al.'s (2015) argument that detailed, real-world narratives reduce information asymmetry by providing relatable contexts. Similarly, Bi et al. (2017) noted that empathetic stories trigger “*affective responses*,” which P11 echoes: “*If I can connect with the creator's story... I'm more likely to contribute.*” These early appraisals of positive emotions were triggered by compelling storytelling and perceived project alignment.

*“The storytelling and visuals stood out the most. The video demonstrated the product's features in a real-world context, which made it easy to imagine using it myself.” (P1)*

*“The sincerity of the story and the requirement of their financial needs. They showed exactly how the funds would be used, which made me feel confident in supporting them.” (P13)*

*“The urgency and genuity of the financial help needed. The family shared detailed information about the medical condition, the cost of the surgery, and the hospital they were working with.” (P14)*

*“Emotions and sentiments are essential in crowdfunding. If people don't feel connected, they won't support. More personal storytelling and updates would help build trust.” (P19)*

The use of storytelling strategies has been shown to positively influence both backer engagement and the effectiveness of fundraising outcomes (Robiady et al., 2021). Storytelling helps potential backers emotionally connect with the entrepreneur's vision, challenges, or social mission, thereby increasing their willingness to support, even when material rewards are involved. These emotional connections complement cognitive evaluations, reinforcing backers' decisions to support campaigns beyond purely transactional motives. These emotional connections, facilitated through storytelling techniques, serve as a core form of emotional appeal. By narrating personal journeys,

challenges, or social missions, campaign creators engage backers not merely on a rational level but through emotionally resonant narratives.

Emotional appeal is one of the key factors in influencing the decision to support crowdfunding campaigns (Wuillaume et al., 2019a, 2019b; Xiang et al., 2019). The role of emotional appeals in crowdfunding has been extensively studied, with scholars emphasizing narratives, urgency, authenticity, and value alignment as critical drivers of backers' behavior. The emotional appeal could include the entrepreneur's enthusiasm, sincerity, or urgent needs. A compelling story, genuine displayed emotions, and alignment with personal values enhance emotional engagement.

*“A strong emotional appeal can make a project memorable and relatable. If the creator's passion shines through and the story resonates with me, I will contribute most probably.” (P1)*

*“The emotional appeal is very important. The creator's story or most important, the project's mission is what I am looking for.” (P11)*

The significance of emotional appeal varies across crowdfunding models. It plays a dominant role in donation-based and peer-to-peer models or intangible product campaigns (S. Chen et al., 2023), while logic and practicality dominate in equity crowdfunding, or in other words, informational visual cues are more effective than tangible product ideas (S. Chen et al., 2023).

*“Donation-based crowdfunding relies heavily on emotional connections. If I feel the story is genuine and impactful, I feel inclined towards the campaign and might contribute.” (P12)*

*“In peer-to-peer crowdfunding, the human connection is often what motivates me to contribute.” (P13)*

*“For equity crowdfunding, emotions play a smaller role compared to logic. However, a compelling vision and passionate founders can help build trust.” (P5)*

While emotional appeal is critical, backers appreciate when it is supported by transparency, evidence, and detailed information about the campaign's goals and execution. Emotional appeal plays a significant role; some backers weigh practical factors such as feasibility and value more heavily. Emotional stories can catalyze the effect when practical aspects are already compelling. Urgency, such as deadlines for medical treatments, compels immediate action by signaling scarcity (Zhou et al., 2018). P14's support for a campaign detailing *“the cost of surgery and the hospital involved”* reflects Zhou et al.'s (2018) finding that time-sensitive, data-driven appeals enhance perceived legitimacy. This aligns with Wuillaume et

al. (2019a, 2019b) who argue that urgency amplifies emotional stakes, pushing supporters to act before “missing out” on aiding critical needs.

*“It’s somewhat important. While I focus more on the practical value, a strong emotional appeal can make a project more compelling and memorable.” (P3)*

*“It’s moderately important. While I value the practical aspects more, a good emotional story can tip the scales in favor of supporting a project.” (P4)*

*“For equity crowdfunding, emotions play a smaller role compared to logic. However, a compelling vision and passionate founders can help build trust.” (P5)*

*“A compelling story or an emotional appeal can make all the difference. That being said, I think the emotional appeal needs to be backed by evidence and transparency.” (P14)*

*“Absolutely. The creators were very transparent and engaged, responding to questions and sharing updates. This made me feel more connected and confident in their vision.” (P8)*

*“Emotions are definitely a double-edged sword in crowdfunding. They draw you in and build connection, but if not matched by responsibility, they can lead to deeper disappointment. Emotional manipulation (whether intentional or not) can damage the whole ecosystem of trust.” (P21)*

## *B. Establishing emotional resonance*

This phase emerged through axial coding as participants described a gradual deepening of their emotional involvement, marked by feelings of immediate motivation, hope, satisfaction, and a sense of belonging. These responses were linked to continuous engagement through campaign updates, milestone achievements, and community interactions. Grounded in participants’ experiential narratives, this theme aligns with theories of relational emotion and social bonding, where emotional investment strengthens through sustained interpersonal cues and perceived reciprocity (Baumeister & Leary, 2017; Fiske, 1991).

Emotional resonance and alignment, or emotional connection, is a crucial driver for backers in crowdfunding campaigns. Emotional resonance acts as a bridge between the pre-contribution phase and the funding commitment phase in crowdfunding. This phase relies on authenticity, shared values, and empathetic storytelling to transform fleeting interest into committed support. We contextualize participant insights within established theoretical

frameworks. When backers feel a personal connection to the entrepreneur's story or mission, they are more likely to contribute.

*"It's crucial. If I don't feel an emotional connection to the project, I don't think I will want to support it. I need to feel like my contribution will make a difference."* (P2)

*"The emotional appeal is very important. If I can connect with the creator's story or the project's mission, I'm more likely to contribute."* (P11)

*"It's very important. Donation-based crowdfunding relies heavily on emotional connections. If I feel the story is genuine and impactful, I feel inclined towards the campaign and might contribute."* (P12)

Backers value authenticity, displayed passion, and enthusiasm in campaigns (Hafeez & Drnovšek, 2025). Emotional connection during the initial exposure phase of crowdfunding is driven by relatability and mission alignment, which collectively build up trust and compel support. Research highlights that human-centric narratives (e.g., P12's emphasis on "genuine and impactful" stories) bridge entrepreneurs' needs with backers' empathy, as relatable scenarios trigger affective responses (Allison et al., 2015; Bi et al., 2017). Authenticity, which is conveyed through passionate entrepreneurs reduces skepticism by signaling credibility (Courtney et al., 2017), while alignment with personal values (e.g., P8's "sense of purpose") transforms campaigns into meaningful commitments, reinforcing self-concept and social responsibility (Kuppuswamy & Bayus, 2017; Robiady et al., 2021). These mechanisms synergize to convert emotional resonance into actionable support, though cross-cultural variations in narrative effectiveness (Anglin et al., 2018) remain underexplored, suggesting avenues for future research.

### 5.5.2 Phase 2: Funding commitment phase

The funding commitment phase (refer to *Table 15*) represents a critical emotional juncture in the backer's journey, wherein initial interest is either solidified into action or dissipates. During this stage, backers engage in more deliberate cognitive evaluation, assessing factors such as the campaign's credibility, feasibility, and alignment with personal values or motivations. Emotional states may shift from curiosity to trust, empathy, anticipation, or even skepticism, depending on the signals received from the campaign and the perceived authenticity of the entrepreneurs. The decision to contribute is often driven by an interplay between rational appraisal and emotional resonance, making this phase a decisive point in the emotional trajectory. Importantly, the emotional commitment does not end with the act of funding; instead, it lays the groundwork for continued engagement and post-contribution affective responses.

Table 15: Phase 2 – Funding commitment phase

Sub-theme	Key emotional state	Stimulating factor	Signal type	Illustrative quote
<b>Encountering apprehension</b>	Frustration, disappointment, regret	Delays, lack of updates and transparency, silence, unmet promises	Negative informational signals	<p><i>“Initially, I was hopeful, but as delays occurred, frustration set in.” – P4</i></p> <p><i>“There were moments of frustration when communication reduced or deadlines were missed.” – P6</i></p> <p><i>“They kept saying ‘soon,’ but after a few months, nothing came, and they stopped replying to comments. That really upset me.” – P20</i></p> <p><i>“My emotional state shifted as delays began stacking up... At one point, they went silent for almost three months.” – P22</i></p>
<b>Cognitive restoration</b>	Optimism, trust, relief	Transparent updates, acknowledgment of problems	Informational	<p><i>“Yes. Initial optimism turned into slight apprehension during the waiting period, but regular updates and early traction from the startup renewed my confidence.” – P5</i></p> <p><i>“Yes. Initially, I was excited, but as delays occurred, I became frustrated. Thankfully, regular updates helped regain some trust.” – P7</i></p> <p><i>“It helped that they were honest about the problems and how they were solving them. That made me want to keep supporting them.” – P18</i></p>

Source: Own work.

### *A. Encountering apprehension*

Backers often experienced apprehension and frustration during campaigns, typically stemming from delays, lack of consistent updates, or unmet expectations (Gerber & Hui, 2013; Lagazio & Querci, 2018). While initial enthusiasm and transparency laid a strong foundation of trust (Gerber & Hui, 2013), moments of uncertainty emerged as deadlines were missed, communication faltered, or progress slowed. These experiences introduced doubts regarding the project's viability, prompting emotional shifts from optimism to apprehension. These negative affective responses signaled a breakdown in perceived reliability and trust, marking a critical turning point in the backer's experience (Oberoi et al., 2022). This aligns with expectancy violation theory, where unmet expectations in interpersonal or transactional contexts elicit adverse emotional and cognitive reactions (Burgoon, 1993).

Several backers shared initial hesitations, such as whether the team could handle ambitious goals (e.g., scaling production or meeting deadlines). For instance, participant P1 mentioned, *"Initially, I was skeptical about whether they could deliver on such an ambitious project. Reading through their detailed plan and seeing endorsements from reputable organizations eased my concerns to some extent."* Participant P5 noted concerns about financial viability, stating, *"I was initially concerned about the high valuation, but I felt more confident once I saw the detailed financial reports and the third-party validation they provided."*

Concerns around timeline adherence were also prevalent, with participant P6 commenting, *"Yes, I hesitated due to concerns about whether they could deliver on their promises within the timeline. Their detailed roadmap and positive feedback from early backers helped alleviate my doubts."* The power of communication was evident in comments of some participants like P6, *"What really reassured me was the regular updates and the way the team communicated, everything was clear and open, and that made me feel like they were being transparent and trustworthy."*

Table 16: Sub-themes generated from “encountering apprehension”

Sub-theme	Description	Frequency	Illustrative quote
<b>Skepticism about deliverability</b>	Initial doubts about the entrepreneurs’ ability to achieve ambitious goals or meet expectations.	Medium	<i>“Initially, I was skeptical about whether they could deliver on such an ambitious project.” — P1</i>
<b>Apprehension regarding financial viability</b>	Concerns about the management of funds, valuation, or repayment guarantees.	Low	<i>“I was initially concerned about the high valuation, but I felt more confident once I saw the detailed financial reports and the third-party validation they provided.” — P5</i>
<b>Timeline concern</b>	Hesitation due to doubts about meeting production or delivery deadlines.	High	<i>“Yes, I hesitated due to concerns about whether they could deliver on their promises within the timeline.” — P6</i>
<b>Impact of trust signals</b>	Reassurance gained from detailed plans, endorsements, prototypes, or financial transparency.	High	<i>“Reading through their detailed plan and seeing endorsements from reputable organizations eased my concerns to some extent.” — P1</i>
<b>The role of communication</b>	Importance of frequent updates and transparency in mitigating backers’ doubts and hesitations.	High	<i>“What really reassured me was the regular updates and the way the team communicated, everything was clear and open, and that made me feel like they were being transparent and trustworthy.” — P6</i>

Source: Own work.

Thematic breakdown shows that trust signals, transparency, and proactive engagement were the most effective tools in overcoming apprehension, transforming initial skepticism into confidence and support. The findings (illustrated in Table 16) indicate that apprehension is predominantly linked to unmet timelines and poor communication, which disrupts the trust established during initial engagement. However, consistent and transparent updates have a

significant potential to mitigate these challenges, restoring backers' confidence and encouraging continued commitment.

### *B. Cognitive restoration*

This phase emerged through constant comparative analysis as participants described a recovery of trust and optimism following prior frustration. This shift was often attributed to transparent communication, consistent updates, and evidence of project progress. The process reflects principles of emotion regulation and cognitive appraisal, wherein individuals reinterpret a situation to regulate emotional responses to transform apprehension into renewed support when credible signals are received (Gross, 2002).

We found that cognitive restoration emerged as a crucial process in maintaining backers' engagement despite periods of frustration or doubt. Backers highlighted that their initial concerns were often alleviated through consistent updates (Choy & Schlagwein, 2016), evidence of progress, and transparent communication from entrepreneurs. These factors re-established trust and renewed their confidence in the campaign's success. Backers frequently reported that positive updates, such as achieving milestones or sharing impact stories, restored their belief in the campaign's value and execution. This restoration process reflects the dynamic nature of emotional engagement in crowdfunding, emphasizing the entrepreneurs' role in managing backers' perceptions and addressing challenges constructively. Here are some of the examples from the narratives:

*"I felt secure knowing that the startup was gaining early traction and keeping us in the loop with regular updates; it showed me they were on the right track." (P5)*

*"Regular updates helped regain some trust after delays occurred." (P7)*

*"Sharing videos of children who recovered validated my support and restored trust." (P14)*

*"It was incredible to see the results of everyone's contributions. Also the creators shared videos of children who got recovered." (P14)*

*"I felt more connected to the project and the community of backers as updates came in." (P1)*

*"I felt optimistic as communication improved and progress became visible." (P10)*

Cognitive restoration relies heavily on entrepreneurs' proactive efforts to provide backers with clear, consistent updates and visible signs of progress. Achieving and communicating milestones is critical in reassuring backers, reaffirming their trust, and maintaining emotional

engagement. Campaigns that emphasize transparency and continuous interactions (Gerber & Hui, 2013) are better positioned to manage backers' cognitive and emotional needs effectively.

