



Article

Crowdfunding and Sustainable Development

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Abstract: The aim of this article is to verify the hypothesis that crowdfunding campaigns with sustainable orientations are significantly more likely to convince investors and successfully raise funds. The research covered 50 successful crowdfunding projects' reward and equity-based models, which were pledged on Polish platforms, and analyzed the context of the campaigns. Basic statistical non-parametric tests were used to analyze the data. The study shows that although there were big differences in the amount of raised funds and achieved success rates, the sustainable orientation of the project itself was not so important. It is worth noticing that the level of realization of the objectives of sustainable development was really low, and was not highlighted in the description. This paper explores the relevant success factors of crowdfunding projects, which is very important in order to prepare new ideas for financing and attract the crowd as an investor.

Keywords: alternative finance; sustainable development; crowdfunding

1. Introduction

The financial crisis of 2008 exposed the weakness of the traditional banking system and financial markets. In response to growing problems, governments and regulators in many countries have introduced additional restrictions that significantly hinder access to capital. This situation particularly affected the small and medium-sized enterprises (SME) sector and newly emerging enterprises. Therefore, these entities began looking for other alternative financing methods such as crowdfunding. The idea to draw funds from the anonymous crowd via the internet originated with small loans in developing countries [1,2]. Today, this approach increases competition with traditional financing agents such as venture capitalists (VCs), business angels (BAs), and banks [3,4], and provides new opportunities for individuals and entrepreneurs in need of financing [5]. The global funding volume was over \$34 billion in 2015, and grew more than 1000% in three years, with the volume projected to surpass worldwide VC spending in 2016 (see Massolution [6], p. 94 and Gravery [7], p. 33).

Low entry barriers stimulate this growth, and the digital channels of crowdfunding platforms are open to almost anyone with the internet connection [5].

By adopting a Declaration of Action for Sustainable Development in Rio de Janeiro, the signatory countries have committed themselves to respecting the principles and achieving the objectives set. Hence, the question arises whether the financial crisis and the resulting lack of access to capital and the above declarations go hand in hand, and whether the resulting alternatives are the answer to the emerging problems.

The aim of this article is to verify the hypothesis that the sustainable orientation of the crowdfunding campaign could significantly persuade investors and ensure success in raising funds.

The article is divided into four sections. The first one discusses the basic concepts of sustainable development. Particular attention has been paid to the assumptions and goals adopted by many countries within the framework of this concept. The second section deals with crowdfunding, including the basic ideas and models. The last section describes the methodology of the research and

Sustainability **2018**, 10, 4650 2 of 11

testing the hypothesis. The most important conclusions flowing from the analysis are contained in the summary, which also offers further indication of research opportunities.

2. Sustainable Development: Basic Concepts, Objectives, and Directions of Action

Sustainable development has been defined in many ways, but the most common and frequently quoted definition is from "Our Common Future", which is also known as the Brundtland Report [8], and it states: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The concept of sustainable development is associated primarily with the United Nations Conference on Environment and Development, which was organized in Rio de Janeiro in 1992 (the so-called Earth Summit). At the meeting, government representatives from 170 countries, including Poland, declared their support for the idea of environmentally-sensitive economic development. During the conference, as well as later, a number of different types of treaties were signed, which have been put into effect with greater or lesser success. Unfortunately, the implementation of the idea of sustainable development was met with very sharp criticism. This is a normative concept of the conscious and active shaping of social relations and human—environment relations. Therefore, it requires a difficult axiological understanding that is contrary to the ruling, ubiquitous liberal democracy. So, if most ethical values are subordinated to economic values, and not vice versa, the realization of sustainable development will remain only a utopia.

This concept has enormous scientific and research potential, especially from an interdisciplinary perspective. It offers the opportunity to compile and combine the perspectives of different academic disciplines, linking ecology, ethics, economics, research, sociology, and many other ones. In addition, research on sustainable development provides the basis for formulating recommendations for social policy, identifying ways to improve the quality of life and the state of the environment [9].

