

Article

Model of Value Transfer in Crowdfunding and Sustainable Development of Small and Medium-Sized Enterprises in Poland—Based on Survey Research

Maria Kukurba ¹, Mariusz Salwin ^{1,*} and Aneta Ewa Waszkiewicz ²

¹ Faculty of Mechanical and Industrial Engineering, Warsaw University of Technology, 00-662 Warsaw, Poland

² Department of International Finance, SGH Warsaw School of Economics, 02-554 Warsaw, Poland

* Correspondence: mariusz.salwin@onet.pl

Abstract: This paper presents the results of a survey of small and medium-sized enterprises (SMEs) in Poland that have benefited from crowdfunding (CF). Based on these results, a new business model was developed. On this basis, the CF equity, reward and donation models were analyzed, and the impact of CF on the way of creating value in the company in the context of sustainable development was determined. The survey results show that the use of CF promotes the sustainable development of SMEs in Poland and significantly impacts their business model. In practical terms, this research has contributed to a better understanding of value creation by these companies. The results of our analysis are useful for consulting companies and CF platforms that help SMEs organize campaigns. In theoretical terms, the study conducted and the methodology used allow the presentation of a new definition of CF and a sustainable business model for a company using CF as well as contribute to the value management theory in SMEs.

Keywords: crowdfunding (CF); sustainability; sustainable value; business model; small and medium-sized enterprises; SMEs



Citation: Kukurba, M.; Salwin, M.; Waszkiewicz, A.E. Model of Value Transfer in Crowdfunding and Sustainable Development of Small and Medium-Sized Enterprises in Poland—Based on Survey Research. *Sustainability* **2023**, *15*, 12594.

<https://doi.org/10.3390/su151612594>

Received: 2 July 2023

Revised: 4 August 2023

Accepted: 8 August 2023

Published: 19 August 2023



Copyright: © 2023 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

The small and medium-sized enterprise (SME) sector faces the greatest difficulties in raising financing for its activities, especially in the initial phase of its development. In the EU, the overall rate of financial barriers to bank credit access for SMEs has remained unchanged over the years, with SMEs using mainly self-financing, short-term credit, and to a lesser extent, state subsidies, asset-based financing and trade credit [1]. Further, worryingly, financing was primarily used for inventories and working capital and less for fixed investment. Moreover, a higher percentage of SMEs used funding for refinancing or paying off obligations (17%, from 13%) rather than for innovative solutions [2]. Crowdfunding (CF), in this context, appears to be an alternative source of financing for SMEs. It provides a new opportunity to test market readiness for virtually all types of companies, from micro-enterprises and the self-employed to start-ups and SMEs. “A business that goes under a market readiness test through CF can, in turn, build the trust that more traditional financial institutions need, as they normally delay their investments until they have a tangible proof of the venture’s viability” [3].

Interest among researchers in this form of financing is still quite high, especially since, despite the COVID-19 pandemic, CF continues to be a popular form of online capital raising [4,5].

In Poland, between 2017 and 2021, the value of the CF market increased from PLN 0.2 billion in 2017 to over PLN 2 billion in 2021 (data as of June 2021). The most significant increase occurred in 2020–2021 when the value of CF funds almost doubled: from PLN 1.03 billion to PLN 2.03 billion [6]. What is contributing to this significant growth of the CF

market in Poland is, among other things, a dynamic increase in the value of the biggest sub-market, that is, donation CF, which will grow to PLN 1.572 billion in 2021 [7].

One of the most quoted definitions describes CF as follows: it involves an open call, mostly through the internet, for the provision of financial resources, either in the form of donations or in exchange for the future product or some form of reward to support initiatives for specific purposes [8]. From a value point of view, CF is an open ecosystem [9] in which interactions between its elements take place [10–14] contributing to value creation. The business models in CF are equity CF (also known as crowdinvesting, equity-based CF) [15], reward-based CF and donation CF [14]. Crowdfunding platforms play a huge role as intermediaries between CF participants, limiting the asymmetry of information between investors and entrepreneurs [16] and also pre-selecting the submitted projects [17].

In terms of the type of projects funded under CF [18–20], a distinction is made between those related to culture, environmental protection and projects of a social nature; as a modus operandi, it represents a type of open innovation [21–23]. CF is increasingly seen as a sustainable source of financing. Research highlights that knowledge-based crowdsourcing of product innovation promotes sustainability-oriented change [24,25]. To conceptualize the impact of CF on sustainability, Messeni and Petruzzelli propose a framework with five dimensions, namely the project developer, the backers, the campaign itself, the CF platform and the results of the CF campaign [24]. The relationships between media and CF are being studied [26], where through the close link between CF and social media, relationships are being formed that facilitate the creation and maintenance of social networks influencing the success of CF campaigns [27–29]. The investors/donors/backers and their motivations are an important element in CF. The results of the research carried out in this direction show that, although the orientation towards equity CF and sustainability does not increase the chances of success or the involvement of sophisticated investors, it does attract more investors from the crowd/non-sophisticated investors. The latter, who are absent from other entrepreneurial financial markets, generally have no prior experience in financing and value the sustainability orientation of companies. They make decisions guided by the logic of the community rather than the market logic typical of sophisticated investors [30]. Researchers emphasize, however, that entrepreneurs should be aware that also in equity crowdfunding, attention should be paid not only to the value of the product offered but also to creating value for other participants in accordance with the win-win concept [31].

While in the logic of the market, expected high monetary returns are the main logic of support, in the logic of the community, non-monetary aspects of projects, such as caring for community development and the potential for a “better world”, are also taken into account [32]. Although it is emphasized that CF offers many opportunities to move towards a sustainable society, with a particular focus on sustainable entrepreneurs and innovators, the CF literature has mainly focused so far on two aspects: the correlation between project characteristics and campaign success [33–35] and the correlation between different signals and funding success [36–38]. However, as emphasized by Testa [39], CF is an innovative socio-technical practice with the potential to scale up and transform financial and, potentially, sustainability systems and influence business models. Therefore, due to the growing importance of CF as a financing modality, there is a need for much more research on companies (user-producers) that have been successful in CF financing and their business model [39,40]. Such studies highlight the role of financing in business models, and CF in particular [39]. They emphasize the increasing interest in sustainable business models, both in terms of archetypes and processes [41–43] as well by using blockchain technology [44]. They point to the need for research into how an organization creates and captures value in a business model that describes the core logic of the organization [9,45–47].

Sustainability efforts require considerable collaboration between different actors [41,48–51], and the cross-cutting perspective of the business model makes it possible to explore such interactions [52–57]. The analysis conducted from this perspective focuses on value transfers (i.e., transactions) between the central organization and external actors in its value network [52,58–63]. This perspective is in line with the so-called business model archi-

tecture, which is an important area of research in understanding the business model but insufficiently researched [64–66]. In other words, a perspective that stretches beyond the boundaries of the organization helps to clarify (1) where environmental and social and economic value is created and captured in the business model; (2) how value is transferred between the central organization and other entities [67].

The topic undertaken by the authors on sustainable value in CF therefore complements and extends the research conducted to date in this area. Taking into account the dynamic development of CF in Poland and globally and the necessity, pointed out by other researchers, to know the business model of companies using CF, the main objective of our research was to investigate the value flow of the CF business model for SMEs in Poland. In order to achieve research goal, we asked the following questions:

1. What are the reasons for using CF by SMEs in Poland?
2. How do SMEs in Poland perceive the possibility of financing through CF?
3. Which CF models are chosen and what are their characteristics in terms of adding value to their sustainability?

The results of the research are an important contribution to indicating the rationale behind the decision to choose CF as a means of SME financing as well as providing a basis for the development of a business model and value flow in this model. To this end, we propose to use the E3 methodology to analyze value creation for CF based on empirical research as well as statistical models, which we test in the context of the value of CF business projects for SMEs. Achieving the main objective required survey research and the development of a business model of SME companies in Poland that have benefited from CF, followed by the identification of the value flow in this model.

The structure of the article corresponds to the different stages of the research conducted, including the development of the research methodology, the performance of the survey and the presentation of its results, the development and presentation of the business model and the value flow in this model, the discussion of the results and the indication of directions for further research.

2. Theory Applied and Research Methodology

Often, the decision on the choice of financing options is critical and depends on the chosen business strategy, type of activity, size of the company and its life cycle [35].

The theory of value-based management (VBM) states that every company strives to maximize value for its owners [7,8]. According to the assumptions of VBM, each feature/process/action affects the creation of value by the company. They contribute to an increase in cash flow, which is beneficial for the company because it builds its value or, by contributing to a decrease in cash flow, reduces the value of the company.

In the Norton and Kaplan model, the financial area was integrated with other types of economic activity. According to the model, there are four perspectives/areas of business activity: research and development, internal (operational) and customer and financial [36]. The main advantage of this model is the identification of value drivers affecting the financial and non-financial (intangible) value and the study of their mutual relationships [37,38]. The value drivers identified by Norton and Kaplan correspond to, among others, those proposed by Walters [39,40] and Rappaport [7]. Harmony between all perspectives is the main condition for increasing the company's value. Value created in CF from an entrepreneurial perspective is an interaction of value creation and perspectives contained in the Norton–Kaplan model [12]. Based on Norton and Kaplan's model, we asked SMEs in Poland about value drivers in CF. However, this model does not take into account the value drivers relevant to sustainable development, and therefore, in this context, the 3E model was used for the analysis.

The methodology of the research included the following stages:

1. Literature network analysis (LNA) using VOSviewer version 1.6.19 Vosviewer software—this stage focuses on a literature review of value creation in CF. LNA

involves two steps. The first step is the literature review, and the second step is the analysis and visualization of the bibliographic network.

2. Survey research and statistical analysis—this stage focuses on a survey research of 121 companies that have used CF as a form of funding for their business. The survey research was conducted using CATI (computer-assisted telephone interviewing) and CAWI (computer-assisted web interviewing). The questions covered all relevant elements that make up the business model. These were mainly semi-open questions so that respondents could also indicate other elements not included by us but which might be relevant to the research. Statistical tests were carried out to examine the relationships emerging between SME characteristics and the costs and benefits of CF.
3. The next stage involves the development of a business model in CF. Based on surveys of companies and statistical analyses, a business model was proposed for SMEs that used CF as a source of financing. We consulted specialists professionally engaged in CF about any doubts that arose while working on the model.
4. The next stage was to identify the values created in CF using the E3 methodology [68]. The model was verified on the basis of an analysis of the cash flow scenarios as developed. Data was obtained from the surveys. Value added was calculated based on the equation: value added created in CF = \sum cash inflows – \sum cash outflows. The use of this approach is due to the fact that in CF campaigns, the business funding raised by SMEs is in the form of cash [69].

3. Literature Review—The Value in CF

The literature review focuses on the value created in CF, hence the main keywords are: “value” and “crowdfunding”. To ensure that the results are complete, in the literature review, we have included words corresponding to “value creation” and “crowdfunding” as synonyms, or understood as synonyms. The final keywords in our research were (“economic value” or “value creation” or “value added” or “EVA” or “value mapping” or “value co-creation”) and (“crowdfinancing” or “crowdfunding” or “equity crowdfunding” or “reward crowdfunding” or “lending” or “donation crowdfunding”). The analysis covers the period 2009–2021, that is, the period when CF as a form of financing became the subject of the research. A search of the Web of Science database yielded 99 items, where, after narrowing down to articles in English, 78 items were obtained. When analyzing the abstracts, it was possible to reject articles that do not address the issue of value creation in CF and/or treat the issue of value as an additional element, and the subject of research is an aspect other than the value created in CF. In this way, 41 articles were obtained for further analysis.

Using the Vosviewer software, a keyword analysis was carried out in the first instance (Figure 1).

It showed that addressing issues of value creation in the relationship with crowdfunding is not as strong as with entrepreneurship or innovation. The positioning of the keywords “business” and “value creation” in correspondence with the term “crowdfunding” is also quite distant, which indicates that these topics are taken up by researchers but are not a fundamental strand of research in relation to business. The highest incidence of value-creation keywords relates to 2016–2017, and linking them to CF has been emerging since 2017.

In terms of the number of citations (Figure 2), papers by Lehner, Macht and Meyskens proved to be the most significant [70–73]. Analyzing social venture projects, Lehner points to research on CF business models, value creation in CF and financial metrics, among the proposed research directions for CF [70]. In terms of value, the subjects of analysis include the role of investors in CF, the motivational factors influencing decisions to invest or sponsor projects, and the success factors of CF campaigns. As part of research on social venture projects, Meyskens and Bird [73] analyze CF business models from the perspective of economic and social value creation. On the basis of the theoretical analysis and the literature review, Macht and Weatherston explore the benefits of using CF, focusing

not only on social ventures but also on business ventures [72]. The broader context of identifying values relevant to different stakeholder groups in CF is examined by Valanciene and Jegeleviciute, who present a general model of CF and stakeholder groups in order to analyze the processes on this basis and to identify the type of value created for the different groups [74,75]. Although they identify the values created in CF, they do not indicate the relationships between them, namely how the creation of some values influences others and the creation of added value for the project owner (company, start-up) [76]. The aspect of building relationships in CF is emphasized by Foà in her research, which takes into account the nature of CF networks. On the basis of data from CF platforms for cultural projects, Foà indicates that a CF campaign requires the development of a marketing model and strategy as well as an extended conceptualization of the product [77]. Community engagement activities need to be organized and integrated through online and offline social networking activities. The value created is built through the relationships between creators and supporters and other agents involved in the crowdfunding value network.

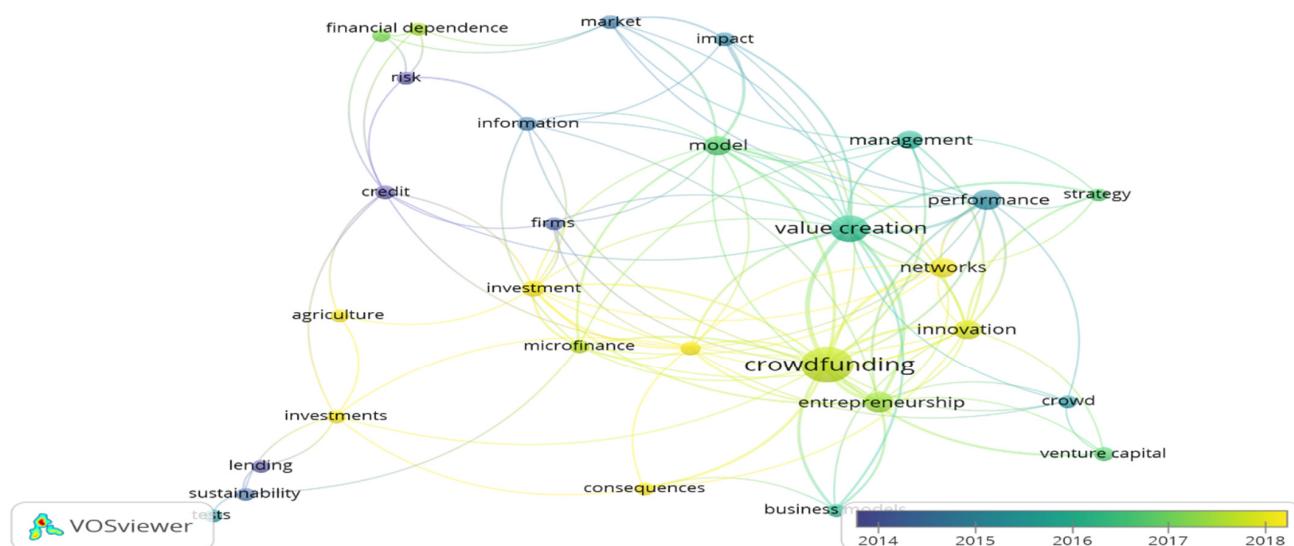


Figure 1. Keyword analysis using Vosviewer.

A different approach based on the concept of viewing CF as a service ecosystem is presented by Quero, Ventura and Kelleher [11–13]. In the proposed CF model, there are different levels of value creation so that—in addition to CF platforms and crowd and project owners—other actors in the intermediation processes can be included, namely social networks, social media platforms, online payment services, online users, media entities and other interested organizations and partners in product development and distribution. The proposed model makes it possible, to a large extent, to deepen the analysis of the intensity and nature of the relationships occurring between actors (formerly stakeholders) and to explore the relationships between the values created based on the concept of a service ecosystem for CF based on the concept of co-created values. The proposals put forward by [11–13], however, concern the funding of cultural organizations. Thus, although a case study analysis is carried out in the article, due to the nature of the projects, the results are of limited applicability to typical business projects.

The literature review has identified the directions of the research conducted so far on the value created in CF. Although the topic of value creation in CF is taken up by researchers, it mainly concerns projects of a social or cultural nature [19,19,20,77–81]; there is little research conducted only on the financing of typical business projects. The current research is mainly theoretical or in the form of case studies and, as such, is insufficient to draw practical conclusions related to the management and value creation of business projects in CF. Furthermore, the CF models developed, although they refer to the pro-

cesses/relationships/dependencies between its participants/agents/stakeholders, do not present the flow of value between them, or they present it in a limited way.

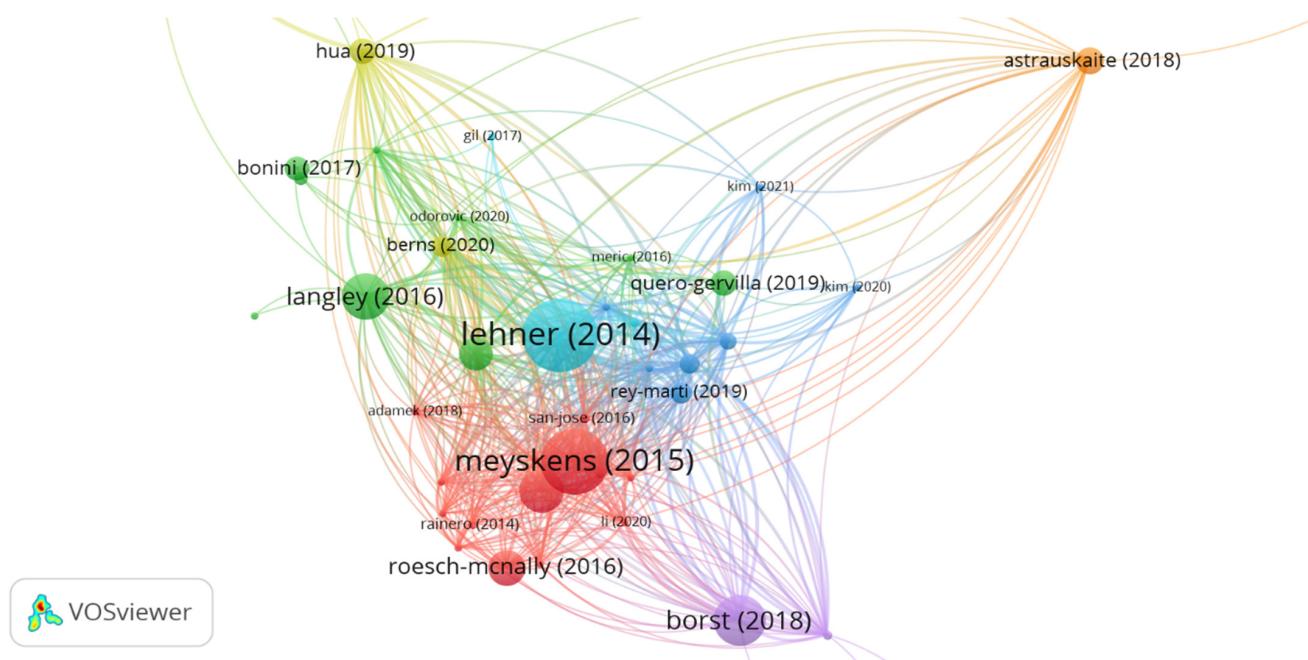


Figure 2. Author citations based on Vosviewer.

4. Survey Research and Statistical Analyses

4.1. Survey Research—Characteristics of the Survey Sample

A survey was conducted among 121 companies (Figure 3) that had used CF as a form of funding their business. The following information-gathering techniques were used: CATI, CAWI and the tool was a survey questionnaire with closed and semi-open questions. The aim of the research was to determine what value CF generates for the companies surveyed.

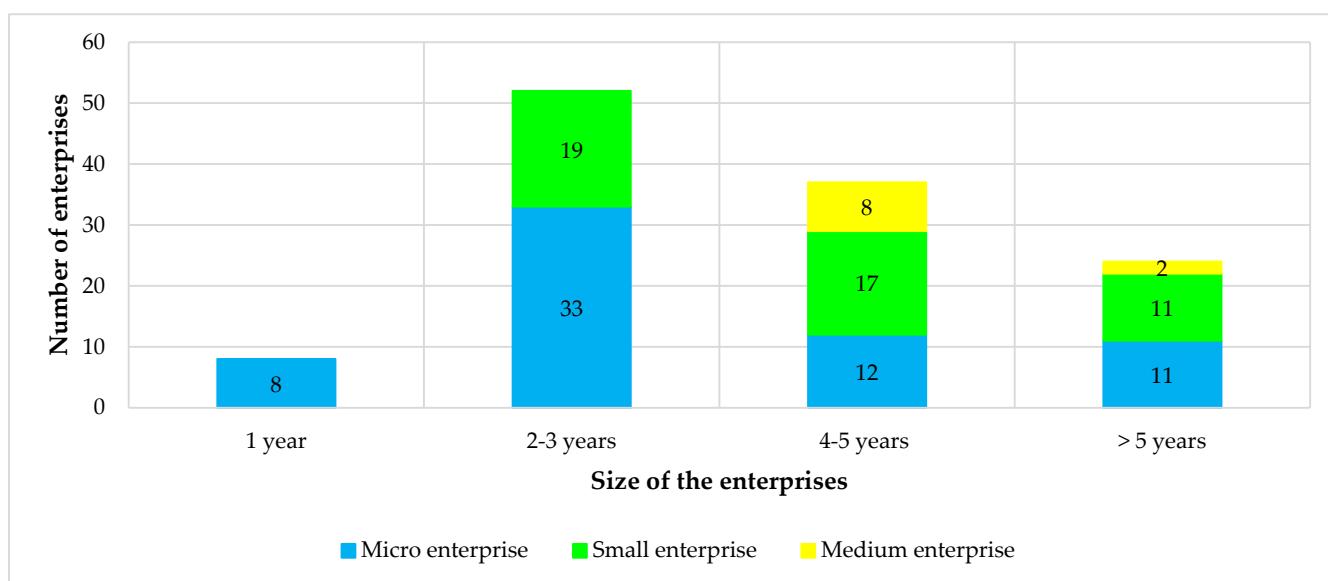


Figure 3. Size and age of companies surveyed.