While many backers experienced fluctuating emotions that ultimately stabilized through narrative alignment or clarification (cognitive restoration), some participants reported emotional trajectories that ended in disillusionment or detachment. These cases lacked cognitive reframing, usually resulting in withdrawal from the campaign or a reluctance to support future crowdfunding initiatives.

*“The excitement of supporting innovative ideas is great, but the unpredictability and lack of accountability in some campaigns make it frustrating. Emotions are essential for attracting initial backers, but if the creators don't follow through, those emotions can quickly turn into distrust and disappointment.” (P10).*

*“It was a mixed experience. Some projects delivered and exceeded expectations, while others failed to deliver at all, leaving me disappointed. Overpromising or lack of updates would demotivate me or make me suspicious.” (P4)*

*“I'm not sure. I want to support creativity and innovation, but this experience has made me wary. If I do back another campaign, I'll thoroughly research the creator, look for independent reviews, and only support if there's a solid history of delivering results. Crowdfunding is built on trust, and once that's broken, it's hard to repair.” (P21)*

These examples illustrate how emotional disconnection, once solidified, can lead to irreversible disengagement. Unlike participants who experienced cognitive-emotional reconciliation, these individuals remained in a state of emotional incongruence, underlining the critical importance of timely and authentic entrepreneurial signaling during campaign tensions.

### 5.5.3 Phase 3: Sustained emotional engagement (post-contribution engagement)

In the final phase (presented in *Table 17*), sustained emotional engagement emerges as backers continue to evaluate their decision beyond the act of contribution.

Table 17: Phase 3 – Sustained emotional engagement

Sub-theme	Key emotional state	Stimulating factor	Signal type	Illustrative quote
<b>Post-contribution trajectory in emotions</b>	Relief, pride, fulfilment, joy	Delivery of product/service, positive campaign outcome, impact of contribution	Behavioral and Informational	<p><i>“Absolutely. Initially, I was hopeful, but as delays occurred, frustration set in. Eventually, when I received the product, I felt a sense of relief and satisfaction.”</i> – P4</p> <p><i>“Yes. I was deeply empathetic and hopeful. As the campaign shared updates about reaching milestones, like purchasing the medicines and food and other medical supplies, I felt immense pride and joy. It was incredible to see the results of everyone’s contributions. Also the creators shared videos of children who got recovered.”</i> – P14</p>
<b>Sustained motivation</b>	Loyalty, trust, excitement, purpose, inspiration	Positive experience, visual impact, community recognition, emotional resonance, communication consistency	Reliability and Informational	<p><i>“Yes, I plan to continue. Clear communication, innovative ideas, and transparency encourage me to support more projects. However, poor communication would discourage me from backing campaigns.”</i> – P1</p> <p><i>“Yes, I will get involved again. A strong business case, transparent communication, and credible teams encourage me. Poor due diligence or unrealistic valuations would discourage me.”</i> – P5</p> <p><i>“Seeing the long-term impact and feeling that my small action made a real difference motivates me to keep supporting such causes.”</i> – P19</p> <p><i>“Yes, I will continue supporting crowdfunding projects, especially those related to smart home technology. If they launch again, I would support them. Their sincerity and how they kept us informed built a lot of trust.”</i> – P16</p>

Source: Own work.

This stage is marked by reflective emotions such as pride, reassurance, or in some cases, disappointment, depending on how the campaign evolves and how entrepreneurs maintain communication. It is during this period that the emotional connection is either deepened through ongoing transparency and meaningful updates or weakened by silence and unmet

expectations. This phase reveals that emotional investment does not end at the point of funding but extends into how backers feel acknowledged and involved in the journey they have chosen to support.

#### *A. Post-contribution trajectory in emotions*

For most of the backers, post-contribution emotions (Katzenmeier et al., 2019; Oppong-Tawiah et al., 2019; Tsai & Bagozzi, 2014) are critical in shaping their overall experience with crowdfunding campaigns. Feeling of satisfaction emerges once individuals have financially supported a project (AlSokkar et al., 2024; Oliver, 1980) and can significantly influence their future engagement with crowdfunding platforms. For instance, participants like P1 and P3 described feelings of pride and satisfaction when supporting “something meaningful” or “impactful,” coupled with anticipation to witness the project’s evolution: *“I felt pride and satisfaction, knowing I was contributing to something meaningful... eagerness to see the final product”* (P1, P3). This aligns with studies linking achievement-driven emotions to value-aligned contributions (Katzenmeier et al., 2019). Conversely, inconsistent communication or missed deadlines, as noted by P6 (*“moments of frustration... disappointment”*), trigger disillusionment, undermining trust and future participation (Oppong-Tawiah et al., 2019). The collected responses highlight a rich tapestry of emotions, from pride and anticipation to relief and joy or disappointment, emphasizing the multifaceted nature of post-contribution experiences:

*“I felt pride and satisfaction, knowing I was contributing to something meaningful. There was also a bit of anticipation to see how the project would unfold.”* (P1)

*“As updates rolled in, I felt more connected to the project and the community of backers. Post-contribution, I felt a mix of pride and eagerness to see the final product.”* (P1)

*“Yes. In the beginning, I was excited. As the campaign moved forward, I felt a sense of pride in being part of something impactful. After I made contribution, I’ve been eagerly waiting for the product to be delivered.”* (P3)

*“However, there were moments of frustration when communication reduced or when deadlines were missed. This led to some disappointment as I had hoped for more consistent engagement.”* (P6)

*“I felt hopeful that if I cannot reach Palestine and help the people there, at least I can do something meaningful. It was rewarding to know that I was helping bring healthcare to people who truly needed*

*it. At the same time, I was eager to see how the project would progress. We should take advantage of technology to help the people of Palestine who are suffering every minute.” (P14)*

*“I felt hopeful and excited, but also cautious. Crowdfunding always feels like a gamble, especially for ambitious projects.” (P10)*

These narratives reveal that backers often experience a profound sense of achievement, particularly when their contributions align with meaningful causes. However, even optimistic backers like P10 acknowledged cautious ambivalence (“*Crowdfunding always feels like a gamble*”), highlighting the fragility of trust in high-risk contexts. Anticipation and eagerness to see project outcomes or receive rewards are common, highlighting the importance of timely communication and delivery. Community bonds are strengthened when backers feel emotionally connected to the entrepreneurs and fellow supporters. Relief and satisfaction are prominent when campaigns fulfill their promises, while tangible impacts (such as videos or updates) showcasing results provide immense joy and validation. For causes with profound societal implications, such as P14’s support for healthcare in Palestine, emotions transcend individual satisfaction, merging hope, purpose, and communal validation: “*It was rewarding to know I was helping... immense pride and joy seeing the results*” (P14). These emotions not only enhance the immediate experience but also build future optimism, increasing the likelihood of continued or sustained engagement and advocacy for similar projects.

Ultimately, post-contribution emotions are amplified by community bonds and transparent engagement (e.g., P1’s sense of connection to “the community of backers”). Positive experiences generate sustained advocacy, while negative ones (like P6’s frustration) emphasize the need for consistent communication to mitigate disappointment. These dynamics emphasize that emotional outcomes are not merely byproducts of participation but prime drivers of future crowdfunding behavior.

### *B. Sustained motivation*

Sustained motivation usually happens when there is progression in emotions post-contribution. In the context of crowdfunding, backers’ engagement does not necessarily end with the act of contribution (Arshad et al., 2023). Instead, their continued involvement, whether through sharing the campaign, following updates, or supporting future projects, is influenced by how their emotions unfold after the initial decision to contribute.

The third phase of sustained emotional engagement captures the backers’ continued involvement with the campaign, their evolving relationship with the project, and the positive emotions that keep them invested (Katzenmeier et al., 2019). The analysis of responses demonstrates how consistent updates, shared milestones, and emotional appeals maintain backers’ interest and a sense of shared purpose. The decision to continue supporting

crowdfunding campaigns is influenced by sustained motivation as a result of positive experiences such as clear communication, meaningful causes, and realistic project goals.

*“A strong business case, transparent communication, and credible teams encourage me. I get discouraged by poor due diligence or unrealistic valuations.” (P5)*

*“What inspires me are meaningful causes and transparency in campaigns. Lack of updates or overpromising would not motivate me.” (P8)*

*“Clear communication, genuine causes, and strong repayment plans motivate me. What discourages me is lack of transparency or failure to provide.” (P15)*

*“If they keep things transparent and actually show how they’re moving forward, that would definitely make me feel even more confident and encouraged to stay involved.” (P11)*

*“Poor communication or unrealistic goals would discourage me from backing campaigns.” (P1)*

Many backers express a willingness to continue but with increased caution (because of negative experiences) or selectiveness, highlighting the importance of trust and reliability in having long-term engagement. While others mentioned that the projects with significant social, environmental, or personal impact can motivate them to continue supporting in the future. P1 mentioned that *“poor communication”* and *“unrealistic goals”* diminish trust, echoing Oppong-Tawiah et al.’s (2019) finding that broken expectations erode future participation. Similarly, P11 highlighted the importance of transparency and visible progress, stating, *“If they keep things transparent and actually show how they’re moving forward...”* This highlights a reflective cycle of emotional engagement, where past outcomes, both positive (e.g., pride in impactful projects) and negative (e.g., frustration with poor communication), shape decision-making. P14’s sustained support for humanitarian causes (*“helping bring healthcare to people who truly needed it...”*) exemplifies how value-driven missions (e.g., social or environmental impact) transcend transactional relationships, creating enduring loyalty (Kuppuswamy & Bayus, 2017).

Thus, sustained engagement (and motivation) in backers continues as the result of a dynamic interaction between cognitive trust (e.g., transparency) and emotional resonance (e.g., pride in shared milestones). As P8 states, *“What inspires me are meaningful causes and transparency in campaigns,”* reflecting the dual role of rational and affective motivators. Future research could explore how cultural contexts or platform design influence these dynamics, particularly in long-term campaigns. We observed that the past emotional experiences of the backers influence future decision-making and engagement in crowdfunding campaigns.

Our findings suggest emotional transitions are not simply responses to static signals but are co-constructed through ongoing interpretation of the entrepreneur's communicative cues. This extends signaling theory by showing that signal reception is temporal and emotionally driven. To sustain backer engagement, signals must resonate emotionally, persist over time, and adapt to the campaign's evolving context. Our study deepens signaling theory by revealing that emotional transitions arise from a dynamic interplay between signal emission and interpretation. In crowdfunding, signals act as evolving narratives inviting continuous interpretation. Backers assess the entrepreneur's reliability, intent, and authenticity through this unfolding, non-linear process, shaped by timing, tone, and message coherence filtered through individual expectations. Emotional engagement thus reflects how backers make sense of signals over time. Signaling operates as a shared, interactive process, with emotional resonance gradually built and reinforced across the three distinct campaign phases.

## **5.6 Discussion**

The main goal of this research is to understand the emotional dynamics backers experience throughout their crowdfunding journey. We find that emotional and informational cues from entrepreneurs influence backers' trust and participation. Incorporating a temporal dimension, signaling theory explains how backers reassess emotions as new signals emerge. For example, transparent, frequent communication acts as a positive signal building trust and engagement (Gerber & Hui, 2013), while inconsistent or absent updates can cause frustration or disengagement. Backers often feel mixed emotions (e.g., excitement and apprehension) as conflicting signals (e.g., enthusiastic messaging versus delays) interact with their motivations and project dynamics (Bagheri et al., 2019). Our findings show how backers cognitively manage this ambivalence, which can lead to continued campaign support or withdrawal.

While prior research highlights emotions' role in crowdfunding decisions, this study offers a novel qualitative perspective by tracing how backers' emotions evolve through distinct engagement stages. Using signaling theory, we show how entrepreneurs' strategic communication shapes emotional transitions. By mapping emotional and informational signals across three phases: (1) initial exposure, (2) funding commitment, and (3) sustained engagement, our research reveals a continuum of emotional shifts influencing backers' ongoing participation.

During the initial exposure phase, backers experience primary emotions (such as excitement, curiosity, and inspiration) triggered by storytelling, value alignment, and impactful campaigns. These emotions lay the foundation for a deeper connection, marked by pride and satisfaction when campaigns actively engage backers through updates and community involvement. In the funding commitment phase, initial apprehension due to risks (like delays or poor communication) can be transformed into trust, optimism, and relief through transparent communication and visible progress. This highlights how appraisal processes

convert negative emotions into positive ones. The sustained emotional engagement phase involves post-contribution emotions driven by fulfilled promises and visible outcomes. Signals like timely reward delivery and impact narratives foster long-term trust and loyalty, turning short-term satisfaction into sustained engagement. Negative signals can quickly erode trust, while positive signals create emotional anchors that build resilience.

Some backers emphasize analytical evaluations, while others prioritize emotional connection, underscoring the need to balance emotional engagement with transparency. The feedback loop between sustained engagement and initial exposure shows how experiences with one campaign influence future funding decisions. Emotional processing continues beyond contribution, shaping backers' expectations and readiness to engage with new campaigns. This study introduces the longitudinal, cyclical emotional transitions that dynamically influence sustained backer involvement in crowdfunding.

### 5.6.1 Theoretical and practical implications

Our first theoretical contribution highlights the emotional co-construction and temporal dynamics of signals. Traditional signaling theory focuses on static informational cues influencing rational evaluations, but our findings extend this by emphasizing the evolving and emotional nature of signal interpretation. Emotional transitions among crowdfunding backers are actively shaped through ongoing interactions with entrepreneurs' communication, revealing a temporal dimension often overlooked. Signals function not as isolated messages but as part of a dynamic narrative that continuously shapes backers' emotional responses. Our research further enriches signaling theory by positioning emotional resonance as a key factor in signal effectiveness. Entrepreneurs must strategically frame signals to inform and emotionally engage backers. Positive emotional resonance achieved through transparent, timely, and authentic communication serves as a powerful signal of trustworthiness, encouraging sustained commitment. In contrast, inconsistent signals can harm backers' trust and reduce engagement.