Sustainable development assumes that economic growth is supposed to lead to a greater social cohesion (including reducing social stratification, equalizing opportunities, and counteracting marginalization and discrimination) and improve the quality of the environment through limiting the harmful impact of production and consumption on the state of the environment, and protecting natural resources [10].

Sustainable development refers to the social and economic development of an enterprise, which enables the implementation of the strategy and the attainment of its objectives without interfering with its future realization [11]. Therefore, the development of an enterprise should be carried out in such a way that it does not interfere with future development potential on the basis of building a competitive advantage as well.

Implementing such a development requires not only the knowledge of internal procedures and capabilities, but also a very detailed knowledge of the conditions and environment in which it operates. Mutual relationships and ways of interacting are of great importance here. It is quite common for managers to seek solutions that should reconcile the conflicting interests of different parties. Hence, it is necessary to harmonize economic objectives with social and environmental objectives. Looking at sustainability research, it is noteworthy that some authors interchangeably use the terms *sustainability* and *business responsibility* [12]. This is in some way justified, because sustainable development involves the use and conservation of natural resources and the orientation of technology and institutions in order to achieve and sustain the fulfillment of the human needs of present and future generations. This understanding, which preserves soil, water resources, plants and the genetic resources of animals, does not degrade the environment and uses technologies that are economically viable and socially acceptable [13].

Regardless of whether these concepts are considered the same or not, they certainly have common assumptions. Their focus is on external effects and the distribution problems that are related to the economic activity of enterprises.

Key elements of sustainable development, according to the Brundtland Report [8], were:

Sustainability **2018**, *10*, 4650 3 of 11

- Recovery of economic growth
- Changing the quality of economic growth
- Satisfying basic needs such as jobs, food, water, access to sanitation, health care
- Ensuring a sustainable level of production
- Protecting and improving the natural resource base
- Technology reorientation and risk management
- Merging the environment and economy in the decision-making process
- Reorientation of international economic relations.

In 2015, the Goals for Sustainable Development were established, which were included in the United Nation (UN)'s Development Agenda 2030. They contain 17 basic objectives:

- No poverty
- Zero hunger
- Good health and well-being
- Quality education
- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation, and infrastructure
- Reduced inequalities
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Peace, justice, and strong institutions
- Partnership for the goals

The greater cohesion, improving the quality of the environment and the mutual relationships between the economy and environment, could be reached by wide social consultation about production and responsible consumption. The crowdfunding campaign is a good tool to realize such ideas. Besides the funds raised from the crowdfunding, the entrepreneurs have the chance to check their offers and promote the great idea of sustainable development. From the other point of view, the easier access to capital, even for entrepreneurships that are excluded from traditional financing systems, gives them a possibility for sustainable growth. The best example of such cohesion and realization of sustainable development's objectives is the Kiva platform, where the donations are given to the entrepreneurs from less developed countries to realize the most suitable ideas for particular regions.

3. Crowdfunding: Models and Platforms

Crowdfunding appears as an alternative tool of financing early-stage businesses and those in expansion phases of growth [14]. It facilitates the financing process by providing an online platform that enables minor investors and individuals to support the initiative through investing small amounts of capital and sharing the idea with others over a fixed time period, which is generally a few weeks [3]. However, such ventures, especially the social ones, utilize crowdfunding as a mechanism not only to finance their initiatives and programs, but also to entice the individuals who are interested more in the proposed idea itself, rather than future cash flows or profits [15]. It is believed that it is highly probable that an investor who likes a project is also keen on the products of the company, and would like to be its first customer [16]. Building a society that accepts and supports projected activities is the

Sustainability **2018**, 10, 4650 4 of 11

first step to ensure future demand for them. This is a big advantage of crowdfunding, and a unique one when compared to other sources of capital.

