Analitik Ağ Süreci Yaklaşımıyla Ödül-Temelli Kitlesel Fonlamada Destekçilerin Motivasyon Unsurlarının Araştırılması

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Özet

Kitlesel fonlama çok sayıda destekçinin ufak katkılarıyla projelerin fonlandığ, hem coğrafi sınırları hem de bürokrasiyi büyük ölçüde ortadan kaldıran inovatif bir fon mekanizması olarak geleneksel fon mekanizmalarına önemli bir alternatif oluşturmaktadır. Net bir gelir beklentisi olmamasına rağmen kitlesel fonlama kampanyalarına katılım sağlayan destekçileri harekete geçiren unsurlar ise önemli bir araştırma konusu oluşturmaktadır. Bu çalışmada özellikle ödül-temelli kitlesel fonlama kampanyalarına destek verenleri motive eden unsurlar araştırılmış, önceliklendirilmiş ve öne çıkanlar Analitik Ağ Süreci yöntemi ile analiz edilerek kara olan etkileri ağırlıklandırılmıştır. Çalışmada kitlesel fonlama platformlarının güvenirliği, ödül beklentisinin üzerinde en önemli unsur olarak öne çıkmıştır. Kitlesel fonlama yaklaşımın henüz oldukça yeni olduğu, bu süreçte öne çıkan unsurun kitlesel fonlama platformları olduğu, genellikle maddi değeri düşük ödüller verildiği ya da verilen ödül vaatlerinin büyük oranda gerçekleştirilmediği düşünüldüğünde bu sonuç sürpriz olarak değerlendirilmemektedir.

Anahtar Kelimeler

Makale Hakkında

Research on Backers' Motivations in Reward-Based Crowdfunding with Analytic Network Process

Abstract

Crowdfunding is an innovative conceptualized alternative to traditional funding mechanisms which bypasses bureaucracy and eliminates geographical barriers by more contributor with less contribution. The motivation criteria that mobilize backers for crowdfunding especially for those who don't have a certain financial expectation are an important research topic. In this study, the factors that affect the motivation of the backers, especially in reward-based crowdfunding campaigns were researched, prioritized and their effects on funding decision were examined by using Analytic Network Process (ANP). As a matter of fact, it is seen that the most important motivation factor is reliability of platform instead of reward expectation for those who participate in reward-based crowdfunding campaigns. Considering crowdfunding is still quite new, crowdfunding platforms are the most prominent part of this process and the promised rewards have generally low monetary value or the high fraud rate, this result isn't considered a surprise.

Keywords

About Article

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Introduction

A financial system consists of institutional units and markets that interact, typically in a complex manner, for the purpose of mobilizing funds for investment and providing facilities, including payment systems, for the financing of commercial activity (OECD, 2004). The role of financial institutions within the system can be summarized as bringing together those who provide funds and who demand funds. Crowdfunding has emerged as an innovative and alternative method brought together those who demand resources for their ventures and who provide resources also called backers by using internet technology.

Crowdfunding is a method which allows the implementation of initiatives by providing limited funds from many sources instead of providing a high rate of funding from a limited number of sources by means of an online funding platform. So, it can be accepted as a new phenomenon which doesn't only remove geographical barriers to access to venture capital but also free entrepreneurs from the shackles of traditional funding institutions by 'democratizing' access to entrepreneurial finance. Moreover, some researchers argue it can be evaluated as close relative of crowdsourcing which focuses on how the crowd may take an active part in a company's innovation process (OECD, 2004). But there is no doubt that crowdfunding is an innovation which has a potential to shake the traditional financial system deeply.

The history of crowdfunding can be based on 18th century, The Irish Loan Fund, but the first modern time crowdfunding is accepted as reunion tour of Marillon which is a British rock band founded by their fans through online donations after the keyboardist of the band Mark Kelly's email to the fans. He had told them the band would lose about $60.000 if they went on a tour, so the fans raised the money (Startups Team, 2018).