Our findings advance signaling theory by linking signal framing with emotional resonance, showing that how a signal is presented, not just its content shapes backers' perceptions and emotions. Unclear, inconsistent, or conflicting signals create uncertainty about a campaign's authenticity, credibility, or the entrepreneur's intent, disrupting emotional alignment, weakening trust, and reducing motivation to stay engaged. In contrast, emotionally resonant signals conveying authenticity, empathy, and passion foster stronger connections and enhance legitimacy. We also highlight the temporal, cumulative nature of signal interpretation. Backers don't evaluate signals in isolation but within an unfolding narrative. Coherent, emotionally attuned signals reinforced over time build emotional momentum and sustain engagement. This dynamic challenges traditional views of signaling as one-way or discrete, positioning it instead as an ongoing, co-constructed exchange. Emotional congruence emerges as a key factor in how signals are received and acted upon. Successful

campaigns craft emotionally compelling, consistent, and context-sensitive narratives that evolve with backers' expectations. This view enriches signaling theory by emphasizing signaling as an emotional, interpretive process shaped through continuous interaction.

This study offers practical implications for entrepreneurs, backers, and crowdfunding platforms. Entrepreneurs should adopt proactive signaling strategies that anticipate backers' evolving emotional needs, for example, segmenting communications to address different motivations (altruistic vs. reward-driven) or sending post-campaign re-engagement signals like annual impact reports. Understanding emotional transitions helps stakeholders build trust, motivation, and sustained engagement. Transparent communication, meaningful engagement, and updates addressing concerns are key to maintaining positive emotional trajectories tied to signaling dynamics.

In the initial exposure phase, compelling storytelling and authentic mission-driven narratives evoke curiosity and excitement. Signals like passion, social proof, and urgency build trust and connection. To sustain engagement, entrepreneurs should use informational signals such as transparent milestone tracking and regular updates. Third-party audits or behind-the-scenes content can reinforce confidence during funding, easing concerns about delays or gaps. Platforms can support this by automating updates and highlighting community milestones, reducing entrepreneurs' signaling burden while maintaining emotional investment. Framing emotional transitions as a feedback loop, this study urges prioritizing relationship-building signals over transactional appeals, ensuring backers feel valued as partners, not just funders.

Platforms should incorporate features that enhance transparency and accountability. For example, they can integrate functionality for entrepreneurs to post detailed financial plans, endorsements from credible entities, or peer reviews. Moreover, platforms could offer backers tools to assess project credibility and manage their expectations, such as timelines for expected delays or success probabilities. The study highlights the importance of backers adopting a cautious yet engaged approach. Backers can use project updates and communication quality as cues to evaluate the likelihood of success. Additionally, campaigns that exhibit poor communication or overpromise should serve as cautionary signals for backers. Campaign creators should be trained to handle backers' emotions during periods of delay or uncertainty. By providing empathetic responses, addressing frustrations openly, and maintaining a consistent dialogue, entrepreneurs can transform potentially negative emotions into opportunities to rebuild trust and engagement. These practical insights emphasize the importance of emotionally intelligent strategies in crowdfunding campaigns, with a focus on building connection, managing apprehension, and ensuring transparency to create a more reliable and engaging experience for backers.

### 5.6.2 Limitations and future directions

While this study offers important insights into how backers' emotions shift throughout their engagement with crowdfunding campaigns, it also has certain limitations. First, the qualitative approach, while offering depth and richness, limits the generalizability of the findings to a broader population. Furthermore, the reliance on self-reported data through structured written responses introduces the potential for recall bias or social desirability bias, as participants might unintentionally omit or alter their experiences. Our participant recruitment process combined purposive and snowball sampling techniques. Snowball sampling, in particular, relies on existing participants to recruit others, which may result in a homogenous group with shared characteristics or perspectives (Gierczyk et al., 2024), potentially limiting the diversity of responses. The overrepresentation of participants who are more accessible or willing to share their experiences, such as those who had positive crowdfunding outcomes, might skew the insights and overlook the perspectives of those with less favorable or disengaged experiences.

These limitations bring out the need for further research that incorporates larger, more diverse samples and employs mixed methodologies to complement the qualitative insights presented here. Researchers can also compare emotional transitions across different crowdfunding models (e.g., donation-based vs. equity-based) to identify platform-specific strategies for managing backer expectations. By focusing on these aspects, future research could develop a more comprehensive understanding of the role of emotions in enhancing trust, engagement, and sustainability in crowdfunding ecosystems.

## 5.7 Conclusion

Our study illuminates the emotional transitions backers experience during crowdfunding, identifying key phases such as initial exposure, funding commitment, and sustained emotional engagement. We unpack how backers' emotional responses to signals influence their future behaviors, positive emotions reinforce continued support, while negative signals may lead to caution or disengagement. This creates a feedback loop where past signal interpretations shape expectations and emotions in subsequent interactions. In digital crowdfunding, mediated signals like updates, social media, and community engagement critically shape these emotional trajectories. Our research extends understanding of emotions in crowdfunding and offers practical insights for entrepreneurs to craft emotionally resonant campaigns. The phased framework also provides a foundation for future studies on backers' motivation and engagement throughout the crowdfunding journey.

## GENERAL DISCUSSION AND CONCLUSION

The study of emotions in crowdfunding has long been constrained by diverse theoretical frameworks and a narrow focus on isolated emotional cues, often overlooking the dynamic interplay between affective and rational factors. Crowdfunding, as a dynamic but emotionally charged financing mechanism (Ren et al., 2021), has long been studied through different lenses, with limited integration of how emotions evolve, interact with rational decision-making, and sustain engagement over time. Psychological studies in crowdfunding have primarily concentrated on emotional contagion, signaling theory, and economic models centered on utility maximization, while overlooking the development of integrative frameworks. However, existing research in crowdfunding has predominantly treated emotions as static while neglecting their transitions over campaign lifecycles. This resulted in a limited understanding of how emotional signals interact with contextual factors like different emotions, product qualities, and communication consistency to shape backers' funding decisions. The rise of computational methods like sentiment analysis and machine learning, while promising, has yet to fully address the complexity of emotional dynamics, particularly in cross-cultural contexts or emerging models like medical and charitable crowdfunding. These shortcomings have hindered both theoretical advancement and practical strategies for sustaining backers' engagement beyond initial funding phases. Prior research has often treated emotions as transient triggers, isolated to initial campaign pitches or backers' momentary emotions. While neglecting their interdependency with trust-building signals, and the long-term impact on loyalty. Through three interconnected studies, this dissertation deepens the understanding of the multifaceted role of emotions in crowdfunding, offering methodological innovations, theoretical development, and practical implications.

The purpose of this research is to explore bibliometric trends, empirical testing of signaling mechanisms, and qualitative exploration of transitions in backers' emotions. The dissertation is organized into five chapters. Chapter 1 introduces the research context, outlines the central objectives, key research questions and overall direction of the study. The bibliometric analysis in Chapter 2 maps the intellectual evolution of the field, revealing a shift from early explorations of crowdfunding mechanics to interdisciplinary studies integrating affective science, economics, and technology. By identifying seminal works and emerging topics, such as blockchain's role in trust-building and pandemic-driven humanitarian campaigns, it contextualizes emotions within broader macroeconomic and technological shifts. The third chapter explores signaling theory within the context of crowdfunding, with particular emphasis on the different types of signals employed in crowdfunding campaigns. In the dissertation, Chapter 3 serves a crucial role in establishing the conceptual foundation for understanding how information asymmetry between entrepreneurs and backers is managed in crowdfunding contexts. In addition, we included a table that organizes the literature through the lens of moderators, thereby providing a structured overview of how contextual and individual factors shape and influence the effectiveness of different signals in

crowdfunding campaigns. The empirical study (Chapter 4) challenges the dichotomy between emotional and rational appeals, demonstrating that while entrepreneurial passion attracts backers, funding decisions hinge on perceived product usefulness. This mediation effect of perceived product usefulness emphasizes the necessity of coupling emotional pitch with tangible value propositions, a finding that bridges signaling theory (Spence, 1973) and framing theory (Entman, 1993; Goffman, 1974). Finally, the qualitative inquiry (Chapter 5) argues the notion of emotions as static, instead revealing cyclical emotional transitions (from initial curiosity to post-funding pride, satisfaction, or frustration) driven by creators' or entrepreneurs' signaling consistency. By integrating signaling theory (Spence, 1973), framing theory (Entman, 1993; Goffman, 1974), and the emotion contagion framework (Hatfield et al., 1993), our research proposes a dynamic model where emotional and informational cues iteratively shape trust and loyalty. In doing so, we offer a holistic perspective that positions emotions as relational processes rather than isolated events, and advances crowdfunding research beyond a narrow focus on economic exchanges (for e.g., such as the transfer of money in return for rewards or financial donation, etc.).

### **Summary of main contributions**

This dissertation offers significant insights into crowdfunding, emotions, and entrepreneurial behavior, starting with its theoretical contributions and followed by its methodological advancements.

#### *Theoretical contributions*

The study advances theoretical integration by linking signaling theory with emotional dynamics in crowdfunding. While prior work has largely treated emotional displays and functional signals separately, this research demonstrates how affective signals, such as entrepreneurial passion, and cognitive signals, such as product usefulness, jointly shape backer decision-making. Moreover, the proposed cyclical emotional model adds conceptual depth by capturing the temporal evolution of emotions across campaign stages.

A central contribution of this dissertation lies in demonstrating how signaling theory, framing theory, and emotion contagion theory function synergistically to explain backer behavior and crowdfunding success. Signaling theory (Spence, 1973) provides the foundational understanding of how entrepreneurs reduce information asymmetry by conveying competence, credibility, and product value through both verbal and non-verbal cues. Framing theory (Entman, 1993; Goffman, 1974) complements this by explaining how these signals are interpreted within specific cognitive and contextual frames, highlighting that the way information is presented can significantly shape perception and evaluation. Meanwhile, emotion contagion theory (Hatfield et al., 1993) accounts for the affective dimension, showing how the emotional expressions of entrepreneurs evoke corresponding feelings in backers, thereby influencing motivation and engagement.

The interplay among these three theoretical lenses offers a more comprehensive model of backer decision-making than any theory alone. Signaling ensures that objective information and credibility are communicated, framing determines how backers interpret and evaluate these signals, and emotion contagion amplifies the motivational impact by generating empathy, excitement, or trust. For example, a highly passionate pitch (signal) is more persuasive when framed in terms of tangible product benefits, while emotional resonance ensures that backers feel connected to the project and the entrepreneur. This dynamic interaction explains why campaigns that combine clear informational cues, effective framing, and emotionally compelling presentations achieve higher engagement and funding success.

Moreover, integrating these theories helps capture the temporal and relational dimensions of crowdfunding, which are often neglected in static models. Signals are not one-off events; they are interpreted and reinterpreted over time as new campaign updates, social interactions, and project developments emerge. Framing and emotion contagion dynamically mediate how these temporal signals affect trust, commitment, and subsequent funding behavior. In this way, the combination of the three theories provides a holistic explanatory framework, linking rational evaluation, emotional resonance, and narrative interpretation to campaign outcomes. This integrated perspective not only advances theoretical understanding but also offers actionable guidance for entrepreneurs, platforms, and policymakers seeking to optimize crowdfunding performance.

### *Methodological contributions*

First, the dissertation makes a methodological and interdisciplinary contribution through its bibliometric analysis, which systematically maps and synthesizes research across the two distinct but interrelated fields of crowdfunding and emotions. This purposeful blending of disciplinary knowledge not only identifies intellectual structures, emerging themes, and research gaps but also establishes a theoretical foundation that bridges entrepreneurship and affective science. By integrating insights from both domains, the study broadens the conceptual scope of crowdfunding research and encourages more cross-disciplinary dialogue.

Second, the study contributes a novel qualitative and mixed-methods perspective to a field often dominated by purely quantitative analyses. By incorporating structured interviews and self-reported emotional trajectories, the dissertation provides a more nuanced understanding of how backers interpret signals and how these interpretations influence their present and future funding behaviors. This approach enriches the literature by foregrounding the lived experiences and cognitive-emotional processes of backers, rather than relying solely on campaign-level outcome data.

Together, these strengths ensure that the dissertation not only addresses current gaps in the literature but also opens new theoretical, methodological, and practical pathways for advancing research and practice in crowdfunding.

### **Theoretical and practical implications**

The implications of this research extend across both theoretical and practical domains. Beyond the overarching contributions to knowledge, each study within this dissertation advances a unique aspect of understanding emotions in crowdfunding. Together, these studies not only enrich the theoretical framework of the field but also offer practical insights for researchers, entrepreneurs, and policymakers. The following discussions outline the distinct theoretical and practical implications derived from each study.

The bibliometric analysis (Study 1) contributes by situating crowdfunding emotions within a broader interdisciplinary framework, revealing the intellectual structure and key trends of the field. By identifying seminal works and gaps, this study encourages integration of established theories such as social exchange theory (Cropanzano et al., 2017; Homans, 1974), expectancy theory (Vroom, 1964), and goal-setting theory (Locke, 1968; Locke & Latham, 2002) into crowdfunding research. These theoretical lenses help explain how emotional appeals generate perceptions of reciprocity and shape backers' motivational expectations. They also influence commitment to funding campaigns, thereby providing a conceptual scaffold for further empirical research. The insights from the bibliometric analysis served as a conceptual foundation for our subsequent quantitative study (Study 2), guiding the selection of key variables and highlighting underexplored themes in crowdfunding research. This ensured that the empirical model in this study was rooted in the most relevant and theoretically sound aspects of emotional dynamics in crowdfunding. Beyond its academic value, the analysis offers practical direction for campaign creators to design persuasive messages, build trust, and reduce perceived risks through emotionally engaging communication. It also draws attention to less-studied crowdfunding models, such as donation- and equity-based campaigns, encouraging tailored strategies for diverse contexts. For policymakers, these findings provide a basis for developing fair and transparent regulations that protect backers from manipulative tactics. Overall, the study not only strengthens scholarly understanding but also supports the creation of sustainable, emotionally intelligent crowdfunding ecosystems.

