FinTech

MDPI

Article

Unlocking Crowdfunding Success: A Configurational Analysis of Macro-Level Drivers in FinTech Ecosystems

Javier Ramos-Díaz and Carlos Chengda Xiangyang *

Faculty of Legal and Economy Sciences, Camilo José Cela University, 28692 Madrid, Spain; luisjavier.ramos@ucjc.edu

* Correspondence: ccarlos.xiang@alumno.ucjc.edu or xiangcc10@163.com

Abstract

This study investigates the critical macro-level conditions that determine the success of crowdfunding platforms, a pivotal segment of the FinTech landscape. We propose a novel configurational theory to decipher how combinations of institutional, economic, and social factors drive platform performance across diverse European economies. Utilizing fuzzy-Set Qualitative Comparative Analysis (fsQCA), we move beyond linear models to reveal that high platform success is not a product of any single factor but emerges from specific, equifinal configurations. Our findings demonstrate that robust crowdfunding ecosystems can thrive even in contexts with less advanced technological infrastructure, provided there is a synergistic interplay of platform governance, institutional trust, regulatory quality, and economic competitiveness. This research contributes to the FinTech literature by reframing crowdfunding success as a complex, context-dependent phenomenon, offering valuable insights for platform developers, regulators, and investors seeking to foster vibrant digital financing environments.

Keywords: crowdfunding platforms; FinTech Ecosystems; configurational theory; platform governance; fsQCA; macro-institutional drivers

JEL Classification: G23; O33; G18; O52

check for updates

Academic Editor: David (Yulong) Liu

Received: 29 October 2025
Revised: 1 December 2025
Accepted: 4 December 2025
Published: 7 December 2025

Citation: Ramos-Díaz, J.; Xiangyang, C.C. Unlocking Crowdfunding Success: A Configurational Analysis of Macro-Level Drivers in FinTech Ecosystems. *FinTech* **2025**, *4*, 70. https://doi.org/10.3390/fintech4040070

Copyright: © 2025 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

Digital platforms have reshaped the global economy by enabling new forms of coordination, exchange, and innovation that transcend traditional organizational and sectoral boundaries. These platforms serve as socio-technical infrastructures that mediate value creation and distribution across multi-sided networks, facilitating interactions among users, producers, and complementors through digitally enabled mechanisms [1,2]. As a subset of this phenomenon, crowdfunding platforms have emerged as an increasingly influential model of financial intermediation, allowing entrepreneurs, civil society actors, and small businesses to access funding directly from distributed user bases, often bypassing conventional financial institutions and regulations [3,4].

The growing literature on digital platforms within the Information Systems (IS) field has highlighted key attributes such as modularity, scalability, openness, and the orchestration of ecosystems [5,6]. However, platform success has often been conceptualized through a lens that privileges internal design, technological affordances, and user engagement strategies, while underestimating the role of external macro-level conditions. Most studies in the IS tradition assume that digital platforms flourish in environments characterized

by high technological penetration, advanced digital infrastructure, and high-income user populations [7]. Yet, empirical evidence from crowdfunding ecosystems suggests a more complex picture, where platform success varies substantially across countries with similar levels of digitalization, and where less developed economies can sometimes outperform more affluent ones in platform fundraising effectiveness [8,9].

This paradox invites a deeper theoretical reflection on the determinants of platform performance. While the modular architecture and governance of platforms have been extensively studied, there remains a critical need to integrate macro-institutional, economic, and social dimensions into platform theory. Crowdfunding platforms, in particular, are not only digital systems but also embedded financial ecosystems whose success depends on broader societal conditions such as trust, legal clarity, ease of doing business, and national competitiveness. These platforms operate at the intersection of financial innovation, digital infrastructure, and institutional legitimacy, making them ideal candidates for a theoretical reframing that moves beyond techno-determinism and embraces contextual heterogeneity [10].

To address these theoretical and empirical gaps, this study introduces the Critical Configurational Theory of Digital Crowdfunding Platforms, a novel approach that conceptualizes platform success not as the result of isolated or linear causal factors, but as the outcome of specific configurations of macro-conditions. Drawing on the configurational tradition in Information Systems research [11] and employing fuzzy-Set Qualitative Comparative Analysis (fsQCA), we explore how different combinations of economic development, digital capacity, institutional quality, social trust, and regulatory environments contribute to platform fundraising success across 25 European countries.

Our approach is grounded in the view that digital platforms are not only technical artifacts but also institutional arrangements embedded in complex social structures [12]. Platforms interact with and are shaped by the environments in which they are deployed, which include legal systems, cultural norms, competitive dynamics, and user trust. In the case of crowdfunding, the ability of platforms to mobilize financial resources depends not only on the presence of digital infrastructure but also on the legitimacy of the platform model, the regulatory space in which it operates, and the willingness of users to engage in non-traditional financial transactions. Social trust, in particular, emerges as a key enabler in contexts where formal mechanisms of risk management are underdeveloped, allowing platforms to function as trust-mediated financial technologies [13].

The contribution of this study is fourfold. First, it proposes a new theoretical lens that reframes crowdfunding platforms as configurational socio-technical systems, whose performance cannot be explained through single-variable models. Second, it demonstrates empirically that platform success can emerge from multiple, context-specific combinations of macro-level conditions, some of which challenge conventional wisdom regarding the primacy of digital development or GDP per capita. Third, it enriches the literature on digital platform ecosystems by integrating institutional theory and social capital theory into the analysis of platform viability and scaling. Fourth, it offers actionable insights for policymakers, regulators, and platform designers on how to foster inclusive, adaptive, and sustainable crowdfunding environments across diverse economic and institutional settings.

By articulating a theory that foregrounds configurational causality and institutional embeddedness, this article responds to recent calls in the IS literature to move beyond narrow models and develop more holistic understandings of digital innovation and its socio-economic consequences [14]. The analysis presented here invites to reconsider assumptions about the universality of IS models and to engage more deeply with the structural conditions that enable or inhibit digital transformation in specific contexts. In doing so, it

also contributes to a more plural and globally relevant research agenda in the study of digital platforms.

The remainder of the article is structured as follows. The next section presents the theoretical background, situating the study within key debates in platform theory, institutional theory, and IS configurational research. This is followed by a detailed explanation of the fsQCA methodology used to identify causal configurations. The results section reports the empirical findings, highlighting the two main macro-configuration pathways associated with crowdfunding success. The discussion interprets these results in light of platform theory and IS scholarship, and the conclusion outlines future research directions and policy implications.

2. Theoretical Framework: Information Systems and the Configurational Understanding of Digital Crowdfunding Platforms

Despite the extensive literature on digital platforms in the Information Systems field, there remains a notable gap in understanding how the success of platform-based models—such as crowdfunding—emerges from cross-national, macro-institutional differences. Much of the current research in IS has focused on platform architecture, user engagement, governance mechanisms, and innovation dynamics within individual platforms or national contexts. Recent studies reinforce this view by showing that platform performance is shaped not only by technical design, but also by institutional, social, and behavioral dynamics. For example, Liu et al. demonstrate that the effectiveness of digital crowdfunding platforms in SME financing depends heavily on the institutional and financial environment surrounding the platform, rather than on platform functionalities alone [15].

However, few studies have systematically explored how institutional configurations at the country level enable or constrain platform development, particularly in relation to alternative finance. By examining platform ecosystems across diverse European environments, this study addresses that gap and contributes to a more context-sensitive and globally relevant understanding of platform viability.

In addition, while configurational approaches such as fuzzy-set Qualitative Comparative Analysis (fsQCA) are gaining traction in organizational and management research [16], their application in the Information Systems discipline remains limited—especially in the study of platform-model ecosystems and digital infrastructures for financial services. This study responds to calls for methodological pluralism in IS by demonstrating how fsQCA can reveal multiple pathways to platform success, accounting for institutional diversity and systemic interaction effects. In doing so, it offers both a theoretical and methodological contribution to the emerging body of work on digital platform ecosystems.

At the core of this IS literature is the conceptualization of platform models as socio-technical infrastructures that mediate interactions between multiple actors and bring about value creation across networks [1,2]. This perspective has helped explain the success of platform-based firms in sectors such as retail, transportation, communication, and finance. Yet, empirical studies are increasingly showing that the performance of crowdfunding platforms is strongly influenced by trust formation, institutional credibility, and user behavioral expectations, as evidenced by Zhang et al., who show that digitally enabled trust signals—such as blockchain traceability labels—affect repurchase intention and campaign outcomes more than technical platform features alone [17].