One of the most well-known crowdfunding projects is Maria Schneider's jazz album "Concert in a Garden." in 2004 by ArtistShare which is accepted the first dedicated crowdfunding platform. With a $9.95 contribution, a backer would be among the first customers to download the album, so it can also be described as a pre-order. At the end of the campaign ArtistShare gathered $130.000 for producing the album, which also would win a 2005 Grammy Award for best large jazz ensemble album later. As can be seen with this campaign ArtistShare not only had an opportunity to distribute the album but also was able to make its market research (Freedman and Nutting, 2015).

It should be mentioned about the great depression at this point. After collapse of the housing market and the financial industry in 2008, banks weren't be able to provide as much as loans like they had been in the past. So, it forced entrepreneurs to seek alternative funding mechanisms. This situation proved the need alternative financial institutions except traditional ones. Especially the evolution of the internet technology, which called Web 2.0, made crowdfunding concept possible.

Today crowdfunding is a rapidly growing phenomenon all over the world. From business and entrepreneurship to music and recording arts there are a lot of crowdfunding campaigns available. Statista's market research shows that the transaction value in the crowdfunding segment amounts will reach approximately 12 billion dollars in 2023. Transaction value will show 14,7% annual growth rate between the years 2019-2023 (Statista, 2019a).
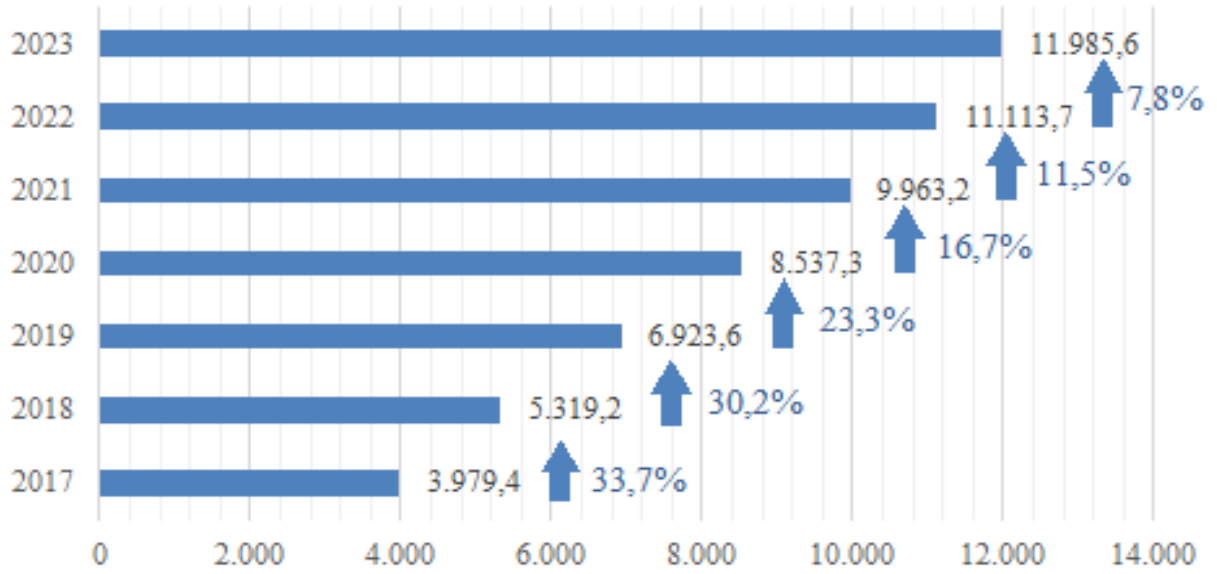
Figure 1. Transaction value in crowdfunding in million U.S. dollars (Statista, 2019a)

According to Statista there are approximately 8,7 million campaigns will be conducted around the world and the average funding per campaign amounts will be $794 by the end of 2019. The average success rate of a crowdfunding campaign is 50% and %78 of them exceed their goal (Startups Team, 2018). Statista's projections show that the number of campaigns in crowdfunding segment will raise to approximately 12 million and the average amounts per campaign to $994 in 2023 (Statista, 2019a).