The survey covered companies operating in Poland in various industries (Figure 4). Among the companies surveyed, 84 (69.42%) operate in the traditional form, 24 (19.83%) combine the traditional form of business with the online form, and only 13 (10.74%) operate exclusively online. The companies surveyed were identified through CF platforms operating in Poland, on which they had carried out fundraising in the past.

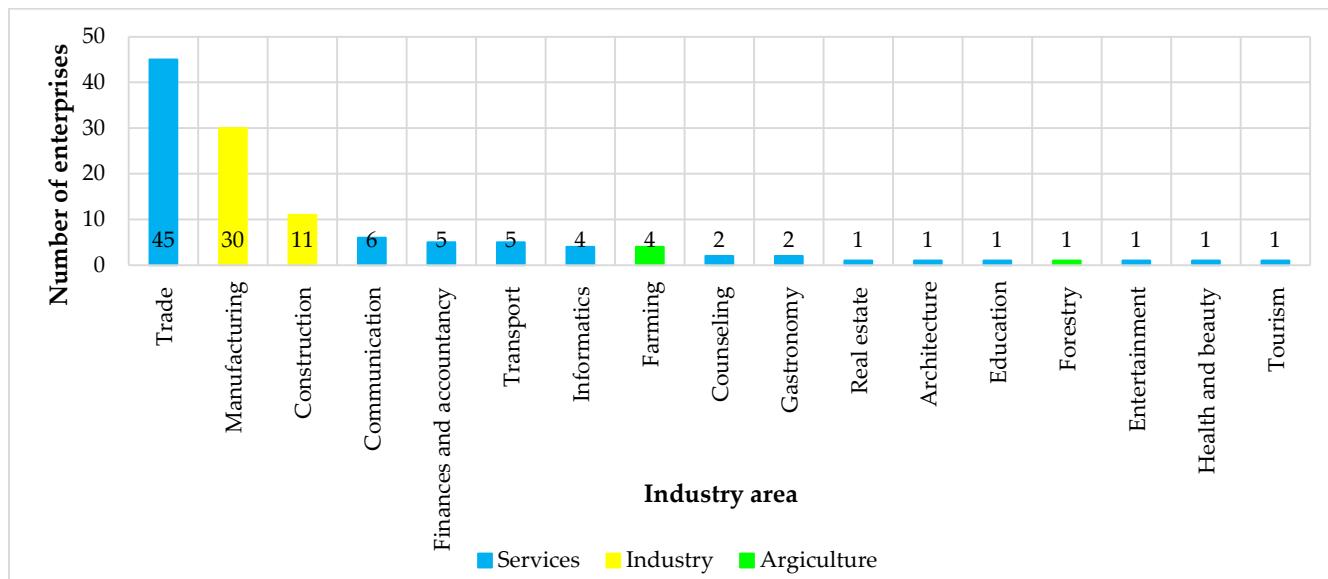
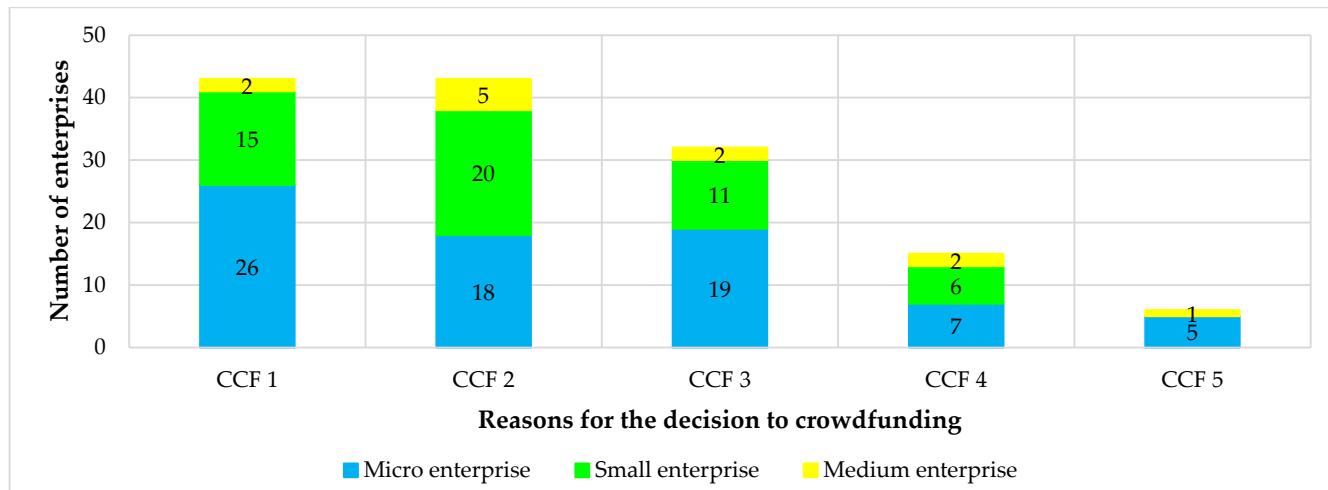


Figure 4. The economic sectors of the companies surveyed.

To obtain information on the use of company CF, the survey questionnaire included questions concerning (among other things):

- Reasons for companies' CF decisions (Figure 5);
- The purposes of raising funds through CF (Figure 6);
- The purposes of running a CF campaign (Figure 7);
- The greatest benefits and risks of using CF, as identified by the companies surveyed (Figures 8 and 9);



CCF 1—No other sources available for such a high amount; CCF 2—Low capital acquisition costs; CCF 3—No credit possible; CCF 4—Checking an innovative source; CCF 5—Clear and simple procedures.

Figure 5. Reasons for companies' CF decisions.

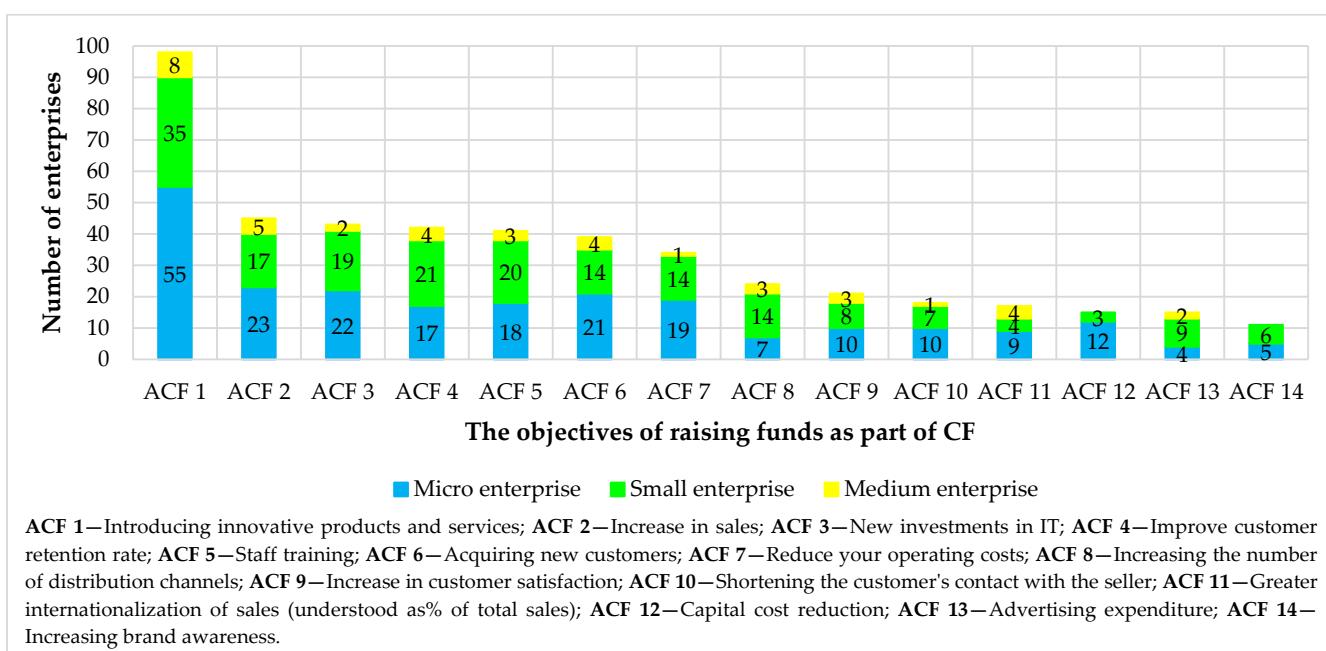


Figure 6. The purposes of raising funds through CF.

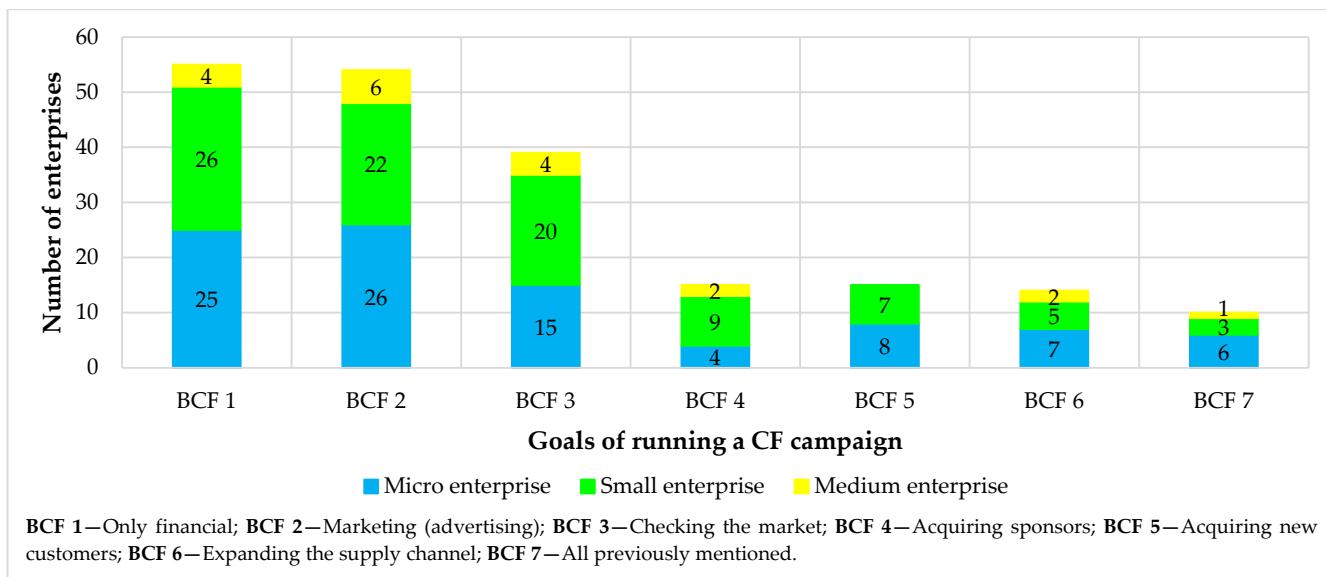


Figure 7. Purposes of running a CF campaign.

The surveyed sample includes micro-, small and medium-sized enterprises. Half of the companies surveyed (60 companies) were enterprises that had been active for no more than three years, including more than half of the micro-enterprises.

The companies surveyed were dominated by trading companies (45) and manufacturing companies (41). Between 4 and 6 companies are active in communications, transport, IT, finance and accounting and agriculture. The other sectors are represented by 1–2 companies.

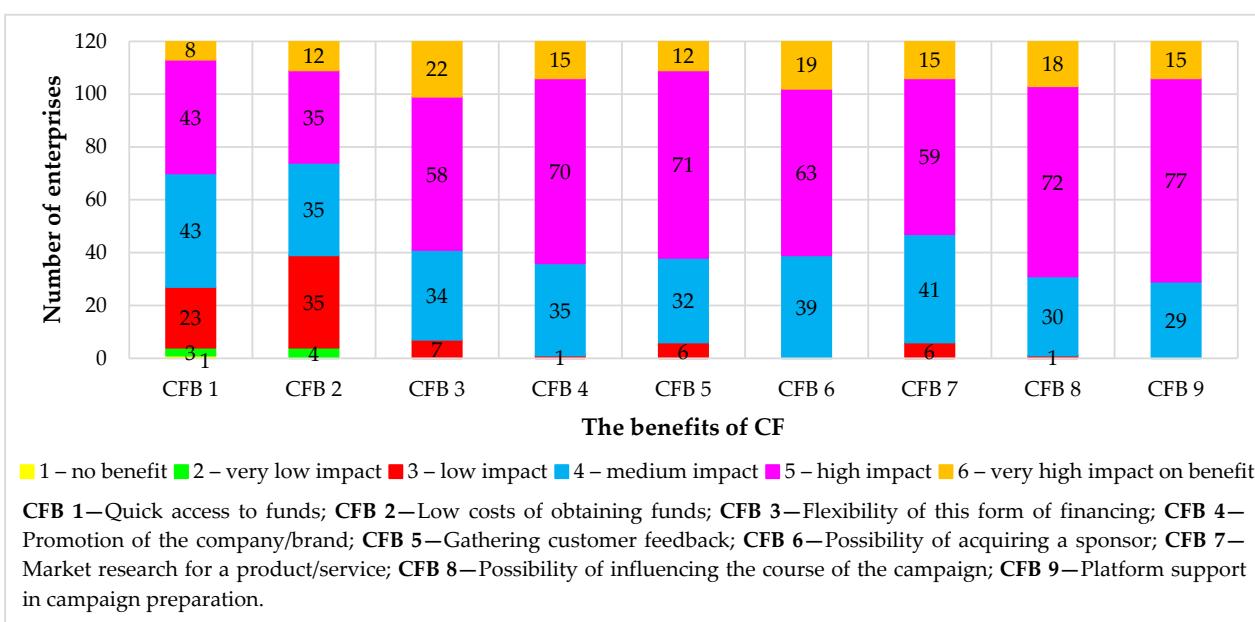


Figure 8. The greatest benefits perceived in CF by the companies surveyed.

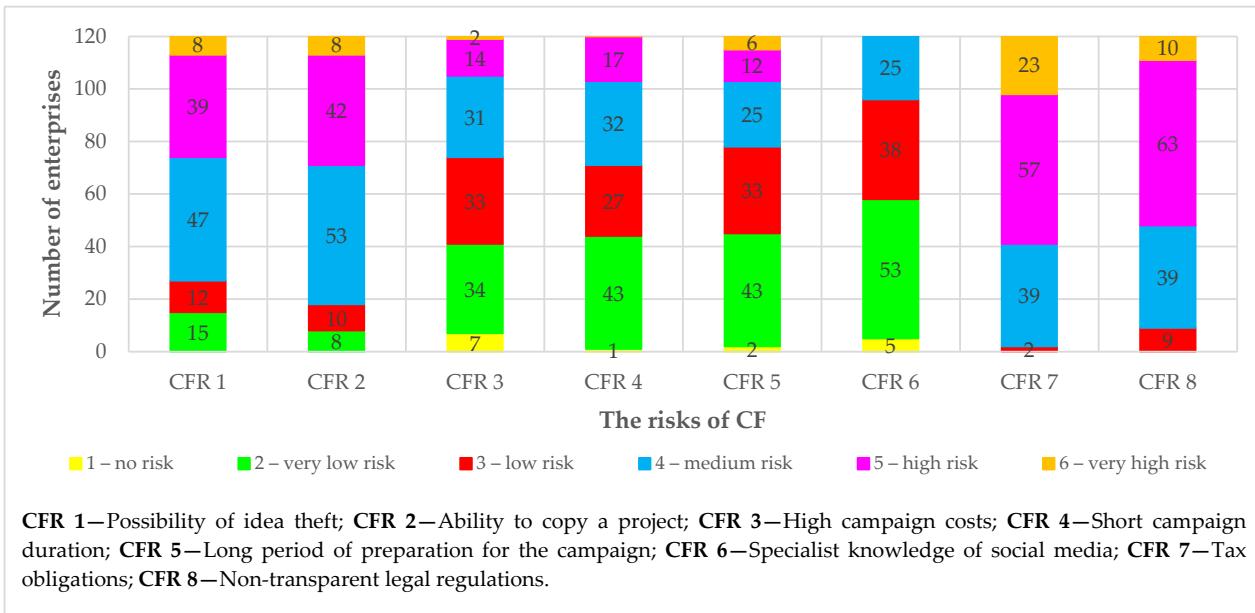


Figure 9. The greatest risks in CF, as identified by the companies surveyed.

The decision to raise funds relates to the financial perspective, but the objectives of their acquisition are related to all other perspectives. The survey showed that the most important purpose of undertaking the CF campaign was to launch an innovative, new product (80.99% of companies). Other declared purposes (28.1–37.19% of companies) included increase in sales, improvement in customer retention rate, investments in IT, acquiring new customers, staff training, and reduction in operating costs.

In the surveyed group, the financial purpose of raising finance was the most important for 55 companies and the marketing purpose for 54 companies. The willingness to verify the market for the product-offer was reported by 39 companies. Almost the same number of entities (14–15 companies) were interested in acquiring new customers, distribution channels or sponsors.

The mentioned benefits of high and very high importance of CF to the company include CFB 3, CFB 4, CFB 5, CFB 6, CFB 7, CFB 8, CFB 9. No company demonstrated that the use of

CF was not beneficial. Poor benefits or average benefits were noted by most companies in relation to the speed of access to funds and their cost. It is noteworthy, however, that almost half of the companies rate the impact of CF on their ability to raise funds quickly and on the associated financing costs as high and very high. The benefits of CF that are important for entrepreneurs relate to a large extent to the customer and operational perspective.

For ongoing CF campaigns, respondents are least concerned about CFR 3, CFR 4, CFR 5 and CFR 6. Among the risks rated as medium, high and very high for the largest group of companies surveyed were the risk of idea theft or copying, tax obligations and transparency of legal regulations concerning CF. The perceived risks and threats relate mainly to the perspective of knowledge and development (possibility of idea theft), financial (high costs) and operational in the field of legal regulations.

4.2. Statistical Analyses

4.2.1. One-Way ANOVA Analysis of Variance

A one-way ANOVA analysis of variance was used to examine the relationship between specific CF activities and a given factor characterizing companies using this form of financing. Each of the CF activities was statistically tested according to four factors characterizing the companies surveyed:

- The size of the company (micro, small, medium);
- The age of the company (1 year, 2–3 years, 4–5 years, >5 years);
- Form of business (traditional business, combination (traditional and online business), only online);
- The sector in which the company operates (services, industry, agriculture).

ANOVA analysis of variance tests the equality of the means of several populations that have a single factor in common (known as a classifier factor). In our case, the classifier factor is the willingness (likelihood) to use CF. The preferences of the companies surveyed form separate populations that are being tested. We tested the existence of a relationship between a CF-related variable and a specific characteristic of a company using CF in a one-way ANOVA analysis of variance by posing null and alternative hypotheses:

- Null hypothesis (H_0): A factor characterizing the company has no impact on the CF-related variable.
- Alternative hypothesis (H_1): A factor characterizing a company influences a CF-related variable.

In the present analysis, the factors characterizing a company are its size, life cycle phase, age, sector of operations, and form of business, understood at this point as business conducted only in traditional form (stationary), only online (e-shop) or as a combination of traditional and online forms. Among the factors related to CF, we included the purposes of CF and the reasons why the company had used CF, as well as the value of the funds raised, the costs of the CF campaign, the benefits the company had intended to achieve through the CF campaign, the CF models and the forms of fundraising. The questions included companies' assessment of the risks associated with using CF as a means of financing.

The one-way ANOVA analysis of variance uses the Fisher statistical test as the test statistics. It compares the mean square of deviations between groups and the mean square of deviations within groups. Statistical tests were carried out at a significance level of 0.05. The Fisher statistical test has $k-1$ and $n-1$ degrees of freedom, where k is the number of factors characterizing companies using CF and n is the number of total observations (the number of all companies used in the analysis). The critical area is the right-hand side.

Table 1 presents all cases for which the alternative hypothesis (H_1) is accepted—for these, the Fisher statistical value falls within the critical area. On the basis of the means, it was determined which of the factors surveyed were the most and least relevant to the particular characteristic of the company. On the basis of the means, it was determined which of the factors surveyed were the most and least relevant to the particular characteristic of the company. The full results of the analysis are presented in the Appendix A in Tables A1–A5.

Table 1. One-way ANOVA analysis of variance—results.