However, much of the IS research on digital platforms has focused on intra-platform dynamics, emphasizing architecture, modularity, and governance mechanisms [5,6], often underestimating the role of contextual, institutional, and macroeconomic conditions in shaping platform outcomes. Platforms have typically been treated as self-contained digital artifacts operating in relatively frictionless environments. As such, platform success is often

attributed to design choices, network effects, or user interface strategies, while external variables—such as regulatory stability, institutional quality, or social trust—are largely relegated to the background.

Yet, recent research in IS has begun to question these assumptions, calling for more attention to the embeddedness of digital platforms in broader societal and institutional contexts. Digital infrastructures, including platforms, are best understood as evolving socio-technical assemblages that interact dynamically with their environment. The concept of configurations helps articulate the interconnectedness of digital innovation with institutional, practical, and regulatory dimensions. Within this perspective, a platform's success is understood not merely as a function of its technical features, but as being fundamentally tied to the specific arrangements of social, economic, and institutional structures in which it is embedded. For instance, Estrin et al. in their cross-country analysis of equity crowdfunding, show that substantial variation in platform performance derives from differences in national regulatory regimes, investor cultures, and market maturity—factors that lie entirely outside platform design [18].

This study builds on and extends this configurational turn in IS by proposing the Critical Configurational Theory of Alternative Finance, a framework that conceptualizes digital crowdfunding platforms as context-dependent digital ecosystems shaped by macro-level combinations of enabling and constraining conditions. In doing so, it addresses key gaps in platform theory by introducing a macro-institutional dimension to the analysis of platform success, grounded in the tradition of configurational analysis in organizational and IS research [11].

The novelty of this theory lies in its multi-theoretic synthesis, drawing from three key strands within the IS domain:

Platform Theory: While platforms are commonly analyzed in terms of their ability to generate network effects, manage multi-sided markets, and scale efficiently [1], the Critical Configurational Theory emphasizes that platform performance is not universal or linear, but contingent on institutional legitimacy, regulatory environments, and societal norms. For example, the same crowdfunding platform architecture may thrive in one country and fail in another, not because of internal design, but due to the absence of supportive macroconditions such as trust or business competitiveness.

Institutional Theory in IS: Drawing on the foundational work of Zucker [19] and later contributions from Avgerou [12] institutional theory in IS has highlighted how digital systems are shaped by and help reproduce institutional logics. The Critical Configurational Theory extends this insight by showing how different institutional configurations—for instance, combinations of ease of doing business, competitiveness, and legal clarity—enable or inhibit the expansion of crowdfunding platforms. In contexts of weak formal institutions, social trust emerges as a compensatory mechanism that supports platform functionality, aligning with prior findings on trust as an institutional substitute [13].

Configurational Thinking in IS Research: Traditional IS studies have often relied on variance-based methods (e.g., regression) that assume linear causality and isolated effects. In contrast, configurational approaches, such as Qualitative Comparative Analysis (QCA), offer a way to model equifinality, where different combinations of conditions can lead to the same outcome [11,16]. This study applies fsQCA to uncover multiple causal pathways to crowdfunding success across Europe, demonstrating that different macrocontexts give rise to distinct but functionally equivalent configurations. This insight contributes to the IS field by operationalizing the complexity of digital platform environments in a systematic and comparative way.

Therefore, the Critical Configurational Theory of Alternative Finance makes three specific theoretical contributions to the field of Information Systems. It reframes digital

crowdfunding platforms as macro-embedded, context-sensitive systems whose success is contingent on the interaction of multiple institutional and social dimensions, rather than on technical capacity alone.

It extends configurational theorizing in IS by empirically validating the existence of multiple sufficient configurations for platform success, and by offering a replicable methodology for analyzing such patterns across national contexts.

Similarly, it bridges IS with institutional and social capital theory, demonstrating how trust and regulatory quality co-determine the viability of digital innovation in finance, particularly in environments with limited technological resources.

By addressing these dimensions, this framework enriches the growing IS literature on digital platforms and contributes to a more comprehensive, institutionally grounded understanding of how platform ecosystems evolve, stabilize, and perform across diverse settings. In doing so, it also responds to ongoing debates about the global applicability of dominant platform models, and the need for context-sensitive theories capable of explaining the uneven geographies of digital transformation.

2.1. Explaining Crowdfunding Success: The Micro-Meso Perspective

Most research on crowdfunding success has focused primarily on microeconomic factors, analyzing why some projects succeed while others fail. Studies emphasize campaign characteristics, such as the quality and clarity of project offerings and the dynamics of investor engagement [20]. Campaign competitiveness also plays a complex role in crowdfunding outcomes. Research indicates that while competition can signal market viability and attract backers to high-quality projects, it can also create saturation that harms smaller initiatives. On one hand, highly competitive projects with strong signals of quality tend to attract more backers and achieve higher funding [21]. On the other hand, intense competition can reduce success rates for smaller projects by fragmenting the attention of a limited backer pool, a phenomenon observed in crowded platform ecosystems [22]. For this reason, some entrepreneurs strategically prefer smaller, niche platforms with less competition, where their projects can stand out more easily [4].

Other factors contributing to success include prior funding from institutional investors or government agencies, which can act as signals of credibility, thereby attracting further backing [23]. Geographic proximity between investors and project creators has also been shown to positively impact campaign outcomes; investors exhibit a local bias, with projects located closer to them more likely to succeed [8]. Social media presence and network connections are crucial as well: LinkedIn connections [20], social network information cascades [24], and regular campaign updates reduce information asymmetry, build trust, and increase visibility, all of which are critical to attracting and retaining backers [23].

Reciprocity plays an essential role in crowdfunding, where project creators who have previously backed other campaigns often experience greater support in return [25]. Social identity and resonance with a project's mission or values also significantly impact success, as backers tend to support projects that align with their social networks and beliefs [26]. Comprehensive communication that includes detailed text, images, and videos enhances transparency, which in turn positively affects campaign outcomes by reducing uncertainty and encouraging trust [27].

In addition to these established micro-level determinants, recent evidence shows that micro dynamics are embedded in broader institutional environments. Hoque provides a comprehensive empirical review showing that micro-level signals (credibility cues, team composition, communication quality) interact systematically with platform-level governance and national-level institutional conditions [28]. This reinforces the idea that micro

drivers of campaign success do not operate in isolation, but are shaped by—and sometimes contingent upon—the broader meso- and macro-level context.

Furthermore, research indicates that crowdfunding campaigns are affected by platform type and project-specific features. In real estate crowdfunding, for instance, projects offering shorter-term returns are particularly attractive to investors seeking quick gains, highlighting the importance of aligning project characteristics with investor preferences. The number of backers, average amount per backer, team size, and platform interactivity are all well-established factors that further influence success, emphasizing the multifaceted nature of crowdfunding dynamics [21].

Overall, while extensive literature has explored individual campaign factors, understanding the aggregate success of crowdfunding at the national level requires a broader perspective. Factors like regulatory support, ease of doing business, and competitive market conditions shape the crowdfunding ecosystem, suggesting that the success of crowdfunding depends not only on micro-level campaign attributes but also on the meso-level institutional and economic contexts that enable or constrain platform operations across different economies

2.2. Explaining Crowdfunding Success: The Macro Perspective

The literature on crowdfunding success from a macro perspective is limited. Most studies focus on micro-level variables, examining factors that influence individual campaign success rather than aggregate crowdfunding performance across economies. However, some research has highlighted the role of macroeconomic factors, such as national entrepreneurship rates and ease of doing business, in influencing the overall success of crowdfunding. For example, countries with easier business environments tend to have higher levels of entrepreneurial activity, which correlates with greater aggregate crowdfunding success [29].

Recent advances have reinforced the relevance of macro-institutional determinants for entrepreneurial financing. Mai finds that macro-level conditions such as economic stability, administrative efficiency, and institutional trust exert a measurable influence on national entrepreneurship rates—factors that in turn underpin entrepreneurial financing channels, including crowdfunding [30]. This supports the idea that the strength of a country's entrepreneurial ecosystem is intertwined with crowdfunding development.

Studies like Dushnitsky et al. have examined how macroeconomic factors affect the creation and closure of crowdfunding platforms rather than campaign success, finding that increased entrepreneurship boosts platform creation [31]. Other variables, like internet usage, legal strength, and GDP per capita, also impact platform growth but vary by platform type. For instance, a higher number of internet users significantly supports investment platforms, while stronger legal rights favor lending platforms.