Table 1. Projection for Number of Campaigns and Funding per Campaign Worldwide

Years	Number of Campaigns (In thousands)	Funding per Campaigns (In U.S. dollars)
2017	5.204,7	765
2018	6.455,1	824
2019	8.724	794
2020	10.940,3	780
2021	11.823,6	843
2022	12.024,1	924
2023	12.063,9	994

Source: Statista (2019a)

How Crowdfunding Works

Although some fund seekers reach directly to their backers via their own platform (which called direct crowdfunding), it is generally accepted that there are three main actors in crowdfunding: Fund-seeking entrepreneurs, fund providers (backers) and internet based crowdfunding platforms which brings them together (Landstrom and Parhankangas, 2019).

The processes behind these instruments may be complex if large numbers of backers and micro-payment transactions must be managed. Since many initiators of ventures and backers are inexperienced or uninformed, "intermediaries" are very important. In order to explain the essential processes of crowdfunding phenomenon, Hemer has created the following figure (2011).
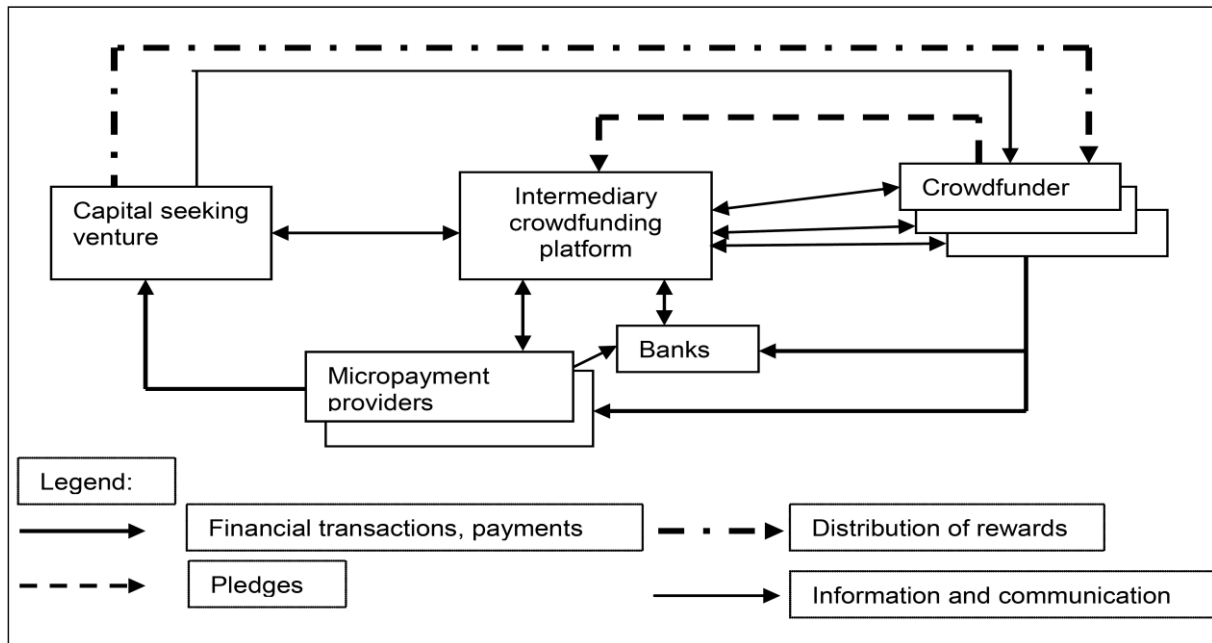

Figure 2. The crowdfunding process involving intermediaries (Hemer, 2011)