The quantitative study (Study 2) advances signaling theory (Spence, 1973) and framing theory (Entman, 1993; Goffman, 1974) by empirically demonstrating how emotional and rational cues interact in backer decision-making. Specifically, the research proposed and tested a model in which displayed entrepreneurial passion acts as an affective signal that attracts attention and generates initial engagement through the emotion contagion mechanism. Perceived product usefulness, on the other hand, frames the rational evaluation

of the campaign, ultimately driving funding decisions. The integration of emotional signaling with cognitive framing supports the dual-signal model. Hence, extending classical signaling theory into temporally dynamic and interactive contexts, highlighting that signals are most effective when coupled with clear, value-relevant information. This justifies that signals are most effective when coupled with value-relevant information and when they actively evoke shared emotional responses among backers. This provides a richer understanding of hybrid decision-making processes where affective and cognitive mechanisms operate in tandem. From a practical perspective, the findings advocate for campaign strategies that balance emotional storytelling with transparency and accountability. Entrepreneurs should design pitches that pair displayed passion (e.g., behind-the-scenes videos) with clear demonstrations of usefulness (e.g., prototypes, use-case scenarios), while platforms can deploy AI-driven tools to personalize updates and mitigate post-funding frustration through real-time progress tracking. Policymakers, too, can leverage these insights to craft regulations that curb manipulative emotional appeals while encouraging trust, for example, mandating milestone disclosures or third-party audits for high-stakes campaigns. Crowdfunding platforms can support these strategies by providing tools for audience segmentation, real-time feedback, and monitoring backer responses to improve campaign performance.

The qualitative study (Study 3) enriches signaling theory by highlighting how emotional cues and their temporal shifts shape backer responses across different stages of a campaign. By tracing the transitions of backers' emotions from initial exposure through post-funding engagement, this study demonstrates that emotional responses are cyclical, co-constructed, and influenced by ongoing informational and relational signals. In doing so, it integrates emotion contagion theory (Hatfield et al., 1993) with signaling and framing frameworks, highlighting that trust, engagement, and commitment are continuously shaped by the interplay of affective and cognitive cues. This point of view reconceptualizes emotions as relational, socially interpreted, and temporally evolving, providing a more refined understanding of backer behavior across the lifecycle of crowdfunding campaigns. This study on emotional dynamics across different campaign stages highlights how managing backers' emotional journeys is critical for sustained engagement. Consistent updates, transparent communication, and authentic storytelling help maintain trust and loyalty throughout the campaign lifecycle. On the implementation side, platforms can strengthen this process by adding features that increase transparency, build credibility, and automate communication, helping entrepreneurs maintain lasting relationships with backers. They could include emotional feedback tools (such as real-time sentiment dashboards) that allow entrepreneurs to adapt their communication strategies as needed. Training programs may also teach entrepreneurs how to sustain positive emotional engagement throughout the funding process, reducing the risk of backer fatigue or loss of interest.

## **Limitations**

Despite its comprehensive scope, this dissertation has several limitations that should be acknowledged. First, the bibliometric analysis relied solely on the Scopus database and English-language publications. While Scopus is extensive and reliable, this restriction may have excluded relevant studies published in other languages or indexed in alternative databases. Additionally, the use of default parameters in VOSviewer for visualization could have influenced the identification of clusters and thematic patterns, limiting the interpretive scope of the analysis.

Second, the quantitative study on reward-based crowdfunding employed a controlled experimental design using only two short-pitch videos. While this allowed for precise testing of the relationships between displayed passion, product usefulness, and funding decisions, it may limit the ecological validity of the findings. Real-world crowdfunding campaigns often involve a wider variety of products, presentation styles, and backer motivations. Furthermore, the binary measure of funding intention may oversimplify the nuanced decision-making process, which can be influenced by factors such as risk perception, budget constraints, and conditional support.

Third, the qualitative study employed text-based interviews with a relatively small and purposively recruited sample of 22 backers. Although sufficient for thematic saturation, the sample may not fully capture the diversity of backer experiences, especially across different cultures, crowdfunding platforms, or project types. Snowball sampling may have introduced homogeneity in perspectives, and self-reported data are subject to recall and social desirability biases. These constraints may limit the generalizability of findings regarding emotional transitions across campaign stages.

Finally, while reward-based crowdfunding (RBCF) is discussed in the second study, the overall dissertation does not focus exclusively on a single crowdfunding model. Consequently, other models such as equity-, donation-, and lending-based crowdfunding received limited analytical attention, which may restrict the generalizability of certain theoretical insights across different crowdfunding contexts. Additionally, while the research integrated signaling theory, framing theory, and emotion contagion frameworks, the complexity of emotional dynamics in cross-cultural contexts, longitudinal campaigns, and multi-stage decision-making warrants further exploration. Subsequent research could extend these models by incorporating larger, diverse samples, cross-platform analyses, and real-time behavioral data to validate and refine the findings presented here.

## **Future research directions**

Building on the limitations identified, several avenues emerge for future investigation. First, bibliometric research could be expanded by incorporating multiple databases such as Web of Science, Google Scholar, ProQuest, and IEEE Xplore, while including non-English publications. Such an approach would provide a more comprehensive mapping of crowdfunding and emotions, allowing scholars to capture a broader range of interdisciplinary studies and emerging trends. Additionally, prospective analyses could explore alternative visualization parameters or integrate advanced text-mining techniques to refine thematic mapping and uncover nuanced patterns in the literature.

Second, experimental research in reward-based crowdfunding could benefit from diverse campaign stimuli and formats. Future studies may examine a wider array of products, services, and presentation styles, including workshops, subscriptions, or social-impact initiatives, to test whether emotional and rational signals function similarly across contexts. Employing more granular measures of funding intention or incorporating actual financial contributions could enhance ecological validity and reveal how backers' cognitive and affective evaluations translate into real-world behaviors. Moreover, cross-cultural studies are also critical, as cultural norms around emotional expression (Gao et al., 2021) and risk perception (Bitterl & Schreier, 2018) likely moderate the efficacy of signals. Norms of collectivism versus individualism may, for example, determine whether backers respond more strongly to community-oriented narratives or individual entrepreneurial emotions. Similarly, differences in risk perception across cultures could influence the weight that backers place on affective versus rational signals in decision-making. Expanding this line of inquiry across diverse cultural and institutional settings would help establish a more globally representative theory of emotions in crowdfunding.

Third, qualitative investigations should aim to broaden participant diversity across different crowdfunding models. The comparative analyses of reward-based, equity, donation, and medical crowdfunding may uncover distinctive emotional drivers: for instance, altruism and empathy are central in donation and medical projects, whereas trust, perceived competence, and financial optimism dominate in equity contexts. Incorporating mixed-method approaches that combine interviews, observational data, and platform analytics could strengthen the reliability of findings and illuminate the interplay between emotional trajectories and rational evaluations more robustly. Such nuanced distinctions would advance theory by showing how the salience of emotions shifts depending on both the nature of the exchange relationship and the perceived stakes of participation. The cyclical emotional model developed in this study opens further possibilities by suggesting “emotional carryover” effects. Backers' prior emotional experiences (whether enthusiasm, disappointment, or betrayal) may spill over into their participation in subsequent campaigns. Investigating these spillovers at both the individual and community level could inform theories of emotional path dependency in entrepreneurial finance. For platforms, this insight

signifies the importance of managing negative experiences, as these may reduce overall market participation.

At the technological frontier, blockchain and artificial intelligence (AI) offer novel research avenues. Blockchain-enabled smart contracts could transform how trust is built by tying fund disbursement to objective, verified milestones, thereby reducing reliance on emotional appeals. This raises questions about whether technology can substitute or complement traditional emotional signals of trustworthiness. AI-driven sentiment analysis and natural language processing tools can dynamically adapt campaign messaging to reflect real-time emotional responses from backers, opening space for research on personalized emotional engagement strategies. Future work could also examine the ethical implications of such adaptive techniques, balancing effectiveness with concerns of manipulation.

Upcoming research could build on the present findings by integrating neuroscientific methods to examine funding decisions in crowdfunding. Techniques such as functional magnetic resonance imaging (fMRI), electroencephalography (EEG), or eye-tracking can provide direct insights into the neural and cognitive mechanisms underlying backers' emotional and rational responses to campaigns. For example, researchers could investigate how entrepreneurial passion, product usefulness, and campaign framing activate reward-related, empathy-related, or decision-making regions in the brain. This approach allows for a deeper understanding of how affective and cognitive processes interact in funding decisions. It can also complement behavioral and self-reported data, providing more objective measures of how emotions influence investment choices. Additionally, neuroscientific studies could explore temporal dynamics, identifying how emotional responses evolve during different stages of campaign engagement and how these neural patterns relate to actual financial decisions.

In summary, this dissertation has examined the complex and evolving role of emotions in crowdfunding, highlighting how affective expressions are not merely peripheral cues but central components in shaping backer decision-making and campaign success. Through a multi-study investigation that integrates signaling theory, framing mechanisms, and emotional dynamics across campaign stages, this research demonstrates that emotions function as relational processes that are contextually constructed, temporally shifting, and socially interpreted. Rather than viewing crowdfunding as a purely economic tool, this dissertation positions it as an emotionally embedded engagement process, where signals must be continuously reinforced through cognitive validation and behavioral consistency. The findings demonstrate that emotional resonance is most effective when aligned with signals of competence, transparency, and narrative coherence, particularly in moments of uncertainty or campaign transition. In doing so, this study contributes a detailed framework for understanding how emotional signaling evolves over time and offers actionable insights for entrepreneurs aiming to cultivate long-term and sustained backer engagement. As crowdfunding continues to mature as a financing model, its future potential will hinge not

only on platform mechanics or campaign design, but also on how effectively campaigners manage the emotional journeys of their audiences.

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## **APPENDICES**

## **Appendix 1: Daljši povzetek**

### **Raziskovanje dejavnikov vpliva na višino zbranih sredstev v kampanjah množičnega financiranja**

#### **1. Uvod**

Množično financiranje je transformativna sila v podjetništvu in na področju investiranja, saj preoblikuje načine, s katerimi podjetja, predvsem zagonska, pridobijo finančno podporo. V nasprotju s tradicionalnimi finančnimi mehanizmi, kot so bančna posojila ali tvegani kapital, množično financiranje temelji na prispevkih večjega števila posameznikov, ki vlagajo razmeroma majhne zneske v projekte, ki jih ocenijo za obetavne. Množično financiranje je demokratiziralo dostop do kapitala, saj omogoča, da inovativni proizvodi in storitve dosežejo trg brez neposredne odvisnosti od tradicionalnih finančnih virov. Razvoj množičnega financiranja je močno pogojen s tehnološkim napredkom, zlasti z vzponom spletnih platform, ki omogočajo neposredno interakcijo med podjetniki in potencialnimi podporniki. Te platforme ponujajo prostor, kjer lahko podjetniki predstavijo svoje projekte, izrazijo svoja sporočila in izpostavijo ključne značilnosti teh, medtem ko podporniki ocenjujejo potencialno vrednost prispevka, tako v otipljivem kot v izkustvenem smislu.

V ekosistemu množičnega financiranja poznamo štiri osnovne oblike financiranja glede na naravo prispevka in pričakovani donos. Množično financiranje na osnovi nagrad je najpogostejša oblika, kjer podporniki v zameno za svojo finančno podporo prejmejo otipljivo ali neotipljivo nagrado, kot so sam proizvod, ekskluzivne izkušnje ali zgodnji dostop do proizvoda (Davis et al., 2017; Mollick, 2014). Množično financiranje na osnovi lastniških deležev omogoča vlagateljem pridobitev lastniškega deleža v podjetju, kar prinaša potencialne finančne donose, odvisne od njegove uspešnosti (Ahlers et al., 2015; Vismara, 2018). Množično financiranje na osnovi dolga omogoča posameznikom posojanje denarja podjetnikom ali podjetjem z obveznostjo vračila skupaj z obrestmi, pogosto mimo tradicionalnih bančnih kanalov (Hollas, 2013). Množično financiranje na osnovi donacij pa vključuje prispevke, namenjene humanitarnim ali družbenim ciljem, brez pričakovanja materialnega oziroma finančnega donosa; pogosto se uporablja za podporo dobrodelnim iniciativam, ustvarjalnim projektom ali skupnostnim prizadevanjem (Liu et al., 2018).

Oblike množičnega financiranja se med seboj razlikujejo glede na motivacijske spodbude podpornikom. Medtem ko so tradicionalne oblike financiranja povezane s prenosom lastniških deležev ali pa s posojilodajalskim odnosom, je financiranje na osnovi nagrad pogosto povezano z notranjimi motivacijami, kot so strast do proizvoda, čustvena povezanost s kampanjo ali želja po zgodnjem dostopu do inovativnih ponudb (Anglin et al., 2018; Cardon et al., 2012). Po drugi strani pa je financiranje na osnovi donacij močno zasidrano v altruističnih nagibih, želji po družbeni prepoznavnosti ter občutku prispevanja k pomembnemu cilju (Mollick, 2014). Razumevanje teh različnih motivacijskih ozadij je za

podjetnike ključnega pomena, saj jim omogoča, da prilagodijo komunikacijske strategije, oblikovanje kampanj in pristope k angažiranju ciljni vrsti financiranja, kar lahko bistveno poveča verjetnost uspeha.

Vse več raziskav o množičnem financiranju prepoznava osrednjo vlogo čustev kot dejavnika vpliva na vedenje podpornikov in uspeh kampanj. Čustva pri podpornikih vplivajo na procese odločanja, motivacijo za prispevek ter na kratkoročno in dolgoročno angažiranost pri kampanjah, zaradi česar so kritičen dejavnik razumevanja dinamike množičnega financiranja. Zato so na področju množičnega financiranja potrebne raziskave, ki sistematično povezujejo odločitvene mehanizme podpornikov z rezultati financiranja in uspešnostjo kampanj.

Doktorsko disertacijo smo osnovali na treh različnih, a medsebojno povezanih raziskavah, od postavitve konceptualnih izhodišč do kvalitativne in kvantitativne analize. Izhodiščna raziskava je bibliometrična analiza, s katero smo izvedli sistematičen pregled in sintezo obstoječe literature o čustvih v množičnem financiranju. Na ta način smo vzpostavili bazo znanja, ki je temelj za oblikovanje prihodnjih raziskav ter razvoj praktičnih strategij množičnega financiranja.