Company Characteristic	Study Area	Factor Surveyed	Fisher Statistics	p-Value	Most Frequently Selected by	Mean	Standard Deviation	Least Frequently Selected by	Mean	Standard Deviation
Size of the company	Form of financing the activity	Loans in the family, among friends	3.66173	0.028650	Micro	0.500000	0.503953	Medium	0.100000	0.316228
		Trade credit	23.19599	0.000000	Medium	0.300000	0.483046	Micro	0.000000	0.000000
		Co-financing by partners	3.72590	0.026971	Medium	0.400000	0.516398	Small	0.085106	0.282057
	Phase of development of the enterprise during which it used CF	Expansion phase	3.845603	0.024102	Small	0.574468	0.499769	Medium	0.300000	0.483046
		Equity	17.54730	0.000000	Medium	0.600000	0.516398	Micro	0.015625	0.125000
	CF model that was used	Donation	5.94834	0.003457	Micro	0.609375	0.491747	Medium	0.200000	0.421637
		Everything or nothing	12.61631	0.000011	Medium	0.500000	0.527046	Micro	0.175368	0.106383
	Value of the funds raised	PLN 20,000–40,000	4.73503	0.010518	Micro	0.640625	0.483610	Small	0.361702	0.485688
		PLN 40,001–80,000	3.27844	0.041147	Small	0.276596	0.452151	Micro	0.093750	0.293785
		PLN 120,000–160,000	4.96835	0.008479	Medium	0.200000	0.421637	Micro	0.000000	0.000000
Company age	Purpose of raising funds	Greater internationalization of sales	3.497158	0.033459	Medium	0.400000	0.516398	Small	0.085106	0.282057
		Increasing the number of distribution channels	3.493413	0.033577	Medium	0.300000	0.483046	Micro	0.109375	0.314576
	Campaign cost	PLN 5000–10,000	3.20499	0.044114	Small	0.319149	0.471186	Micro	0.125000	0.333333
		PLN 10,001–20,000	7.93683	0.000583	Medium	0.200000	0.421637	Micro	0.000000	0.000000
	Costs incurred in connection with raising funds as part of a CF campaign	Taxes	13.63074	0.000005	Small	0.468085	0.504375	Micro	0.078125	0.270490
		Advertisement	8.29910	0.000424	Medium	0.300000	0.483046	Small	0.042553	0.204030
		Financial and accounting services	5.15090	0.007166	Medium	0.200000	0.421637	Micro	0.000000	0.000000
	Benefits of CF	Company/brand promotion	3.157032	0.046168	Medium	5.000000	0.471405	Small	4.638298	0.673264
	Phase of development of the enterprise during which it used CF	Founding phase	21.60432	0.000000	1 year	1.000000	0.000000	>5 years	0.000000	0.000000
		Maturity phase	10.51660	0.000004	>5 years	0.333333	0.481543	1 year	0.000000	0.000000
								2–3 years	0.000000	0.000000

Table 1. Cont.

Company Characteristic	Study Area	Factor Surveyed	Fisher Statistics	p-Value	Most Frequently Selected by	Mean	Standard Deviation	Least Frequently Selected by	Mean	Standard Deviation
Form of business activity	CF model that was used	Equity	3.514967	0.017420	>5 years	0.291667	0.464306	1 year	0.000000	0.000000
	Value of the funds raised	PLN 5000–10,000	6.993465	0.000228	1 year	0.250000	0.462910	4–5 years	0.000000	0.000000
	Purpose of running a CF campaign	All above	2.742442	0.046331	1 year	0.250000	0.462910	>5 years	0.000000	0.000000
	Campaign cost	PLN 500–1000	3.525029	0.017199	1 year	0.250000	0.462910	>5 years	0.000000	0.000000
	Form of financing the activity	Co-financing by partners	4.811215	0.009803	Combination	0.291667	0.464306	Traditional activity	0.071429	0.259086
	Form of collection used	Everything or nothing	4.326183	0.015376	Combination	0.250000	0.442326	Only online	0.000000	0.000000
	Value of the funds raised	PLN 160,000–200,000	4.299775	0.015759	Combination	0.083333	0.282330	Traditional activity	0.000000	0.000000
	Reason for the decision to use CF	Low cost of raising capital	3.142431	0.046813	Combination	0.541667	0.508977	Only online	0.153846	0.375534
		PLN 1001–5000	3.904530	0.022805	Traditional activity	0.785714	0.412790	Only online	0.538462	0.518875
	Campaign cost	PLN 20,000–40,000	4.299775	0.015759	Combination	0.083333	0.282330	Traditional activity	0.000000	0.000000
		Financial and accounting services	6.443617	0.002209	Combination	0.166667	0.380693	Only online	0.000000	0.000000
Sector in which the company operates	Costs incurred in connection with raising funds as part of a CF campaign	Consulting services	3.655393	0.028822	Only online	0.153846	0.375534	Traditional activity	0.011905	0.109109
		Opportunity to obtain a sponsor	3.654378	0.028849	Only online	5.230769	0.599145	Traditional activity	4.738095	0.660760
	Value of the funds raised	PLN 40,001–80,000	3.20757	0.044007	Industry	0.048780	0.218085	Agriculture	0.000000	0.000000
		PLN 120,000–160,000	10.95080	0.000043	Agriculture	0.400000	0.547723	Services	0.000000	0.000000
	Campaign cost	PLN 10,001–20,000	4.872512	0.009263	Agriculture	0.200000	0.447214	Services	0.000000	0.000000
	Benefits of CF	Low cost of obtaining funds	3.769508	0.025888	Agriculture	4.600000	1.341641	Services	3.933333	1.004494

In all cases, the null hypothesis was rejected, indicating that the company characterization factors examined have a statistically significant impact on CF factors. The statistical survey demonstrates that the characteristics which are held by companies using crowdfunding and which show the greatest correlations with the factors surveyed include the size of the company (19 companies), the form of business (9 companies), the age of the company (8 companies) and the sector in which the company operates (5 companies).

If the null hypothesis is rejected, it is necessary to examine which of the comparative factors characterizing companies using CF contributed to the rejection. The differences between the means in the different populations (types of companies) should then be analyzed. Multiple-comparison (post hoc) tests are used for this purpose.

4.2.2. Tukey's Test—One-Way ANOVA Analysis of Variance Post Hoc Test

As the one-way ANOVA analysis of variance showed significant differences between the groups considered, further tests were carried out. Special post hoc tests were used for this purpose—Tukey's RIR (reasonably important difference) test. These tests were designed to determine which of the k means differed and which were equal and thus to identify which populations were responsible for rejecting the null hypothesis in the ANOVA analysis. This is the most recommended test for comparing each pair of means separately.

The null and alternative hypotheses for Tukey's RIR test, verifying the existence of a relationship between the pairwise means of the factors, can be written as follows:

- Null hypothesis (H_0): The means of the factors characterizing the surveyed companies using CF from the pair are the same.
- Alternative hypothesis (H_1): The means of the factors characterizing the surveyed companies using CF from the pair are not the same.

Statistical tests were carried out at a significance level of 0.05. This statistic compares all pairs of the independent variable with a Student t test and adjusts the significance level for multiple comparisons.

A post hoc test, Tukey's RIR test, showed no significant relationships between the following surveyed characteristics of companies using CF and the surveyed CF factors:

- Company size: benefits of CF—company/brand promotion;
- Age of the company: purpose of running a CF campaign—all of the above;
- Form of business conducted: cost of running the campaign—PLN 1001–5000;

For the other pairs: company characteristics and services—there are relationships, as presented in Table 2. The full results of the analysis are presented in the Appendix A in Table A5.

Table 2. Tukey test—One-way ANOVA post hoc test.

Characteristics of Company	Study Area	Factors Tested	Pair				
			Feature 1	Mean	Feature 2	Mean	p-Value
Form of financing the activity	Phase of development of the enterprise during which it used CF	Loans in the family, among friends	Micro	0.500000	Medium	0.100000	0.042666
		Trade credit	Micro	0.000000	Medium	0.300000	0.000118
		Co-financing by partners	Small	0.000000	Medium	0.300000	0.000118
			Micro	0.125000	Medium	0.400000	0.043503
	CF model that was used		Small	0.085106	Medium	0.400000	0.020617
		Expansion phase	Micro	0.328125	Small	0.574468	0.024964
			Micro	0.015625	Small	0.234043	0.001479
		Equity	Micro	0.015625	Medium	0.600000	0.000119
Company size	Form of collection used		Small	0.234043	Medium	0.600000	0.003493
			Micro	0.609375	Small	0.340426	0.012176
		Donative	Micro	0.609375	Medium	0.200000	0.036680
			Micro	0.031250	Medium	0.500000	0.000122
	Value of the funds raised	Everything or nothing	Small	0.106383	Medium	0.500000	0.000319
		PLN 20,000–40,000	Micro	0.640625	Small	0.361702	0.009794
		PLN 40,001–80,000	Micro	0.093750	Small	0.276596	0.032193
		PLN 120,000–160,000	Micro	0.000000	Medium	0.200000	0.017115
Purpose of raising funds	Greater internationalization of sales (understood as % of total sales)		Small	0.085106	Medium	0.400000	0.025108
		Increasing the number of distribution channels	Micro	0.109375	Small	0.297872	0.036489
	Campaign cost	PLN 5000–10,000	Micro	0.125000	Small	0.319149	0.033783
		PLN 10,001–20,000	Micro	0.000000	Medium	0.200000	0.002186
			Small	0.021277	Medium	0.200000	0.000455

Table 2. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair			
			Feature 1	Mean	Feature 2	Mean
Company age	Costs incurred in connection with raising funds as part of a CF campaign	Taxes	Micro	0.078125	Small	0.468085
		Advertisement	Micro	0.015625	Medium	0.300000
			Small	0.042553	Medium	0.300000
		Financial and accounting services	Micro	0.000000	Medium	0.200000
			1 year	1.000000	2–3 years	0.230769
	Phase of development of the enterprise during which it used CF	Founding phase	1 year	1.000000	4–5 years	0.081081
			1 year	1.000000	>5 years	0.000000
			2–3 years	0.230769	>5 years	0.000000
		Maturity phase	1 year	0.000000	>5 years	0.333333
			2–3 years	0.000000	>5 years	0.333333
Form of business activity	CF model that was used	Equity	2–3 years	0.057692	>5 years	0.417342
	1 year		0.250000	2–3 years	0.019231	
	Value of the funds raised	PLN 5000–10000	1 year	0.250000	4–5 years	0.000000
			1 year	0.250000	>5 years	0.000000
			1 year	0.250000	2–3 years	0.038462
	Campaign cost	PLN 500–1000	1 year	0.250000	4–5 years	0.027027
			1 year	0.250000	>5 years	0.000000
			1 year	0.250000	>5 years	0.010787
	Form of financing the activity	Co-financing by partners	Combination	0.291667	Traditional activity	0.071429
	Form of collection used	Everything or nothing	Combination	0.250000	Traditional activity	0.071429
			Combination	0.250000	Only online	0.000000
	Value of the funds raised	PLN 160,000–200,000	Combination	0.083333	Traditional activity	0.000000

Table 2. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair				
			Feature 1	Mean	Feature 2	Mean	p-Value
	Reason for the decision to use CF	Low cost of raising capital	Combination	0.541667	Only online	0.153846	0.048758
	Campaign cost	PLN 20,000–40,000	Combination	0.083333	Traditional activity	0.000000	0.012833
	Costs incurred in connection with raising funds as part of a CF campaign	Financial and accounting services	Combination	0.166667	Traditional activity	0.011905	0.002027
		Consulting services	Combination	0.166667	Only online	0.000000	0.033972
	Benefits of CF	Opportunity to obtain a sponsor	Traditional activity	0.011905	Only online	0.153846	0.043067
Sector in which the company operates			Traditional activity	4.738095	Only online	5.230769	0.036389
			Services	0.000000	Industry	0.097561	0.037714
	Value of the funds raised	PLN 120,000–160,000	Services	0.000000	Agriculture	0.400000	0.000219
			Industry	0.097561	Agriculture	0.400000	0.005707
	Campaign cost	PLN 10,001–20,000	Services	0.000000	Agriculture	0.200000	0.013860
	Benefits of CF	Low costs of obtaining funds	Services	3.933333	Industry	4.439024	0.033009

4.2.3. R-Pearson Correlation

The surveys provided information on the value of funds raised through CF and the costs involved. The R-Pearson correlation coefficient (Table 3) was used to assess the association of the three related variables:

- Value of funds raised through CF (1);
- Percentage of the total project value, corresponding to the funds raised through CF (2);
- The cost of running the CF campaign (3).

Table 3. R-Pearson correlation results.

	1.		2.		3.
	Pearson's R—Correlation Coefficient	p-Value	Pearson's R—Correlation Coefficient	p-Value	Pearson's R—Correlation Coefficient
1. Value of funds raised through CF	1				
2. Percentage of the total project value, corresponding to the funds raised through CF	−0.3393	0.0001	1		
3. The cost of running the CF campaign	0.7444	1.00666×10^{-22}	−0.2063	0.0231	1

The Pearson's linear correlation coefficient tells us what the strength and direction of the linear relationship between the variables under study is. The coefficient R takes values in the range $[-1, 1]$. The closer the value is to 1, the stronger and more positive the relationship is (if one variable increases, then the other also increases). The closer the value is to -1 , the stronger and more negative the relationship is (if one variable increases, then the other decreases). A coefficient value of zero, on the other hand, indicates the absence of a linear relationship between the variables.

A non-parametric test of the correlation coefficient significance was used to examine and determine the existence of a relationship between the aforementioned variables and to check whether the counted correlation value is statistically significant. The test statistic is as follows:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} \quad (1)$$

where:

r —value of Pearson's linear correlation coefficient calculated from the sample;
 n —sample size.

The null hypothesis and the alternative hypothesis for the statistical significance of the correlation coefficient testing the existence of a relationship between the variables are as follows:

- H_0 : Indicates that there is no correlation between the variables under study.
- H_1 : Indicates that there is a correlation between the variables under study.

The verification of this hypothesis will help to assess whether the existing relationship between the variables in the sample is merely random or whether it is a regularity in the population under study.

The test results (correlation coefficient values and p -values) for each pair of study variables are provided in the table below. The significance level was set at 0.05.

There is a significant correlation between study variables 1 and 2 (p -value = 0.0001). The correlation coefficient is -0.3393 , and this is a moderate negative correlation. This means that the higher the value of the funds raised through CF, the lower the percentage that the total project was raised through CF.

There is a highly significant correlation between study variables 1 and 3 ($p\text{-value} = 1.00666 \times 10^{-22}$). The correlation coefficient is 0.7444, and this is a very strong positive correlation. This means that the higher the value of the funds raised through CF, the higher the cost of running the CF campaign.

There is a significant correlation between study variables 2 and 3 ($p\text{-value} = 0.0231$). The correlation coefficient is -0.2063 , and this is a weak negative correlation. This means that the higher the percentage of the total project raised through CF, the lower the cost of running the CF campaign.

5. Crowdfunding Business Model

The analysis of the survey responses led us to develop the business model shown in Figure 10. The starting point when creating a business model is first to identify the participants directly and indirectly (e-shop) related to the CF campaign. Another important element in the creation of the model is the concept/idea/product (CIP), which is the main reason why the company seeks funding. Developing a CIP requires committing different types of resources and deciding how to finance the production (input). The occurrence of this element, CIP, triggers all other activities undertaken by the company and creates links between participants. The model takes into account the need for additional staff and the creation of a unit to deal only with the CF campaign, as indicated by the companies interviewed. The decision to undertake a CF campaign brings about the need to choose a CF model and the type of fundraising, the timing of the CF campaign. In addition, in many cases, it is required to use support for appropriate accounting records, as well as to use legal and marketing services in order to properly prepare, perform and complete the CF campaign. A good campaign should communicate the CIP in a way that convinces prospective investors/donors. Additionally, it requires a proper presentation of the company itself in order to gain their trust. The achievement of these objectives is made possible by networking on CF platforms and social media, which play an important role in this message.

Resources, both tangible and intangible, committed before and during the CF campaign are one of the model segments. The use of these resources by the company and the assessment of its own capabilities determines the decision to finance and test the idea under consideration. Deciding on funding through CF involves ring-fencing some of the resources within the company itself and organizing them in order for the company to run a campaign and raise funds. The use of existing access to e-commerce and social media can be a supporting element at the stages of idea generation, testing, and fundraising.

The “cloud” segment of the model includes those actors whose activity is conducted using the internet, that is mainly CF platforms and social media. Thanks to the CF platform on which the campaign is run, there are numerous iterative interactions between the “crowd” and the SMEs involving the exchange of product/idea information. The active participants are potential investors/backers or donors who emerge from the crowd. Among them, companies are also looking for potential customers and business partners. There is communication between the entrepreneur and the crowd through CF platforms, and there are fund contributions from donors and investors. As platform activities are linked to cloud solutions, alongside CF platforms and social media, the model also includes entrepreneurs’ online activity in the form of e-commerce. Being present online and operating as an e-commerce business is important, as businesses with a combination of traditional and online forms were most likely to make the decision to use CF. Further, the model includes a participant lawmaking institutions in Poland because (as the respondents pointed out) they are the parties generating the biggest risk of using CF as a way of financing, and this risk concerns the amount of taxes paid and the transparency of legal regulations. The model above shows the actors involved in the CF campaign but does not take into account the CF models. As research by other authors has shown, this has important implications for the value created and the nature of relationships formed between participants. This model shows the dependencies between the actors, but it does not depict the type of values transferred in the CF model. To identify value flows, we apply the E3 model.

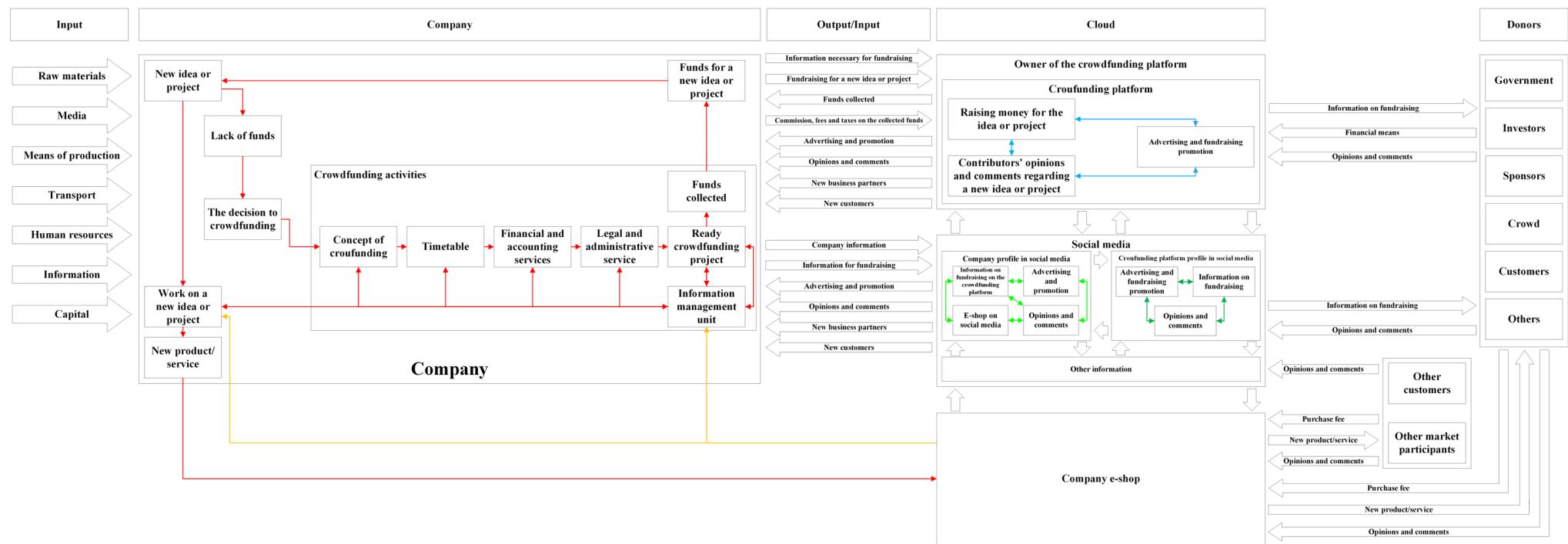


Figure 10. Business model of SMEs using CF.

5.1. E3 Value Model

On the basis of the business model, using the E3 methodology, a value flow map of the business model was developed [68]. This business model represents the flow of value when the exchange involves at least two parties [82]. Exchanges between the actors represented in the value business model are agreements regulating which objects and for what economic value will be exchanged by the actors during the life of a contract [83]. The E3 business model does not show when and how these exchanges take place [84]. The business model concerns actors, that is, who exchanges value objects with whom, what customer's needs are met with this exchange, and what income and expenditure is thus generated for each actor [82].

According to the E3 methodology, actors are entities perceived by themselves and their environment as economically independent [83]. The CF business model (Figure 11) includes entities that are responsible for profit and loss, namely, in this case, SMEs, banks, advisory institutions, social media and CF platforms. In the diagram, the actors providing legal, accounting and advisory services reflect the impact of government institutions on the operation of businesses. Another group are investors, donors and sponsors, namely, the "crowd".

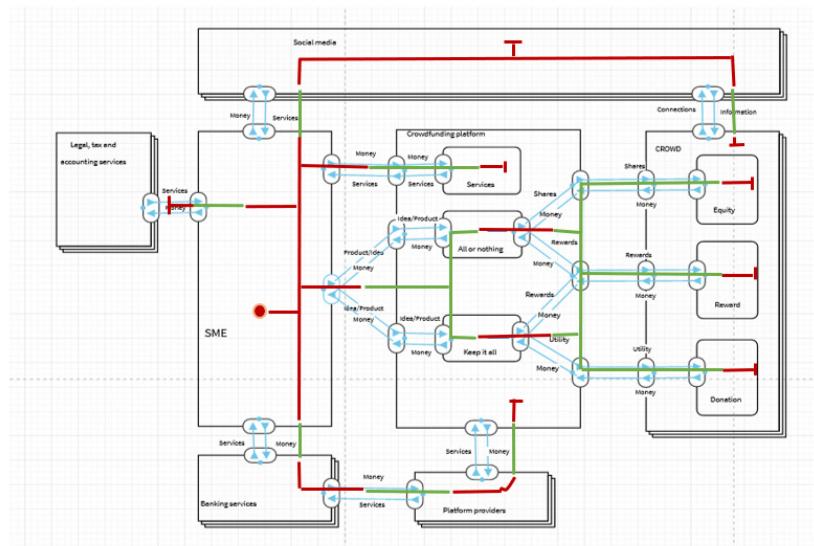


Figure 11. Business model of SMEs using CF. Note: See Table 4 for an explanation of line colors and other model graphics.

In the E3 business model, we identify the actors/participants between whom value is exchanged. These can be individual actors or market segments. A market segment represents a group of actors for whom the value objects is the same. The diagram includes SMEs as an actor and the segments: CF platforms, social media, the crowd, banks and the legal and financial services segment.