When Hemer's crowdfunding chart is examined, it can be seen the crowdfunding platform is located at the center of the system. Crowdfunding platform is the main element that brings together fund-seekers and backers. The process can be summarized as follows:

a. Fund-seeker uploads some technical details, drawings, visual elements or related documents of their project to a crowdfunding platform.
b. Fund-seeker specifies the amount of funds required for the project also commitments to the backers if the project can be realized.
c. Platform authorities pre-examine the uploaded projects according to the project guidelines and usage conditions and evaluate their suitability.
d. Eligible projects are exhibited on the platform within the period and the funds will be requested.
e. Backers define the amount of funds they want to provide to the platform. These funds are held as pledges. Banks and micropayment providers are mediated at this stage. In other words, financial transactions are carried out through traditional financial institutions.
f. If the project supported enough in other word reached enough fund the relevant fund is transferred to the fund-seeker by micropayment providers after the deductions made

by the crowdfunding platform. The amount of the deduction is differing to platforms. Some of the platforms make deductions from all projects, some of them make deductions only from successful ones and some of them don't.

g. If the project doesn't adequately fund there are two different options. The platform either refunds to the backers generally without any deduction which called as "All or Nothing" like Kickstarter did or transfers the fund to the fund-seeker like Indiegogo did which called as "Keep It All".

h. After the project is entitled to receive support the project owner fulfills its commitments, if any. At this point, crowdfunding platforms don't have any responsibility.

Models of Crowdfunding

Crowdfunding can be either in the form of donation or an exchange for future product or can sometimes be as a form of reward to support initiatives for specific purposes. It can be divided into two categories in their research in terms of offer or don't offer monetary incentives and operated under four major models. Gedda, Nilsson, Såthén and Søilen showed this like the model below (2016):
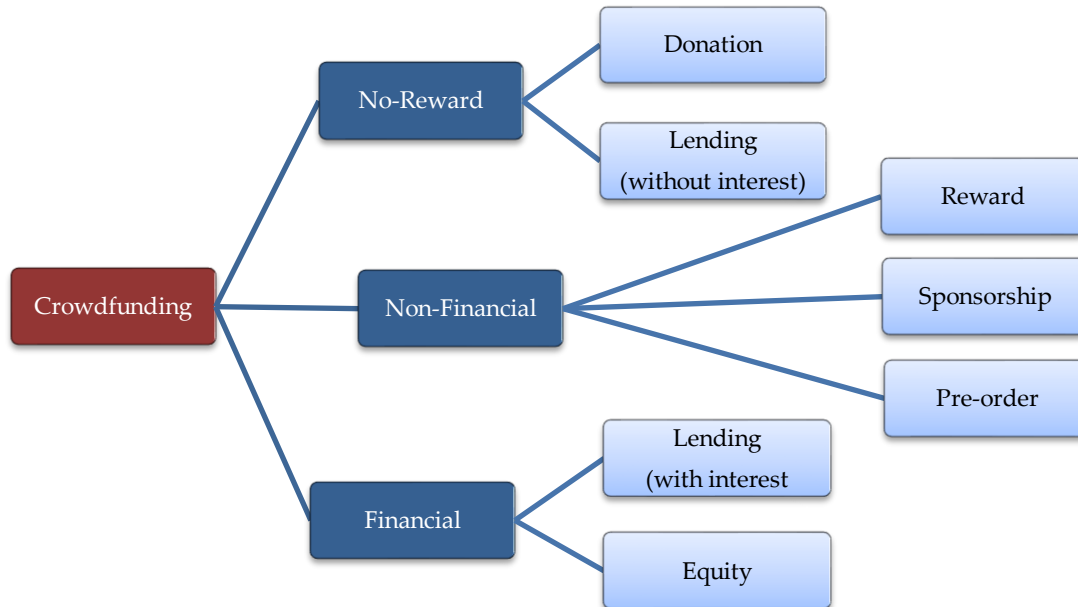
Figure 3. Types of crowdfunding

The statistic which was given below shows the volume of funds raised through crowdfunding worldwide in 2017, by type. In 2017, 25 billion U.S. dollars were generated through debt-based which can be called as peer-to-peer landing. This type of crowdfunding created most of the funds. With 5,5 billion U.S. dollars, reward and donation based crowdfunding types were the second largest. And finally, in 2017 with 2,5 billion U.S. dollars equity-based crowdfunding was the least preferred crowdfunding type globally due to insufficient regulations (Statista, 2019c).