Medtem ko se podjetniki pogosto osredotočajo predvsem na prepričljive predstavitve in faktološko vsebino kampanj, pomembno vlogo igrajo tudi neverbalni znaki in čustveni izrazi med predstavitvami. Zavedanje teh signalov in njihovo strateško upravljanje lahko bistveno povečata verjetnost pridobitve financiranja ter okrepi zaupanje podpornikov. Raziskave poudarjajo, da čustveni prikaz ni zgolj dodatek k oblikovanju kampanje, temveč integralni dejavnik, ki oblikuje percepcijo in odločitev za podporo kampanje množičnega financiranja.

Glede na trenutno razumevanje dejavnikov, ki vplivajo na uspeh kampanj množičnega financiranja, je ključnega pomena preučiti mehanizme subjektivne ocene proizvoda s strani podpornikov (Kuppuswamy & Bayus, 2017), saj formalne informacije, ki jih nudijo platforme, pogosto niso zadostne za sprejem dokončne odločitve o financiranju. Pretekle študije kažejo, da vlagatelji v različnih kontekstih pogosto izhajajo iz kombinacije signalov, preden sprejmejo dokončno odločitev (Ahlers et al., 2015; Chakraborty & Swinney, 2021; Courtney et al., 2017). V doktorski disertaciji se osredotočamo na množično financiranje na osnovi nagrad, v katerih video predstavitve (Davis et al., 2017) pomenijo osrednji komunikacijski kanal. Video predstavitve namreč združujejo širok nabor informacij, od splošnega pregled izdelka, narativne elemente (Anglin et al., 2023), podrobnosti o vodstveni ekipi (Ralcheva & Roosenboom, 2020) ter strukturo nagrad po kampanji (Frydrych et al., 2014).

Na obravnavanem raziskovalnem področju je tako pomembno razumeti smiselnost prenosa signalov od podjetnikov do podpornikov. Ker so formalne informacije, ki jih zagotavljajo platforme pogosto nezadostne, podporniki pri oblikovanju odločitev praviloma iščejo kombinacijo signalov. Tako kot v drugih investicijskih kontekstih (Chakraborty & Swinney,

2021) tudi pri množičnem financiranju velja, da vlagatelji ne sprejemajo odločitev zgolj na podlagi osnovnih podatkov, temveč na celostni interpretaciji razpoložljivih informacij.

Učinkovit prenos signalov od podjetnikov do podpornikov so že izpostavile številne študije. Skupne ugotovitve teh raziskav so, da morajo biti signali natančno posredovani, izraženi in ustrezno interpretirani, da pride do smiselne komunikacije. Colombo (2021) je identificiral več različnih signalov, ki učinkovito komunicirajo glede kakovosti proizvoda, povečujejo legitimnost ter prispevajo k pridobivanju financiranja. Ne glede na to je zagotovitev sodelovanja podpornikov v kampanjah množičnega financiranja še vedno izziv (Yuan et al., 2021). V skladu s tradicionalno teorijo signaliziranja kombinacija vsebinskih in narativnih signalov povečuje zaznano verodostojnost podjetnika in krepi pozitiven učinek na namere podpornikov glede financiranja. Izhajajoč iz predhodnih ugotovitev tako v doktorski disertaciji raziščemo preplet med izraženo strastjo (podjetnika) in zaznano uporabnostjo izdelka pri oblikovanju odločitev podpornikov množičnega financiranja.

Poleg zgoraj omenjenega, teorija okvirjenja (Entman, 1993) podaja dodatna izhodišča za razumevanje, kako lahko podjetniki strateško predstavijo informacije in s tem vplivajo na percepcijo podpornikov. Po teoriji okvirjenja lahko ena vsebina sproži različne odzive podpornikov, odvisno od načina predstavitve. V kontekstu množičnega financiranja lahko skrbno oblikovan okvir, ki izpostavi edinstvene lastnosti izdelka ter družbeno ali čustveno vrednost projekta, vpliva na zaznano koristnost, občutek pripadnosti in motivacijo podpornikov, s čimer posredno spodbuja njihove odločitve o financiranju.

Na tej osnovi v raziskavi obravnavamo naslednja raziskovalna vprašanja: (1) Kako prikaz podjetnikove strasti in predstavitev uporabnosti izdelka vplivata na odločitev podpornikov o financiranju? (2) Kako mediacijski učinek zaznane uporabnosti izdelka oblikuje povezavo med podjetnikovo strastjo in namero podpornikov za podporo projektu? Ta raziskovalna vprašanja so ključna za razumevanje dinamičnih interakcijskih učinkov med čustvenim izražanjem podjetnikov, zaznano uporabnostjo izdelka in vedenjem podpornikov v ekosistemu množičnega financiranja.

V doktorski disertaciji prispevamo k obstoječemu znanju na področju množičnega financiranja na več načinov. Prvič, izpeljemo empirične preverbe o tem, kako prikazana strast podjetnika vpliva na odločanje podpornikov. Drugič, osvetlimo osrednjo vlogo zaznane uporabnosti proizvoda kot posrednika v procesu odločanja, kar odpira pomembne teoretske in praktične implikacije za oblikovanje strategij množičnega financiranja. Nazadnje, študija povezuje vedenjski in čustveni vidik množičnega financiranja, s čimer omogoča celovitejše razumevanje odločitev podpornikov in dejavnikov, ki vplivajo na uspešnost kampanj.

## 2. Raziskovalni cilji

Glavni cilj doktorske disertacije je poglobiti razumevanje čustvene dinamike in procesov odločanja v množičnem financiranju, zlasti v kampanjah množičnega financiranja na osnovi nagrad. Začnemo z bibliometrično analizo uporabe čustev v množičnem financiranju, s ciljem sistematičnega mapiranja obstoječe literature, identifikacije ključnih trendov na tem raziskovalnem področju, in analize dosedanjih prispevkov s ciljem izpostavitve še ne raziskanih tem. V doktorski disertaciji želimo oblikovati celovit pregled konceptualizacije in operacionalizacije čustev v predhodnih raziskavah množičnega financiranja, ter omogočiti vpogled v prihajajoče teme z namenom izpostavitve potencialnih novih trendov na tem področju. Z uporabo bibliometričnih metod želimo odgovoriti na naslednja raziskovalna vprašanja:

1. *Kateri so do sedaj objavljeni članki so najbolj citirani in prispevajo k razumevanju množičnega financiranja in vloge čustev?*
2. *Katere prihajajoče teme se pojavljajo v raziskavah množičnega financiranja?*
3. *Katere so vodilne znanstvene revije, ki se osredotočajo na interdisciplinarno proučevanje množičnega financiranja in vloge čustev?*
4. *Kako lahko obstoječe raziskave množičnega financiranja, ki se osredotočajo na vlogo čustev v kampanjah množičnega financiranja, informirajo prihodnje raziskave?*

Izhajajoč iz bibliometrične analize v drugi raziskavi preučimo odnos med izraženo podjetniško strastjo in zaznano uporabnostjo proizvoda na oblikovanje odločitve podpornikov za financiranje kampanje. V raziskavi empirično analiziramo, kako prikazana strast kot ključni čustveni signal, vpliva na zaznavanje podpornikov glede kredibilnosti kampanje ter raziščemo mediacijsko vlogo zaznane uporabnosti proizvoda na podjetnikovo strast. V raziskavi se osredotočimo na to, kako s kombinacija čustvenih in funkcionalnih signalov podjetniki učinkovito komunicirajo svojo zavezanost, kompetentnost in vrednost proizvoda. Ti dejavniki krepijo pripravljenost podpornikov za financiranje kampanj množičnega financiranja.

V tretji študiji izhajamo iz procesne perspektive z namenom raziskati nabor čustev podpornikov skozi celoten proces sodelovanja v kampanji množičnega financiranja. Poseben poudarek namenimo čustvenim prehodom in preučimo, katera čustvena stanja imajo največji vpliv v posameznih fazah kampanje. V tej raziskavi se osredotočimo na razvoj in spreminjanje čustev podpornikov med njihovim vključevanjem v kampanje ter zastavimo naslednje raziskovalno vprašanje:

*Kakšno čustveno dinamiko doživljajo podporniki ob začetnem vključevanju v kampanje množičnega financiranja in kako se ta čustvena dinamika razvija skozi različne faze procesa množičnega financiranja?*

Z namenom odgovoriti na to raziskovalno vprašanje podrobno preučimo oblikovanje, razvoj in interpretacijo čustvenih odzivov podpornikov skozi celoten potek kampanj množičnega financiranja. Izpostavimo kompleksno interakcijo med afektivnimi in kognitivnimi procesi podpornikov, ki v interakciji vplivajo na odločitve o financiranju. S preučevanjem razvoja čustvenih odzivov podpornikov, raziskava podjetnikom ponuja dragocene vpogleda za učinkovitejše vključevanje podpornikov in oblikovanja strategij kampanj.

Rezultati zgoraj predstavljenih raziskav skupaj zagotavljajo poglobljen vpogled v dejavnike, ki vplivajo na sodelovanje podpornikov in njihov odločitveni proces o financiranju v množičnem financiranju. Rezultati pokažejo, kako uspeh kampanj oblikuje interakcijo med signali podjetnikov, lastnostmi proizvodov in čustvi podpornikov. Še posebej izpostavimo vlogo podjetniške strasti, ki v kombinaciji z zaznano uporabnostjo izdelka, spodbuja namere za financiranje ter izpostavi mediacijsko vlogo uporabnosti izdelka v finančni podpori.

Z raziskavo osvetlimo tudi signaliziranje preko katerega podjetniki z verbalnimi in neverbalnimi znaki komunicirajo svojo legitimnost, kakovost proizvoda, ter načine, kako podporniki signale interpretirajo v sprejemu odločitve o podpori. V raziskavi spremljamo prehod čustev podpornikov v različnih fazah vključevanja v kampanje množičnega financiranja ter prikažemo, kako čustveni odzivi na vsebino kampanje, posodobitve in socialne interakcije, vplivajo na presojo vrednosti proizvoda.

### ***Vloga signalov v množičnem financiranju***

Asimetrija v informacijah med podjetniki in investitorji je prepoznana kot ključni dejavnik, ki prispeva k neuspešnim finančnim rezultatom (Lu et al., 2023). V virtualnem okolju množičnega financiranja je ta neuravnoteženost še posebej izrazita, kar povečuje verjetnost neuspeha kampanj (Ahlers et al., 2015). V tem kontekstu imajo signali, ki jih podjetniki posredujejo prek verbalnih, neverbalnih in čustvenih namigov, ključno vlogo pri zmanjševanju negotovosti in gradnji zaupanja. Teorija signaliziranja (Spence, 1973) nudi teoretični okvir za razumevanje, kako ti signali komunicirajo kredibilnost in vrednost izdelka v množičnem financiranju, pri čemer poudarja, da učinkovito signaliziranje temelji tako na strošku signala kot na ustreznem prenosu in percepciji s strani podpornikov (Wang et al., 2022).

Obstoječe raziskave poudarjajo, da lahko kombinacija signalov o produktu in čustvih poveča legitimnost, preusmeri pozornost podpornikov in izboljša rezultate kampanj (Colombo, 2021; Steigenberger & Wilhelm, 2018). Prepoznavnost signalov, vključujoč govorico telesa in čustveno avtentičnostjo, vpliva na odločanje podpornikov, saj sporoča o zanesljivosti in kompetentnosti podjetnika (Bafera & Kleinert, 2023). V doktorski disertaciji tako kategoriziramo ključne signale, prepoznane v prejšnjih raziskavah, ter pojasnimo, kako

kontekstualni dejavniki vplivajo na njihovo učinkovitost. Analiza se tako osredotoča na vpliv kontekstualnih in individualnih moderatorjev, kot so tip investitorja, trajanje kampanje, stopnja negotovosti glede izdelka in značilnosti platforme, na uspešnost signalov.

Integrirano razumevanje mehanizmov signaliziranja v množičnem financiranju ne pojasni zgolj razlik v uspešnosti kampanj, temveč tudi izpostavlja vrzeli in ponuja usmeritve za prihodnje raziskave. Teorijo signaliziranja kot teoretično izhodišče uporabimo analizo časovne dinamike in čustvenih signalov skozi različne faze angažiranosti podpornikov. Ta pristop omogoča preučevanje, kako spreminjajoči se čustveni odzivi in posodobitve kampanj vplivajo na kognitivne ocene podpornikov ter njihovo vedenje pri financiranju.

### **3. Metodološki pristop**

Metodološki pristopi, ki smo jih uporabili v doktorski disertaciji naslovijo raziskovalne cilje skozi različne pristope, ki združujejo sistematično analizo literature, kvantitativno modeliranje in kvalitativno raziskovanje.

#### **3.1 Sistematični pregled literature**

Za sistematičen pregled literature o množičnem financiranju in čustvih (prva raziskava) smo uporabili bibliometrično analizo, metodo, ki je kot bolj rigorozna in objektivna v primerjavi s tradicionalnimi narativnimi pregledi literature. Sledili smo strukturiranemu pristopu, ki sta ga predlagala Zupic & Čater (2015) in ga prevzele številne kasnejše študije (Aria & Cuccurullo, 2017; Donthu et al., 2021; Mukherjee et al., 2022). Metodološko smo izvedli štiristopenjski proces, ki je zajemal oblikovanje raziskovalnih izhodišč, zbiranje podatkov, analizo ter združeno vizualizacijo in interpretacijo rezultatov. Združitev zadnjih dveh aktivnosti je omogočila hkratno raziskovanje podatkov in generiranje vpogledov prek vizualnih predstavitev, kar je povečalo učinkovitost in poglobilo razumevanje. Metodologija je integrirala več bibliometričnih tehnik: ko-citiranje, bibliografsko povezovanje, izpostavitev ključnih besed in analizo citatov. Tak pristop je omogočil sistematično preučevanje intelektualnega prostora, odkrivanje vzorcev in povezav med raziskavami množičnega financiranja in raziskavami čustev.