Research on Central and Eastern Europe [32] shows that higher economic well-being and robust crowdfunding platforms contribute to alternative finance growth. Internet and ICT development are also essential for crowdfunding success, as high internet penetration and digital payments increase campaign success. In contrast, low digital infrastructure hinders crowdfunding growth [33].

Legislation plays a crucial role: clear, supportive regulation fosters crowdfunding, while overly strict laws deter participation [34]. For instance, proactive legislation correlates with increased per capita crowdfunding [35].

Moreover, Alsagr provides recent empirical evidence demonstrating that differences in national institutional environments—including regulatory quality, rule of law, corruption control, and government effectiveness—significantly shape crowdfunding outcomes for entrepreneurs [36]. His findings show that even campaigns with strong micro-level char-

acteristics perform differently depending on the macro-institutional landscape in which they are embedded. This reinforces the argument that crowdfunding success is highly context-dependent and cannot be fully understood without macro-level analysis.

Ramos, Cicchiello, and Messina conducted a pioneering study analyzing how macroeconomic variables influence aggregate crowdfunding success across 21 Ibero-American countries [37]. Using fuzzy-set Qualitative Comparative Analysis (QCA), they identified specific "paths" to success that vary according to a country's economic prosperity. Their research highlights that a country's level of well-being, often reflected in GDP per capita, plays a central role in determining the success of crowdfunding at the aggregate level. In wealthier economies, high GDP combined with favorable conditions for doing business and advanced digital infrastructure drives greater fundraising success in crowdfunding. Chile and Puerto Rico exemplify this path, where business-friendliness and digital connectivity, alongside competitiveness, create an optimal environment for crowdfunding.

In less prosperous economies, the pathway to success differs. Countries with lower GDP per capita but comparatively high levels of competitiveness and larger populations—such as Bolivia, Nicaragua, and El Salvador—achieve relative crowdfunding success despite limited digital and institutional support. The study's findings suggest that competitiveness can partially compensate for weaker digital infrastructure and regulatory barriers, allowing these economies to attract local investment for crowdfunding initiatives.

Additionally, they identify distinct regional "paths" within Ibero-America, reflecting specific combinations of conditions that support crowdfunding success. For example, the "Chilean path"—characterized by high ease of doing business, advanced digital infrastructure, and competitiveness—is typical of more prosperous economies like Chile, Puerto Rico, and Panama. In contrast, the "Mexican path" shows that countries like Mexico, Colombia, and Peru can achieve moderate success with strong competitiveness and business-friendly environments, despite lower digital development. Finally, the "Brazilian path," seen in Brazil, leverages high digital infrastructure and competitiveness, though hindered by regulatory challenges. These findings underscore the importance of tailored strategies that align with each country's unique economic and institutional landscape to maximize crowdfunding potential

2.3. Literature Gaps and Contribution

The above review shows that most research on crowdfunding success has adopted either a micro-level perspective, centered on project and campaign characteristics, or a meso-level focus on platform design and governance. Only a limited number of studies have analyzed aggregate crowdfunding performance across countries, and these typically rely on linear econometric models and treat macro-conditions as independent, additive drivers. Existing contributions rarely consider how institutional, economic, and social factors combine in non-linear and equifinal ways to enable or constrain crowdfunding ecosystems.

In addition, the Information Systems literature on digital platforms has tended to underplay cross-national heterogeneity and institutional embeddedness. Platform success is often associated with technological sophistication, network effects and user engagement strategies, while broader institutional and social structures are treated as a relatively homogeneous background. Recent work has begun to challenge this view by emphasizing digital infrastructures as evolving socio-technical assemblages and calling for context-sensitive theorizing, yet empirical applications in the domain of alternative finance remain scarce.

A second gap concerns methodology. While fuzzy-set Qualitative Comparative Analysis (fsQCA) has been increasingly used in management and organization studies, its application in IS research on platform ecosystems is still limited. There is a need for studies

that explicitly leverage configurational methods to model complex causality, asymmetric relationships, and multiple pathways to digital platform success.

Finally, most existing cross-country analyses of crowdfunding rely on a small set of macro-indicators and do not systematically examine the role of social trust as a macro-level enabler of digital financial innovation. The interplay between formal institutional quality, ease of doing business, competitiveness, digital capacity and generalized trust remains under-explored.

This study addresses these gaps by (i) conceptualizing digital crowdfunding platforms as macro-embedded, context-sensitive ecosystems; (ii) applying fsQCA to identify multiple sufficient configurations of macro-level conditions associated with high crowdfunding performance; (iii) explicitly incorporating social trust as a key institutional and societal variable; and (iv) triangulating configurational findings with econometric robustness checks. In doing so, it responds to recent calls for more pluralistic and context-aware theorizing of digital platforms and alternative finance.

3. Methodology

3.1. Research Design and Unit of Analysis

This study adopts a configurational methodological approach to investigate how macro-level institutional, economic and social factors interact to shape the success of digital crowdfunding platforms across different national contexts. We employ fuzzy-set Qualitative Comparative Analysis (fsQCA), a set-theoretic method well suited to modeling complex causality, equifinality and conjunctural explanations—key characteristics of socio-technical systems such as digital platforms [16,38].

The unit of analysis is the nation-state. Our focus is not on individual campaigns or platforms, but on national crowdfunding ecosystems, understood as the aggregate performance of platforms operating in a given country. While this choice entails a loss of micro-level granularity, it allows us to address the theoretical question of how macro-institutional configurations enable or constrain crowdfunding as a systemic phenomenon.

3.2. Data Sources and Sample

The empirical analysis covers European countries for which reliable and comparable data on crowdfunding and macroeconomic indicators are available (see Table 1). The sample comprises a total of 25 European Union (EU) and European Economic Area (EEA) countries, as reported in the European Crowdfunding Reports by the Cambridge Centre for Alternative Finance (CCAF) and related sources.

Table 1. Variables, Sources, and Operationalization.

Variable	Source	Operationalization
Crowdfunding per capita	CCAF	Log-transformed
GDP per capita	World Bank	PPP-adjusted
Digital readiness index	WEF	Scaled 0–1
Institutional quality	WGI	Average of governance indicators
Ease of Doing Business	World Bank	Rescaled 0–1; higher values indicate a more favorable regulatory and administrative environment

Note. CCAF = Cambridge Centre for Alternative Finance; WGI = Worldwide Governance Indicators; WEF = World Economic Forum. Source: Own elaboration.

Data on the total amount of funds raised through digital crowdfunding per country were obtained from Ziegler et al. [9] and subsequent updates by the CCAF and related

policy reports. A graphical overview of cross-country differences in crowdfunding volume is provided in Appendix A (Figure A1). Macroeconomic and institutional indicators were drawn from internationally recognized sources: GDP per capita from the World Bank's World Development Indicators; the Digital Society Index and related measures from Eurostat and specialized digital economy reports; the Global Competitiveness Index from the World Economic Forum; the Ease of Doing Business Index from the World Bank; and measures of generalized social trust from European Social Survey waves and Eurobarometer studies.

3.3. Variables and Outcome Operationalization

The outcome of interest is crowdfunding success at country level. In the main analysis we operationalize this as the amount of funds raised through digital crowdfunding platforms per capita. This indicator captures the relative intensity of crowdfunding activity in each national ecosystem. As a robustness check, we also compute an alternative outcome, namely crowdfunding volume as a share of GDP, to assess whether the configurational results are sensitive to the way success is measured. As shown in Table 2, descriptive statistics for the main variables indicate substantial cross-country variation in crowdfunding activity and related macro-institutional factors.

Table 2. Descriptive Statistics for Main Variables (25 European Countries).

Variable	Mean	SD	Min	Max
Crowdfunding per capita	28.725	35.114	0.081	125.020
GDP per capita (PPP, USD)	40,286.664	27,077.430	13,974.400	125,006.000
Ease of Doing Business (rank)	37.400	19.346	4.000	79.000
Digital Society Index	88.256	4.465	80.700	96.500
Global Competitiveness Index (rank)	29.240	16.394	1.000	53.000
Social Trust (index)	72.356	8.967	50.350	86.975

Source: Own elaboration.