Figure 4. Volume of funds raised through crowdfunding worldwide in 2017, by type in billion U.S. dollars (Statista, 2019c)
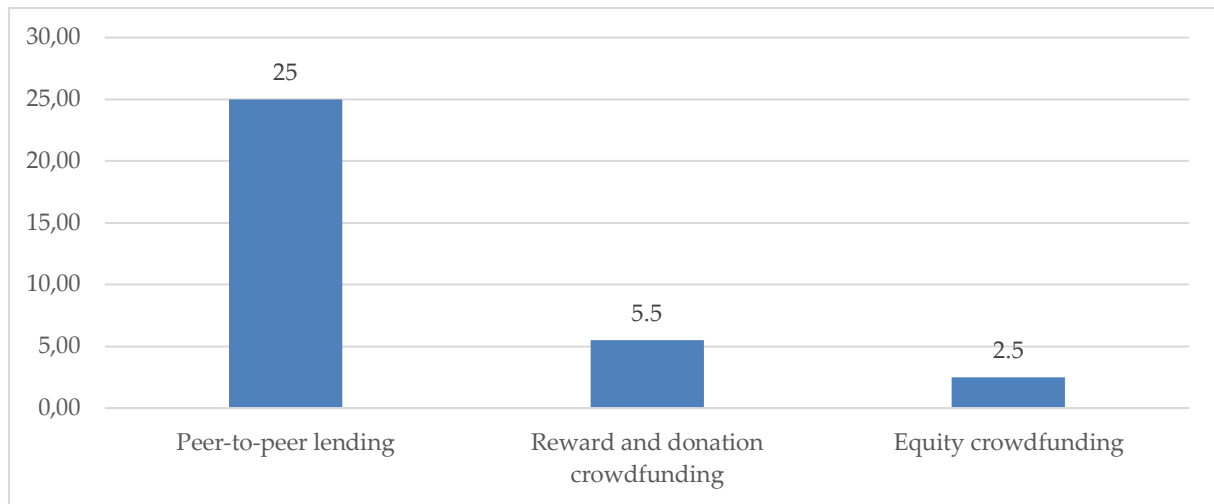
Donation-Based: Donation-based crowdfunding may be the oldest model especially when we think about the charitable organizations. In this model backers contribute without any monetary return expectation. It can be at the local level, such as the travel expenses of the Little League Team, or globally, such as disaster relief. In the last 10 years it also been used for campaigns of election like Obama in 2008. One of the most well-known crowdfunding platforms is GoFundMe which launched in 2010 (Freedman and Nutting, 2015). Now, GoFundMe is the world's largest, free social fundraising platform with over $5 billion raised and a community of more than 50 million donors (GoFundMe, 2019). Each year, from medical to education there are a lot of campaign are conducted around the world. It is free and donors can choose to give GoFundMe a voluntary tip to maintain and improve the platform (GoFundMe, 2019).

Reward-Based: On reward-based crowdfunding platforms backers have some expectations like appreciation such as thank-you note or being early customers in return for their monetary contribution (Landstrom and Parhankangas, 2019). Especially for innovative products reward-based crowdfunding campaigns can provide a good feedback about the market potential.

After the success of ArtistShare, more reward-based crowdfunding platforms were launched (Freedman and Nutting, 2015). First, in 2007 Indiegogo and two years later Kickstarter were launched. Now, they are two of the most well-known reward-based crowdfunding platforms around the world. Although generally there isn't a tangible reward expectation or no guarantee that the entrepreneurs will fulfill their promises, number of reward-based crowdfunding platforms and campaigns are growing rapidly.

For example, according to the statistics in the last 10 years only Kickstarter launched 461.628 projects with 4,56 billion U.S. dollars pledged. Although the project success rate was %37,3, it can be seen from the table below, more than %89 of the funds transferred to fund-seekers. This is because some successful projects have received more funds than necessary like Pebble Time. Smart Watch Pebble couldn't find $100k initial capital at the end of the negotiations with investors but after launched on Kickstarter, it could collect more than 20,3 million U.S. dollars (Statista, 2019b).