It is worth noting that most crowd investors are not sophisticated; they avoid business plans, cash-flow liquidity, collateral, rational economic analysis, etc. However, along with the growth of the popularity of crowdfunding, there increases also the selectivity of the crowd funders. As equity-based crowdfunding platforms have expanded (from 2012 to 2014, an average growth of 410%) and attracted an increasing number of interesting investment opportunities, traditional investors have begun to look to them for opportunities [17]. NESTA's 2014 study of alternative finance in the United Kingdom (UK) revealed that 38% of investor survey respondents from equity-based crowdfunding sites identified themselves as being either sophisticated investors or high net worth individuals [18].

Currently, the online platforms provide several different models of crowdfunding that vary according to the incentives they offer to the crowd. The literature distinguishes among donation-based, reward-based, debt-based, and equity-based crowdfunding [16,19]. Donation-based crowdfunding collects a specific type of backers who do not expect return or benefits from their support to the project. The model offers the donors a contract without any physical or financial rewards. It is commonly used for social campaigns whose main goals are not connected with the business itself, but with charity (e.g., GoFoundMe or Crowdrise.com). In reward-based crowdfunding, investors receive perks such as advanced versions of funded products (e.g., Pebble Smartwatch) rather than receiving a financial return on their contributions [20]. In equity-based crowdfunding, entrepreneurs sell small ownership stakes in their firms [21]. The SEC's implementation of the Jumpstart Our Business Startups Act in 2012, includes the Regulation A+, which allows for small businesses and start-ups to rise as much as \$50 million USD from the crowd [22]. In the European Union (EU), the EU Directive 2017/1129/WE [23] gives the possibility of reaching up to one million EUR in funds obtained by the non-public offer (in special cases even to eight million EUR). The directive is obligatory for all members of the EU, and the appropriate regulators in the countries should decide which level (one to eight million EUR) is the best for the conditions of the internal financial market. In Poland, for example, the Polish Financial Supervision Authority decided to set the maximum level of funds obtained by the non-public offer up to one million EUR, which has been in force from July 2018 [24]. Finally, debt-based crowdfunding involves investors making microloans to entrepreneurs. In some cases, investors obtain their original investment returned with interest. However, in some platforms such as Kiva, only the principal is returned to the investor, with no other expectations of financial or other return [14]. There are existing platforms that offer mixed models of crowdfunding, and some projects with such offers have successfully raised funds through them (see Collins and Pierrakis [19]).

Crowdfunding is a demand-oriented way of financing. The success of the campaign is the result of sufficient demand, but the raised funds are not the only advantage of this model of financing. The authors of the project get feedback—commonly through comments—that could be used to further improve the ideas. Moreover, crowdfunding enables supporting atypical projects, which could not be financed by the traditional financial institutions or do not meet the expectations and interest of such institutions. Many times, after successful campaigns, the projects and ideas attract the interest of venture capitals or business angels, and can count on further financing from these sources.

Nevertheless, crowdfunding has disadvantages, too. Firstly, the projects are presented to the wider society; thus, the main idea could be easily duplicated. It is very important to find the balance between the information given to potential customers and investors to create the demand and the security of the project itself. Another problem, especially in equity crowdfunding, regards the law regulations in many countries. There are very rare laws strictly dedicated to crowdfunding. In many situations, the authors of the projects use the related regulations and rules, believing that the interpretation is proper.

To date, scholarly knowledge about crowdfunding remains quite limited [25]. One of the directions of interest of research are the determinants of crowdfunding success. Pioneers within the research stream have noted that knowledge of these factors will be needed in order to inform