The explanatory conditions include five macro-level variables that reflect theoretical arguments on platform governance, institutional quality, economic capacity, and social embeddedness:

- GDP per capita (GDP/pc): proxy for general economic capacity and the availability of surplus financial resources.
- Digital Society Index (Digital Society): captures technological maturity, including digital infrastructure, skills, and connectivity.
- Global Competitiveness Index (Competitiveness): measures institutional performance, innovation capacity, and market efficiency.
- Ease of Doing Business (Ease Doing Business): reflects regulatory simplicity and administrative efficiency, affecting the cost and feasibility of creating and operating digital platforms.
- Social Trust (Social Trust): indicates the level of generalized interpersonal trust, which can act as a substitute or complement for formal institutional safeguards.

These five conditions were selected through a two-step process. First, we assembled an extensive pool of macro-indicators related to digital capacity, institutional quality, competitiveness, innovation, entrepreneurship, and social capital from international databases, amounting to more than 300 candidate variables. Second, we reduced this high-dimensional space by combining theoretical reasoning with exploratory factor analysis and principal component analysis, grouping strongly correlated indicators into composite dimensions and retaining those that showed both conceptual relevance and empirical distinctiveness.

The five retained indices thus represent theoretically grounded, parsimonious aggregations of a broader institutional and economic landscape. A detailed presentation of the fuzzy-set calibration of the outcome and causal conditions used in the configurational analysis is provided in Appendix B (Table A1).

3.4. Data Pre-Processing and Calibration

Before performing the fsQCA, all variables were inspected for missing values, outliers and inconsistencies. When necessary, we winsorized extreme values at the 5th and 95th percentiles to avoid undue influence of outliers.

Following standard fsQCA procedures, the outcome and the five conditions were calibrated into fuzzy sets, with membership scores ranging from 0 (full non-membership) to 1 (full membership). For each variable, we specified three qualitative anchors: a threshold for full membership, a crossover point (point of maximum ambiguity), and a threshold for full non-membership. These anchors were defined using a combination of theoretical reasoning, empirical distribution (e.g., quartiles), and external benchmarks from prior crowdfunding and digital innovation research [38,39]. Table 3 reports the calibration thresholds and descriptive statistics.

Table 3. Calibration Thresholds and Descriptive Statistics (25 European Countries).

Variable	Mean	SD	Min	Max	Full Non-Membership (0.0)	Crossover (0.5)	Full Membership (1.0)
Crowdfunding per capita	28.725	35.114	0.081	125.020	6.038	14.220	32.108
GDP per capita (PPP, USD)	40,286.664	27,077.430	13,974.400	125,006.000	21,779.500	28,439.300	50,916.300
Ease of Doing Business (rank)	37.400	19.346	4.000	79.000	22.000	39.000	51.000
Digital Society Index	88.256	4.465	80.700	96.500	85.500	88.500	89.100
Global Competitiveness Index (rank)	29.240	16.394	1.000	53.000	15.000	29.000	42.000
Social Trust (index)	72.356	8.967	50.350	86.975	68.000	72.125	80.725

Note. Calibration thresholds correspond to empirical quartiles of each variable. Source: Own elaboration.

3.5. fsQCA Procedure

Once the sets were calibrated, we constructed a truth table that lists all logically possible combinations of conditions and indicates, for each country, its degree of membership in each configuration and in the outcome set. We then applied fsQCA to identify configurations of conditions that are sufficient for high crowdfunding success.

In line with best practices, we set the minimum frequency threshold at 1 case and the consistency threshold at 0.80. We analyzed both the complex and parsimonious solutions to distinguish core and peripheral conditions and to assess the robustness of the findings. Consistency and coverage scores were computed for each configuration as well as for the overall solution. Cases with membership greater than 0.5 in a given configuration were interpreted as empirical instances of that pathway.

3.6. Econometric Robustness Checks

To complement and triangulate the configurational analysis, we conducted a series of econometric robustness checks designed to assess the stability of the results under different assumptions and alternative specifications. We employed a set of robust methods that mitigate common issues in cross-sectional analyses, such as heteroskedasticity, sensitivity to outliers, and potential non-linear relationships among variables.

The starting point was an Ordinary Least Squares (OLS) regression model estimated on the logarithm of crowdfunding per capita. This model serves as the baseline specification and allows us to evaluate the average marginal relationships between macro-institutional conditions and crowdfunding performance. However, because OLS estimates can be affected by heteroskedasticity, skewed distributions, and influential observations in small samples, additional approaches were implemented to examine the stability of the coefficients.

Specifically, three complementary econometric techniques were applied:

Robust Linear Models (RLM) with Huber weights, which reduce the influence of outliers and yield more stable estimates when the classical assumptions of the linear model are not fully met.

Quantile Regression ($\tau = 0.5$), which examines effects at the median of the distribution, offering robustness to asymmetry and capturing relationships that may not emerge in mean-centered estimations.

Generalized Least Squares/Weighted Least Squares (GLS/WLS), used as a correction for heteroskedasticity by assigning weights inversely proportional to the estimated variance of the residuals, thereby improving the efficiency and reliability of the coefficients.

4. Results

The application of fuzzy-Set Qualitative Comparative Analysis (fsQCA) to the crowdfunding ecosystems of 25 European countries yields two main causal configurations that are consistently associated with high levels of fundraising success. These findings confirm the theoretical premise of the Critical Configurational Theory of Digital Crowdfunding Platforms: platform success is not the result of single dominant factors, but rather emerges from context-specific combinations of macro-level conditions. These results reveal the presence of equifinality, whereby different combinations of institutional, social, and economic factors lead to comparable outcomes in terms of digital platform performance.

The analysis identifies two sufficient configurations that account for a substantial share of the cases with high crowdfunding performance. Both configurations meet the standard fsQCA threshold for consistency, which indicates the degree to which cases exhibiting the configuration also display the outcome. The consistency scores for both configurations exceed 0.80, which is widely accepted as the benchmark for reliable sufficiency in fsQCA studies [38,39]. Definitions of consistency, coverage, and related QCA evaluation metrics are provided in Appendix C. These findings confirm that the identified combinations of conditions are not only theoretically plausible but also empirically robust. The sufficient causal configurations that lead to successful crowdfunding ecosystems in European countries are shown in Table 4.

For comparison, the results derived from the parsimonious solution are reported in Table 5.

The first configuration characterizes environments where digital crowdfunding platforms thrive in regulatory-friendly ecosystems, even in the absence of high economic development or advanced digital infrastructure. Countries such as Italy, Spain, Slovenia and Lithuania, exemplify this pattern. These countries exhibit high levels of ease of doing business and global competitiveness, combined with relatively low levels of GDP per capita and digital infrastructure development.

This counterintuitive result highlights that crowdfunding platforms can flourish even in economically constrained or technologically less advanced environments, provided that regulatory conditions are supportive and markets are sufficiently dynamic. In this configuration, institutional efficiency and competitive business climates appear to compensate for the lack of wealth and digital maturity. Countries such as Slovenia, Lithuania, Spain,

and Italy are illustrative examples of this configuration, where platforms achieve high fundraising success despite limitations in traditional enablers like GDP or digital readiness.

Table 4. Causal pathway to "success in crowdfunding" in 25 European economies (Complex Solution).

Complex Solution	Configuration 1	Configuration 2
GDP/pc	●	●
Digital Society	●	●
Competitiveness	ø	ø
Ease Doing business	ø	ø
Social Trust	●	ø
Consistency	0.817692	0.833333
Raw Coverage	0.471698	0.396226
Unique Coverage	0.094339	0.018867
	Solution Consistency	0.490566
	Solution Coverage	0.838712
	Consistency Cut-off	0.810811

Note: ● Condition (absent) ø Condition (present). Source: Own elaboration.

Table 5. Results of configurations based on a "Parsimonious" solution.

Complex Solution	Configuration 1
GDP/pc	●
Digital Society	●
Competitiveness	ø
Ease Doing business	ø
Social Trust	●
	0.818182
	0.509434
	0. 509434
Consistency	Solution Consistency
Raw Coverage	0. 509434
Unique Coverage	Solution Coverage
	0.818182
	Consistency Cut-off
	0.80

Note: ● Condition (absent) ø Condition (present). Source: Own elaboration.

The second configuration represents a trust-based platform ecosystem, where high levels of interpersonal trust, coupled with institutional ease of doing business and market competitiveness, generate fertile ground for platform emergence and adoption. This ecosystem is visible in countries such as Germany, the Netherlands, Sweden, and Denmark.