Table 2. Overview of Projects and Dollars on Crowdfunding Platform Kickstarter

Projects and Dollars	Projects, Million U.S. Dollars, Success Rate (%)
Launched projects	461.628
Total dollars pledged (billion U.S. dollars)	4,56
Successful dollars (billion U.S. dollars)	4,07
Unsuccessful dollars (million U.S. dollars)	447
Live dollars (million U.S. dollars)	41
Live projects	3.872
Success rate (%)	37,3

Source: Statista (2019b)

Additionally, many backers pledge amounts less than the minimum reward threshold or assume risk because two prominent studies found that at least 70 percent of projects miss their delivery deadlines (Freedman and Nutting, 2015). Generally, backers simply want to support a project or interested in the technology behind the product.

Debt-Based: Unlike donation-based and reward-based crowdfunding models, in this model backers expect monetary incentives. Backers offer loans to individuals and they take interest payments in return. Debt-based crowdfunding firstly emerged as an investment vehicle in 2005 in U.K. then one year later in U.S. (Landstrom and Parhankangas, 2019). Debt-based had approximately 76% market share in 2017 which can be seen from the Figure 3 and it is the fastest growing type of crowdfunding today.

In this model first individual borrowers apply for unsecured loans, if approved they receive a credit score and interest rate set uniquely by platform. Of course, higher risks must yield higher rates to stay attractive. Then they borrow money from crowd to pay it back with interest. It also called as peer-to-peer (P2P) crowdfunding. Platforms take a percentage of the loan amounts from the borrower also from investors. Kiva and Funding Circle are some of the most well-known debt-based crowdfunding platforms (Freedman and Nutting, 2015).

Equity-Based: Equity-based crowdfunding is the newest compared to others but has the potential for rapid grow. Equity-based crowdfunding allows backers to purchase equity of new firms (Landstrom and Parhankangas, 2019). Beside supporting initiatives, this model also offers monetary incentives. So, it can be described as a new generation investment tool. Legislation is so important for this model because the process doesn't end with the transfer of the contribution amount directly to the platform, but also requires the signing of the necessary contracts for the acquisition of shares. In this model, the internet platforms are intermediaries and the amounts deposited for the shares are kept in escrow account in a bank. After internet platform is informed on the completion of the transaction, they transfer with the instruction (Atsan and Erdoğan, 2015). Therefore, this model can also be called as the most complex one. Although U.S. led the overall crowdfunding campaigns, equity-based crowdfunding campaigns are more common in China and Europe due to the less restrictive policy environment. Some of the examples of equity-based crowdfunding platforms are Wefunder, Localstake, Crowdcube and Seedrs (Landstrom and Parhankangas, 2019).

Literature Review

The motivation of the backers is generally depending on the type of the platform. This is certain that the motivation of the dept-based or equity-based crowdfunding backers most likely are financial reasons, on the other hand donation-based or reward-based crowdfunding backers have other motivations like social causes, helping entrepreneurs, receiving product rewards or maybe a chance to be the first customer of a new product.

Especially considering 64 percent of platform operators associated fraud medium to very high risk (UNDP, 2017), it is possible to say that there are other important motivations on funding intention except reward expectation for the reward-based campaigns (Landstrom and Parhankangas, 2019).

Since the conceptualization of crowdfunding was in the recent past, it wouldn't be wrong to say that the academic studies were quite new. However, it is also possible to find many studies on crowdfunding in the literature. Also, it is possible to find many motivation factors which influence backers' funding intentions. In this study, the researches were examined according to the actuality and the number of citations. Then the motivation criteria of backers' in the reward-based crowdfunding process were prioritized and examined under three headings.