Sustainability **2018**, *10*, 4650 5 of 11

how crowdfunding impacts the governance and outcomes of entrepreneurial organizations [5]. Agrawal et al. [1] examined the geographic origin of consumers who invested on the SellaBand platform and established that distance still plays a role insofar as "local investors invest relatively early, and they appear less responsive to decisions by others investors". Mollick [26] uncovered that the projects that reflect the underlying cultural products of their geographic area are much more successful than others. Kuppuswamy and Bayus [15] showed that social information (i.e., others crowdfunders' decisions) plays a key role in the success of the project. Ahlers et al. [27] analyzed equity crowdfunding, presenting evidence that successful crowdfunding initiatives rely on credible signals, the quality of the startup, and sound information disclosure to the crowd. Between the determinants of crowdfunding success, the researchers have surveyed also the motivation of the investors (e.g., Hoegen et al. [28]). For example, it has been suggested that funders of microloans on the Kiva platform are motivated to contribute to a campaign to get a "warm glow" from contributing to entrepreneurs in need [14]. They found that entrepreneurs were more successful at raising money when the narrative that was used to solicit investment included language indicating accomplishment and rhetoric traditionally associated with political speech. Other theories that have been applied to crowdfunded microlending are cognitive evaluation theory and self-determination theory. These theories predict differing responses to intrinsic versus extrinsic cues [25]. Allison et al. [14], using data from the Kiva platform, found that intrinsic cues—those that frame a venture as an opportunity to help others—are positively related to crowdfunding performance. In contrast, the extrinsic cues—which frame the venture as a business opportunity—are negatively related to crowdfunding performance.

A number of studies have leveraged theoretical perspectives that have built the knowledge surrounding how individual crowdfunding campaigns project information to potential investors, and how crowds react to this information [25]. For example, Burch et al. [16] incorporated research on privacy and reputation, and found out that reducing access to information controls positively impacted the funds that were raised. Drover et al. [29] found that both angels and crowdfunding organizations can serve to certify nascent firms, but that certification from the collective is a function of the crowdfunding platform type. Calic and Mosakowski [30] ascertained that a sustainability orientation positively affects the funding success of crowdfunding projects, and that this relationship is mediated by project creativity and third-party endorsements. Another research study by Cholakova and Clarysse [31] concluded that equity funding motivation is financial/utilitarian, with no significant role of non-financial motives.

From these findings, there appears a question: if the funds are raised from crowd/society and the sustainability orientation positively affects the success, does the character of the project itself matter? Are the investors more willing to support a project that is more closely connected with the elements of sustainable development, and has realized more objects of this concept?

The Polish market of alternative finance is quite young, but its dynamics are really impressive. This is the fastest-growing market in Central and Eastern Europe, and not only there. In 2016, the value of the Polish alternative finance market reached the level of \$38.1 million EUR, which was more than 272% higher than in 2015. According to Zieger et al. [32], debt-based crowdfunding increased circa 700% year-to-year, and equity crowdfunding increased 350%. In comparison, in the same time, the biggest alternative market in the world—the Asia and Pacific Region—grew by 136%, Europe grew by 101%, the UK grew by 43%, and the American market grew by 23% (see Zieger et al. [32], Gravery et al., [7], Ziegler et al. [33], Zhang et al. [34]). Even these numbers alone are good reasons to explore the Polish market. From the other point of view, the changes in the law regulations, made in the EU and furthermore in Poland, could significantly influence the whole alternative finance market and lead to enormous growth or cause alternative instruments to be avoided for a long time. The direction that the market will choose in the future will depend not only on the regulators themselves, but also on the participants of this market. If they use crowdfunding for financing and the obligations frequently go unfulfilled, the investors will turn away from the alternative finance. If they use crowdfunding to create new ideas and show responsibility, which changes into high profitability,

Sustainability **2018**, *10*, 4650 6 of 11

the crowdfunding campaigns will attract new investors, and the alternative finance market will become the real competitor for the traditional financial system.

4. Methodology

The research included 50 projects from Polish online platforms. Since the reward-based and equity-based models of crowdfunding are the most popular types in this region, in the survey, we examined all of the successfully completed equity-based campaigns until the end of July 2018, as well as an equal number of reward-based projects. In effect, I obtained data from 25 typical reward-based crowdfunding campaigns and 25 equity-based crowdfunding campaigns. The equity campaigns were launched on beesfund.pl, crowdway.pl, and findfunds.pl. The reward campaigns were launched on polakpotrafi.pl and wspieram.to. These are the most well-known and used crowdfunding platforms in Poland. The projects were chosen randomly. For every project, the same data were gathered: the amount of raised funds, the success rate (i.e., percentage of goal funds applied for), the number of contributors, an average donation as a quotient amount of raised funds, and the number of contributors. Besides these variables, two other ones were specified: key elements and basic objectives.