These countries show high levels of social trust, ease of doing business, and competitiveness, again without necessarily requiring advanced digital infrastructure. Here, the presence of social trust plays a pivotal role. In these cases, trust in institutions, other users, and the overall digital environment acts as an informal mechanism of coordination and legitimacy, reducing the perceived risks associated with online financial interactions.

Social trust thus becomes a critical enabling condition for the adoption and effectiveness of crowdfunding platforms, more expanded in Northern and Central European countries such, where social capital complements formal institutions to create stable and trustworthy digital environments.

These two dominant configurations explain nearly half of all cases of high crowdfunding performance observed in the sample. The overall solution consistency reaches 83.87 percent, and the combined solution coverage is 49.05 percent. This means that the proposed configurations not only reliably predict the outcome but also capture a substantial portion

of the empirical variation in the dataset. Furthermore, each configuration shows meaningful levels of unique coverage, which indicates that each explains cases not accounted for by the other. This confirms that the configurations are not merely overlapping versions of the same pattern, but rather represent distinct and independent pathways to success.

An important insight from the findings is the absence of high digital development as a necessary condition in either configuration. This challenges the conventional assumption that digital infrastructure is a prerequisite for platform success. Instead, the analysis demonstrates that crowdfunding platforms can achieve legitimacy, adoption, and impact even in contexts with moderate or underdeveloped technological environments, as long as other enabling conditions are in place. In both configurations, the presence of a conducive business environment and institutional quality appear to function as foundational pillars, while social trust either reinforces or partially substitutes other formal mechanisms.

Taken together, these results underscore the value of a configurational approach in understanding the dynamics of digital crowdfunding platforms. Rather than seeking universal predictors or relying on linear assumptions, this study reveals that success is the outcome of locally embedded structures that operate in synergy. The findings also offer empirical validation for the Critical Configurational Theory, which posits that platform ecosystems are shaped by systemic interactions among context-sensitive factors. This perspective shifts the focus of platform analysis from technology-centric models to broader institutional and societal configurations, offering a more nuanced understanding of digital platform viability across diverse environments.

First Configuration (Ease of Doing Business * ~Digital Society * Competitiveness * ~GDP Per Capita):

- Slovenia
- Lithuania
- Spain
- Italy
- Portugal

* Countries such as Greece, Bulgaria, Croatia, Romania, Hungary, Poland and Czech Republic do not fully meet the necessary and sufficient condition of the first configuration, although they are close to.

Second Configuration (Ease of Doing Business * ~Digital Society * Competitiveness * Social Trust):

- Germany
- France
- Sweden
- Netherlands
- Austria
- Denmark

* Belgium*, Ireland*, Finland*, Luxembourg*, Estonia*, Latvia* do not fully meet the necessary and sufficient condition of the first configuration, although they are close to.

The comparative analysis of European countries reveals a geographically patterned diversity in platform-enabling configurations. Southern European countries such as Italy, Spain, Portugal and to a lesser extent Greece, together with Slovenia tend to succeed through what can be termed institutionally driven ecosystems, where the strength of legal frameworks and business-friendly regulation compensates for lower levels of digital development and economic capital. These countries reflect a model where regulatory clarity and administrative efficiency lower the entry barriers for platform creation and participation.

In contrast, Northern and Central European countries such as Germany, Sweden, and the Netherlands display trust-driven ecosystems, where high levels of interpersonal and institutional trust underpin digital platform success. In these contexts, users are more willing to engage with crowdfunding platforms even in the absence of strong state regulation or sophisticated digital interfaces, because trust serves as a coordinating mechanism that reduces perceived risk.

This regional variation reinforces the argument that platform ecosystems are not uniformly structured, but differentially composed according to their institutional and social environments. The existence of multiple sufficient configurations highlights the relevance of context-sensitive platform strategies and cautions against universalist assumptions about how crowdfunding platforms (or digital platforms in general) should be designed and scaled.

Econometric Robustness Checks

As a starting point, we estimated an Ordinary Least Squares (OLS) regression model using the logarithm of crowdfunding per capita as the dependent variable (Table 6). The results show that Ease of Doing Business is the only statistically significant predictor (coef. = −0.0645; $p = 0.022$), indicating that a more favorable regulatory and administrative environment is associated with higher levels of crowdfunding activity. The remaining variables—GDP per capita, digital readiness, competitiveness, and social trust—display non-significant coefficients, suggesting that once institutional conditions are accounted for, their marginal effects on crowdfunding performance are weak or negligible. The model explains approximately 45% of the variance ($R^2 = 0.454$), which is reasonable for a cross-sectional sample of 25 countries.

Table 6. OLS Regression Results: Determinants of log Crowdfunding per capita.

Variable	Coef.	Std. Error	t	*p*-Value
const	14.4717	7.9953	1.810	0.086
gdp_pc	0.0000	0.0000	1.004	0.328
ease_doing_business	−0.0645	0.0258	−2.497	0.022
digital_society	−0.0775	0.0772	−1.003	0.328
competitiveness	−0.0104	0.0470	−0.220	0.828
social_trust	−0.0476	0.0584	−0.814	0.426

Note. Dependent variable: log(cf_pc). R-squared = 0.454. $N = 25$. Source: Own elaboration.

Taken together, the OLS results support the configurational interpretation by showing that crowdfunding success is not driven solely by economic capacity or digital development but is strongly linked to the institutional and regulatory environment. This initial model already points to the central role of business environment quality as a systematic determinant of crowdfunding performance in Europe.

To assess the robustness of these findings, we re-estimated the baseline specification using three alternative estimators: a Robust Linear Model (RLM) with Huber weights, a median Quantile Regression ($\tau = 0.5$), and a Weighted Least Squares (WLS) model as a GLS-type correction for heteroskedasticity. Detailed results for the Robust Linear Model (RLM) are reported in Table 7. Across all three models, the sign and significance of Ease of Doing Business remained highly consistent. In both the OLS and RLM estimations, a more favorable business environment (lower rank) is associated with higher crowdfunding per capita, and this effect becomes even stronger in the WLS specification.

Table 7. Robust Linear Model (RLM) Results: Determinants of log Crowdfunding per capita.

Variable	Coef.	Std. Error	t	*p*-Value
const	13.6521	8.0433	1.697	0.090
gdp_pc	0.0000	0.0000	0.813	0.416
ease_doing_business	−0.0601	0.0260	−2.313	0.021
digital_society	−0.0769	0.0777	−0.990	0.322
competitiveness	−0.0117	0.0473	−0.248	0.804
social_trust	−0.0359	0.0588	−0.611	0.541

Note. Robust Linear Model with Huber T norm. Dependent variable: log(cf_pc). Source: Own elaboration.

This convergence confirms the central role of regulatory and administrative quality as a structural driver of national crowdfunding performance.

In contrast, the coefficients for digital readiness, competitiveness, and social trust exhibit greater variability across estimators. Although the WLS model suggests statistically significant—or near-significant—associations for these variables, the signs and magnitudes of the coefficients are sensitive to the weighting scheme, pointing to potential non-linearities, multicollinearity, and small-sample limitations. The median quantile regression does not yield statistically significant effects but preserves the negative sign of Ease of Doing Business and the positive association of social trust with crowdfunding performance.

Overall, these robustness checks reinforce the conclusion that the quality of the business environment is the most consistent predictor across models, whereas the effects of digital readiness, competitiveness, and social trust appear to be context-dependent and less stable when evaluated through purely additive linear approaches.

All robustness models were estimated using the same five macro-level conditions included in the fsQCA analysis, allowing for a direct methodological comparison. In this respect, the results show a high degree of coherence with the configurations identified through the set-theoretic approach.

First, both the RLM and GLS/WLS models confirm the central importance of Ease of Doing Business as a significant determinant of crowdfunding per capita. In all specifications, a more favorable regulatory and administrative environment—reflected in lower values of the index—is consistently associated with higher levels of crowdfunding activity. This methodological convergence reinforces the fsQCA interpretation, where this condition appears as a core element in several sufficient configurations for high performance.

Second, the quantile regression estimated at the median does not produce statistically significant coefficients, a result that is expected given the small sample size. Nonetheless, the direction of the effect for Ease of Doing Business remains positive, and the model suggests a potential role for social trust in the central part of the distribution, in line with the "trust-driven" ecosystem pathways identified through fsQCA. The median quantile regression results are presented in Table 8.