Bibliometrično analizo smo začeli s preliminarnim pregledom literature, z namenom pregledati razpršenost raziskav na tem področju, kar je razkrilo potrebo po vzpostavitvi strukture obstoječih raziskav. Podatke smo zbirali iz baze Scopus, celovite in zanesljive zbirke znanstvenih virov, pri čemer smo uporabili skrbno izbrane ključne besede in merila vključitve, osredotočena na publikacije v angleškem jeziku, objavljene med letoma 2013 in 2023. Po filtriranju in izboljšavi izhodiščnega nabora člankov je bilo v analizo vključenih 269 dokumentov, med njimi članki v znanstvenih revijah, konferenčni prispevki, poglavja v knjigah ter druga znanstvena dela. Z uporabo programske opreme VOSviewer smo izvedli relacijske analize in vizualizacije omrežij, da bi preučili razvoj raziskav, prepoznali nastajajoče trende ter identificirali ključne avtorje, prispevke in intelektualne strukture. S kombinacijo bibliometričnih tehnik in tematske kvalitativne analize smo izdelali pregled

literature, ki ponuja vpogled v razvoj in trenutno stanje raziskav o množičnem financiranju in vlogi čustev.

### 3.2 Kvantitativna raziskava

V raziskovalnem procesu smo nadaljevali s kvantitativno raziskavo za empirično preučitev vpliva izražene podjetniške strasti in uporabnosti izdelka na odločitve podpornikov v financiranju. Podatki smo zbrali od podpornikov množičnih financiranj preko strukturiranega spletnega vprašalnika, ki simulira postopek odločanja pri množičnem financiranju preko izpostavljenosti kratkim videoposnetkom predstavitve kampanje. V letu 2022 smo preko Prolific platforme vključili 380 udeležencev, ki so imeli predhodne izkušnje z množičnim financiranjem in zadostno znanje angleščine. Za analizo zbranih empiričnih podatkov smo uporabili različne statistične pristope, vključno z modeliranjem strukturnih enačb (SEM).

V metodološkem pristopu smo sledili Spierer (2013), pri čemer smo v vprašalnik vključili dva realna videoposnetka množičnega financiranja s platform Kickstarter in Indiegogo, pri čemer smo za izvedbo vprašalnika platformo Qualtrics. Videoposnetke smo izbrali glede na naslednja merila: (1) na videoposnetku je predstavitev izvajal podjetnik; (2) čas videoposnetka je bil manj kot 2 minuti; (3) kakovost produkcije je bila visoka; (4) predstavljen proizvod je bil tehnološki in (5) poudarek je bil na zgodnjem dostopu do proizvoda kot ključni nagradi (in motivaciji) za podpornike. Na platformi Qualtrics smo vsakega sodelujočega naključno dodelili k enemu od dveh videoposnetkov, ki si ga je moral pred nadaljnim sodelovanjem v anketi, ogledati, z namenom pridobiti zanesljive in kakovostne podatke.

### 3.3 Kvalitativna raziskava

Za analizo celovite čustvene izkušnje podpornikov v procesu množičnega financiranja (tretja študija) smo uporabili kvalitativni raziskovalni pristop na osnovi intervjujev, ki smo jih izvedli asinhrono, preko elektronske pošte. Tak pristop je udeležencem omogočil, da so odgovarjali v času, ki jim je najbolj ustrežal, ter oblikovali bolj reflektivne in podrobne odgovore (Hunt & McHale, 2007; Jowett et al., 2011). Podatke smo zbrali od 15 sodelujočih (podpornikov), ki so v zadnjih dveh letih podprli najmanj tri projekte na platformah Kickstarter ali Indiegogo. Vzorec je bil namensko oblikovan tako, da je zajemal raznolikost glede starosti, spola, nacionalnosti in izkušenj s crowdfundingom, kar omogoča poglobljeno razumevanje razlik v čustvenih odzivih.

Doktorsko disertacijo smo izdelali z mešanimi metodami, ki so vključevale bibliometrična analizo, kvantitativna analizo s strukturnimi enačbami in kvalitativno raziskavo z namenom celovitega in večdimenzionalnega razumevanja pojavov množičnega financiranja. Uporaba mešanih metod omogoča trianguliranje ugotovitev, kar povečuje robustnost in veljavnost raziskave ter zagotavlja, da k razumevanju motivacije podpornikov v kampanjah

množičnega financiranja prispevajo tako statistične povezave kot tudi dejanske izkušnje podpornikov.

*Slika 1: Pregled v disertaciji uporabljenih metodoloških pristopov*

<p><b>Študija 1: Bibliometrična analiza uporabe čustev v množičnem financiranju</b></p> <p><b>Cilj:</b> Mapiranje področja uporabe čustev v množičnem financiranju, identifikacija ključnih avtorjev, nastajajočih trendov in premalo raziskovanih področij.</p> <p><b>Poudarek:</b> Vpliv čustev na vedenje podpornikov v različnih modelih množičnega financiranja.</p> <p><b>Metoda:</b> Bibliometrična analiza (ko-citiranje, analiza so-avtorstev in mapiranje ključnih besed) za analizo raziskovalnih vzorcev in intelektualne strukture.</p> <p><b>Rezultati:</b></p> <ul style="list-style-type: none"><li>• Identificirani glavni avtorji, nastajajoče raziskovalne teme in vrzeli v razumevanju spreminjajočih se čustvenih odzivov podpornikov.</li><li>• Načrt za prihodnje raziskave in izpostavitve področij za nadaljnjo teoretično in empirično preverbo.</li></ul>	<p><b>Študija 2: Analiza izražene strasti in uporabnosti izdelka</b></p> <p><b>Cilj:</b> Preučiti, kako podjetniška strast v kombinaciji z zaznano uporabnostjo izdelka vpliva na namere podpornikov za podporo.</p> <p><b>Poudarek:</b> Mediacijska vloga uporabnosti izdelka v prenosu učinka podjetniške strasti v podporo množičnemu financiranju.</p> <p><b>Metoda:</b> Kvantitativna raziskava na osnovi anket z modeliranjem strukturnih enačb (SEM) za testiranje hipotez.</p> <p><b>Rezultati:</b></p> <ul style="list-style-type: none"><li>• Uporabnost izdelka v celoti mediira učinek izražene strasti na namere podpornikov za podporo.</li><li>• Izražena strast ni zadostna; podporniki morajo dobiti informacijo o zaznani uporabnosti izdelka.</li></ul>	<p><b>Študija 3: Analiza dinamike čustev podpornikov v množičnem financiranju</b></p> <p><b>Cilj:</b> Analizirati časovne in čustvene signale v različnih fazah vključenosti v kampanjo.</p> <p><b>Poudarek:</b> Preučitev čustvene dinamike financerjev v procesu udeležbe v kampanjah množičnega financiranja. Identificirati čustvene prehode in ugotoviti, katera čustva imajo največji vpliv v posameznih fazah kampanj.</p> <p><b>Metoda:</b> Kvalitativni strukturirani intervjuji s podporniki: tematska analiza čustvene dinamike in signalov.</p> <p><b>Rezultati:</b></p> <ul style="list-style-type: none"><li>• Čustva podpornikov se razvijajo od navdušenja in radovednosti do zaupanja, zadovoljstva in dolgoročne vključenosti.</li><li>• Časovni in čustveni signali pomembno vplivajo na kognitivno oceno in vedenje pri odločanju o financiranju.</li></ul>
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*Vir: Lastno delo*

#### 4. Ugotovitve raziskave

Skupne ugotovitve treh raziskav kažejo, da imajo čustva osrednjo vlogo v uspehu množičnega financiranja, saj oblikujejo angažiranost podpornikov, njihovo odločanje in vztrajnost pri sodelovanju. V kampanjah množičnega financiranja čustveni signali, kot je izraz podjetniške strasti, in izražena čustva skozi pripovedovanje zgodb, delujejo kot ključni sprožilci, ki pritegnejo začetno pozornost podpornikov ter zmanjšujejo negotovost v okoljih, zaznamovanih z informacijsko asimetrijo. Kvantitativna študija potrjuje, da ima izražena strast neposreden vpliv na odločitve o financiranju, vendar je ta vpliv v celoti posredovan prek zaznane uporabnosti izdelka. To izpostavi dvostopenjski proces, v katerem čustveni signali najprej sprožijo angažiranost, racionalne ocene pa v nadaljevanju okrepijo podporo. S kvalitativno raziskavo dopolnimo te ugotovitve z opisom dinamike razvoja čustvenih signalov v času - začetno navdušenje in radovednost podpornikov, ki ju sprožijo materiali posredovani v okviru kampanje, se lahko preoblikujeta v zaupanje, zadovoljstvo in dolgoročno angažiranost, ko podporniki zaznajo legitimnost, preglednost, pravočasnost posodobitev in otipljive rezultate.

Rezultati kvalitativne pokažejo, da prepletanje čustvenih in informacijskih signalov oblikuje presojo podpornikov skozi celotno pot množičnega financiranja. V zgodnjih fazah navdušenje in inspiracija delujeta kot čustvena sprožilca, ki pritegneta pozornost in spodbudita občutek usklajenosti s cilji podjetnika. Ko v procesu sprejemanja odločitve podporniki napredujejo proti odločitvi za podporo, se čustveni signali povezujejo s kognitivnimi ocenami, predvsem z oceno informacij o izdelku, ki se izkažejo za odločilne pri sprejemanju finančnih odločitev. Pregled literature potrjuje, da je tak hibridni proces odločanja značilen za množično financiranje, pri čemer so učinki prenosa čustev, signaliziranje s strani podpornikov in okvirjanje, dosledno prepoznani kot ključni dejavniki angažiranosti in podpore. To pomeni, da čustva sama po sebi niso dovolj, saj jih je nujno strateško dopolnjevati z jasnimi, verodostojnimi informacijami o kampanji množičnega financiranja in njenih rezultatih.

Poleg tega rezultati poudarjajo časovno in iterativno naravo vključenosti podpornikov, saj čustva niso statična, temveč nihajo in se spreminjajo glede na prejete signale podjetnikov v kampanjah množičnega financiranja. Podporniki pogosto izkušajo mešanico čustev, pri čemer navdušenje spremlja negotovost ali strah, stopnja uravnoveženosti pa je odvisna od transparentnosti in odzivnosti kampanje. Dolgoročna vključenost podpornikov izhaja tudi iz učinkovitosti podjetnikov v upravljanju tako afektivnih kot informacijskih signalov, od rednih posodobitev in izpolnjevanja obljubljenih nagrad do vidnih družbenih učinkov.

V doktorski disertaciji s skupnimi ugotovitvami prispevamo k več večnivojskemu razumevanju dinamike množičnega financiranja, saj povezujejo makrotrende z mikro mehanizmi. Sistematični pregled opozarja na naraščajočo pomen čustvenih dejavnikov v različnih vrstah kampanj, od medicinskih in dobrodelnih do družbeno usmerjenih, medtem ko kvantitativna študija osvetljuje poti, prek katerih strast vpliva na izbire podpornikov.

Kvalitativna raziskava dopolnjuje to sliko z vpogledom v razvoj in medsebojno delovanje čustvenih ter informacijskih signalov skozi čas. Skupaj ugotovitve kažejo, da uspešne kampanje množičnega financiranja uravnotežijo elemente čustvene privlačnosti, racionalne ocene in pregledne komunikacije, kar ponazarja kompleksno interakcijo čustvenih, kognitivnih in časovnih dejavnikov na vedenje in odločitve podpornikov.

## 5. Prispevki k teoriji in praksi

Doktorska disertacija prispeva k nadaljnemu preučevanju množičnega financiranja, saj v analizo vključuje čustva, signaliziranje in odločanje podpornikov. Ponuja tako teoretična spoznanja kot praktična priporočila za podjetnike, platforme in oblikovalce politik, ki želijo razumeti ter sooblikovati dinamiko množičnega financiranja. Raziskava mapira raziskovanje vloge čustev v množičnem financiranju, izdelava intelektualno strukturo, identificira ključne prispevke in nastajajoče trende. Izpostavlja premalo raziskane vidike, med drugim spreminjajoče čustvene odzive podpornikov ter njihovo vlogo v donacijskih, lastniških in na nagradah temelječih modelih množičnega financiranja. Z izpostavitvijo teh vrzeli zagotavlja osnovo za integracijo uveljavljenih teorij (npr. teorije socialne izmenjave, teorije pričakovanj in teorije postavljanja ciljev) v raziskave množičnega financiranja ter ponuja konceptualni okvir za razlago, kako čustva vplivajo na odločitve podpornikov o financiranju kampanj. Z mapiranjem obstoječe literature smo pripravili izhodišča za nadaljnje raziskovanje, saj izdelamo tako pregled trenutnega znanja na področju kot tudi izhodišča za nadaljnji razvoj področja. Bibliometrična analiza vloge čustev v množičnem financiranju oblikovalcem politik omogoča vpogled v to, kako čustva oblikujejo sporočilnost kampanj množičnega financiranja in vplivajo na vedenje podpornikov. Pomaga pri izdelavi izhodišč, ki lahko zaščitijo podpornike pred manipulativnimi taktikami, usmerja odločitve o prioritetnem financiranju in podpira politike, ki temeljijo na dokazih, s ciljem pravičnega in trajnostnega ekosistema množičnega financiranja. Menimo, da doktorska disertacija uspešno prevede teorijo v praktične ukrepe, ki izboljšujejo učinkovitost kampanj množičnega financiranja.

V doktorski raziskavi pokažemo, da signali, kot sta izražena strast in uporabnost izdelka, niso statični, temveč se razvijajo skozi interakcije med podjetniki in podporniki. Ta dinamika zmanjšuje informacijsko asimetrijo in oblikuje odločitve, pri čemer ima kombinacija čustvenih in racionalnih signalov zelo močen učinek. Praktične implikacije naših ugotovitev so pomembne tako za oblikovalce kampanj kot tudi za podpornike. Platforme množičnega financiranja pa lahko izboljšajo interakcijo med ustvarjalci in podporniki z orodji za komunikacijo, spremljanje povratnih informacij in posodobitev, ki gradijo verodostojnost ter ohranjajo angažiranost podpornikov.

Doktorska disertacija pokaže, da podporniki signale interpretirajo kot del zgodbe, ki jo pripovedujejo podjetniki in čustvena resonanca neposredno vpliva na zaupanje, zavezanost in sodelovanje. Signali prenašajo vrednost ne le prek informacij, temveč tudi z vzbujanjem čustvenih odzivov, zaradi česar sta jasnost in doslednost ključni za verodostojnost.