After analyzing the description of the project, I assigned each element of the project a value of either zero or one depending on whether the project realized the basic elements and goals of sustainable development (one: yes, zero: no). Summarizing the value after the elements resulted in obtaining the variable "key elements". Adding the values up after the goal produced the variable "basic objective". The descriptive statistics can be found in Table 1.

| | N | Min. | Max. | Mean | Std. Deviation | Skewness | | Kurtosis | |
|------------------------|----|---------|-----------|------------|-------------------|-----------|-----------|-----------|-----------|
| | | 141111. | | | | Statistic | Std.Error | Statistic | Std.Error |
| Amount | 50 | 18,900 | 1,640,000 | 254,307.71 | 327,424.07 | 3.171 | 0.337 | 11.208 | 0.662 |
| Percent of goal | 50 | 16 | 2295 | 183.74 | 330.37 | 5.660 | 0.337 | 35.504 | 0.662 |
| Number of contributors | 48 | 21 | 3688 | 502.60 | 623.68 | 3.207 | 0.343 | 13.966 | 0.674 |
| Average donation | 48 | 41 | 15842 | 1500.58 | 2789.13 | 3.664 | 0.343 | 15.603 | 0.674 |
| Key elements | 50 | 0 | 7 | 2.44 | 1.631 | 0.891 | 0.337 | 0.417 | 0.662 |
| Basic objectives | 50 | 0 | 8 | 3.04 | 1.678 | 0.556 | 0.337 | 0.118 | 0.662 |
| Valid N (listwise) | 48 | | | | | | | | |

Table 1. Descriptive Statistics.

5. Results

The whole raised amount of money was about \$12.7 million PLN (\$2.95 million EUR). The average success rate was 183.74% of funds applied for, and the average number of contributors was circa 506. The time of raising the funds did not exceed 60 days, except for one campaign whose time of duration was 96 days. The projects obtained a value of 2.44 regarding the key elements (average) of sustainable development (according to Brundtland, 1987), and realized circa 3.04 from 17 goals (UN's Development Agenda 2030). The most common key element was "technology reorientation and risk management", while the least common was "ensuring a sustainable level of production". From the basic goals that were established and included in the UN's Development Agenda 2030, the ones that were most often realized were "quality education" and "industry, innovation, and infrastructure".

Since none of the above variables seemed to have a normal distribution, I used a non-parametric test to check the correlation between the variables (Spearman's rho), as shown in Table 2.

Sustainability **2018**, 10, 4650

Table 2. Non-parametric correlation: Spearman's rho.

| | | Amount | Percentage Goal | # Contributors | Average Donation | Duration | Key Elements | Basic Objectives |
|------------------|---|-----------|--------------------|-------------------|---------------------|----------|--------------|---------------------|
| amount | Correlation coefficient Sig. (two-tailed) | 1.000 | | | | | | |
| | N | 50 | | | | | | |
| | Correlation coefficient | -0.405 ** | 1.000 | | | | | |
| percent_goal | Sig. (two-tailed) | 0.004 | | | | | | |
| | N | 50 | 50 | | | | | |
| | Correlation coefficient | -0.133 | 0.658 ** | 1.000 | | | | |
| nr_contributors | Sig. (two-tailed) | 0.368 | 0.000 | | | | | |
| | N | 48 | 48 | 48 | | | | |
| | Correlation coefficient | 0.632 ** | -0.714 ** | -0.823 ** | 1.000 | | | |
| average_donation | Sig. (two-tailed) | 0.000 | 0.000 | 0.000 | | | | |
| - | N | 48 | 48 | 48 | 48 | | | |
| | Correlation coefficient | -0.105 | -0.134 | 0.190 | -0.115 | 1.000 | | |
| duration | Sig. (two-tailed) | 0.617 | 0.524 | 0.385 | 0.601 | | | |
| | N | 25 | 25 | 23 | 23 | 25 | | |
| | Correlation coefficient | 0.432 ** | -0.375 ** | -0.263 | 0.448 ** | 0.104 | 1.000 | |
| key_elements | Sig. (two-tailed) | 0.002 | 0.007 | 0.71 | 0.001 | 0.621 | | |
| • | N | 50 | 50 | 48 | 48 | 25 | 50 | |
| | Correlation coefficient | 0.304 * | -0.203 | -0.115 | 0.296 * | -0.116 | 0.488 ** | 1.000 |
| basic_objectives | Sig. (two-tailed) | 0.032 | 0.157 | 0.435 | 0.041 | 0.580 | 0.000 | |
| , | N | 50 | 50 | 48 | 48 | 25 | 50 | 50 |