Actors exchange objects of value, which are services, products, money and even consumer experiences. The primary object of value is the CIP delivered to the CF platform in exchange for another object, which is money (completed fundraising). For an actor such as the crowd, the objects of value are rewards or shares, exchanged via the CF platform depending on the CF business model. An important object of value is the information and opinion on the product that are exchanged between the SMEs and the crowd via the CF platform and social media. The objects of value are the services provided by the platform, resulting from the types of cash fundraising offered and the CF business model. The objects of value represent a specific value proposition. A value proposition is a set of value exchanges that shows what objects of value are exchanged for other objects of value.

Table 4. Explanation of symbols.

Group of Actors	Actor	Value Interface	Value Ports	Flow of Value between Ports	Activities Undertaken by the Actor(s) to Provide Value	Determination of Possible Value Exchange Scenarios	Initiation of Activities To Be Taken	Completion of Activities, Delivery of Object/Value

The value exchange takes place via the value interface on all its ports. Actors have one or more value interfaces. The value interface shows the value of an object for which an actor is willing to exchange another object of value through the interface ports. Most value interfaces are used by the SMEs as running a CF campaign requires the exchange of many objects of value, such as banking, accounting, and advertising services.

An actor uses a value port to show that it wants to provide or request objects of value. The notion of a port enables one to detach oneself from the internal processes of the business and focus only on how external actors and other elements of the model can be brought together. There are two value interfaces in the relationship of the SMEs with the CF platforms. In the first interface, there is an exchange of value related to the provision of advertising services and other aspects by the platform, and the second interface is related to the fundraising model. The diagram shows the fundraising models that respondents used most frequently and the CF business models.

Value activity is the activity undertaken by actors to increase their profitability and/or their utility. Therefore, in order to determine whether the activities undertaken are profitable or increase utility, it is necessary to attribute them to the relevant actors. The lines connecting the ports in the value interfaces represent the exchange of value and the direction of its flow; this exchange is presented in the diagram with solid lines. Thus, between the platform and the SMEs, the requested value is the value of the services provided by the platform for a certain monetary value. The value offered by the SMEs is the value of the idea/product/concept in exchange for the value of the money raised (money is the object of value).

Regardless of the CF model used by the SMEs, all actors are involved in the flow of value. Each takes the activities necessary to offer objects of value, but the flow of value will vary depending which model is used by the SMEs and, on the other hand, what preferences and expectations are shown by investors/donors.

Possible value-flow scenarios can be identified from the model. A scenario pathway consists of one or more segments/actors linked by connecting elements and start-stop stimuli. The path indicates which objects of value interfaces must be exchanged as a result of the initial stimulus or as a result of exchange via other value interfaces. The scenario pathway starts with an initial stimulus which represents the initiating event triggered by the actor. The last segment of the scenario pathway is linked to the stop stimulus. The stop stimulus indicates that the pathway of the scenario is ending, which means that the value exchange has been finalized.

Moving from the initiating stimulus, that is, the decision to raise finance through the CF along the red lines indicating the activities undertaken by the actors to create value, to the ending stimulus (stop stimulus) makes it possible to consider all possibilities and assess their cost-effectiveness. The green lines in the model indicate the exchange of value under different scenarios.

The model presented is a generic model. In order to be able to validate it, we will consider the implemented scenarios resulting from the different CF models.

5.2. E3 Value Business Model

Based on the E3 value business model diagram and the survey results for CF, the following scenarios can be identified [85]:

1. Equity CF with the “all or nothing” model
2. Reward CF with the “all or nothing” model
3. Reward CF with the “keep it all” model
4. Donation CF with the “keep it all” model

By analyzing the models, we can determine how the SMEs can achieve the goal of raising finance and what kind of value is exchanged. In the E3 value model, learning about the value network allows the calculation of net cash flow values, as presented in the tables below.

The value analysis is conducted from the point of view of the main actor, which is the SMEs.

5.2.1. Equity CF with the “All or Nothing” Model

Based on the E3 business model shown in Figure 12, a value flow was developed for the first scenario.

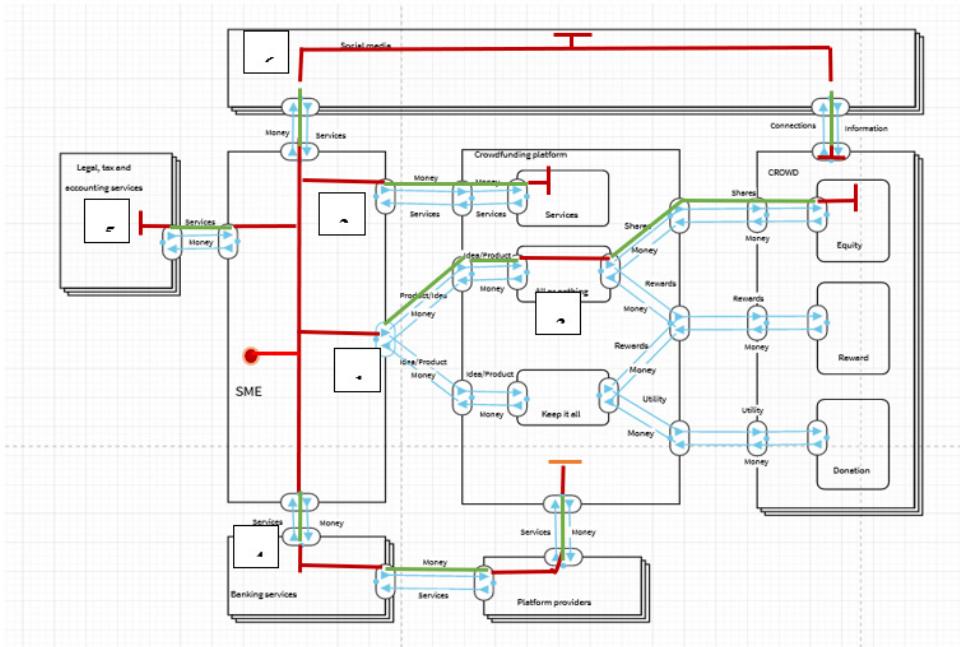


Figure 12. The E3 model for equity CF with the “all or nothing” model. Note: See Table 4 for an explanation of line colors and other model graphics.

The value flow pathways determined for this scenario, as presented in Figure 3, allowed the development of a profit sheet indicating the objects to be exchanged and the values associated with them. The different activities are described in the Table 5 with consecutive numbers according to their position in the diagram.

Based on the value flow analysis, we can calculate the value of the net flows and value the project itself.

The equation for calculating net cash flow is provided below:

$$\text{Net cash flows (Money 1)} = (\text{Money 3} - \text{Money 2}) - (\text{Money 4} + \text{Money 5} + \text{Money 6})$$

The value of the proceeds (Money 1) consists of the money the company will receive (Money 3) but minus the costs of operating the CF platforms (Money 2) and the costs of other services provided by the CF participants (Money 4, 5, 6). The calculated value of net cash flow corresponds to the value of cash that physically flows into the company.

From the point of view of added value creation, it is important that the funds raised be significantly higher than the project cost. Raising funds only at the level of costs incurred only means reimbursing expenditure and does not create the surplus necessary for further investment.

In business ventures, a minimum limit on the funds raised is usually required in the CF so that at least the production costs can be covered if the entrepreneur is unable to convince investors of the idea potential and to make contributions in excess of the project budget. Hence, respondents pointed to fundraising that requires collecting all the required funds.

Table 5. Profit sheet for the Equity CF scenario—“all or nothing” model.

	Actor	Value Object In	Value Object Out	Value In	Value Out
1.	CF platform	Money 1	Project/idea concept	Money 1	Project value/concept/idea/costs
2.	CF platform	Services 2	Money 2	Value of PCF services	Money 2
3.	Crowd-equity CF	Shares	Money 3	Value Shares	Money 3
3.	CF platform	Money 3	Shares	Money 3	Value Shares
4.	Banking services	Services 4	Money 4	Value of banking services	Money 4
5.	Legal, tax and accounting services	Services 5	Money 5	Value of legal, tax and accounting services	Money 5
		Services 6	Money 6	Value of advertising	Money 6
6.	Social media	Opinions	Information	Improvement proposals	Social media fees

Explanations: Money 1—funds from contributions by investors/donors/backers; Money 2—expenses for CF platform services; Money 3—value of contributions from investors via a CF platform; Money 4—expenses related to banking services; Money 5—expenses related to legal and tax services; Money 6—fees for social media.

In equity CF, in compliance with the law, for the funds invested, investors must receive shares of equivalent value. We can write this in the form of an equation: Shares = money 3

The value added for the SME is the difference between the net proceeds and the value of the cost for the project generated, i.e., value added = Money 1 – project cost. The more added value generated during a CF campaign, the greater the chances of the project’s success in the future.

5.2.2. Reward CF with the “All or Nothing” and “Keep It All” Models

Similarly, we will carry out value calculations for reward CF taking into account the “all or nothing” and “keep it all” fundraising options (Figure 13).

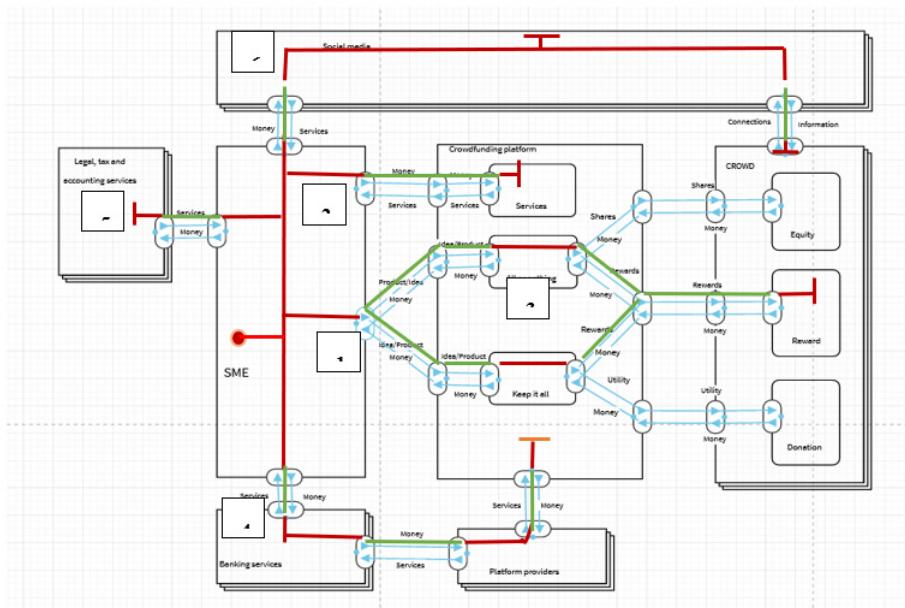


Figure 13. Value flow for the reward CF scenario. Note: See Table 4 for an explanation of line colors and other model graphics.

In this model, it is not necessary to analyze the separation of fundraising options as the final value transferred to the SME will occur if, in the “all or nothing” model, funds are transferred or not. The pattern of value flow, however, will be the same as for the “keep it all” model (Table 6).

Table 6. Profit sheet for reward CF scenario—“all or nothing” and “keep it all” models.

	Actor	Value Object in	Value Object out	Value in	Value out
1.	CF platform	Money 1	Project/concept/idea Rewards	Money 1	Project/concept/idea/cost Rewards
2.	CF platform	Services 2	Money 2	Value of PCF services	Money 2
3.	Crowd—reward CF	Rewards	Money 3	Value of rewards	Money 3
	CF platform	Money 3	Rewards	Money 3	Value of rewards
4.	Banking services	Services 3	Money 3	Value of banking services	Money 3
5.	Legal, tax and accounting services	Services 4	Money 4	Value of legal, tax and accounting services	Money 4
6.	Social media	Services 5 opinions	Money 5 Information	Value of advertising Suggestions for improvement	Money 5

Explanations: Money 1—funds from contributions by investors/donors/backers; Money 2—expenses for CF platform services; Money 3—value of contributions from investors via a CF platform; Money 4—expenses related to banking services; Money 5—expenses related to legal and tax services; Money 6—fees for social media.

Despite considering different fundraising models for the reward CF, the equation for calculating the net cash flow value is the same:

$$\text{Net cash flows (Money 1)} = (\text{Money 3} - \text{Money 2}) - (\text{Money 4} + \text{Money 5} + \text{Money 6})$$

The value of net cash flow corresponds to the value of cash received by the company. However, their net value to the company will not be the same as in equity CF as the company has to incur additional costs to acquire or produce investor rewards, making the net proceeds lower—assuming the amount of the campaign impact would be the same and assuming other costs as in the other scenarios. This was confirmed by the statistical analyses that an increase in funding raised also means that higher costs are required, but if the percentage of funding raised increases in relation to the value of the project, then the costs will be lower. The implication is that getting the project value (budget) right is crucial, and in campaigns that allow for “take as much as you can raise”, the actual fundraising costs can be very high, plus there is a very high risk that the funds raised in this way will not be sufficient for the project. The statistical analysis shows that Polish companies made little use of this CF model and the “take as much as you can raise”. The “all or nothing” and “minimum funding target” fund raisings predominated, which, in the light of the analyses, means that they sought to minimize funding costs, although this was not their main objective.

This also has an impact on value creation in CF. In this model, the added value for the SMEs will be lower than in equity CF, as the proceeds have to be reduced by the sum of the investment in the project itself and the associated rewards. Assuming, therefore, that it is possible to run campaigns for the same project in equity CF or reward CF and with different fundraising options, equity CF is clearly preferable as there is the possibility of generating higher revenues and higher added value for the company.

5.2.3. Donation CF with the “All or Nothing” Model

The option that the companies surveyed were keen to use is donation CF. The flow of value for this model is shown below in Figure 14.

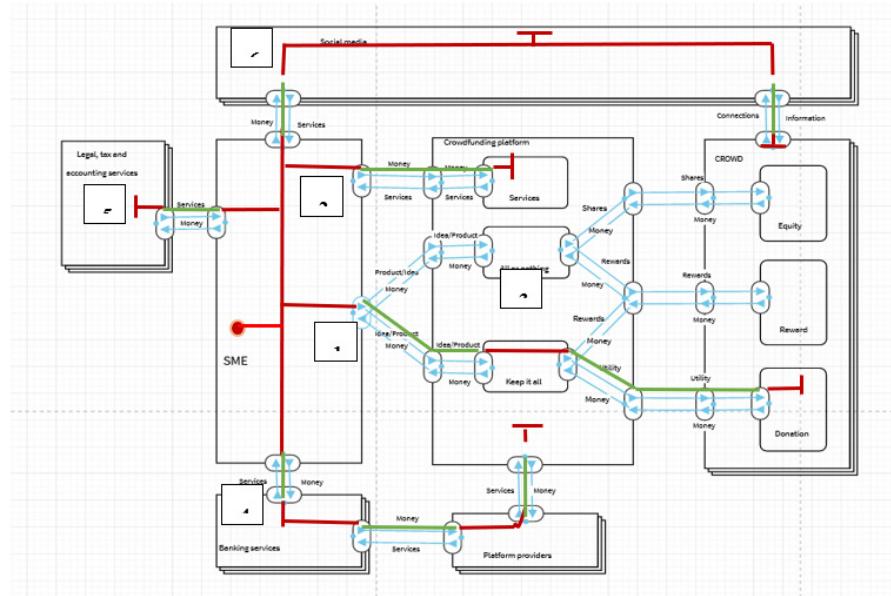


Figure 14. Flow of value in the donation CF. Note: See Table 4 for an explanation of line colors and other model graphics.

In line with the value flow model as presented, we find here a confirmation that the CF model is crucial for the value flow. The actors and the core activities remain the same. Data on transferred objects of value and transferred values in this scenario are provided in Table 7.

Table 7. Profit sheet for donation CF scenario—“all or nothing” and “keep it all” models.

	Actor	Value Object in	Value Object out	Value in	Value out
1.	CF platform	Money 1	Project/concept/idea Social values/ utilitarian value	Money 1	Project value/concept/idea/costs Social values/utilitarian value
2.	CF platform	Services 2	Money 2	Value of PCF services	Money 2
3.	Crowd— donation CF	Social val- ues/utilitarian value	Money 3	Social values/utilitarian values	Money 3
	CF platform	Money 3	Social values/ utilitarian value	Money 3	Social values/ utilitarian value
4.	Banking services	Services 4	Money 4	Value of banking services	Money 4
5.	Legal, tax and accounting services	Services 5	Money 5	Value of legal, tax and accounting services	Money 5
6.	Social media	Services 6	Money 6	The value of advertising and networking	Money 6

Explanations: Money 1—funds from contributions by investors/donors/backers; Money 2—expenses for CF platform services; Money 3—value of contributions from investors via a CF platform; Money 4—expenses related to banking services; Money 5—expenses related to legal and tax services; Money 6—fees for social media.

As in the previous scenarios, the calculation of net cash flows is as follows, and is the same as previously:

$$\text{Net cash flows (Money 1)} = (\text{Money 3} - \text{Money 2}) - (\text{Money 4} + \text{Money 5} + \text{Money 6})$$

Assuming that the company raises the same value of funds as in equity CF and the cost of servicing is the same, this CF model raises the same value of funds or very close to the same value. This is a higher value than for reward CF as there are no additional reward costs. This means that also the added value for SMEs will be the same as for equity CF. This CF model produces similar results in terms of added value. Typically, however, donation platforms charge lower fees than investment platforms or do not charge any fees at all, which is why, from a business management point of view, donation CF is the most beneficial for owners. It does not trigger the consequences of issuing shares to investors as in equity CF, that is, having to share power and/or profits with investors or having to pay reward costs.

The statistical research showed that the size of the company is the characteristic showing the highest correlation with the factors studied for companies using CF, so the values most closely related to this factor will be used to test the model. The business models occurring most frequently by company size were equity CF and donation CF, and the form of fundraising was "all or nothing". Most medium-sized companies raised funds in the range PLN 120,001–160,000 and incurred costs in the range PLN 10,001–20,000. The statistical analysis also showed that the higher the value of funds raised through CF, the higher the cost of running a CF campaign. Therefore, to calculate net flows, we assume lower costs for lower cash receipts and we assume higher costs for higher cash receipts. Hence, the net flows are PLN 110,000 for the lower limit and PLN 140,000 for the upper limit. The cost of capital will be in the first case $10,000/110,000 = 9\%$ and for the upper threshold $20,000/140,000 = 14.3\%$. The higher value of the capital cost for the upper threshold means that an increase in net inflows by PLN 30,000 (PLN 14,000–110,000), or 27.3%, requires a 100% increase in the cost of running a CF campaign, demonstrating the declining effectiveness of this mode of financing for the company. The statistical analysis also showed that the value of these costs is determined most strongly by advertising costs and financial and accounting service costs. These costs were the most acute for medium-sized companies. The costs of operating CF platforms as well as advisory services and taxes were much less acute for these companies.

6. Discussion

The aim of this research was to determine the business model of SMEs in Poland that have used CF. The business model question is justified because its framework can provide a structured way of sustainable business thinking by mapping purpose, value creation opportunities across the network and value capture (how to generate revenue) in companies [43,86]. Based on the survey questionnaires and the E3 concept, we developed a business and value flow model for CF. The links in the model were identified and so was the value transfer that takes place between the SMEs and the other actors. Using the analysis of scenarios reflecting the decisions made by entrepreneurs, it was shown that the use of equity CF or donation CF was the most beneficial for the companies analyzed. Using these business models enables higher cash receipts to be achieved than in reward CF. This has a corresponding impact on the higher added value from the CF campaign for the SMEs and on the cost of CF capital.

The value transferred by the SMEs is a project for which the company has already incurred certain expenses related to the conceptual phase, and needs to incur costs in the future in order to implement it. A characteristic feature of CF campaigns is that projects are evaluated by a crowd (potential investors, backers and donors) who, depending on their assessment of its value, will be willing to provide funding. This is why it is so important to generate as much added value as possible already at the stage of the acquisition. As the analysis shows, the value proposition of SMEs in projects is validated by the crowd, through

CF and social media platforms. The simulations show that the value of the project in equity CF corresponds to the value of the shares granted, and in reward CF, the value of the project corresponds to the sum of the funds provided by the backers. In that model, in addition to the project, SMEs also offer rewards; hence, the value of the cash receipts is lower than in the other models and is lower than the assessment of the project value by the crowd. In donation CF, the value of the project corresponds to the value of the funds invested. In all models, there is a significant difference between the value proposed by the SMEs and the value expected by investors, backers or donors. In equity CF, investors expect business impact and profits; in reward CF, these are mainly small rewards without profit sharing, as in donation CF, where the expected values are non-financial in nature [35,87,88]. However, as the surveys show, entrepreneurs have successfully implemented fundraising in both equity and donation CF. Moreover, these were the models most favored by companies. This means that both financial and non-financial aspects of projects are valued, and is an acknowledgement that the motivations of crowd participants can vary widely [30,89–91]. Projects assessed as more valuable from the point of view of individual participants can count on higher fundraising values [89]. In other words, a market valuation of projects is achieved through the business model implemented by the SMEs and related to CF. Market valuation is characterized by consideration of risk and potential future growth opportunities, which is consistent with investment theory [35,92]. Higher valuation is for projects whose potential, in the opinion of investors, is greater and their usefulness is greater from a social point of view (this is also the case in the stock market) as well as for investors [93,94]. According to this theory, an investor, in the expectation of higher returns, is willing to pay much more than the present value of a project based on its cost of production, which corresponds to the discounted value of future profits [95–98]. For the company, this means higher revenues than the costs incurred in developing the concept. The higher the surplus in the simulation, denoted as money 1, the greater the possibility of generating future profits.

The values captured by the SMEs in the CF are the opinions on the product, the concept, and the values offered, which are valued through the cash receipt values as offered. In a CF campaign, there is, therefore, an opportunity to increase the value of revenue by working with CF platforms, social media and the crowd. The value flow analyses show the particular importance of the CF model and the type of fundraising as they influence how value is created, how it is captured, and the final value added.