Third, the GLS/WLS model reveals additional significant associations for competitiveness, digital readiness, and social trust, although the signs and magnitudes vary depending on the weighting scheme. This pattern suggests that the relationships between these institutional dimensions and crowdfunding performance may be non-linear, context-dependent, and heterogeneous across countries—precisely the kind of causal complexity that the configurational approach captures more effectively than traditional linear models. The GLS-type Weighted Least Squares estimates are shown in Table 9.

Taken together, these robust econometric analyses are not intended to replace the configurational approach; rather, they reinforce the overall credibility of the findings by demonstrating that the most stable institutional determinant—Ease of Doing Business—emerges as a key driver of crowdfunding performance across both fsQCA and alternative statistical models. At the same time, the variability observed in the coefficients for digital readiness, competitiveness,

and social trust supports the configurational conclusion that these conditions do not operate in isolation but instead function through specific combinations that enable multiple pathways to success within European crowdfunding ecosystems.

Table 8. Quantile Regression (Median, $\tau = 0.5$): Determinants of log Crowdfunding per capita.

Variable	Coef.	Std. Error	t	*p*-Value
const	−0.0010	11.8380	−0.000	1.000
gdp_pc	−0.0000	0.0000	−0.201	0.843
ease_doing_business	−0.0360	0.0383	−0.942	0.358
digital_society	−0.0567	0.1144	−0.496	0.625
competitiveness	0.0226	0.0697	0.324	0.750
social_trust	0.1177	0.0865	1.360	0.190

Note. Quantile regression at the 50th percentile (median). Dependent variable: log(cf_pc). Source: Own elaboration.

Table 9. Weighted Least Squares (GLS-type) Results: Determinants of log Crowdfunding per capita.

Variable	Coef.	Std. Error	t	*p*-Value
const	16.6115	2.0869	7.960	0.000
gdp_pc	0.0000	0.0000	1.366	0.188
ease_doing_business	−0.0590	0.0076	−7.783	0.000
digital_society	−0.0683	0.0156	−4.387	0.000
competitiveness	−0.0415	0.0217	−1.915	0.071
social_trust	−0.0744	0.0171	−4.349	0.000

Note. Weighted Least Squares with weights based on inverse squared OLS residuals. Dependent variable: log(cf_pc). Source: Own elaboration.

5. Discussion

The findings of this study offer strong empirical and theoretical support for the Critical Configurational Theory of Digital Crowdfunding Platforms and constitute a meaningful contribution to the Information Systems (IS) literature [40]. By identifying two distinct and sufficient macro-level configurations that explain high crowdfunding performance across European countries, this study demonstrates that platform success is not driven by universal enablers such as GDP or digital infrastructure, but rather emerges from specific interactions among institutional, social, and economic conditions.

From a theoretical standpoint, these results challenge dominant assumptions in platform studies and digital innovation research, which frequently associate platform scalability and performance with technological sophistication, digital penetration, or user-base size. The absence of digital development as a necessary condition in either configuration reinforces the idea that digital infrastructure, while important, is not sufficient for platform viability. This insight extends the arguments of Tilson et al. regarding the socio-institutional embeddedness of digital infrastructures by showing that platform ecosystems can adapt and thrive in low-tech environments when other macro-level conditions are favorable [41].

Furthermore, the identification of social trust as a key enabling factor in one configuration contributes to IS research on institutional embeddedness and the informal dimensions of digital platform governance. While trust has been widely recognized in micro-level studies of crowdfunding behavior [20], this study shows that it also operates as a macro-level institutional resource. High levels of generalized trust create an environment in which digital transactions can occur even without extensive formal safeguards or advanced technological intermediaries. In this sense, trust functions as a systemic asset that enhances the legitimacy, adoption, and operational feasibility of digital crowdfunding platforms, particularly in contexts where digital infrastructures or regulatory frameworks remain underdeveloped.

This finding resonates with broader discussions in IS and organizational theory about the substitutability between formal institutions and social capital [13,19]. In high-trust

societies, platforms benefit from lower transaction costs, greater willingness to participate, and stronger reputational mechanisms—all of which contribute to platform performance. Incorporating this variable into a configurational analysis further illustrates the value of bridging social capital theory with IS research, offering a framework to integrate informal and formal dimensions of digital ecosystem development.

The simultaneous presence of competitiveness and ease of doing business in both configurations underscores the importance of institutional and regulatory environments for platform success. These findings align with a growing body of IS literature emphasizing the role of external governance, legal clarity, and institutional support in digital innovation [10,34]. From this perspective, digital platforms are not isolated technical artifacts but are deeply shaped by the quality and functionality of their surrounding institutional context.

The contribution of the econometric robustness checks further strengthens this interpretation. The OLS, RLM, WLS and Quantile Regression models consistently demonstrate that Ease of Doing Business is the most stable and significant predictor of crowdfunding per capita, mirroring its status as a core condition in the fsQCA configurations. Conversely, the variability in coefficients for digital readiness, competitiveness, and social trust across econometric estimators reflects that these factors do not operate independently; rather, they exert influence only through specific, context-sensitive combinations. This methodological convergence between linear and configurational approaches reinforces the idea that digital platform performance is a causally complex phenomenon that cannot be fully captured through average marginal effects.

These findings have important practical implications for policymakers, platform designers, and digital innovation strategists. For countries seeking to develop robust crowdfunding ecosystems, the results suggest that investing exclusively in digital infrastructure may be insufficient. Instead, efforts should prioritize improving the regulatory environment, fostering competitive market conditions, and building or maintaining social trust. The recognition of multiple pathways to success provides strategic flexibility: some contexts may benefit more from formal institutional reforms, while others may leverage pre-existing social cohesion.

For platform designers and operators, the findings highlight the need to adapt platform strategies to national or regional configurations. Rather than assuming that a single platform model can be replicated across borders, the evidence indicates that local institutional, social, and competitive conditions shape adoption, scalability, and performance.

Finally, the study contributes methodologically by demonstrating the value of fsQCA in capturing complex causal patterns and advancing configurational theorizing within the IS field [42]. While IS research has traditionally relied on variance-based models, this study illustrates how set-theoretic approaches can uncover the non-linear, asymmetric, and conjunctural relationships that more accurately reflect the dynamics of digital transformation.

6. Conclusions

This study has introduced and empirically validated the Critical Configurational Theory of Digital Crowdfunding Platforms, offering a novel theoretical framework for understanding how platform success is shaped by the interplay of macro-institutional, social, and economic factors. Drawing on configurational logic and applying fsQCA to a comparative dataset of European economies, the analysis shows that high crowdfunding performance can be achieved through multiple and distinct combinations of enabling conditions. These findings challenge dominant techno-centric and linear assumptions about platform success and offer a more context-sensitive understanding of digital ecosystem viability.

The first major contribution of this study lies in its theoretical repositioning of crowdfunding platforms as embedded digital infrastructures whose performance is contingent

upon institutional environments. By integrating insights from platform theory, institutional theory, and social capital theory, the study advances a holistic perspective that bridges formal and informal enablers of digital innovation. The identification of trust, competitiveness, and regulatory quality as critical components—capable of compensating for limited digital infrastructure—underscores the importance of viewing platforms not merely as technical systems but as institutional arrangements embedded in broader societal logics.

Second, the study makes a methodological contribution by demonstrating the value of fsQCA for uncovering causal complexity and equifinality in digital environments. The ability to detect and interpret multiple sufficient pathways provides a richer and more realistic account of how platform ecosystems operate across heterogeneous contexts. The results also benefit from triangulation with econometric robustness checks (OLS, RLM, Quantile Regression, and WLS), which consistently confirm the centrality of Ease of Doing Business as a stable, statistically significant determinant of crowdfunding performance. This convergence strengthens the credibility of the configurational findings and shows how linear and set-theoretic methods can complement each other in IS research.

Third, the study offers important practical insights. For policymakers, the findings suggest that strengthening legal clarity, improving regulatory efficiency, fostering competitiveness, and cultivating social trust can directly enhance crowdfunding performance, even in the absence of advanced digital infrastructures. For platform developers, the results highlight the need to adapt platform architectures and engagement strategies to national institutional configurations rather than assuming universal scalability.

Despite its contributions, the study has several limitations that open avenues for future research. The outcome variable—crowdfunding funds raised per capita—constitutes an aggregate proxy that does not distinguish between platform types or internal performance metrics. Future work could integrate platform-level or campaign-level data to bridge macro- and micro-level dynamics. In addition, using countries as the main unit of analysis may obscure subnational variation related to regional regulation, financial systems, or cultural norms. Multi-level or subnational designs could provide a more fine-grained understanding. Finally, the sample is limited to European countries; extending the analysis to emerging economies or non-European regions would allow testing the external validity of the identified configurations.