^{*} Correlation is significant at the level 0.05 (two-tailed); ** Correlation is significant at the level 0.01 (two-tailed).

Sustainability **2018**, *10*, 4650 8 of 11

Concerning the variable <code>key_elements</code> in Table 2, it can be observed that the three success indicators are positively correlated with <code>amount</code> and <code>average_donation</code>, and negatively correlated with <code>nr_contributors</code>. Thus, it could be concluded that the more key elements of sustainable development that are obtained in the project, the higher the amount of raised funds, and the higher the value of each individual donation from investors. On the other hand, the number of investors in such projects is lower. This relationship is significant at the 0.01 level, but is not very strong. Similarly, the <code>basic_objectives</code> element is positively correlated with <code>amount</code> and <code>average_donation</code>, but the relationships are much weaker, and their significance is at the 0.05 level. The correlation between the <code>basic_objectives</code> and the <code>nr_contributors</code> is not confirmed.

Although the correlation suggests a positive relationship between the sustainable orientation of the project and the success of the raising the funds, it could be worth checking the differences between the groups of projects with the same number of obtained key elements obtained (see Table 3) and realized basic objectives (see Table 4).

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|-------|----------------------------|
| 1 | The distribution of the <i>percent_goal</i> is the same across categories of <i>key_elements</i> | Independent samples: Kruskal–Wallis test | 0.081 | Retain the null hypothesis |
| 2 | The distribution of <i>amount</i> is the same across categories of <i>key_elements</i> | Independent samples: Kruskal–Wallis test | 0.061 | Retain the null hypothesis |
| 3 | The distribution of <i>nr_contributors</i> is the same across categories of <i>key_elements</i> | Independent samples: Kruskal–Wallis test | 0.284 | Retain the null hypothesis |
| 4 | The distribution of average_donation is the same across categories of key_elements | Independent samples: Kruskal–Wallis test | 0.016 | Reject the null hypothesis |
| 5 | The distribution of <i>duration</i> is the same across categories of <i>key_elements</i> | Independent samples: Kruskal–Wallis test | 0.485 | Retain the null hypothesis |

Table 3. Hypothesis test summary: *key elements*.

| Table 4. | Hypothesis test summary: | basic_ | objectives. |
|----------|--------------------------|--------|-------------|
|----------|--------------------------|--------|-------------|

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|-------|----------------------------|
| 1 | The distribution of percent_goal is the same across categories of basic_objectives | Independent samples: Kruskal–Wallis test | 0.876 | Retain the null hypothesis |
| 2 | The distribution of amount is the same across categories of basic_objectives | Independent samples: Kruskal–Wallis test | 0.380 | Retain the null hypothesis |
| 3 | The distribution of nr_contributors is the same across categories of basic_objectives | Independent samples: Kruskal–Wallis test | 0.934 | Retain the null hypothesis |
| 4 | The distribution of average_donation is the same across categories of basic_objectives | Independent samples: Kruskal–Wallis test | 0.513 | Retain the null hypothesis |
| 5 | The distribution of duration is the same across categories of basic_objectives | Independent samples: Kruskal–Wallis test | 0.911 | Retain the null hypothesis |

As can be seen from Table 3, only the distribution of *average donation* is not the same across categories of *key elements*. Taking into account every other variable, the differences are not significant. This means that the success of raising funds is not dependent on obtaining the elements of sustainable development. As a confirmation, the same can be seen if I check the realization of the main objectives and its influence on the campaign results (see Table 4).