The E3 model used in this study is a model that takes these aspects into account [83,99]. Based on the business model built, the value flow analysis was carried out and showed that in addition to financial values in the form of cash, other values are also generated in the CF. This means that apart from economic value, social value is also created, which can be written down as:

$$\text{Value creation in CF} = \text{Economic value} + \text{Social value}.$$

This relationship, relevant to previous considerations, can also be written down as:

$$\text{Project value} = \text{Economic value} + \text{Social value} = \text{Value of funds raised}.$$

In our research, we have shown that the value of the funds raised corresponds to the SME assessment of the proposed value (of the project), but the structure of this value can vary greatly depending on the type of project.

Social value is created through social media and CF platforms as a result of information sharing and feedback from their participants (donors, investors). They have the opportunity to validate ideas precisely from the point of view of their own needs in accordance with the SME assessment of the utility of the proposed values. Projects can be assessed for their environmental impact, making it easy for entrepreneurs to verify whether the proposed value is acceptable from this point of view. They can also take steps to align the project with these expectations. In this respect, social and environmental values are, on the one hand,

offered by entrepreneurs in the proposed project and, on the other hand, created by the crowd as a result of the exchange of information and opinions, generating added value for the project. The disadvantage of presenting an idea in the media due to the possibility of plagiarism [87,100], which often appears in the literature, was not confirmed in the research, as this feature of CF was considered irrelevant by the respondents. Therefore, it should be considered that the cost associated with losing the project or plagiarizing it is not relevant to the SMEs in Poland, and the benefits of being able to promote the company and the project itself are more relevant.

Social value is created through social media and CF platforms as a result of information sharing and feedback from their participants (donors, investors). They have the opportunity to validate ideas precisely from the point of view of their own needs in accordance with the SME assessment of the utility of the proposed values. Projects can be assessed for their environmental impact, making it easy for entrepreneurs to verify whether the proposed value is acceptable from this point of view. They can also take steps to align the project with these expectations. In this respect, social and environmental values are, on the one hand, offered by entrepreneurs in the proposed project and, on the other hand, created by the crowd as a result of the exchange of information and opinions, generating added value for the project. The disadvantage of presenting an idea in the media due to the possibility of plagiarism [87,100], which often appears in the literature, was not confirmed in the research, as this feature of the CF was considered irrelevant by the respondents. Therefore, it should be considered that the cost associated with losing the project or plagiarizing it is not relevant to the SMEs in Poland, and the benefits of being able to promote the company and the project itself are more relevant.

On this basis, a new definition of CF can be proposed: "CF is a virtual marketplace in which the economic, social and environmental values of enterprise projects are assessed, and such a valuation is made through CF platforms as a result of raising funds to finance these projects".

Considering the possibility of value creation by SMEs as a result of raising funds in the CF, respondents mainly indicated objectives related to revenue generation: through the introduction of a new product, acquisition of new customers, markets, internationalization of sales, increasing the number of distribution channels, advertising and promotion of the brand or company. They also pointed to the opportunity to make investments and reduce costs. The dominant factors, however, were those that increase revenue, i.e., those linking to co-creation values, such as co-ideation, co-design, co-creation and co-evaluation relating to the innovative product and the opportunity to gather feedback on that product [11–13,101]. The value of co-consumption is reflected in the acquisition of new customers, markets and distribution channels. They further pointed to the possibility of making investments in IT and training, i.e., activities undertaken in the operational sphere of the company, also aimed at reducing costs. It is also noteworthy that the very fact of launching a CF campaign has an impact on the organization of the company as it requires the adaptation of existing resources and the engagement of new ones in order to carry out the campaign effectively. This means that companies make significant changes to their operations, which influences the flow of value within the company itself. This observation begs the question: "How effectively are companies that have raised funds in CF able to generate added value that contributes to the growth of their value?", namely how to translate the success of a CF campaign into market success? This highlights a very important area for research among companies that have used this form of financing successfully but have not been able to translate it into long-term market success. The analysis of the value flow shows that the feedback received should be used not only to raise funds, as indicated by the respondents, but also to strengthen the market position and the brand of the company and to gain feedback from the market. Hence, it can be seen that respondents are aware of the opportunities provided by CF. However, the question arises as to what extent entrepreneurs are able to use the information flowing into the company to develop their business.

Due to the existing connections between the economic, environmental and social layers, changes in one of them cause changes in the others [67,102]; changes to a company's business model caused by environmental problems can affect social factors and vice versa [41,86]. In other cases, the business model becoming overly focused on environmental issues may underestimate the social and economic layers. For these reasons, an appropriate mix of economic, environmental and social issues is needed in a business model for sustainable development [42,102,103]. The question is therefore what should the business model of companies using CF be in order to achieve the required balance between these layers and to increase the value of the company?

7. Conclusions

The research described in this paper made it possible to develop a business model for a company using CF. This model shows network relationships between the company and other participants in a CF campaign. The value analysis using the methodology proposed in the E3 model allowed the development of a value network and proposals for possible value flow scenarios depending on the CF business model and the type of fundraising. Depending on the CF model, other project-related values are subject to assessment: social and environmental values in the donation and reward models and economic values mainly in the equity model. However, irrespective of the CF model used, companies are pursuing economic objectives mainly concerned with increasing revenue. There is a transfer of the value captured in the CF into the value of the enterprise.

Apart from the added value of learning about the CF business model and the value creation in CF for the company using the E3 model, which incorporates economic, social and environmental values, we identified an important area for further research regarding companies that have used this form of financing. The research shows that more attention needs to be paid to activities undertaken within the company. We also proposed a new definition of CF that provides for the creation of more than just economic value in CF. This definition not only includes the aspect of funding, crowd's contribution to value creation and other participants but also points to the market nature of a CF campaign, where the valuation of the project itself takes place.

The research was carried out only in Poland, and hence, there are limitations to the interpretation of the results. However, the research provides a good basis for comparative studies conducted in other countries. Their aim should be to better understand the motivations and value drivers relevant to entrepreneurs reaching for this form of financing. The current research can be deepened to include aspects relating to skills and the extent to which the value captured by companies in CF is exploited.

There is no need to convince anyone of the significance of CF platforms in the entire fundraising process. The research results confirm their great importance and the importance of social media. It stems from the fact that platforms and media are involved in the transmission and capture of value, so another important direction should be to explore the expectations of entrepreneurs in maximizing the value transmitted through platforms and media to entrepreneurs. The organizational arrangements adopted for the security of transactions and all kinds of legal and tax issues are of great importance in this case. And, as the companies surveyed indicated, these issues represented a significant source of cost and risk. In 2022, the CF legal regulations in Poland were adapted to the EU requirements in terms of maintaining this type of risk. This research is worth conducting with a particular focus on the development of blockchain technology, which can greatly simplify some of these processes. Although the model we developed is a generic model, it can be the basis for analyzing value network in a broad sense as it takes into account social and economic values in addition to economic values. Tailoring it to the individual needs of the company will involve detailing the description of the value transmitted, transferred and captured, and an undoubtedly advantage of the proposed business model is the ability to quantify these values.

In our research, we mainly focused on the size of the company, so deepening the research by taking into account other characteristics, such as the phase of development, sector or type of projects is likely to contribute to better understanding and characterization of a typical SME using CF. Considering that the growth prospects of the CF market are significant, learning about the characteristics and expectations of entrepreneurs can help shape the value network in such a way that each participant can maximize the value captured, all the more so as the model allows analysis of both the value offered and the value captured, not only for the companies but also by each participant. The greatest advantage of the proposed model is, therefore, its versatility, meaning that the same model can be used according to the needs of each actor without the necessity to build different models for each actor separately. It shows in an integrated way how a change in the behavior of one participant can affect the others. By doing so, it enables sustainable decision-making by all of them.

Author Contributions: Conceptualization, M.K. and M.S.; methodology, M.K. and M.S.; formal analysis, M.K. and M.S.; investigation, M.K. and M.S.; resources, M.K., M.S. and A.E.W.; data curation, M.K. and M.S.; writing—original draft preparation, M.K. and M.S.; writing—review and editing, M.K. and M.S.; visualization, M.K. and M.S.; supervision, M.K., M.S. and A.E.W. project administration, M.K. and M.S.; funding acquisition, M.K., M.S. and A.E.W. All authors have read and agreed to the published version of the manuscript.

Funding: The study was financed under the grant agreement of the National Science Center no. 2017/25/B/HS4/02225.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is contained within the article.

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

Appendix A

Appendix A.1. One-Way ANOVA—Calculations

Table A1. One-Way ANOVA—calculations—company size (micro; small; medium).

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Micro		Small		Medium	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Form of financing the activity	Own funds	2.48987	0.087269	0.359375	0.483610	0.489362	0.505291	0.700000	0.483046
	Loans in the family, among friends	3.66173	0.028650	0.500000	0.503953	0.340426	0.478975	0.100000	0.316228
	Trade credit	23.19599	0.000000	0.000000	0.000000	0.000000	0.000000	0.300000	0.483046
	Bank credit	1.66800	0.193040	0.093750	0.293785	0.212766	0.413688	0.100000	0.316228
	Co-financing by partners	3.72590	0.026971	0.125000	0.333333	0.085106	0.282057	0.400000	0.516398
	Leasing	1.96875	0.144191	0.156250	0.365963	0.148936	0.359875	0.400000	0.516398
Phase of development of the enterprise during which it used CF	Funds from the European Union	0.41376	0.662116	0.140625	0.350382	0.085106	0.282057	0.100000	0.316228
	Founding phase	2.563384	0.081328	0.265625	0.445157	0.106383	0.311661	0.100000	0.316228
	Start-up phase	1.170763	0.313706	0.312500	0.467177	0.255319	0.440755	0.500000	0.527046
	Expansion phase	3.845603	0.024102	0.328125	0.473242	0.574468	0.499769	0.300000	0.483046
CF model that was used	Maturity phase	0.177678	0.837436	0.093750	0.293785	0.063830	0.247092	0.100000	0.316228
	Equity	17.54730	0.000000	0.015625	0.125000	0.234043	0.427976	0.600000	0.516398
	Sponsorship	0.12146	0.885740	0.296875	0.460493	0.340426	0.478975	0.300000	0.483046
	Donative	5.94834	0.003457	0.609375	0.491747	0.340426	0.478975	0.200000	0.421637
Form of collection used	Mortgage	0.69394	0.501630	0.109375	0.314576	0.127660	0.337318	0.000000	0.000000
	Everything or nothing	12.61631	0.000011	0.031250	0.175368	0.106383	0.311661	0.500000	0.527046
	Take as much as you want	1.23377	0.294920	0.328125	0.473242	0.255319	0.440755	0.100000	0.316228
	Achievement of the minimum financial goal	2.44575	0.091044	0.546875	0.501733	0.425532	0.499769	0.200000	0.421637
Value of the funds raised	Mixed	1.63221	0.199880	0.093750	0.293785	0.212766	0.413688	0.200000	0.421637
	PLN 5000–10,000	1.36689	0.258905	0.046875	0.213042	0.000000	0.000000	0.000000	0.000000
	PLN 10,001–20,000	0.33732	0.714364	0.203125	0.405505	0.170213	0.379883	0.100000	0.316228
	PLN 20,000–40,000	4.73503	0.010518	0.640625	0.483610	0.361702	0.485688	0.400000	0.516398
	PLN 40,001–80,000	3.27844	0.041147	0.093750	0.293785	0.276596	0.452151	0.200000	0.421637
	PLN 80,001–120,000	1.89858	0.154329	0.015625	0.125000	0.085106	0.282057	0.000000	0.000000
	PLN 120,000–160,000	4.96835	0.008479	0.000000	0.000000	0.085106	0.282057	0.200000	0.421637
	PLN 160,000–200,000	2.77045	0.066712	0.000000	0.000000	0.021277	0.145865	0.100000	0.316228
	Increase in sales	0.376082	0.687366	0.359375	0.483610	0.361702	0.485688	0.500000	0.527046
	Reduction in the cost of capital	2.734172	0.069065	0.187500	0.393398	0.063830	0.247092	0.000000	0.000000

Table A1. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Micro		Small		Medium	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Purpose of raising funds	Greater internationalization of sales (understood as % of total sales)	3.497158	0.033459	0.140625	0.350382	0.085106	0.282057	0.400000	0.516398
	Reduction in operating costs	0.874667	0.419686	0.296875	0.460493	0.297872	0.462267	0.100000	0.316228
	Improved customer retention	2.048397	0.133502	0.265625	0.445157	0.446809	0.502538	0.400000	0.516398
	Acquisition of new customers	0.202922	0.816626	0.328125	0.473242	0.297872	0.462267	0.400000	0.516398
	Increased customer satisfaction	0.616849	0.541373	0.156250	0.365963	0.170213	0.379883	0.300000	0.483046
	Increasing the number of distribution channels	3.493413	0.033577	0.109375	0.314576	0.297872	0.462267	0.300000	0.483046
	Shortening the contact between the customer and the seller	0.105569	0.899898	0.156250	0.365963	0.148936	0.359875	0.100000	0.316228
	Advertising expenses	2.401289	0.095016	0.062500	0.243975	0.191489	0.397727	0.200000	0.421637
	Increasing brand awareness	0.938532	0.394102	0.078125	0.270490	0.127660	0.337318	0.000000	0.000000
	Introduction of innovative products (goods and services)	1.154628	0.318709	0.859375	0.350382	0.744681	0.440755	0.800000	0.421637
Purpose of running a CF campaign	New investments in IT	0.781499	0.460074	0.343750	0.478714	0.404255	0.496053	0.200000	0.421637
	Staff training	1.291295	0.278770	0.281250	0.453163	0.425532	0.499769	0.300000	0.483046
	Only financial	0.372658	0.689709	0.109375	0.314576	0.106383	0.311661	0.200000	0.421637
	Marketing (advertising)	2.401289	0.095016	0.062500	0.243975	0.191489	0.397727	0.200000	0.421637
	Market check	0.833489	0.437072	0.125000	0.333333	0.148936	0.359875	0.000000	0.000000
	Acquiring sponsors	0.721428	0.488189	0.406250	0.495015	0.468085	0.504375	0.600000	0.516398
	Acquisition of new customers	1.509932	0.225162	0.390625	0.491747	0.553191	0.502538	0.400000	0.516398
Reason for the decision to use CF	Expanding the supply channel	2.455488	0.090196	0.234375	0.426956	0.425532	0.499769	0.400000	0.516398
	All above	0.177678	0.837436	0.093750	0.293785	0.063830	0.247092	0.100000	0.316228
	No credit available	0.384210	0.681837	0.296875	0.460493	0.234043	0.427976	0.200000	0.421637
	Checking the innovative source	0.325412	0.722876	0.109375	0.314576	0.127660	0.337318	0.200000	0.421637
	There are no other sources for such a high amount	1.014882	0.365587	0.406250	0.495015	0.319149	0.471186	0.200000	0.421637
Campaign cost	Low cost of raising capital	1.735689	0.180749	0.281250	0.453163	0.425532	0.499769	0.500000	0.527046
	Transparent and simple procedures	2.067958	0.131002	0.078125	0.270490	0.000000	0.000000	0.100000	0.316228
	PLN 500–1000	2.35537	0.099304	0.078125	0.270490	0.000000	0.000000	0.000000	0.000000
	PLN 1001–5000	2.90041	0.058932	0.796875	0.405505	0.638298	0.485688	0.500000	0.527046
	PLN 5000–10,000	3.20499	0.044114	0.125000	0.333333	0.319149	0.471186	0.200000	0.421637
	PLN 10,001–20,000	7.93683	0.000583	0.000000	0.000000	0.021277	0.145865	0.200000	0.421637
	PLN 20,000–40,000	2.77045	0.066712	0.000000	0.000000	0.021277	0.145865	0.100000	0.316228
	Commission for the collected portal	1.34503	0.264496	0.484375	0.503706	0.574468	0.499769	0.300000	0.483046
	Legal support	2.67969	0.072758	0.468750	0.502967	0.255319	0.440755	0.400000	0.516398

Table A1. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Micro		Small		Medium	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Costs incurred in connection with raising funds as part of a CF campaign	Platform maintenance costs	2.33843	0.100935	0.390625	0.491747	0.212766	0.413688	0.200000	0.421637
	Taxes	13.63074	0.000005	0.078125	0.270490	0.468085	0.504375	0.200000	0.421637
	Project organization	2.11013	0.125773	0.109375	0.314576	0.021277	0.145865	0.000000	0.000000
	Advertisement	8.29910	0.000424	0.015625	0.125000	0.042553	0.204030	0.300000	0.483046
	Financial and accounting services	5.15090	0.007166	0.000000	0.000000	0.063830	0.247092	0.200000	0.421637
	Employees	3.02551	0.052314	0.000000	0.000000	0.085106	0.282057	0.100000	0.316228
	Consulting services	0.68849	0.504343	0.046875	0.213042	0.021277	0.145865	0.100000	0.316228
Benefits of CF	Quick access to funds	0.706368	0.495507	4.140625	1.005811	4.276596	0.925535	4.500000	0.971825
	Low costs of obtaining funds	0.608722	0.545745	4.218750	1.075982	4.000000	1.000000	4.200000	1.135292
	Flexibility of this form of financing	1.722764	0.183033	4.843750	0.801165	4.638298	0.845076	5.100000	0.567646
	Company/brand promotion	3.157032	0.046168	4.921875	0.625000	4.638298	0.673264	5.000000	0.471405
	Gathering customer feedback	0.294229	0.745651	4.718750	0.653896	4.723404	0.743146	4.900000	0.875595
	Opportunity to obtain a sponsor	0.334395	0.716447	4.828125	0.655978	4.808511	0.680099	5.000000	0.816497
	Market research for the product/service	0.023373	0.976903	4.671875	0.735812	4.702128	0.805279	4.700000	0.674949
	The ability to influence the course of the campaign	0.901039	0.408923	4.937500	0.687184	4.787234	0.587410	5.000000	0.666667
CF risk	Platform assistance in preparing the campaign	1.334354	0.267272	4.890625	0.537991	4.936170	0.639438	4.600000	0.699206
	Ability to steal an idea	2.187078	0.116774	4.265625	1.116147	3.851064	1.042128	4.300000	0.948683
	Ability to copy the project	1.770882	0.174675	4.234375	0.971698	4.404255	0.924535	3.800000	0.788811
	High campaign costs	0.225082	0.798792	3.078125	1.185959	3.191489	1.154166	3.300000	1.251666
	Short campaign duration	0.024927	0.975386	3.218750	1.030776	3.170213	1.239199	3.200000	1.229273
	Long period of preparation for the campaign	0.438447	0.646084	3.156250	1.057381	3.106383	1.417807	3.500000	1.080123
	Specialized knowledge of social media	0.098863	0.905942	2.671875	0.817559	2.680851	0.911434	2.800000	0.788811
	Tax obligations	0.556928	0.574465	4.890625	0.737159	4.744681	0.793125	4.900000	0.567646
	Non-transparent legal regulations	2.645938	0.075146	4.609375	0.704119	4.510638	0.776624	5.100000	0.737865

Table A2. One-Way ANOVA—calculations—company age (1 year; 2–3 years; 4–5 years; more than 5 years).