Podjetniki lahko to razumevanje izkoristijo za predvidevanje pričakovanj podpornikov, transparentno komunikacijo in ohranjanje smiselne vključenosti skozi celoten življenjski cikel kampanje. Tako platforme kot podporniki imajo koristi od izboljšane kakovosti signalov, večje transparentnosti in sistematične komunikacije, kar omogoča informirane odločitve ter spodbuja trajno vključenost.

## **6. Omejitve in smernice za nadaljnje raziskovalno delo**

Doktorska disertacija se sooča z več omejitvami, ki hkrati odpirajo priložnosti za nadaljnje raziskovanje. Bibliometrična analiza je omejena na bazo podatkov Scopus in publikacije v angleškem jeziku, kar lahko izključi pomembne prispevke iz drugih virov ali jezikov. Prihodnje študije lahko vključijo dodatne baze, kot so Web of Science, Google Scholar, ProQuest, IEEE Xplore, Dimensions API in ABI/Inform, ter upoštevajo večjezično literaturo za celovitejši pregled. Vključevanje interdisciplinarnih perspektiv bi lahko poglobilo teoretična izhodišča in omogočilo boljše razumevanje čustvene dinamike v različnih kontekstih množičnega financiranja. Med obetavnimi raziskovalnimi temami množičnega financiranja izstopajo veriženje blokov, množično financiranje v času pandemije ter medicinske in dobrodelne pobude, ki osvetljujejo razvijajočo se vlogo čustev pri odločanju podpornikov. Nadaljnje študije lahko izhajajo iz alternativnih teoretičnih okvirjev, kot so teorija socialne menjave, teorija pričakovanj in teorija postavljanja ciljev, za sistematično pojasnitev vpliva čustev na odločitve o financiranju.

Metodološke omejitve so prisotne tudi v eksperimentalnih raziskavah signaliziranja in vedenja podpornikov. V doktorski disertaciji uporabljena omejen nabor video predstavitev in osredotočenost na produktne kampanje omejujeta posplošljivost ugotovitev. Širitev raziskovalnih zasnov na različne oblike predstavitev, panog dejavnosti in tipe nagrad, vključno s storitvami, lahko poveča veljavnost rezultatov. Prav tako binarna mera namere financiranja ne odraža kompleksnosti odločanja, ki vključuje različne stopnje zanimanja, oklevanja in pogojne podpore. Vključitev dejanskih finančnih prispevkov ali natančnejših vedenjskih kazalnikov bi lahko bolje simulirala avtentične pogoje množičnega financiranja in okrepila ekološko veljavnost.

Obstoječe študije pogosto operacionalizirajo signale prek izražene strasti in uporabnosti izdelka, s poudarkom na paralingvističnih namigih, medtem ko druge verbalne in jezikovne značilnosti ter lastnosti izdelka ostajajo zapostavljene. Nadaljnje raziskave lahko vključijo širši nabor signalizacijskih mehanizmov, kot so pripovedne tehnike, jezikovni slog in komunikacijske strategije po zaključku kampanj v različnih modelih množičnega financiranja. Raziskovanje relacijskih dinamik onkraj trenutka prispevka, zlasti v fazi po financiranju, lahko osvetli trajanje čustvene vključenosti in njen vpliv na dolgoročno zvestobo. Primerjalne analize med nagradnim, lastniškim in donacijskim modelom množičnega financiranja lahko dodatno pojasni prenosljivost učinkov signaliziranja med platformami.

Kvalitativni pristop k preučevanju čustvenih prehodov med podporniki tudi omejuje posplošljivost ugotovitev. Strukturirani pisni odgovori in vzorčenje na osnovi snežne kepe lahko pristransko oblikujejo vzorec, kar zmanjšuje raznolikost perspektiv sodelujočih. Uporaba heterogeno zasnovanih vzorcev in kombinacija kvalitativnih ter kvantitativnih metodologij lahko omogoči zajem širšega spektra izkušenj. Preučevanje čustvenih prehodov v različnih modelih množičnega financiranja izpostavi, kako podporniki interpretirajo signale, oblikujejo pričakovanja in vzdržujejo angažiranost skozi čas, kar pomeni dobro osnovo za razvoj učinkovitejših strategij krepitve zaupanja, sodelovanja in trajnosti v ekosistemih množičnega financiranja.

## CHAPTER 2 APPENDICES

### Appendix 2: Literature search query — crowdfunding and emotions

( TITLE-ABS-KEY ( crowdfunding ) AND TITLE-ABS-KEY ( emotional ) OR TITLE-ABS-KEY ( emotions ) OR TITLE-ABS-KEY ( sentiment ) OR TITLE-ABS-KEY ( passion ) OR TITLE-ABS-KEY ( gratitude ) OR TITLE-ABS-KEY ( affections ) OR TITLE-ABS-KEY ( enthusiasm ) OR TITLE-ABS-KEY ( excitement ) OR TITLE-ABS-KEY ( "negative emotions" ) OR TITLE-ABS-KEY ( "positive emotions" ) OR TITLE-ABS-KEY ( "emotional signaling" ) OR TITLE-ABS-KEY ( "emotional signalling" ) OR TITLE-ABS-KEY ( "emotional appeal" ) OR TITLE-ABS-KEY ( "emotional engagement" ) OR TITLE-ABS-KEY ( "emotional factors" ) OR TITLE-ABS-KEY ( "positive sentiments" ) OR TITLE-ABS-KEY ( "negative sentiments" ) OR TITLE-ABS-KEY ( empathy ) OR TITLE-ABS-KEY ( "investor sentiment" ) OR TITLE-ABS-KEY ( "investor feelings" ) OR TITLE-ABS-KEY ( "backer feelings" ) OR TITLE-ABS-KEY ( "feelings" ) OR TITLE-ABS-KEY ( "entrepreneur feelings" ) OR TITLE-ABS-KEY ( "backer emotions" ) OR TITLE-ABS-KEY ( emotion ) OR TITLE-ABS-KEY ( "display passion" ) OR TITLE-ABS-KEY ( "display confidence" ) OR TITLE-ABS-KEY ( "moods and emotions" ) OR TITLE-ABS-KEY ( mood ) OR TITLE-ABS-KEY ( "affective engagement" ) ) AND PUBYEAR > 2012 AND ( LIMIT-TO ( LANGUAGE , "english" ) )

*Source: Own work, Scopus (2023).*

### Appendix 3: Types of publications and subject areas

Type of publication	No. of documents	Percentage of 269
Article	194	72.1
Conference paper	62	23.0
Book chapter	10	3.0
Book	2	0.7
Review	1	0.4

Subject area	No. of documents	Percentage of 269
Business, Management and Accounting	131	48.7
Computer Science	99	36.8
Social Sciences	61	22.7
Economics, Econometrics and Finance	55	20.4
Decision Sciences	37	13.8
Engineering	29	10.8
Mathematics	17	6.3
Psychology	16	5.9
Arts and Humanities	14	5.2
Medicine	13	4.8
Others	39	14.5

*Source: Own work, Scopus (2013-2023).*

#### Appendix 4: Top 10 co-cited references (descending order)

Co-cited reference	Citation	Total link strength
Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. <i>Journal of Business Venturing</i> , 29(1), 1-16.	64	222
Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. <i>Journal of Business Venturing</i> , 29(5), 585-609.	35	119
Parhankangas, A., & Renko, M. (2017). Linguistic style and crowdfunding success among social and commercial entrepreneurs. <i>Journal of Business Venturing</i> , 32(2), 215-236.	24	128
Allison, T. H., Davis, B. C., Webb, J. W., & Short, J. C. (2017). Persuasion in crowdfunding: An elaboration likelihood model of crowdfunding performance. <i>Journal of Business Venturing</i> , 32(6), 707-725.	22	131
Ahlers, G. K., Cumming, D., Günther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. <i>Entrepreneurship theory and practice</i> , 39(4), 955-980.	17	72
Bi, S., Liu, Z., & Usman, K. (2017). The influence of online information on investing decisions of reward-based crowdfunding. <i>Journal of Business Research</i> , 71, 10-18.	15	82
Anglin, A. H., Short, J. C., Drover, W., Stevenson, R. M., McKenny, A. F., & Allison, T. H. (2018). The power of positivity? The influence of positive psychological capital language on crowdfunding performance. <i>Journal of Business Venturing</i> , 33(4), 470-492.	14	88
Courtney, C., Dutta, S., & Li, Y. (2017). Resolving information asymmetry: Signaling, endorsement, and crowdfunding success. <i>Entrepreneurship Theory and Practice</i> , 41(2), 265-290.	14	78
Burtch, G., Ghose, A., & Wattal, S. (2013). An empirical examination of the antecedents and consequences of contribution patterns in crowd-funded markets. <i>Information Systems Research</i> , 24(3), 499-519.	14	59
Xiang, D., Zhang, L., Tao, Q., Wang, Y., & Ma, S. (2019). Informational or emotional appeals in crowdfunding message strategy: An empirical investigation of backers' support decisions. <i>Journal of the Academy of Marketing Science</i> , 47, 1046-1063.	13	86

Source: Own work.

## Appendix 5: Top 12 productive sources

Source title	No. of documents	No. of forward citations	No. of citations per document	Link strength
Journal of Business Research	7	147	21	1044
Journal of Business Venturing	6	605	101	1202
New Media and Society	6	271	45	30
Journal of Small Business Management	6	38	6	1119
Journal of Medical Internet Research	5	66	13	57
Small Business Economics	4	113	28	706
International Journal of Entrepreneurial Behavior and Research	4	35	9	637
Information Technology and People	4	14	4	371
Entrepreneurship Theory and Practice	3	501	167	666
Electronic Commerce Research and Applications	3	208	69	584
Internet Research	3	177	59	671
Journal of Academy of Marketing Science	3	89	30	529

*Source: Own work, Scopus (2013 – 2023).*

## CHAPTER 4 APPENDICES

### Appendix 6: Harman's single-factor test

Total Variance Explained						
Component	Initial eigenvalue			Extraction sum of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	6.300	45.003	45.003	6.300	45.003	45.003
2	2.560	18.286	63.289			
3	1.002	7.158	70.447			
4	0.665	4.749	75.196			
5	0.608	4.341	79.537			
6	0.517	3.693	83.230			
7	0.433	3.093	86.323			
8	0.382	2.726	89.049			
9	0.370	2.643	91.692			
10	0.316	2.259	93.952			
11	0.268	1.916	95.868			
12	0.224	1.597	97.465			
13	0.198	1.411	98.876			
14	0.157	1.124	100.000			

*Note: Extraction method – Principal component analysis*

**Appendix 7: Scale reliability statistics (Displayed Passion — DP)**

Reliability coefficient ( $\alpha$ )	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient $\alpha$	0.837	0.016	0.805	0.866

Item	Estimate	Lower 95% CI	Upper 95% CI
DP_Item 1	0.821	0.781	0.853
DP_Item 2	0.798	0.754	0.836
DP_Item 3	0.810	0.771	0.843
DP_Item 4	0.799	0.756	0.836
DP_Item 5	0.814	0.778	0.845
DP_Item 6	0.822	0.788	0.853

*Source: Own work.*

**Appendix 8: Scale reliability statistics (Product Usefulness — PU)**

Reliability coefficient ( $\alpha$ )	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient $\alpha$	0.929	0.006	0.916	0.939

Item	Estimate	Lower 95% CI	Upper 95% CI
PU_Item 1	0.914	0.900	0.928
PU_Item 2	0.926	0.914	0.939
PU_Item 3	0.912	0.898	0.926
PU_Item 4	0.932	0.922	0.942
PU_Item 5	0.917	0.904	0.931
PU_Item 6	0.912	0.897	0.927
PU_Item 7	0.919	0.906	0.932
PU_Item 8	0.916	0.902	0.930

*Source: Own work.*

## Appendix 9: Description of measurement items

Construct	Scale source	Item description	Measurement scale
Displayed passion	X.-P. Chen et al. (2009)	<p>To rate participants' agreement with the following statements regarding the entrepreneur's body language and pitch in the video:</p> <ul style="list-style-type: none"> <li>• The presenter/entrepreneur has energetic body movements</li> <li>• The presenter uses appropriate body language (e.g., eye contact, hand movements) to display emotions</li> <li>• The presenter has assertive body language</li> <li>• The presenter has a lot of rich body gestures</li> <li>• The presenter talked with varied tone and pitch</li> <li>• The presenter's face lit up while talking about the product/idea</li> <li>• The presenter demonstrates enthusiasm and excitement while discussing the product.</li> <li>• The presenter speaks with confidence about the potential of the product.</li> <li>• The presenter shows genuine interest in the product throughout the presentation.</li> </ul>	5–point likert scale (1 = strongly disagree, 5 = strongly agree)
Product usefulness	F.D. Davis (1989)	<p>To rate the extent to which the participant felt the product in the video appeared to:</p> <ul style="list-style-type: none"> <li>• Save time</li> <li>• Accomplish more work</li> <li>• Increase the quality of work</li> <li>• Make the job easier</li> <li>• Provide control over work</li> <li>• Cut unproductive time</li> <li>• Be effective</li> <li>• Address your needs</li> </ul>	5–point likert scale (1 = strongly disagree, 5 = strongly agree)
Funding decision	Baron et al. (2006); Ciuchta et al. (2018)	<p>Are you willing to invest?</p> <p>If yes, how much money are you willing to invest in this campaign? (In US Dollars \$)</p>	<p>Yes/No</p> <ul style="list-style-type: none"> <li>• Less than \$20</li> <li>• \$20–\$40</li> <li>• \$40–\$60</li> <li>• \$60–\$80</li> <li>• \$80–\$100</li> <li>• More than \$100</li> </ul>

Source: Own work.

*Note:* The following two additional questions were asked, but their responses were not included in the analysis.

“In order to know your affective response post video, we request you to rate the following”:

- Would you recommend this product to a friend or colleague?
- Would you share this campaign on social media?

## Appendix 10: Detailed analysis based on control variables

### a) Participants’ age

In *Appendix 10A*, it is shown that older participants rate passion higher than younger ones, with the lowest mean passion score of 3.723 (SD = 0.975) for those up to 20 years of age, and a peak of 4.418 (SD = 0.787) for those 61 years old and above. This suggests older individuals may value emotional expression more, viewing it as a sign of credibility. The coefficient of variation (CV) shows more consistency among older participants, particularly in the 41 – 60 age group (CV = 0.162).