In conclusion, the Critical Configurational Theory of Digital Crowdfunding Platforms offers a robust, adaptable, and empirically grounded framework for rethinking platform success in the digital age. By foregrounding the importance of institutional configurations, social trust, and regulatory environments—and validating these mechanisms through complementary econometric models—the study contributes to a more pluralistic, context-aware, and globally relevant research agenda in Information Systems. As digital platforms continue to expand and diversify, understanding their embeddedness in complex socio-technical systems will be essential for designing inclusive, resilient, and contextually appropriate digital infrastructures.

7. Future Research Directions

Building on the insights developed in this study, several promising avenues for future research emerge. First, further investigations could explore whether the identified configurational pathways hold across different types of digital platforms beyond crowdfunding, such as peer-to-peer lending, digital cooperatives, or decentralized finance infrastructures. This would allow to assess whether the institutional conditions identified here represent broader patterns in platform-based financial innovation or are specific to reward- or equity-based crowdfunding ecosystems.

Second, future studies could incorporate platform-level design features—such as governance mechanisms, transparency tools, and user experience architectures—into multi-level configurational models. This would enable a deeper understanding of how macro-institutional environments interact with platform-specific affordances to shape user trust, engagement, and funding outcomes. Integrating digital affordance theory with institutional and configurational approaches could help bridge micro- and macro-level explanations in Information Systems research.

Third, while this study focused on European countries, extending the analysis to emerging economies or regions with different institutional logics (e.g., Latin America, Southeast Asia, or Sub-Saharan Africa) could uncover new configurations and test the theory's global validity. These contexts may exhibit alternative success pathways, such as informal trust mechanisms or hybrid public–private regulation models, that enrich our understanding of how digital platform ecosystems adapt to diverse conditions.

Finally, longitudinal studies could be conducted to examine the temporal dynamics of platform success. By tracking the evolution of configurations over time, researchers could better understand how institutional shifts—such as regulatory reforms or socio-political crises—affect the stability or transformation of crowdfunding ecosystems. Such research would further illuminate the resilience and adaptability of digital platforms in complex institutional environments.

Author Contributions: Conceptualization, J.R.-D.; Methodology, J.R.-D.; Software, J.R.-D. and C.C.X.; Formal analysis, J.R.-D. and C.C.X.; Investigation, C.C.X.; Resources, C.C.X.; Data curation, J.R.-D.; Writing—original draft, C.C.X.; Writing—review & editing, J.R.-D.; Visualization, C.C.X.; Project administration, C.C.X. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: The data used in this study were obtained from the CCAF, World Bank, WEF, and WGI databases and are publicly accessible to users. The processed datasets are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A. Amount of Money Raised Through Crowdfunding by EU Country (Millions of $)

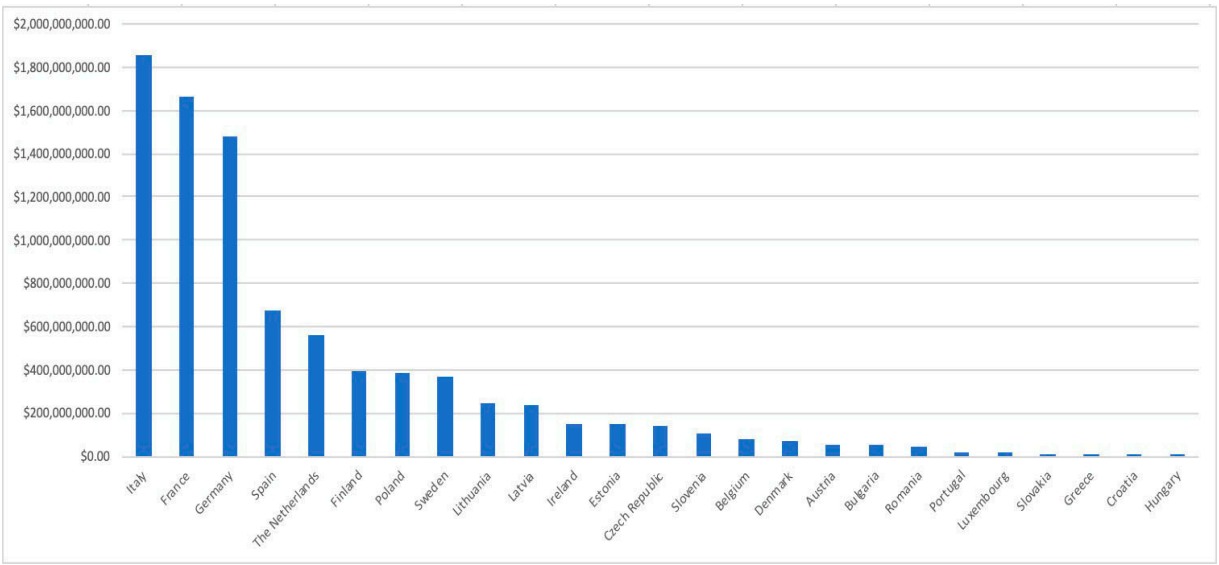


Figure A1. Amount of Money Raised through Crowdfunding in European Union countries (in million USD). Source: Our own elaboration based on data from Ziegler et al. (2020) [9].

Appendix B. QCA-Fuzzy-Set Configurations

Table A1. Fuzzy-set calibration of outcome and causal conditions for 25 European countries.

Case	Result	Causal Conditions				
Countries	Money Raised Through Crowdfunding	GDP Per Capita	Ease of Doing Business	Digital Society	Competitiveness	Social Trust
Germany	1	0.7	0.7	0.4	1	1
Austria	0	1	0.7	1	1	1
Belgium	0	0.7	0.4	0.7	0.7	0.7
Bulgaria	0	0	0	0.4	0	0.4
Croatia	0	0	0.4	0.7	0.4	0.4
Denmark	0	1	1	1	1	1
Slovakia	0	0.4	0.4	0.7	0.4	0.7
Slovenia	0.4	0.4	0.7	0	0.7	0.7
Spain	0.7	0.4	0.7	1	0.7	0.7
Estonia	0.4	0.4	1	0.4	0.7	0.7
Finland	0.7	0.7	0.7	1	1	1
France	1	0.7	0.7	0	0.7	0.7
Greece	0	0	0	0.4	0.4	0
Hungary	0	0	0.4	0.7	0.7	0.7
Ireland	0.4	1	0.7	0.7	1	1
Italy	1	0.4	0.4	0.7	0.4	0.4
Latvia	0.4	0.4	1	1	0.7	0.4
Lithuania	0.4	0.4	1	0	0.7	0.4
Luxembourg	0	1	0	0	1	1
Netherlands	0.7	1	0.4	0	1	1
Poland	0.7	0	0.4	1	0	0.4
Portugal	0	0.4	0.7	0.4	0.4	0.4
Czech Rep.	0.4	0.4	0.4	0.4	0.7	0.4
Romania	0	0	0.4	0.7	0	0
Sweden	0.7	1	1	1	1	1

Source: Own elaboration.

Appendix C. Measures

- Consistency

Consistency is a measure of how often the combination of conditions leads to the desired result (high fundraising). Generally, it is recommended that consistency be greater than 0.8 to consider a combination as sufficient. In this case, both configurations exceed that threshold, with consistency values of 0.8077 and 0.8333, respectively. This suggests that these combinations are consistent in explaining the phenomenon of high fundraising.

- Gross Coverage (raw coverage)

Gross coverage represents the proportion of cases explained by that solution. The first configuration covers 39.62% of the cases, while the second covers 47.16%.

- Unique Coverage

Unique coverage measures the proportion of cases that are explained only by that particular configuration. In this case, the first configuration is responsible for 1.88% of the cases that are not explained by other configurations, while the second configuration covers 9.43% of the cases uniquely.

- Solution Coverage

Indicates that, together, the configurations explain approximately 49.05% of the cases of high fundraising.

- Solution Consistency

This suggests that the combination of these two solutions is consistent at 83.87%, meaning it is highly likely that when these configurations are present, high fundraising is achieved.