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	1 Year		2–3 Years		4–5 Years		>5 Years	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Form of financing the activity	Own funds	2.016781	0.115361	0.125000	0.353553	0.461538	0.503382	0.540541	0.505228	0.333333	0.481543
	Loans in the family, among friends	1.008531	0.391652	0.500000	0.534522	0.423077	0.498867	0.297297	0.463373	0.500000	0.510754
	Trade credit	1.031634	0.381311	0.000000	0.000000	0.000000	0.000000	0.054054	0.229243	0.041667	0.204124
	Bank credit	0.687744	0.561285	0.000000	0.000000	0.134615	0.344642	0.189189	0.397061	0.125000	0.337832
	Co-financing by partners	1.725874	0.165478	0.250000	0.462910	0.076923	0.269069	0.216216	0.417342	0.083333	0.282330
	Leasing	0.615018	0.606605	0.250000	0.462910	0.192308	0.397959	0.189189	0.397061	0.083333	0.282330
Phase of development of the enterprise during which it used CF	Funds from the European Union	0.341237	0.795542	0.125000	0.353553	0.115385	0.322603	0.081081	0.276725	0.166667	0.380693
	Founding phase	21.60432	0.000000	1.000000	0.000000	0.230769	0.425436	0.081081	0.276725	0.000000	0.000000
	Start-up phase	1.33943	0.264983	0.000000	0.000000	0.326923	0.473665	0.351351	0.483978	0.291667	0.464306
	Expansion phase	2.54736	0.059273	0.000000	0.000000	0.442308	0.501506	0.513514	0.506712	0.375000	0.494535
CF model that was used	Maturity phase	10.51660	0.000004	0.000000	0.000000	0.000000	0.000000	0.054054	0.229243	0.333333	0.481543
	Equity	3.514967	0.017420	0.000000	0.000000	0.057692	0.235435	0.216216	0.417342	0.291667	0.464306
	Sponsorship	1.445776	0.233070	0.000000	0.000000	0.307692	0.466041	0.351351	0.483978	0.375000	0.494535
	Donative	2.424286	0.069217	0.750000	0.462910	0.557692	0.501506	0.351351	0.483978	0.375000	0.494535
Form of collection used	Mortgage	0.748255	0.525486	0.250000	0.462910	0.076923	0.269069	0.108108	0.314800	0.125000	0.337832
	Everything or nothing	2.308813	0.080036	0.000000	0.000000	0.038462	0.194184	0.135135	0.346583	0.208333	0.414851
	Take as much as you want	0.177539	0.911434	0.375000	0.517549	0.269231	0.447888	0.297297	0.463373	0.250000	0.442326
	Achievement of the minimum financial goal	0.470452	0.703455	0.625000	0.517549	0.500000	0.504878	0.432432	0.502247	0.416667	0.503610
Value of the funds raised	Mixed	0.768429	0.513945	0.000000	0.000000	0.192308	0.397959	0.135135	0.346583	0.125000	0.337832
	PLN 5000–10,000	6.993465	0.000228	0.250000	0.462910	0.019231	0.138675	0.000000	0.000000	0.000000	0.000000
	PLN 10,001–20,000	0.333916	0.800834	0.125000	0.353553	0.192308	0.397959	0.216216	0.417342	0.125000	0.337832
	PLN 20,000–40,000	0.084144	0.968570	0.500000	0.534522	0.538462	0.503382	0.486486	0.506712	0.500000	0.510754
	PLN 40,001–80,000	1.909889	0.131776	0.125000	0.353553	0.153846	0.364321	0.108108	0.314800	0.333333	0.481543
	PLN 80,001–120,000	0.616334	0.605764	0.000000	0.000000	0.057692	0.235435	0.054054	0.229243	0.000000	0.000000
	PLN 120,000–160,000	0.444857	0.721392	0.000000	0.000000	0.038462	0.194184	0.081081	0.276725	0.041667	0.204124
	PLN 160,000–200,000	1.547107	0.206049	0.000000	0.000000	0.000000	0.000000	0.054054	0.229243	0.000000	0.000000
	Increase in sales	2.149237	0.097767	0.125000	0.353553	0.480769	0.504505	0.351351	0.483978	0.250000	0.442326
	Reduction in the cost of capital	0.821368	0.484601	0.125000	0.353553	0.153846	0.364321	0.054054	0.229243	0.166667	0.380693
	Greater internationalization of sales (understood as % of total sales)	1.240049	0.298426	0.125000	0.353553	0.134615	0.344642	0.216216	0.417342	0.041667	0.204124
	Reduction in operating costs	1.142049	0.335138	0.375000	0.517549	0.211538	0.412384	0.378378	0.491672	0.250000	0.442326

Table A2. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	1 Year		2–3 Years		4–5 Years		>5 Years	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Purpose of raising funds	Improved customer retention	0.886767	0.450228	0.375000	0.517549	0.269231	0.447888	0.432432	0.502247	0.375000	0.494535
	Acquisition of new customers	1.984732	0.120062	0.000000	0.000000	0.403846	0.495454	0.270270	0.450225	0.333333	0.481543
	Increased customer satisfaction	0.575891	0.631979	0.250000	0.462910	0.192308	0.397959	0.108108	0.314800	0.208333	0.414851
	Increasing the number of distribution channels	0.999294	0.395854	0.000000	0.000000	0.250000	0.437237	0.189189	0.397061	0.166667	0.380693
	Shortening the contact between the customer and the seller	0.435148	0.728246	0.125000	0.353553	0.153846	0.364321	0.189189	0.397061	0.083333	0.282330
	Advertising expenses	0.899251	0.443901	0.250000	0.462910	0.076923	0.269069	0.162162	0.373684	0.125000	0.337832
	Increasing brand awareness	0.061245	0.980072	0.125000	0.353553	0.096154	0.297678	0.081081	0.276725	0.083333	0.282330
	Introduction of innovative products (goods and services)	0.325842	0.806670	0.750000	0.462910	0.788462	0.412384	0.810811	0.397061	0.875000	0.337832
	New investments in IT	1.879535	0.136837	0.125000	0.353553	0.423077	0.498867	0.405405	0.497743	0.208333	0.414851
Purpose of running a CF campaign	Staff training	2.194785	0.092346	0.500000	0.534522	0.230769	0.425436	0.351351	0.483978	0.500000	0.510754
	Only financial	0.413568	0.743566	0.000000	0.000000	0.134615	0.344642	0.108108	0.314800	0.125000	0.337832
	Marketing (advertising)	0.899251	0.443901	0.250000	0.462910	0.076923	0.269069	0.162162	0.373684	0.125000	0.337832
	Market check	1.179990	0.320466	0.000000	0.000000	0.153846	0.364321	0.162162	0.373684	0.041667	0.204124
	Acquiring sponsors	0.890924	0.448113	0.250000	0.462910	0.519231	0.504505	0.405405	0.497743	0.416667	0.503610
	Acquisition of new customers	0.566906	0.637900	0.625000	0.517549	0.442308	0.501506	0.486486	0.506712	0.375000	0.494535
	Expanding the supply channel	1.423347	0.239486	0.000000	0.000000	0.365385	0.486236	0.324324	0.474579	0.333333	0.481543
Reason for the decision to use CF	All above	2.742442	0.046331	0.250000	0.462910	0.019231	0.138675	0.081081	0.276725	0.166667	0.380693
	No credit available	1.677208	0.175694	0.125000	0.353553	0.365385	0.486236	0.189189	0.397061	0.208333	0.414851
	Checking the innovative source	0.281712	0.838512	0.125000	0.353553	0.096154	0.297678	0.162162	0.373684	0.125000	0.337832
	There are no other sources for such a high amount	0.551796	0.647931	0.375000	0.517549	0.346154	0.480384	0.297297	0.463373	0.458333	0.508977
	Low cost of raising capital	0.707215	0.549574	0.375000	0.517549	0.346154	0.480384	0.432432	0.502247	0.250000	0.442326
Campaign cost	Transparent and simple procedures	1.452965	0.231048	0.000000	0.000000	0.019231	0.138675	0.054054	0.229243	0.125000	0.337832
	PLN 500–1000	3.525029	0.017199	0.250000	0.462910	0.038462	0.194184	0.027027	0.164399	0.000000	0.000000
	PLN 1001–5000	0.255892	0.857004	0.625000	0.517549	0.730769	0.447888	0.675676	0.474579	0.750000	0.442326
	PLN 5000–10,000	0.401097	0.752467	0.125000	0.353553	0.230769	0.425436	0.162162	0.373684	0.250000	0.442326
	PLN 10,001–20,000	2.388916	0.072368	0.000000	0.000000	0.000000	0.000000	0.081081	0.276725	0.000000	0.000000
	PLN 20,000–40,000	1.547107	0.206049	0.000000	0.000000	0.000000	0.000000	0.054054	0.229243	0.000000	0.000000
	Commission for the collected portal	0.885259	0.450997	0.750000	0.462910	0.500000	0.504878	0.513514	0.506712	0.416667	0.503610

Table A2. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	1 Year		2–3 Years		4–5 Years		>5 Years	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Costs incurred in connection with raising funds as part of a CF campaign	Legal support	0.260159	0.853959	0.500000	0.534522	0.365385	0.486236	0.351351	0.483978	0.416667	0.503610
	Platform maintenance costs	0.718861	0.542656	0.250000	0.462910	0.307692	0.466041	0.243243	0.434959	0.416667	0.503610
	Taxes	1.365457	0.256817	0.000000	0.000000	0.211538	0.412384	0.270270	0.450225	0.333333	0.481543
	Project organization	1.045684	0.375140	0.000000	0.000000	0.096154	0.297678	0.081081	0.276725	0.000000	0.000000
	Advertisement	0.374079	0.771853	0.000000	0.000000	0.038462	0.194184	0.054054	0.229243	0.083333	0.282330
	Financial and accounting services	0.288175	0.833862	0.000000	0.000000	0.057692	0.235435	0.027027	0.164399	0.041667	0.204124
	Employees	0.616334	0.605764	0.000000	0.000000	0.057692	0.235435	0.054054	0.229243	0.000000	0.000000
Benefits of CF	Consulting services	0.946323	0.420710	0.000000	0.000000	0.038462	0.194184	0.081081	0.276725	0.000000	0.000000
	Quick access to funds	1.162857	0.327018	4.500000	0.534522	4.057692	0.978463	4.405405	0.896272	4.208333	1.141287
	Low costs of obtaining funds	1.713706	0.167977	3.875000	0.991031	3.923077	0.967028	4.351351	0.888701	4.333333	1.372610
	Flexibility of this form of financing	0.651954	0.583282	4.500000	0.755929	4.846154	0.801582	4.702703	0.811886	4.875000	0.850192
	Company/brand promotion	0.291075	0.831773	4.875000	0.640870	4.846154	0.696901	4.837838	0.500750	4.708333	0.750604
	Gathering customer feedback	1.661078	0.179212	4.750000	0.462910	4.615385	0.745019	4.729730	0.693167	5.000000	0.659380
	Opportunity to obtain a sponsor	0.546546	0.651439	4.750000	0.707107	4.884615	0.646373	4.729730	0.732145	4.916667	0.653863
CF risk	Market research for the product/service	0.288366	0.833724	4.500000	0.534522	4.653846	0.737899	4.729730	0.838274	4.750000	0.737210
	The ability to influence the course of the campaign	0.452644	0.715914	5.000000	0.755929	4.807692	0.715061	4.945946	0.524190	4.916667	0.653863
	Platform assistance in preparing the campaign	0.669897	0.572179	4.875000	0.353553	4.903846	0.602596	4.783784	0.629600	5.000000	0.589768
	Ability to steal an idea	2.148608	0.097844	4.625000	1.187735	4.269231	1.011994	3.783784	1.250225	4.083333	0.829702
	Ability to copy the project	0.652804	0.582752	4.375000	0.744024	4.269231	1.011994	4.378378	0.681149	4.041667	1.197068
	High campaign costs	1.279449	0.284728	3.250000	1.281740	3.230769	1.198289	2.837838	0.928365	3.375000	1.377222
	Short campaign duration	1.281643	0.283983	2.500000	0.755929	3.326923	1.115333	3.162162	1.258604	3.208333	0.977093
CF risk	Long period of preparation for the campaign	0.920378	0.433362	2.500000	0.755929	3.230769	1.198289	3.243243	1.233905	3.125000	1.295897
	Specialized knowledge of social media	0.263042	0.851900	2.875000	0.640870	2.711538	0.914728	2.675676	0.747368	2.583333	0.928611
	Tax obligations	0.631391	0.596189	5.125000	0.640870	4.769231	0.703364	4.891892	0.698561	4.791667	0.931533
	Non-transparent legal regulations	1.253244	0.293773	4.125000	0.991031	4.634615	0.627127	4.675676	0.783654	4.625000	0.824226

Table A3. One-Way ANOVA—calculations—form of business activity (combination of internet shop + traditional activity; traditional activity; only via the internet).

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Combination of Internet Shop + Traditional Activity		Traditional Activity		Online Only	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Form of financing the activity	Own funds	1.663410	0.193904	0.541667	0.508977	0.440476	0.499426	0.230769	0.438529
	Loans in the family, among friends	1.502071	0.226895	0.250000	0.442326	0.440476	0.499426	0.461538	0.518875
	Trade credit	2.178784	0.117712	0.083333	0.282330	0.011905	0.109109	0.000000	0.000000
	Bank credit	0.306029	0.736948	0.125000	0.337832	0.154762	0.363850	0.076923	0.277350
	Co-financing by partners	4.811215	0.009803	0.291667	0.464306	0.071429	0.259086	0.230769	0.438529
	Leasing	0.854503	0.428110	0.125000	0.337832	0.202381	0.404188	0.076923	0.277350
	Funds from the European Union	1.577906	0.210731	0.166667	0.380693	0.083333	0.278045	0.230769	0.438529
Phase of development of the enterprise during which it used CF	Founding phase	2.501508	0.086300	0.041667	0.204124	0.214286	0.412790	0.307692	0.480384
	Start-up phase	2.740577	0.068643	0.500000	0.510754	0.261905	0.442312	0.230769	0.438529
	Expansion phase	0.044922	0.956088	0.416667	0.503610	0.428571	0.497844	0.384615	0.506370
	Maturity phase	0.349673	0.705646	0.041667	0.204124	0.095238	0.295307	0.076923	0.277350
CF model that was used	Equity	2.141215	0.122056	0.250000	0.442326	0.142857	0.352029	0.000000	0.000000
	Sponsorship	0.025295	0.975027	0.333333	0.481543	0.309524	0.465074	0.307692	0.480384
	Donative	1.477749	0.232342	0.416667	0.503610	0.452381	0.500717	0.692308	0.480384
	Mortgage	1.885107	0.156356	0.041667	0.503610	0.142857	0.500717	0.000000	0.480384
Form of collection used	Everything or nothing	4.326183	0.015376	0.250000	0.442326	0.071429	0.259086	0.000000	0.000000
	Take as much as you want	0.698480	0.499385	0.333333	0.481543	0.250000	0.435613	0.384615	0.506370
	Achievement of the minimum financial goal	1.506007	0.226026	0.333333	0.481543	0.488095	0.502860	0.615385	0.506370
	Mixed	2.141215	0.122056	0.083333	0.282330	0.190476	0.395035	0.000000	0.000000
Value of the funds raised	PLN 5000–10,000	0.668197	0.514561	0.000000	0.000000	0.035714	0.186691	0.000000	0.000000
	PLN 10,001–20,000	2.040265	0.134555	0.166667	0.380693	0.154762	0.363850	0.384615	0.506370
	PLN 20,000–40,000	1.343861	0.264799	0.375000	0.494535	0.559524	0.499426	0.461538	0.518875
	PLN 40,001–80,000	0.523138	0.594026	0.208333	0.414851	0.178571	0.385293	0.076923	0.277350
	PLN 80,001–120,000	0.236296	0.789920	0.041667	0.204124	0.035714	0.186691	0.076923	0.277350
	PLN 120,000–160,000	1.974083	0.143449	0.125000	0.337832	0.035714	0.186691	0.000000	0.000000
	PLN 160,000–200,000	4.299775	0.015759	0.083333	0.282330	0.000000	0.000000	0.000000	0.000000
	Increase in sales	0.257832	0.773159	0.375000	0.494535	0.357143	0.482035	0.461538	0.518875
	Reduction in the cost of capital	1.448814	0.238995	0.041667	0.204124	0.130952	0.339374	0.230769	0.438529

Table A3. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Combination of Internet Shop + Traditional Activity		Traditional Activity		Online Only	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Purpose of raising funds	Greater internationalization of sales (understood as % of total sales)	0.657430	0.520069	0.166667	0.380693	0.119048	0.325790	0.230769	0.438529
	Reduction in operating costs	0.736972	0.480751	0.250000	0.442326	0.309524	0.465074	0.153846	0.375534
	Improved customer retention	1.755583	0.177290	0.500000	0.510754	0.321429	0.469830	0.230769	0.438529
	Acquisition of new customers	0.378121	0.685975	0.375000	0.494535	0.297619	0.459957	0.384615	0.506370
	Increased customer satisfaction	0.292727	0.746766	0.125000	0.337832	0.190476	0.395035	0.153846	0.375534
	Increasing the number of distribution channels	2.101859	0.126782	0.333333	0.481543	0.178571	0.385293	0.076923	0.277350
	Shortening the contact between the customer and the seller	1.483782	0.230978	0.208333	0.414851	0.154762	0.363850	0.000000	0.000000
	Advertising expenses	1.020266	0.363657	0.208333	0.414851	0.107143	0.311152	0.076923	0.277350
	Increasing brand awareness	1.402194	0.250126	0.041667	0.204124	0.119048	0.325790	0.000000	0.000000
	Introduction of innovative products (goods and services)	2.320824	0.102659	0.666667	0.481543	0.833333	0.374916	0.923077	0.277350
Purpose of running a CF campaign	New investments in IT	0.926857	0.398658	0.250000	0.442326	0.369048	0.485445	0.461538	0.518875
	Staff training	2.928550	0.057373	0.541667	0.508977	0.297619	0.459957	0.230769	0.438529
	Only financial	1.033063	0.359111	0.041667	0.204124	0.142857	0.352029	0.076923	0.277350
	Marketing (advertising)	1.020266	0.363657	0.208333	0.414851	0.107143	0.311152	0.076923	0.277350
	Market check	1.721956	0.183176	0.208333	0.414851	0.119048	0.325790	0.000000	0.000000
	Acquiring sponsors	0.018441	0.981731	0.458333	0.508977	0.440476	0.499426	0.461538	0.518875
	Acquisition of new customers	1.837569	0.163730	0.625000	0.494535	0.404762	0.493794	0.461538	0.518875
	Expanding the supply channel	2.598035	0.078673	0.500000	0.510754	0.261905	0.442312	0.384615	0.506370
	All above	1.177541	0.311628	0.041667	0.204124	0.107143	0.311152	0.000000	0.000000
	No credit available	0.270059	0.763805	0.208333	0.414851	0.273810	0.448591	0.307692	0.480384
Reason for the decision to use CF	Checking the innovative source	0.249483	0.779613	0.083333	0.282330	0.130952	0.339374	0.153846	0.375534
	There are no other sources for such a high amount	2.140391	0.122153	0.208333	0.414851	0.369048	0.485445	0.538462	0.518875
	Low cost of raising capital	3.142431	0.046813	0.541667	0.508977	0.333333	0.474236	0.153846	0.375534
	Transparent and simple procedures	0.807804	0.448286	0.000000	0.000000	0.059524	0.238024	0.076923	0.277350

Table A3. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Combination of Internet Shop + Traditional Activity		Traditional Activity		Online Only	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Campaign cost	PLN 500–1000	2.679335	0.072783	0.000000	0.000000	0.035714	0.186691	0.153846	0.375534
	PLN 1001–5000	3.904530	0.022805	0.541667	0.508977	0.785714	0.412790	0.538462	0.518875
	PLN 5000–10,000	1.340003	0.265800	0.291667	0.464306	0.166667	0.374916	0.307692	0.480384
	PLN 10,001–20,000	2.178784	0.117712	0.083333	0.282330	0.011905	0.109109	0.000000	0.000000
	PLN 20,000–40,000	4.299775	0.015759	0.083333	0.282330	0.000000	0.000000	0.000000	0.000000
Costs incurred in connection with raising funds as part of a CF campaign	Commission for the collected portal	1.310522	0.273575	0.583333	0.503610	0.511905	0.502860	0.307692	0.480384
	Legal support	0.777638	0.461830	0.375000	0.494535	0.357143	0.482035	0.538462	0.518875
	Platform maintenance costs	2.799369	0.064895	0.125000	0.337832	0.333333	0.474236	0.461538	0.518875
	Taxes	2.357525	0.099098	0.250000	0.442326	0.273810	0.448591	0.000000	0.000000
	Project organization	0.097161	0.907482	0.083333	0.282330	0.059524	0.238024	0.076923	0.277350
	Advertisement	2.166959	0.119062	0.125000	0.337832	0.023810	0.153371	0.076923	0.277350
	Financial and accounting services	6.443617	0.002209	0.166667	0.380693	0.011905	0.109109	0.000000	0.000000
	Employees	0.315938	0.729720	0.041667	0.204124	0.047619	0.214238	0.000000	0.000000
Benefits of CF	Consulting services	3.655393	0.028822	0.083333	0.282330	0.011905	0.109109	0.153846	0.375534
	Quick access to funds	0.381178	0.683895	4.250000	0.793999	4.250000	1.028216	4.000000	0.912871
	Low costs of obtaining funds	0.062604	0.939347	4.083333	1.017955	4.154762	1.069783	4.076923	1.037749
	Flexibility of this form of financing	0.341130	0.711665	4.666667	0.761387	4.821429	0.778641	4.769231	1.091928
	Company/brand promotion	1.892577	0.155229	4.666667	0.701964	4.892857	0.640366	4.615385	0.506370
	Gathering customer feedback	1.576605	0.210998	4.541667	0.721060	4.809524	0.685059	4.615385	0.767948
	Opportunity to obtain a sponsor	3.654378	0.028849	4.958333	0.690253	4.738095	0.660760	5.230769	0.599145
	Market research for the product/service	0.372795	0.689615	4.708333	0.624094	4.654762	0.783782	4.846154	0.800641
	The ability to influence the course of the campaign	0.646872	0.525528	4.875000	0.612372	4.857143	0.642714	5.076923	0.759555
	Platform assistance in preparing the campaign	0.292935	0.746612	4.875000	0.740887	4.904762	0.551429	4.769231	0.599145
	Ability to steal an idea	0.920842	0.401026	3.958333	1.160179	4.095238	1.071189	4.461538	1.050031
	Ability to copy the project	0.698047	0.499599	4.208333	0.931533	4.321429	0.907276	4.000000	1.224745
	High campaign costs	0.484909	0.616974	3.125000	1.115601	3.190476	1.187040	2.846154	1.214232
	Short campaign duration	0.015265	0.984853	3.166667	1.307725	3.202381	1.117007	3.230769	0.832050

Table A3. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Combination of Internet Shop + Traditional Activity		Traditional Activity		Online Only	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
CF risk	Long period of preparation for the campaign	0.000644	0.999356	3.166667	1.340560	3.166667	1.230470	3.153846	0.800641
	Specialized knowledge of social media	0.218451	0.804087	2.708333	0.806450	2.702381	0.875087	2.538462	0.776250
	Tax obligations	0.966714	0.383322	4.666667	0.637022	4.857143	0.762729	5.000000	0.816497
	Non-transparent legal regulations	0.676092	0.510560	4.625000	1.013496	4.642857	0.687984	4.384615	0.506370

Table A4. One-Way ANOVA—calculations—sector in which the company operates (services; industry; agriculture).