### Appendix 10A: Descriptive statistics (n = 363) based on participants’ age

Age	N	Variable	M	SD	Std. Error	Coefficient of variation (CV)
Up to 20 years of age	13	DP	3.723	0.975	0.270	0.262
		PU	2.923	0.885	0.245	0.303
21 – 40 years of age	258	DP	4.131	0.784	0.049	0.190
		PU	3.050	1.017	0.063	0.334
41 – 60 years of age	81	DP	4.249	0.687	0.076	0.162
		PU	2.995	1.069	0.119	0.357
61 years of age or above	11	DP	4.418	0.787	0.237	0.178
		PU	3.034	0.839	0.253	0.276

*Source: Own work.*

Conversely, perceptions of product usefulness show less variation across age groups, with mean scores remaining relatively stable between 2.923 and 3.050. The highest product usefulness rating is observed in the 21 – 40 years of age group ( $M = 3.050$ ,  $SD = 1.017$ ), while the lowest is in the youngest group ( $M = 2.923$ ,  $SD = 0.885$ ). The coefficient of variation (CV) for product usefulness is higher than for displayed passion across all age groups, indicating more variability in responses. This aligns with prior literature suggesting that product usefulness is often perceived to be lower among older adults due to reduced technology exposure, heightened risk aversion, and potential usability issues (Rogers, 2003; Venkatesh & Davis, 2000).

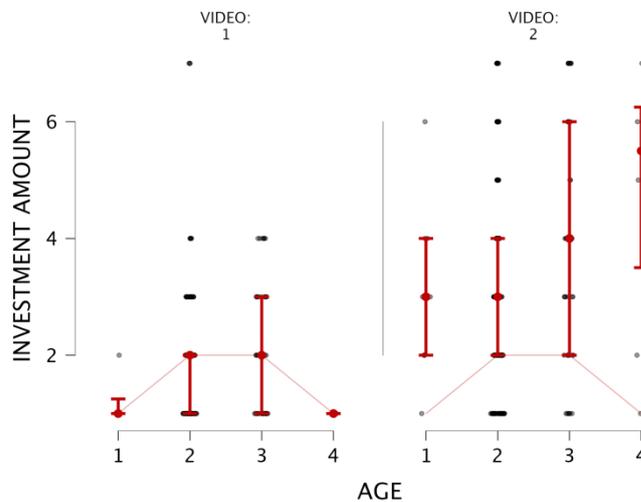
#### Appendix 10B: Investment distribution by age group (across two videos)

Video	Age	INVESTMENT						
		Do not want to invest any amount	Less than \$20	\$20–\$40	\$40–\$60	\$60–\$80	\$80–\$100	More than \$100
Video 1	up to 20 years of age	3	1	0	0	0	0	0
	21 – 40 years of age	58	30	21	5	0	0	3
	41 – 60 years of age	19	8	9	6	0	0	0
	61 years of age or above	3	0	0	0	0	0	0
Video 2	up to 20 years of age	1	3	2	2	0	1	0
	21 – 40 years of age	33	32	29	14	11	13	9
	41 – 60 years of age	6	7	6	7	2	4	7
	61 years of age or above	1	1	0	1	1	2	2

Source: Own work.

*Appendix 10B* with flexplot in *Figure A1* compares the investment amounts across age groups (up to 20 years, 21 – 40 years, 41 – 60 years, and 61 years of age or above) for two groups based on the videos they watched (Video 1 and Video 2). For Video 1, the majority of younger participants (up to 20 years of age) did not wish to invest any amount, with only 3 participants choosing this option. The 21 – 40 years age group also showed a higher number of participants who did not wish to invest any amount or chose smaller investment ranges (less than \$20). On the contrary, Video 2 had a more balanced distribution across age groups, with the 21 – 40 years of age group again showing the largest number of participants across all investment ranges, particularly in the \$20 – \$40 and \$40 – \$60 ranges. This suggests that the younger demographic (21 – 40 years) tends to have a higher willingness to invest, with an increase in the diversity of investment amounts in Video 2 compared to Video 1, especially in the higher investment ranges.

*Figure A1: Flexplot*



*Source: JASP analysis.*

#### b) Participants' gender

A series of independent t-tests were conducted to examine significant differences in variables based on participants' gender. The sample consisted of 183 males (50.4%) and 179 females (49.3%). The results of the independent t-tests for the study variables based on gender are presented in *Appendix 10C*.

**Appendix 10C: Mean differences in values based on participants' gender (n = 363)**

<b>Variable</b>	<b>Gender</b>	<b>M</b>	<b>SD</b>	<b>t-value</b>	<b>df</b>	<b>Sig. (2-tailed)</b>
<b>Displayed passion</b>	Male	3.98	0.81	- 4.40	360.00	***
	Female	4.33	0.70			
<b>Product usefulness</b>	Male	2.80	0.98	- 4.50	360.00	***
	Female	3.27	1.00			
<b>Funding decision</b>	Male	2.73	1.18	- 4.74	360.00	***
	Female	3.32	1.18			

\*\*\*  $p$ -value  $\leq 0.001$

Source: Own work.

The comparison between genders indicates that females perceive displayed passion and product usefulness more strongly than males ( $\beta = 0.280$ ,  $p = 0.004$ ) and are more likely to fund projects ( $t(360) = - 4.74$ ,  $p < .001$ ). *Appendix 10D* presents this, showing a higher proportion of males (74) chose not to invest compared to females (50), while females were more likely to invest in mid-range tiers (\$20 – \$60). At higher investment levels (\$80 – \$100+), contributions were similar. These results support the idea that females are more responsive to relational and emotional cues (Meyers–Levy & Maheswaran, 1991). Overall, females perceive displayed passion and product usefulness more strongly than males ( $\beta = 0.280$ ,  $p = 0.004$ ) and are more inclined to fund projects ( $t(360) = - 4.74$ ,  $p < .001$ ). *Appendix 10D* shows that more males (74) chose not to invest compared to females (50), while females were more likely to invest in mid-tier ranges (\$20 – \$60); at higher levels, contributions were similar. These findings support evidence that females are more attuned to relational and emotional cues (Meyers–Levy & Maheswaran, 1991).

## Appendix 10D: Investment distribution by gender

Gender	INVESTMENT						
	Do not want to invest any amount	Less than \$20	\$20–\$40	\$40–\$60	\$60–\$80	\$80–\$100	More than \$100
Male	74	39	30	12	7	10	11
Female	50	43	37	23	7	10	9
Prefer not to mention	0	0	0	0	0	0	1
Total	124	82	67	35	14	20	21

*Source: Own work.*

### c) Participants' education

We also found a slightly significant negative relationship between the education level of backers and product usefulness ( $\beta = -0.124$ ,  $p = 0.044$ ), indicating that a higher education level may slightly reduce the perceived usefulness of the product.

*Appendix 10E* shows the distribution of investment amounts across different education levels. Participants with an elementary or high school education were more likely to either not invest ( $n = 23$ ) or contribute smaller amounts, such as less than \$20 ( $n = 23$ ) or \$20 – \$40 ( $n = 14$ ). Those with a bachelor's degree showed a more diverse distribution, with a significant number choosing not to invest ( $n = 62$ ), but also a higher number contributing between \$20 – \$40 ( $n = 29$ ) and even more than \$100 ( $n = 13$ ). Similarly, participants with a master's degree followed a comparable trend, although with slightly fewer individuals in the higher investment categories, such as \$40 – \$60 ( $n = 9$ ) and more than \$100 ( $n = 5$ ). Interestingly, individuals with a doctorate (PhD) were the least likely to invest overall, with most contributions falling in the lower ranges, suggesting that higher education levels may be associated with more selective or cautious investment behavior. Prior research suggests that highly educated consumers tend to scrutinize products more critically because of their advanced analytical skills and awareness of alternatives (Agarwal & Prasad, 1999). They often demand sophisticated features and evidence-based benefits, leading to skepticism if a product does not meet their elevated expectations (Parasuraman & Colby, 2015).

### Appendix 10E: Investment distribution by level of education

Education	INVESTMENT						
	Do not want to invest any amount	Less than \$20	\$20–\$40	\$40–\$60	\$60–\$80	\$80–\$100	More than \$100
Elementary or high school or equivalent	23	23	14	4	3	7	2
Bachelor's degree	62	37	29	21	8	8	13
Master's degree	36	19	24	9	1	4	5
Doctorate (PhD)	3	3	0	1	2	1	1

*Source: Own work.*

## **CHAPTER 5 APPENDICES**

### **Appendix 11: Interview protocol**

#### **Introduction**

Dear participant,

I am a doctoral candidate, conducting a research study aimed at exploring the emotional changes that funders/backers (who contribute or invest in crowdfunding campaigns) experience during their engagement with crowdfunding campaigns, from initial interaction to the decision to contribute. Your participation in this study would provide valuable insights into this area of crowdfunding research.

#### **Purpose of the study**

The objective of this study is to gain a deeper understanding of the emotional transitions backers undergo when engaging with crowdfunding campaigns, thereby contributing to the academic knowledge of behavioral dynamics in this context.

#### **What participation involves**

Your involvement in this study will include completing a structured written online interview, which is anticipated to require approximately 30–40 minutes.

#### **Confidentiality and data protection**

Your responses will be treated with strict confidentiality and used solely for academic purposes. Participation is voluntary, and you may withdraw at any stage without providing a reason.

- All data collected will be anonymized to protect your identity.
- The data will be securely stored and accessible only to the research team.
- Findings may be included in academic publications, but no personally identifiable information will be disclosed.

#### **Potential benefits and risks**

Your participation will contribute to advancing academic understanding of crowdfunding dynamics and decision-making processes. The study poses no known risks to participants.

## **Participant's rights**

You have the right to:

1. Withdraw from the study at any time without penalty.
2. Request that your data be excluded from analysis should you decide to withdraw.
3. Access a summary of the research findings upon request.

## **Consent statement**

By participating in this study, you confirm that:

1. You have read and understood the provided information.
2. You voluntarily agree to participate in this research.
3. You understand your rights, including the right to withdraw at any time.

## **Researcher's information**

Saima Hafeez

Email: sh9852@student.uni-lj.si

Should you have any questions or require further information, please do not hesitate to contact me.

Thank you for considering this invitation to participate in our research. Your insights are highly valued and will significantly contribute to the study's outcomes.

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## Appendix 12: Questionnaire

The purpose of this questionnaire is to gain a deeper understanding of the experiences, emotions, and motivations of individuals who support crowdfunding campaigns. Your perspective as a backer is vital for exploring what inspires people to contribute and how elements (such as storytelling, product appeal, the creator's expressed emotions, and shifts in backers' feelings, etc.) influence these decisions.

As you respond, we encourage you to reflect on your most memorable and recent crowdfunding experiences. There are no right or wrong answers; we are interested in your personal and genuine thoughts, feelings, and experiences. Feel free to recall specific campaigns, moments, or emotions that stood out to you, and to share openly about how you engaged with the project and the creators.

Your honest reflections will contribute to a deeper understanding of backer behavior and help improve the design and experience of crowdfunding campaigns in the future.

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### SECTION 1: Introduction, background & engagement

Q1. Can you tell me a bit about yourself?

*(Open-ended response: Occupation, familiarity with crowdfunding)*

Q2. a) How did you first learn about the crowdfunding campaign/project you supported?

- Crowdfunding Platform (Kickstarter, Indiegogo, etc.)
- Social media (LinkedIn, Facebook, Twitter, etc.)
- Word of mouth
- Other

b) How many projects have you supported so far? *(Open-ended response)*

c) Which type of projects do you typically support?

- Reward-based
- Equity-based
- Donation-based
- Peer-to-peer

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## **SECTION 2: Emotional experience**

Q3. Do you remember how you felt when you first saw the campaign video or visuals?

*(Open-ended response: intrigued, inspired, skeptical, excited, etc.)*

Q4. What specific aspects of the campaign caught your attention and impressed you?

*(Examples: storytelling, visuals, product, creator's passion, social proof, pledged amount, etc.)*

Q5. What aspects of a crowdfunding project do you consider most important before deciding to back it?

*(Examples: creator credibility, project description, rewards, social proof, etc.)*

Q6. How important is the emotional appeal of a project in your decision to back it?

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## **SECTION 3: Decision to support**

Q7. Can you recall a project that particularly resonated with you emotionally?

Q8. What factors played a key role in your decision to contribute to the campaign?

- Logical (e.g., rewards, product, goal amount, etc.)
- Emotional (e.g., empathy, inspiration, etc.)

Q9. In what ways did your emotions shape your decision to contribute to the campaign?

*(Examples: empathy, excitement, trust, passion, etc.)*

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## **SECTION 4: Post-contribution reflections**

Q10. Did you feel a connection with the creators or the story behind the campaign?

*(If yes, how did this connection influence your decision?)*

Q11. Did you experience any doubts or hesitation before deciding to support?

*(If yes, what helped you overcome them?)*

Q12. How did you feel immediately after making your contribution?

*(Examples: pride, satisfaction, anticipation, anxiety, etc.)*

Q13. Did your emotions evolve as the campaign progressed?

*(Did you feel differently during the initial discovery, exploration, and post-contribution phases?)*

Q14. Looking back, how do you feel about your decision to contribute?

*(Would you describe it as a positive or negative experience overall?)*

Q15. a) How do you evaluate your overall emotional experience associated with backing a crowdfunding project?

Scale:

1 = Very Negative (e.g., regret, disappointment)

2 = Somewhat Negative (e.g., skepticism, mild frustration)

3 = Neutral (e.g., no significant emotional impact)

4 = Somewhat Positive (e.g., satisfaction, mild excitement)

5 = Very Positive (e.g., joy, pride, strong excitement)

b) Can you briefly explain why you selected this rating?

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## **SECTION 5: Future intentions and recommendations**

Q16. How do you see emotions, particularly those that build a connection between campaign creators and backers, contributing to the overall success of crowdfunding campaigns?

Q17. What do you think crowdfunding campaigns could do better to connect emotionally with backers?

Q18. Do you plan to continue supporting crowdfunding projects in the future?

*(What would encourage or discourage you from backing future projects?)*

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