None of the success indicators is dependent on the realization of the main objective of sustainable development. These findings suggest that investors in crowdfunding are not sensitive to the sustainability lens, which is comparable to the findings of Hörisch [35] and Saxton and Wang [36], which showed that campaigns with a focus on environmental factors, art, or human services have a harder time getting funding. The same was noticed by Calic and Mosakowski [30]. While the

Sustainability **2018**, *10*, 4650 9 of 11

argument remains attractive that sustainable projects are more legitimate because of moral and ideological reasons, they found only partial evidence to support it with their data.

My findings highlight the likely context-specific nature of results, which reflects upon the very nature of crowdfunding. Not only are the values and beliefs of members of the crowd subject to change over time, but the individuals who participate in crowdfunding are also likely to change over time as well.

6. Discussion

Crowdfunding has exploded in popularity over the last decade, and now accounts for tens of billions of dollars annually. However, despite the importance and growth of crowdfunding, little scholarly knowledge exists about the topic.

A brief evaluation can lead to erroneous conclusions that the crowdfunding campaigns are particularly suited to fight social differences and stimulate "healthy" growth because they promote socially acceptable activities. However, a more detailed analysis demonstrates that this impression is wrong. It is true that alternative finance certainly contributes to the realization of many projects that are more or less in line with the assumptions and goals of sustainable development, but this factor is not necessarily crucial to guarantee their success. It should be noticed that the sustainable development goals are only one of the determinants that may attract funding. The success of a campaign could depend on numerous other factors, ranging from fandom (in many cases supported by influencers), the quality of presentation of the information, the reputation of the project initiator, existing co-finance or previous success in financing from other campaigns, etc. Analyzing only one of the determinants generates limitations, because it does not show the relations between those factors. Confirmation of these findings might be seen in the quite frequent campaigns set on Polish platforms such as e.g., "protection of rainforest" (https://polakpotrafi.pl/projekt/ochrona-lasow-deszczowych (15 November 2018)) or "charity for the homeless in" etc., in which the personal benefits of initiators lie in the shadow of humanitarian or social causes. In such cases, the projects are unsuccessful, and do not raise the funds, although they are well prepared and socially sensitive. On the other hand, if the project is unrealistic, insufficiently innovative, or does not inspire confidence, good preparation and social sensitivity do not matter either.

The above analysis has several limitations. First, the assessment of the projects was subjective. This means that it was not based on credible research, but rather on analyzing the description made by the author and their subjective judgment. Besides that, the adopted scale was very limited, as it only had two values: zero if the project did not have anything in common with detailed elements or the objective of sustainable development, and one if it did. Thus, the intensity of the realization was omitted. However, the results are very interesting, and should constitute evidence in wider research. For example, it will be interesting to compare the findings with the projects that were unsuccessful, or were pledged on other platforms from other countries.

On the other hand, future research could compare the models of crowdfunding, e.g., lending, donation, reward, and equity crowdfunding. From the logical point of view, sustainable orientation should be more important for the non-profit campaigns, but this needs to be checked.

Another fruitful direction of future research will be addressing the question of how the socio—cultural context influences the response of the crowd to sustainability projects. Are people more likely to fund projects that address concerns that are widely held in the culture and stir little controversy, such as eliminating poverty or reducing infant mortality? Or are adherents of causes associated with countercultural views more zealous in their support of related projects? How do shifts in social—cultural values play out in the expression of minority group values in crowdfunding arenas? Future studies ought to address these areas in order to move the nascent field of crowdfunding research forwards.

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Sustainability 2018, 10, 4650 10 of 11

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Sustainability **2018**, 10, 4650 11 of 11

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