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Services		Industry		Agriculture	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Form of financing the activity	Own funds	0.09372	0.910606	0.453333	0.50117	0.414634	0.498779	0.400000	0.547723
	Loans in the family, among friends	0.02887	0.971549	0.413333	0.495748	0.390244	0.493865	0.400000	0.547723
	Trade credit	0.06750	0.934761	0.026667	0.162192	0.02439	0.156174	0.000000	0.000000
	Bank credit	1.85080	0.161644	0.186667	0.392268	0.073171	0.263652	0.000000	0.000000
	Co-financing by partners	2.26468	0.108360	0.093333	0.292858	0.219512	0.419058	0.000000	0.000000
	Leasing	0.49472	0.611003	0.146667	0.356156	0.219512	0.419058	0.200000	0.447214
Phase of development of the enterprise during which it used CF	Funds from the European Union	0.53643	0.586250	0.093333	0.292858	0.146341	0.357839	0.200000	0.447214
	Founding phase	0.75887	0.470468	0.213333	0.41242	0.170732	0.380949	0.000000	0.000000
	Start-up phase	1.27464	0.283352	0.253333	0.437849	0.390244	0.493865	0.400000	0.547723
	Expansion phase	0.84780	0.430949	0.466667	0.502247	0.341463	0.480091	0.400000	0.547723
CF model that was used	Maturity phase	0.63139	0.533641	0.066667	0.251124	0.097561	0.300406	0.200000	0.447214
	Equity	1.713992	0.184599	0.160000	0.369075	0.097561	0.300406	0.400000	0.547723
	Sponsorship	1.216531	0.299944	0.320000	0.469617	0.341463	0.480091	0.000000	0.000000
	Donative	0.257874	0.773127	0.480000	0.502964	0.439024	0.502433	0.600000	0.547723
Form of collection used	Mortgage	0.832019	0.437706	0.080000	0.273120	0.146341	0.357839	0.200000	0.447214
	Everything or nothing	0.293423	0.746249	0.093333	0.292858	0.097561	0.300406	0.200000	0.447214
	Take as much as you want	0.585224	0.558590	0.253333	0.437849	0.341463	0.480091	0.200000	0.447214
	Achievement of the minimum financial goal	0.232206	0.793144	0.453333	0.501170	0.512195	0.506061	0.400000	0.547723
Value of the funds raised	Mixed	2.487521	0.087465	0.200000	0.402694	0.048780	0.218085	0.200000	0.447214
	PLN 5000–10,000	0.74568	0.476636	0.013333	0.115470	0.048780	0.218085	0.000000	0.000000
	PLN 10,001–20,000	0.97080	0.381784	0.213333	0.412420	0.146341	0.357839	0.000000	0.000000
	PLN 20,000–40,000	1.37529	0.256788	0.453333	0.501170	0.609756	0.493865	0.600000	0.547723
	PLN 40,001–80,000	3.20757	0.044007	0.240000	0.429959	0.073171	0.263652	0.000000	0.000000
	PLN 80,001–120,000	1.60213	0.205819	0.066667	0.251124	0.000000	0.000000	0.000000	0.000000
	PLN 120,000–160,000	10.95080	0.000043	0.000000	0.000000	0.097561	0.300406	0.400000	0.547723
	PLN 160,000–200,000	0.14028	0.869255	0.013333	0.115470	0.024390	0.156174	0.000000	0.000000
	Increase in sales	2.25329	0.109556	0.426667	0.497924	0.317073	0.471117	0.000000	0.000000
	Reduction in the cost of capital	0.65405	0.521810	0.146667	0.356156	0.097561	0.300406	0.000000	0.000000
	Greater internationalization of sales (understood as % of total sales)	1.83404	0.164292	0.106667	0.310768	0.219512	0.419058	0.000000	0.000000
	Reduction in operating costs	2.90562	0.058640	0.213333	0.41242	0.365854	0.487652	0.600000	0.547723
	Improved customer retention	0.40515	0.667803	0.373333	0.486947	0.292683	0.460646	0.400000	0.547723
	Acquisition of new customers	0.19044	0.826847	0.333333	0.474579	0.317073	0.471117	0.200000	0.447214

Table A4. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Services		Industry		Agriculture	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Purpose of raising funds	Increased customer satisfaction	1.62184	0.201907	0.133333	0.342224	0.219512	0.419058	0.400000	0.547723
	Increasing the number of distribution channels	0.83539	0.436256	0.173333	0.381084	0.219512	0.419058	0.400000	0.547723
	Shortening the contact between the customer and the seller	1.28214	0.281278	0.186667	0.392268	0.097561	0.300406	0.000000	0.00
	Advertising expenses	1.86949	0.158741	0.106667	0.310768	0.121951	0.331295	0.400000	0.547723
	Increasing brand awareness	0.43294	0.649624	0.093333	0.292858	0.073171	0.263652	0.200000	0.447214
	Introduction of innovative products (goods and services)	0.75887	0.470468	0.786667	0.41242	0.829268	0.380949	1.000000	0.000000
	New investments in IT	0.52513	0.592854	0.386667	0.490266	0.292683	0.460646	0.400000	0.547723
Purpose of running a CF campaign	Staff training	0.04631	0.954766	0.333333	0.474579	0.341463	0.480091	0.400000	0.547723
	Only financial	0.498582	0.608665	0.133333	0.342224	0.097561	0.300406	0.000000	0.000000
	Marketing (advertising)	1.869490	0.158741	0.106667	0.310768	0.121951	0.331295	0.400000	0.547723
	Market check	0.860756	0.425480	0.093333	0.292858	0.170732	0.380949	0.200000	0.447214
	Acquiring sponsors	2.202643	0.115035	0.506667	0.503322	0.317073	0.471117	0.600000	0.547723
	Acquisition of new customers	0.254360	0.775837	0.480000	0.502964	0.414634	0.498779	0.400000	0.547723
	Expanding the supply channel	0.918249	0.402051	0.306667	0.464215	0.317073	0.471117	0.600000	0.547723
Reason for the decision to use CF	All above	1.754617	0.177456	0.053333	0.226210	0.146341	0.357839	0.000000	0.000000
	No credit available	0.938166	0.394244	0.280000	0.452022	0.268293	0.448575	0.000000	0.000000
	Checking the innovative source	0.289094	0.749471	0.133333	0.097561	0.300406	0.345746	0.200000	0.447214
	There are no other sources for such a high amount	2.112177	0.125525	0.400000	0.493197	0.243902	0.434769	0.600000	0.547723
	Low cost of raising capital	1.086996	0.340580	0.320000	0.469617	0.439024	0.502433	0.200000	0.447214
Campaign cost	Transparent and simple procedures	0.138694	0.870636	0.053333	0.226210	0.048780	0.218085	0.000000	0.000000
	PLN 500–1000	0.135081	0.873780	0.040000	0.197279	0.048780	0.218085	0.000000	0.000000
	PLN 1001–5000	0.162266	0.850404	0.720000	0.452022	0.707317	0.460646	0.600000	0.547723
	PLN 5000–10,000	0.248426	0.780435	0.226667	0.421495	0.170732	0.380949	0.200000	0.447214
	PLN 10,001–20,000	4.872512	0.009263	0.000000	0.000000	0.048780	0.218085	0.200000	0.447214
	PLN 20,000–40,000	0.140285	0.869255	0.013333	0.115470	0.024390	0.156174	0.000000	0.000000
	Commission for the collected portal	0.452802	0.636944	0.480000	0.502964	0.560976	0.502433	0.400000	0.547723
	Legal support	0.475953	0.622480	0.346667	0.479113	0.439024	0.502433	0.400000	0.547723
	Platform maintenance costs	1.815827	0.167220	0.360000	0.483232	0.195122	0.401218	0.400000	0.547723
	Taxes	2.982434	0.054503	0.266667	0.445195	0.146341	0.357839	0.600000	0.547723

Table A4. *Cont.*

Study Area	Factors Tested	Fisher Statistics	<i>p</i> -Value	Services		Industry		Agriculture	
				Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Costs incurred in connection with raising funds as part of a CF campaign	Project organization	0.595483	0.552944	0.053333	0.226210	0.097561	0.300406	0.000000	0.000000
	Advertisement	0.437683	0.646574	0.040000	0.197279	0.073171	0.263652	0.000000	0.000000
	Financial and accounting services	0.385448	0.680999	0.053333	0.226210	0.024390	0.156174	0.000000	0.000000
	Employees	0.826671	0.440021	0.026667	0.162192	0.073171	0.263652	0.000000	0.000000
	Consulting services	0.385448	0.680999	0.053333	0.226210	0.024390	0.156174	0.000000	0.000000
Benefits of CF	Quick access to funds	0.255643	0.774846	4.200000	0.929981	4.292683	1.054607	4.000000	1.000000
	Low costs of obtaining funds	3.769508	0.025888	3.933333	1.004494	4.439024	1.025885	4.600000	1.341641
	Flexibility of this form of financing	0.473742	0.623847	4.733333	0.875080	4.853659	0.654254	5.000000	1.000000
	Company/brand promotion	0.113036	0.893215	4.840000	0.658417	4.780488	0.570622	4.800000	1.095445
	Gathering customer feedback	0.100998	0.904013	4.746667	0.718356	4.731707	0.671729	4.600000	0.894427
	Opportunity to obtain a sponsor	1.039074	0.356996	4.853333	0.671693	4.756098	0.662589	5.200000	0.836660
	Market research for the product/service	0.460021	0.632398	4.720000	0.797970	4.658537	0.656116	4.400000	0.894427
	The ability to influence the course of the campaign	0.050699	0.950585	4.893333	0.627594	4.878049	0.713972	4.800000	0.447214
	Platform assistance in preparing the campaign	1.019214	0.364033	4.840000	0.616003	4.926829	0.565254	5.200000	0.447214
CF risk	Ability to steal an idea	0.257231	0.773622	4.066667	1.131052	4.146341	1.062096	4.400000	0.547723
	Ability to copy the project	0.055874	0.945683	4.253333	0.916712	4.268293	1.049390	4.400000	0.547723
	High campaign costs	1.382649	0.254948	3.266667	1.154701	2.975610	1.150822	2.600000	1.516575
	Short campaign duration	0.758899	0.470453	3.160000	1.053181	3.195122	1.249390	3.800000	1.095445
	Long period of preparation for the campaign	0.059227	0.942521	3.160000	1.151263	3.195122	1.288788	3.000000	1.581139
	Specialized knowledge of social media	0.856574	0.427237	2.706667	0.850649	2.707317	0.843917	2.200000	0.836660
	Tax obligations	1.239154	0.293370	4.773333	0.763586	4.975610	0.688760	4.600000	0.894427
	Non-transparent legal regulations	0.040616	0.960211	4.626667	0.693080	4.585366	0.805469	4.600000	1.140175

Appendix A.2. Tukey Test—One-Way ANOVA Post Hoc Test

Table A5. Tukey test—One-way ANOVA post hoc test.

Characteristics of Company	Study Area	Factors Tested	Pair				
			Feature 1	Mean	Feature 2	Mean	
Company size	Form of financing the activity	Loans in the family, among friends	Micro	0.500000	Small	0.340426	0.201276
			Micro	0.500000	Medium	0.100000	0.042666
			Small	0.340426	Medium	0.100000	0.328293
		Trade credit	Micro	0.000000	Small	0.000000	1.000000
		Co-financing by partners	Micro	0.000000	Medium	0.300000	0.000118
			Small	0.000000	Medium	0.300000	0.000118
			Micro	0.125000	Small	0.085106	0.807204
			Micro	0.125000	Medium	0.400000	0.043503
	Phase of development of the enterprise during which it used CF	Expansion phase	Small	0.085106	Medium	0.400000	0.020617
			Micro	0.328125	Small	0.574468	0.024964
		Equity	Micro	0.328125	Medium	0.300000	0.984148
			Small	0.574468	Medium	0.300000	0.238542
CF model that was used	Everything or nothing	Micro	0.015625	Small	0.234043	0.001479	
			Micro	0.015625	Medium	0.600000	0.000119
		Small	0.234043	Medium	0.600000	0.003493	
			Micro	0.609375	Small	0.340426	0.012176
		Donative	Micro	0.609375	Medium	0.200000	0.036680
			Small	0.340426	Medium	0.200000	0.680928
		Micro	0.031250	Small	0.106383	0.332147	
			Micro	0.031250	Medium	0.500000	0.000122
Form of collection used	Everything or nothing	Small	0.106383	Medium	0.500000	0.000319	

Table A5. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair			<i>p</i> -Value
			Feature 1	Mean	Feature 2	
Value of the funds raised	PLN 20,000–40,000	Micro	0.640625	Small	0.361702	0.009794
		Micro	0.640625	Medium	0.400000	0.317434
		Small	0.361702	Medium	0.400000	0.972360
		Micro	0.093750	Small	0.276596	0.032193
		Micro	0.093750	Medium	0.200000	0.680870
	PLN 40,001–80,000	Small	0.276596	Medium	0.200000	0.826234
		Micro	0.000000	Small	0.085106	0.094592
		Micro	0.000000	Medium	0.200000	0.017115
		Small	0.085106	Medium	0.200000	0.265986
		Micro	0.140625	Small	0.085106	0.675751
Purpose of raising funds	Greater internationalization of sales (understood as % of total sales)	Micro	0.140625	Medium	0.400000	0.070245
		Small	0.085106	Medium	0.400000	0.025108
		Micro	0.109375	Small	0.297872	0.036489
		Micro	0.109375	Medium	0.300000	0.329538
		Small	0.297872	Medium	0.300000	0.999886
	Increasing the number of distribution channels	Micro	0.125000	Small	0.319149	0.033783
		Micro	0.125000	Medium	0.200000	0.845521
		Small	0.319149	Medium	0.200000	0.668518
		Micro	0.000000	Small	0.021277	0.734746
		Micro	0.000000	Medium	0.200000	0.002186
Campaign cost	PLN 5000–10,000	Small	0.021277	Medium	0.200000	0.000455
		Micro	0.078125	Small	0.468085	0.000120
	PLN 10,001–20,000	Micro	0.078125	Medium	0.200000	0.628883
		Micro	0.078125	Medium	0.200000	0.628883
Costs incurred in connection with raising funds as part of a CF campaign	Taxes					

Table A5. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair			<i>p</i> -Value	
			Feature 1	Mean	Feature 2		
Company age	Advertisement	Financial and accounting services	Small	0.468085	Medium	0.200000	0.122789
			Micro	0.015625	Small	0.042553	0.775073
			Micro	0.015625	Medium	0.300000	0.000363
			Small	0.042553	Medium	0.300000	0.001491
	Benefits of CF	Company/brand promotion	Micro	0.000000	Small	0.063830	0.202427
			Micro	0.000000	Medium	0.200000	0.008179
			Small	0.063830	Medium	0.200000	0.111277
			Micro	4.921875	Small	4.638298	0.055956
Phase of development of the enterprise during which it used CF	Founding phase	Maturity phase	Micro	4.921875	Medium	5.000000	0.930336
			Small	4.638298	Medium	5.000000	0.234020
			1 year	1.000000	2–3 years	0.230769	0.000137
			1 year	1.000000	4–5 years	0.081081	0.000137
			1 year	1.000000	>5 years	0.000000	0.000137
			2–3 years	0.230769	4–5 years	0.081081	0.136585
			2–3 years	0.230769	>5 years	0.000000	0.021552
			4–5 years	0.081081	>5 years	0.000000	0.768793
			1 year	0.000000	2–3 years	0.000000	1.000000
			1 year	0.000000	4–5 years	0.054054	0.944304
			1 year	0.000000	>5 years	0.333333	0.007331
			2–3 years	0.000000	4–5 years	0.054054	0.743193

Table A5. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair				
			Feature 1	Mean	Feature 2		
CF model that was used		Equity	1 year	0.000000	2–3 years	0.057692	0.971776
			1 year	0.000000	4–5 years	0.216216	0.382752
			1 year	0.000000	>5 years	0.417342	0.172106
			2–3 years	0.057692	4–5 years	0.216216	0.150855
			2–3 years	0.057692	>5 years	0.417342	0.035837
			4–5 years	0.216216	>5 years	0.417342	0.839909
Value of the funds raised		PLN 5000–10,000	1 year	0.250000	2–3 years	0.019231	0.000450
			1 year	0.250000	4–5 years	0.000000	0.000262
			1 year	0.250000	>5 years	0.000000	0.000413
			2–3 years	0.019231	4–5 years	0.000000	0.927500
			2–3 years	0.019231	>5 years	0.000000	0.950371
			4–5 years	0.000000	>5 years	0.000000	1.000000
Purpose of running a CF campaign		All above	1 year	0.250000	2–3 years	0.019231	0.117379
			1 year	0.250000	4–5 years	0.081081	0.382334
			1 year	0.250000	>5 years	0.166667	0.874773
			2–3 years	0.019231	4–5 years	0.081081	0.713016
			2–3 years	0.019231	>5 years	0.166667	0.127330
			4–5 years	0.081081	>5 years	0.166667	0.624064
Campaign cost		PLN 500–1000	1 year	0.250000	2–3 years	0.038462	0.024665
			1 year	0.250000	4–5 years	0.027027	0.019876
			1 year	0.250000	>5 years	0.000000	0.010787
			2–3 years	0.038462	4–5 years	0.027027	0.992825

Table A5. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair			<i>p</i> -Value	
			Feature 1	Mean	Feature 2		
Form of business activity	Form of financing the activity	Co-financing by partners	2–3 years	0.038462	>5 years	0.000000	0.852474
			4–5 years	0.027027	>5 years	0.000000	0.951190
		Co-financing by partners	Combination	0.291667	Traditional activity	0.071429	0.012966
			Combination	0.291667	Only online	0.230769	0.853773
			Traditional activity	0.071429	Only online	0.230769	0.240967
	Form of collection used	Everything or nothing	Combination	0.250000	Traditional activity	0.071429	0.025366
			Combination	0.250000	Only online	0.000000	0.038008
			Traditional activity	0.071429	Only online	0.000000	0.691268
		PLN 160,000–200,000	Combination	0.083333	Traditional activity	0.000000	0.012833
			Combination	0.083333	Only online	0.000000	0.131791
Reason for the decision to use CF	Value of the funds raised	PLN 160,000–200,000	Traditional activity	0.000000	Only online	0.000000	1.000000
			Combination	0.083333	Traditional activity	0.333333	0.141571
			Combination	0.083333	Only online	0.153846	0.048758
		Low cost of raising capital	Traditional activity	0.333333	Only online	0.153846	0.412048
			Combination	0.541667	Traditional activity	0.785714	0.050380
	Campaign cost	1001–5000 PLN	Combination	0.541667	Only online	0.538462	0.999795
			Combination	0.541667	Traditional activity	0.333333	0.141571
		More than 5001 PLN	Combination	0.541667	Only online	0.153846	0.048758
			Traditional activity	0.333333	Only online	0.153846	0.412048
			Combination	0.541667	Traditional activity	0.785714	0.050380

Table A5. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair				
			Feature 1	Mean	Feature 2	Mean	
Costs incurred in connection with raising funds as part of a CF campaign	PLN 20,000–40,000	Traditional activity	Traditional activity	0.785714	Only online	0.538462	0.153366
			Combination	0.083333	Traditional activity	0.000000	0.012833
		Combination	Combination	0.083333	Only online	0.000000	0.131791
			Traditional activity	0.000000	Only online	0.000000	1.000000
		Financial and accounting services	Combination	0.166667	Traditional activity	0.011905	0.002027
			Combination	0.166667	Only online	0.000000	0.033972
			Traditional activity	0.011905	Only online	0.000000	0.976348
	Consulting services	Combination	Combination	0.083333	Traditional activity	0.011905	0.259298
			Combination	0.083333	Only online	0.153846	0.548979
		Traditional activity	Traditional activity	0.011905	Only online	0.153846	0.043067
			Combination	4.958333	Traditional activity	4.738095	0.323798
Sector in which the company operates	Benefits of CF	Opportunity to obtain a sponsor	Combination	4.958333	Only online	5.230769	0.457118
			Traditional activity	4.738095	Only online	5.230769	0.036389
			Services	0.240000	Industry	0.073171	0.059802
		PLN 40,001–80,000	Services	0.240000	Agriculture	0.000000	0.348839
			Industry	0.073171	Agriculture	0.000000	0.910165

Table A5. *Cont.*

Characteristics of Company	Study Area	Factors Tested	Pair				
			Feature 1	Mean	Feature 2	Mean	p-Value
Campaign cost	PLN 120,000–160,000	Services	Services	0.000000	Industry	0.097561	0.037714
			Services	0.000000	Agriculture	0.400000	0.000219
			Industry	0.097561	Agriculture	0.400000	0.005707
	PLN 10,001–20,000	Services	Services	0.000000	Industry	0.048780	0.225212
			Services	0.000000	Agriculture	0.200000	0.013860
			Industry	0.048780	Agriculture	0.200000	0.092349
Benefits of CF	Low costs of obtaining funds	Services	Services	3.933333	Industry	4.439024	0.033009
			Services	3.933333	Agriculture	4.600000	0.340047
			Industry	4.439024	Agriculture	4.600000	0.941326