- Cases with Membership Above 0.5

Cases with membership values greater than 0.5 are the empirical cases that strongly belong to each of the causal configurations. They indicate those countries or economies where the mentioned conditions are strongly present. These empirical cases could serve as specific examples where the causal configurations identified are actually materializing in practice.

References

1. Parker, G.G.; Van Alstyne, M.W.; Choudary, S.P. *Platform Revolution: How Networked Markets are Transforming the Economy and How to Make Them Work for You*; W. W. Norton & Company: New York, NY, USA, 2018.
2. Tiwana, A. *Platform Ecosystems: Aligning Architecture, Governance, and Strategy*; Morgan Kaufmann: Burlington, MA, USA, 2014.
3. Agrawal, A.; Catalini, C.; Goldfarb, A. Crowdfunding: Geography, social networks, and the timing of investment decisions. *J. Econ. Manag. Strategy* **2015**, *24*, 253–274. [CrossRef]
4. Belleflamme, P.; Lambert, T.; Schwienbacher, A. Crowdfunding: Tapping the right crowd. *J. Bus. Ventur.* **2015**, *30*, 585–609.
5. Gawer, A. Bridging differing perspectives on technological platforms: Toward an integrative framework. *Res. Policy* **2014**, *43*, 1239–1249. [CrossRef]
6. de Reuver, M.; Sørensen, C.; Basole, R.C. The digital platform: A research agenda. *J. Inf. Technol.* **2018**, *33*, 124–135. [CrossRef]
7. Constantinides, P.; Henfridsson, O.; Parker, G.G. Introduction—Platforms and infrastructures in the digital age. *Inf. Syst. Res.* **2018**, *29*, 381–400. [CrossRef]
8. Hornuf, L.; Schmitt, M.; Stenzhorn, E. Does a Local Bias Exist in Equity Crowdfunding? CESifo Working Paper Series. 2020. Available online: https://ssrn.com/abstract=3555581 (accessed on 10 May 2025).
9. Ziegler, T.; Shneor, R.; Wenzlaff, K.; Odorović, A.; Johanson, D.; Hao, R.; Ryll, L. *The Future of Crowdfunding: A European Policy Perspective*; Cambridge Centre for Alternative Finance: Cambridge, UK, 2020.
10. Kenney, M.; Zysman, J. The rise of the platform economy. *Issues Sci. Technol.* **2016**, *32*, 61–69.
11. El Sawy, O.A.; Malhotra, A.; Park, Y.; Pavlou, P.A. Seeking the configurations of digital ecodynamics: It takes three to tango. *Inf. Syst. Res.* **2010**, *21*, 835–848. [CrossRef]
12. Avgerou, C. Information systems: What sort of science is it? *Inf. Syst. J.* **2000**, *10*, 241–254. [CrossRef]
13. Coleman, J.S. Social capital in the creation of human capital. *Am. J. Sociol.* **1988**, *94*, S95–S120. [CrossRef]
14. Henfridsson, O.; Bygstad, B. The generative mechanisms of digital infrastructure evolution. *MIS Q.* **2013**, *37*, 907–931. [CrossRef]
15. Liu, Y.; Kamal, M.M.; Zhang, J.; Rahman, M.; Aydin, E. Leveraging digital crowdfunding platforms for SME financing. *Technovation* **2025**, *135*, 103309. [CrossRef]
16. Fiss, P.C. Building better causal theories: A fuzzy set approach to typologies in organization research. *Acad. Manag. J.* **2011**, *54*, 393–420. [CrossRef]
17. Zhang, L.; Shao, Z.; Zhao, T.; Xiaotong, L.; Liu, Y. Digitally-enabled antecedents of trust, repurchase intention and crowdfunding success: The moderating effect of blockchain traceability labels. *Inf. Syst. Front.* **2024**, *26*, 101469.
18. Estrin, S.; Khavul, S.; Kritikos, A.S.; Jonas, L. Equity crowdfunding across countries and platforms. *PLoS ONE* **2024**, *19*, e0293292. [CrossRef]
19. Zucker, L.G. Production of trust: Institutional sources of economic structure. In *Research in Organizational Behavior*; JAI Press: Stamford, CT, USA, 1986.
20. Vismara, S. Equity retention and social network theory in equity crowdfunding. *Small Bus. Econ.* **2016**, *46*, 579–590. [CrossRef]
21. Mollick, E. The dynamics of crowdfunding: An exploratory study. *J. Bus. Ventur.* **2014**, *29*, 1–16. [CrossRef]
22. Burich, G.; Ghose, A.; Wattal, S. Cultural differences and geography as determinants of online pro-social lending. *MIS Q.* **2014**, *38*, 773–794. [CrossRef]
23. Kleinert, S.; Volkmann, C. Equity crowdfunding and the role of investor discussion boards. *Ventur. Cap.* **2019**, *21*, 327–352. [CrossRef]
24. Vismara, S. Information cascades among investors in equity crowdfunding. *Entrep. Theory Pract.* **2018**, *42*, 206–236. [CrossRef]

25. Zvilichovsky, D.; Inbar, Y.; Barzilay, O. Playing both sides of the market: Success and reciprocity on crowdfunding platforms. In Proceedings of the International Conference on Information Systems (ICIS), Fort Worth, TX, USA, 13–16 December 2015.
26. Kromidha, E.; Robson, P. Social identity and signalling success in crowdfunding. *Inf. Manag.* **2016**, *53*, 605–629.
27. Koch, J.A.; Siering, M. Crowdfunding success factors: The characteristics of successfully funded projects on crowdfunding platforms. In Proceedings of the 23rd European Conference on Information Systems (ECIS), Münster, Germany, 26–29 May 2015.
28. Hoque, M.M. Crowdfunding for innovation: A comprehensive empirical review. *Fintech Bus. J.* **2024**, *1*, 100–115. [CrossRef]
29. World Bank. *Doing Business 2020: Comparing Business Regulation in 190 Economies*; World Bank Publications: Washington, DC, USA, 2020.
30. Mai, T.L. Impact of macro factors on country-level entrepreneurship. *Humanit. Soc. Sci. Commun.* **2025**, *12*, 253. [CrossRef]
31. Dushnitsky, G.; Guerini, M.; Piva, E.; Rossi-Lamastra, C. Crowdfunding in Europe: Determinants of platform creation across countries. *Calif. Manag. Rev.* **2016**, *58*, 44–71. [CrossRef]
32. Bednarz, J.; Markiewicz, M.; Płoska, A. The determinants and development of crowdfunding in the Central and Eastern Europe countries. *Ekon. I Prawo. Econ. Law* **2017**, *16*, 275–285. [CrossRef]
33. Alonso, J. Pension fund investment in infrastructure and global financial regulation. In *Retirement System Risk Management: Implications of the New Regulatory Order*; Oxford University Press: Oxford, UK, 2015; pp. 186–211.
34. Cicchiello, A.F. Building an entrepreneurial ecosystem based on crowdfunding in Europe: The role of public policy. *J. Entrep. Public Policy* **2019**, *8*, 292–311. [CrossRef]
35. Wroldsen, J.S. Crowdfunding investment contracts. *Va. Law Bus. Rev.* **2016**, *10*, 543–580.
36. Alsagr, N. Digital Dreams, Institutional Realities: How Entrepreneurs' Crowdfunding Outcomes Are Shaped by Macro-Institutional Contexts. *Economies* **2025**, *13*, 294. [CrossRef]
37. Ramos, J.; Cicchiello, A.F.; Messina, M. The role of macro-indicators in crowdfunding success: Empirical evidence from Latin America. *Eur. J. Int. Manag.* **2022**, *18*, 521–541. [CrossRef]
38. Ragin, C.C. *Redesigning Social Inquiry: Fuzzy Sets and Beyond*; University of Chicago Press: Chicago, IL, USA, 2008.
39. Wagemann, C.; Schneider, C.Q. *Set-Theoretic Methods for the Social Sciences: A Guide to Qualitative Comparative Analysis*; Cambridge University Press: Cambridge, UK, 2012.
40. Lee, A.S. Editorial comments: MIS Quarterly's editorial policies and practices. *MIS Q.* **2001**, *25*, iii–vii.
41. Tilson, D.; Lyytinen, K.; Sørensen, C. Research commentary—Digital infrastructures: The missing IS research agenda. *Inf. Syst. Res.* **2010**, *21*, 748–759. [CrossRef]
42. Walsham, G. Interpretive case studies in IS research: Nature and method. *Eur. J. Inf. Syst.* **1995**, *4*, 74–81. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.