References

- European Central Bank. *The Euro Area Bank Lending Survey. Fourth Quarter of 2020*; European Central Bank: Frankfurt am Main, Germany, 2021.
- Masiak, C.; Block, J.H.; Moritz, A.; Lang, F.; Kraemer-Eis, H. How Do Micro Firms Differ in Their Financing Patterns from Larger SMEs? *Ventur. Cap.* **2019**, *21*, 301–325. [CrossRef]
- European Central Bank. *Survey on the Access to Finance of Enterprises in the Euro Area*; European Central Bank: Frankfurt am Main, Germany, 2022.
- European Central Bank. *Crowdfunding and ESF Opportunities: Future Perspectives for Managing Authorities*; European Central Bank: Frankfurt am Main, Germany, 2020.
- Simons, A.; Kaiser, L.F.; Vom Brocke, J. Enterprise Crowdfunding: Foundations, Applications, and Research Findings. *Bus. Inf. Syst. Eng.* **2019**, *61*, 113–121. [CrossRef]
- Masłowski, D.; Kulińska, E.; Salwin, M.; Pawlas, K.; Kulińska-Jachowska, K. Impact of Policy Regulations on the Functioning of Hospitals in Poland during the COVID-19 Pandemic: A Qualitative Analysis. *Int. J. Manag. Econ.* **2022**, *58*, 192–217. [CrossRef]
- Poland: Value of the Crowdfunding Market 2021. Available online: <https://www.statista.com/statistics/1127083/poland-value-of-the-crowdfunding-market/> (accessed on 3 June 2023).
- Poland: Sub-Market Value of Crowdfunding 2021. Available online: <https://www.statista.com/statistics/1223906/poland-sub-market-value-of-crowdfunding/> (accessed on 3 June 2023).
- Belleflamme, P.; Lambert, T.; Schwienbacher, A. Crowdfunding: Tapping the Right Crowd. *J. Bus. Ventur.* **2014**, *29*, 585–609. [CrossRef]
- Chesbrough, H. Business Model Innovation: Opportunities and Barriers. *Long Range Plan.* **2010**, *43*, 354–363. [CrossRef]
- Cicchiello, A.F. Building an Entrepreneurial Ecosystem Based on Crowdfunding in Europe: The Role of Public Policy. *J. Entrep. Public Policy* **2019**, *8*, 297–318. [CrossRef]
- Quero, M.; Ventura, R. Value Cocreation System. Analysis of Crowdfunding Cases. *Universia Bus. Rev.* **2014**, *128*–143.
- Quero, M.J.; Ventura, R.; Kelleher, C. Value-in-Context in Crowdfunding Ecosystems: How Context Frames Value Co-Creation. *Serv. Bus.* **2017**, *11*, 405–425. [CrossRef]
- Quero, M.J.; Ventura, R. Value Proposition as a Framework for Value Cocreation in Crowdfunding Ecosystems. *Mark. Theory* **2019**, *19*, 47–63. [CrossRef]
- Lee, I.; Shin, Y.J. Fintech: Ecosystem, Business Models, Investment Decisions, and Challenges. *Bus. Horiz.* **2018**, *61*, 35–46. [CrossRef]
- Ibrahim, D.M. Equity Crowdfunding: A Market for Lemons? *SSRN J.* **2014**. [CrossRef]
- Ahlers, G.K.C.; Cumming, D.; Günther, C.; Schweizer, D. Signaling in Equity Crowdfunding. *Entrep. Theory Pract.* **2015**, *39*, 955–980. [CrossRef]
- Cumming, D.J.; Johan, S.A.; Zhang, Y. The Role of Due Diligence in Crowdfunding Platforms. *J. Bank. Financ.* **2019**, *108*, 105661. [CrossRef]
- Barbaz, D.S.; Al-Hiyali, A.D.K. Economic Evaluation of Some Agricultural Initiative Projects in Iraq. *Iraqi J. Agric. Sci.* **2020**, *51*, 797–804. [CrossRef]
- Bento, N.; Gianfrate, G.; Thoni, M.H. Crowdfunding for Sustainability Ventures. *J. Clean. Prod.* **2019**, *237*, 117751. [CrossRef]
- Bourcet, C.; Bovari, E. Exploring Citizens’ Decision to CrowdFund Renewable Energy Projects: Quantitative Evidence from France. *Energy Econ.* **2020**, *88*, 104754. [CrossRef]
- Ahsan, M.; Cornelis, E.F.I.; Baker, A. Understanding Backers’ Interactions with Crowdfunding Campaigns: Co-Innovators or Consumers? *J. Res. Mark. Entrep.* **2018**, *20*, 252–272. [CrossRef]
- Chu, C.-C.; Cheng, Y.-F.; Tsai, F.-S.; Tsai, S.-B.; Lu, K.-H. Open Innovation in Crowdfunding Context: Diversity, Knowledge, and Networks. *Sustainability* **2019**, *11*, 180. [CrossRef]
- Kukurba, M.; Waszkiewicz, A.E.; Salwin, M.; Kraslawski, A. Co-Created Values in Crowdfunding for Sustainable Development of Enterprises. *Sustainability* **2021**, *13*, 8767. [CrossRef]
- Messeni Petruzzelli, A.; Natalicchio, A.; Panniello, U.; Roma, P. Understanding the Crowdfunding Phenomenon and Its Implications for Sustainability. *Technol. Forecast. Soc. Change* **2019**, *141*, 138–148. [CrossRef]
- Troise, C.; Tani, M.; Dinsmore, J.; Schiuma, G. Understanding the Implications of Equity Crowdfunding on Sustainability-Oriented Innovation and Changes in Agri-Food Systems: Insights into an Open Innovation Approach. *Technol. Forecast. Soc. Change* **2021**, *171*, 120959. [CrossRef]
- Laurell, C.; Sandström, C.; Suseno, Y. Assessing the Interplay between Crowdfunding and Sustainability in Social Media. *Technol. Forecast. Soc. Change* **2019**, *141*, 117–127. [CrossRef]
- Lu, B.; Hao, S.; Pinedo, M.; Xu, Y. Fintech Operations—An Overview of Recent Developments and Future Research Directions. *Serv. Sci.* **2021**, *13*, 19–35. [CrossRef]
- Borst, I.; Moser, C.; Ferguson, J. From Friendfunding to Crowdfunding: Relevance of Relationships, Social Media, and Platform Activities to Crowdfunding Performance. *New Media Soc.* **2018**, *20*, 1396–1414. [CrossRef] [PubMed]
- Mollick, E.R.; Kuppuswamy, V. After the Campaign: Outcomes of Crowdfunding. *SSRN J.* **2014**. [CrossRef]
- Bagheri, A.; Chitsazan, H.; Ebrahimi, A. Crowdfunding Motivations: A Focus on Donors’ Perspectives. *Technol. Forecast. Soc. Change* **2019**, *146*, 218–232. [CrossRef]

32. Zhang, S.; Meng, Q.; Xie, J. Closed-Loop Supply Chain Value Co-Creation Considering Equity Crowdfunding. *Expert Syst. Appl.* **2022**, *199*, 117003. [\[CrossRef\]](#)
33. Vismara, S. Information Cascades among Investors in Equity Crowdfunding. *Entrep. Theory Pract.* **2018**, *42*, 467–497. [\[CrossRef\]](#)
34. Astrauskaitė, I.; Paškevičius, A. An Analysis of Crowdfunded Projects: KPI's to Success. *Entrep. Sustain. Issues* **2018**, *6*, 23–24. [\[CrossRef\]](#)
35. Calic, G.; Mosakowski, E. Kicking Off Social Entrepreneurship: How A Sustainability Orientation Influences Crowdfunding Success: Kicking Off Social Entrepreneurship. *J. Manag. Stud.* **2016**, *53*, 738–767. [\[CrossRef\]](#)
36. Cosma, S.; Grasso, A.G.; Pagliacci, F.; Pedrazzoli, A. Exploring Factors Influencing the Success of Equity Crowdfunding Campaigns: Findings from Italy. In *Frontier Topics in Banking*; Gualandri, E., Venturelli, V., Sclip, A., Eds.; Palgrave Macmillan Studies in Banking and Financial Institutions; Springer International Publishing: Cham, Switzerland, 2019; pp. 73–95. ISBN 978-3-030-16294-8.
37. Anglin, A.H.; Short, J.C.; Ketchen, D.J.; Allison, T.H.; McKenny, A.F. Third-Party Signals in Crowdfunded Microfinance: The Role of Microfinance Institutions. *Entrep. Theory Pract.* **2020**, *44*, 623–644. [\[CrossRef\]](#)
38. Bapna, S. Complementarity of Signals in Early-Stage Equity Investment Decisions: Evidence from a Randomized Field Experiment. *Manag. Sci.* **2019**, *65*, 933–952. [\[CrossRef\]](#)
39. Calic, G.; Shevchenko, A. How Signal Intensity of Behavioral Orientations Affects Crowdfunding Performance: The Role of Entrepreneurial Orientation in Crowdfunding Business Ventures. *J. Bus. Res.* **2020**, *115*, 204–220. [\[CrossRef\]](#)
40. Testa, S.; Nielsen, K.R.; Bogers, M.; Cincotti, S. The Role of Crowdfunding in Moving towards a Sustainable Society. *Technol. Forecast. Soc. Change* **2019**, *141*, 66–73. [\[CrossRef\]](#)
41. Testa, S.; Roma, P.; Vasi, M.; Cincotti, S. Crowdfunding as a Tool to Support Sustainability-oriented Initiatives: Preliminary Insights into the Role of Product/Service Attributes. *Bus. Strategy Environ.* **2020**, *29*, 530–546. [\[CrossRef\]](#)
42. Boons, F.; Laasch, O. Business Models for Sustainable Development: A Process Perspective. *J. Bus. Models* **2019**, *7*, 9–12. [\[CrossRef\]](#)
43. Lüdeke-Freund, F.; Carroux, S.; Joyce, A.; Massa, L.; Breuer, H. The Sustainable Business Model Pattern Taxonomy—45 Patterns to Support Sustainability-Oriented Business Model Innovation. *Sustain. Prod. Consum.* **2018**, *15*, 145–162. [\[CrossRef\]](#)
44. Bocken, N.M.P.; Short, S.W.; Rana, P.; Evans, S. A Literature and Practice Review to Develop Sustainable Business Model Archetypes. *J. Clean. Prod.* **2014**, *65*, 42–56. [\[CrossRef\]](#)
45. Zhu, H.; Zhou, Z.Z. Analysis and Outlook of Applications of Blockchain Technology to Equity Crowdfunding in China. *Financ. Innov.* **2016**, *2*, 29. [\[CrossRef\]](#)
46. Chesbrough, H.; Rosenbloom, R.S. The Role of the Business Model in Capturing Value from Innovation: Evidence from Xerox Corporation’s Technology Spin-off Companies. *Ind. Corp. Change* **2002**, *11*, 529–555. [\[CrossRef\]](#)
47. Massa, L.; Tucci, C.L.; Afuah, A. A Critical Assessment of Business Model Research. *Acad. Manag. Ann.* **2017**, *11*, 73–104. [\[CrossRef\]](#)
48. Shafer, S.M.; Smith, H.J.; Linder, J.C. The Power of Business Models. *Bus. Horiz.* **2005**, *48*, 199–207. [\[CrossRef\]](#)
49. Lipiak, J.; Salwin, M. The Improvement of Sustainability with Reference to the Printing Industry—Case Study. In *Advances in Manufacturing II*; Hamrol, A., Grabowska, M., Maletić, D., Woll, R., Eds.; Springer International Publishing: Cham, Switzerland, 2019; pp. 254–266. ISBN 978-3-030-17268-8.
50. Salwin, M.; Santarek, K.; Kraslawski, A.; Lipiak, J. Product-Service System: A New Opportunity for the Printing Industry. In *Advanced Manufacturing Processes II*; Tonkonogyi, V., Ivanov, V., Trojanowska, J., Oborskyi, G., Grabchenko, A., Pavlenko, I., Edl, M., Kuric, I., Dasic, P., Eds.; Lecture Notes in Mechanical Engineering; Springer International Publishing: Cham, Switzerland, 2021; pp. 83–95. ISBN 978-3-030-68013-8.
51. Salwin, M.; Jacyna-Gołda, I.; Bańska, M.; Varanchuk, D.; Gavina, A. Using Value Stream Mapping to Eliminate Waste: A Case Study of a Steel Pipe Manufacturer. *Energies* **2021**, *14*, 3527. [\[CrossRef\]](#)
52. Salwin, M.; Nehring, K.; Jacyna-Gołda, I.; Kraslawski, A. Product-Service System Design—An Example of the Logistics Industry. *Arch. Transp.* **2022**, *63*, 159–180. [\[CrossRef\]](#)
53. Amit, R.; Zott, C. Value Creation in E-Business. *Strateg. Manag. J.* **2001**, *22*, 493–520. [\[CrossRef\]](#)
54. Salwin, M.; Jacyna-Gołda, I.; Kraslawski, A.; Waszkiewicz, A.E. The Use of Business Model Canvas in the Design and Classification of Product-Service Systems Design Methods. *Sustainability* **2022**, *14*, 4283. [\[CrossRef\]](#)
55. Salwin, M. Design of Product-Service Systems in Printing Industry. Ph.D. Thesis, Lappeenranta-Lahti University of Technology LUT, Lappeenranta, Finland, 2021.
56. Salwin, M.; Kraslawski, A.; Lipiak, J.; Gołębiewski, D.; Andrzejewski, M. Product-Service System Business Model for Printing Houses. *J. Clean. Prod.* **2020**, *274*, 122939. [\[CrossRef\]](#)
57. Salwin, M.; Lipiak, J.; Przeczką, M. Product-Service Systems as an Opportunity for the Enterprise Producing Injection Molds. *Mark. Zarządzanie* **2018**, *54*, 75–87. [\[CrossRef\]](#)
58. Salwin, M.; Lipiak, J.; Kulesza, R. Product-Service System—A Literature Review. *Res. Logist. Prod.* **2019**, *9*, 5–14. [\[CrossRef\]](#)
59. Amit, R.; Zott, C. Crafting Business Architecture: The Antecedents of Business Model Design: Antecedents of Business Model Design. *Strateg. Entrep. J.* **2015**, *9*, 331–350. [\[CrossRef\]](#)
60. Amit, R.; Zott, C. Creating Value Through Business Model Innovation. *MIT Sloan Manag. Rev.* **2012**, *53*, 41–49.
61. Bańska, M.; Salwin, M.; Waszkiewicz, A.E.; Rychlik, S.; Kukurba, M. Startup Accelerators. *Int. J. Manag. Econ.* **2022**, *58*, 1–39. [\[CrossRef\]](#)

62. Bańska, M.; Salwin, M.; Maśłowski, D.; Rychlik, S.; Kukurba, M. Start-up Accelerator: State of the Art and Future Directions. *Eur. Res. Stud. J.* **2022**, *25*, 477–510. [CrossRef] [PubMed]
63. Bańska, M.; Salwin, M.; Kukurba, M.; Rychlik, S.; Kłos, J.; Sychowicz, M. Start-Up Accelerators and Their Impact on Sustainability: Literature Analysis and Case Studies from the Energy Sector. *Sustainability* **2022**, *14*, 13397. [CrossRef]
64. Bańska, M.; Salwin, M.; Tylżanowski, R.; Miciuła, I.; Sychowicz, M.; Chmiel, N.; Kopytowski, A. Start-Up Accelerators and Their Impact on Entrepreneurship and Social Responsibility of the Manager. *Sustainability* **2023**, *15*, 8892. [CrossRef]
65. Baden-Fuller, C.; Mangematin, V. Business Models: A Challenging Agenda. *Strateg. Organ.* **2013**, *11*, 418–427. [CrossRef]
66. Baden-Fuller, C.; Morgan, M.S. Business Models as Models. *Long Range Plan.* **2010**, *43*, 156–171. [CrossRef]
67. Foss, N.J.; Saebi, T. Fifteen Years of Research on Business Model Innovation: How Far Have We Come, and Where Should We Go? *J. Manag.* **2017**, *43*, 200–227. [CrossRef]
68. Brehmer, M.; Podoynitsyna, K.; Langerak, F. Sustainable Business Models as Boundary-Spanning Systems of Value Transfers. *J. Clean. Prod.* **2018**, *172*, 4514–4531. [CrossRef]
69. Akkermans, J.M.; Gordijn, J. Value-Based Requirements Engineering: Exploring Innovative e-Commerce Ideas. *Requir. Eng.* **2003**, *8*, 114–134. [CrossRef]
70. Weissenrieder, F. Value Based Management: Economic Value Added or Cash Value Added? *SSRN J.* **1999**. [CrossRef]
71. Lehner, O.M. The Formation and Interplay of Social Capital in Crowdfunded Social Ventures. *Entrep. Reg. Dev.* **2014**, *26*, 478–499. [CrossRef]
72. Macht, S.; Chapman, G. Getting More than Money through Online Crowdfunding. *Asia-Pac. J. Bus. Adm.* **2019**, *11*, 171–186. [CrossRef]
73. Macht, S.A.; Weatherston, J. The Benefits of Online Crowdfunding for Fund-Seeking Business Ventures: The Benefits of Online Crowdfunding. *Strateg. Change* **2014**, *23*, 1–14. [CrossRef]
74. Meyskens, M.; Bird, L. Crowdfunding and Value Creation. *Entrep. Res. J.* **2015**, *5*, 155–166. [CrossRef]
75. Valančienė, L.; Jegelevičiūtė, S. Valuation of Crowdfunding: Benefits and Drawbacks. *Econ. Manag.* **2013**, *18*, 39–48. [CrossRef]
76. Valančienė, L.; Jegelevičiūtė, S. Crowdfunding for Creating Value: Stakeholder Approach. *Procedia-Soc. Behav. Sci.* **2014**, *156*, 599–604. [CrossRef]
77. Islam, M.T.; Khan, M.T.A. Inertia to the Adoption of Crowdfunding in Bangladesh: A Study on Start-up Entrepreneurs. *Cogent Bus. Manag.* **2020**, *7*, 1811597. [CrossRef]
78. Foà, C. Crowdfunding Cultural Projects and Networking the Value Creation: Experience Economy between Global Platforms and Local Communities. *Arts Mark.* **2019**, *9*, 235–254. [CrossRef]
79. Bento, N.; Gianfrate, G.; Groppo, S.V. Do Crowdfunding Returns Reward Risk? Evidences from Clean-Tech Projects. *Technol. Forecast. Soc. Change* **2019**, *141*, 107–116. [CrossRef]
80. Daldrup, V.; Krahl, O.; Bürger, R. Is Crowdfunding Suitable for Financing German Public Research Organization (PRO) Projects? In *Contemporary Developments in Entrepreneurial Finance*; Moritz, A., Block, J.H., Golla, S., Werner, A., Eds.; FGF Studies in Small Business and Entrepreneurship; Springer International Publishing: Cham, Switzerland, 2020; pp. 309–333. ISBN 978-3-030-17611-2.
81. Ko, J.; Ko, E. What Fashion Startups Should Know before Launching Crowdfunding Projects: Focusing on Wadiz Reward Crowdfunding. *J. Glob. Fash. Mark.* **2021**, *12*, 176–191. [CrossRef]
82. Zakharkin, O.O.; Zakharkina, L.S.; Pokhylko, S.V.; Kreshchik, O.S. Development of Crowdfunding as an Innovative Method of Social Projects Funding. *Financ. Credit. Act.-Probl. Theory Pract.* **2019**, *2*, 509–517. [CrossRef]
83. Laurier, W.; Poels, G. Conceiving E3-Value Business Plans. In Proceedings of the 4th Workshop on Value Modeling and Business Ontologies, Amsterdam, The Netherlands, 21–22 December 2009.
84. Baldi, M.; Gai, S.; Jaccheri, L.; Lago, P. *Object Oriented Software Process Model Design in E³*; Politecnico di Torino: Torino, Italy, 1995.
85. Gordijn, J.; Akkermans, H. Designing and Evaluating E-Business Models. *IEEE Intell. Syst.* **2001**, *16*, 11–17. [CrossRef]
86. Cumming, D.J.; Leboeuf, G.; Schwienbacher, A. Crowdfunding Models: Keep-It-All vs. All-Or-Nothing. *Financ. Manag.* **2020**, *49*, 331–360. [CrossRef]
87. Bocken, N.M.P.; Rana, P.; Short, S.W. Value Mapping for Sustainable Business Thinking. *J. Ind. Prod. Eng.* **2015**, *32*, 67–81. [CrossRef]
88. Bukhari, F.A.S.; Usman, S.M.; Usman, M.; Hussain, K. The Effects of Creator Credibility and Backer Endorsement in Donation Crowdfunding Campaigns Success. *Balt. J. Manag.* **2019**, *15*, 215–235. [CrossRef]
89. Du, S.; Peng, J.; Nie, T.; Yu, Y. Pricing Strategies and Mechanism Choice in Reward-Based Crowdfunding. *Eur. J. Oper. Res.* **2020**, *284*, 951–966. [CrossRef]
90. Alegre, I.; Moleskis, M. Beyond Financial Motivations in Crowdfunding: A Systematic Literature Review of Donations and Rewards. *Voluntas* **2021**, *32*, 276–287. [CrossRef]
91. Cox, J.; Nguyen, T.; Kang, S.M. The Kindness of Strangers? An Investigation into the Interaction of Funder Motivations in Online Crowdfunding Campaigns. *Kyklos* **2018**, *71*, 187–212. [CrossRef]
92. Esmaeili, L.; Hashemi Golpayegani, A. A Novel Method for Discovering Process Based on the Network Analysis Approach in the Context of Social Commerce Systems. *J. Theor. Appl. Electron. Commer. Res.* **2021**, *16*, 58–86. [CrossRef]
93. Mohamed, S.; McCowan, A.K. Modelling Project Investment Decisions under Uncertainty Using Possibility Theory. *Int. J. Proj. Manag.* **2001**, *19*, 231–241. [CrossRef]

94. Cheng, P.Y.K. Decision Utility and Anticipated Discrete Emotions: An Investment Decision Model. *J. Behav. Financ.* **2014**, *15*, 99–108. [[CrossRef](#)]
95. Nawrocki, D.; Viole, F. Behavioral Finance in Financial Market Theory, Utility Theory, Portfolio Theory and the Necessary Statistics: A Review. *J. Behav. Exp. Financ.* **2014**, *2*, 10–17. [[CrossRef](#)]
96. Bender, M.; Gal-Or, E.; Geylani, T. Crowdfunding As a Vehicle for Raising Capital and for Price Discrimination. *J. Interact. Mark.* **2019**, *46*, 1–19. [[CrossRef](#)]
97. Fiordelisi, F.; Monferrà, S. Measuring Shareholder Value in Asset-based Lending Industries. *Manag. Financ.* **2009**, *35*, 885–903. [[CrossRef](#)]
98. Viner, J. The Utility Concept in Value Theory and Its Critics. *J. Political Econ.* **1925**, *33*, 638–659. [[CrossRef](#)]
99. Bogoutdinov, B.B.; Barannikov, A.L.; Russian Presidential Academy of National Economy and Public Administration. Investment Appeal and Development Strategies of Small Businesses. *Econ. Policy* **2016**, *11*, 60–81. [[CrossRef](#)]
100. De Kinderen, S.; Gordijn, J. E3-Service-A Model-Based Approach for Generating Needs-Driven E-Service Bundles in a Networked Enterprise. In Proceedings of the European Conference on Information Systems (ECIS 2008), Galway, Ireland, 9–11 June 2008.
101. Daskalakis, N.; Yue, W. User’s Perceptions of Motivations and Risks in Crowdfunding with Financial Returns. *SSRN J.* **2017**. [[CrossRef](#)]
102. Cucari, N.; Nuhu, K. Co-Creation of Value in Relationships Crowdfunding-Territory: An Exploratory Study in the Italian Context. In Proceedings of the 9th European Conference on Intellectual Capital (ECIC 2017), Lisbon, Portugal, 6–7 April 2017; Lopes, I.T., Serrasqueiro, R., Eds.; Academic Conferences Ltd.: Reading, UK, 2017; pp. 71–79.
103. Oskam, I.; Bossink, B.; De Man, A.-P. Valuing Value in Innovation Ecosystems: How Cross-Sector Actors Overcome Tensions in Collaborative Sustainable Business Model Development. *Bus. Soc.* **2021**, *60*, 1059–1091. [[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.