Wang, Yang showed in their research (2019) that product innovativeness, perceived product quality and webpage's visual design have positive influences on backers' funding intentions. But they couldn't find a significant relation with crowdfunding platform reputation and backer's funding intention in reward-based crowdfunding.

Gürler showed complexity has a negative effect on intention in his research (2016). Complexity can be observed in terms of product or platform. In this research both were examined. Simplicity rather than complexity was discussed and examined user-friendliness of the platform and usefulness of the product.

Gedda, Nilsson, Såthén and Søilen examined the favorite crowdfunding models and payout models of entrepreneurs and funders with the aim of finding in their article (2016). They showed that different payout models for a crowdfunding platform has a significant effect on backers' funding intention. In this research the most known and used payout models are all or nothing and all and more were examined under pay-out models title.

Undoubtedly, the reward expectation of the backers is an important factor in the decision to participate in reward-based crowdfunding. Therefore, it is possible to find many studies supporting this. One of these researches is Gerber and Hui's (2013). They showed what motivates backers to participate or deterred in crowdfunding with their qualitative research. Their claim was that the rapid rise of crowdfunding platforms may be attributed in part to the way these platforms satisfying people's social and cognitive needs rather than in their desire for financial resources alone. And they present some findings on motivations for supporters like collecting rewards, helping others, supporting causes, and being part of a community.

Gerber, Hui and Kuo also proved backers motivated to participate in order to seek rewards, often in the form of tangible products and/or services in their qualitative research (2012). They also showed participating on a crowdfunding platform which can support creators and causes by confirming values, or to participating in a community were some of other motivations.

Ryu, Kim and Kim examined the relationship between funder motivations and actual funding behavior on crowdfunding platforms (2016). They focused on two prominent and corresponding motivations, reward and philanthropy. They showed that although during different periods of campaigns, reward and philanthropy had a significant effect on backer's funding motivations.

Zhang and Chen found the number of backers was positively related to the funding success (2019). They also showed that the average number of rewards was related to the number of backers therefore to funding success.

On their study regarding the motivation of donors, Juan and Shin found two intrinsic motivators of crowd-funders which are altruism and contributing to their communities as the strongest.

In Jian and Shin's qualitative research altruistic value and community were two of the primary motivations of crowdfunders (2014).

Allison, Davis, Webb and Short proved adopting a group identity was positive and significant on venture funding in their study (2017). They also found that the product-specific issue-relevant information of quality (ingredient branding) and usefulness (product interconnections) were also positively related to crowdfunding performance.

Zhao, Chen, Wang and Chen examined the important role of trust and commitment, perceived risk as key mediating variables on funding intention in their research (2017). They found that perceived product innovation has a negative effect on perceived risk and perceived risk has a positive effect on funding intention. They also remarked that in many researches perceived risk was found to have a significantly negative effect on funding intention, indicating that lower perceived risk leads to higher funding intention. In this study it was accepted that perceived risk has a negative effect on funding intention unlike perceived product innovation. They also showed that perceived benefit strengthen commitment so do funding intention.

Mollick researched about the role of individual quality in new ventures in his exploratory study and showed that project quality's importance (2014). According to Mollick, the fact that crowdfunders respond to quality signals to a large degree suggests that financial backing was linked, at least in part, on a rational assessment of the chance of a project succeeding.

Finally, Kraus, Richter, Brem, Cheng and Chang conducted an empirical analysis about the strategies for reward-based crowdfunding campaigns (2016). One of their findings was about number of backers. They showed that number of backers evidently one of the most important condition for high achieved funding in percentage.

Methodology

Today, there are many techniques used to solve multi-criteria decision-making problems. Analytic Network Process (ANP) is one of the most powerful synthesis methodologies for combining judgment and data to effectively rank options to measure intangibles using human judgment. This structured technique was developed by Saaty for organizing and analyzing complex decisions, based on mathematics and psychology (Superdecision, 2019). Rather than prescribing a "correct" decision, this method help the decision makers to find a solution that best suits their goal and their understanding of the problem. It provides a comprehensive and rational framework for structuring a decision problem, for representing and quantifying its elements, for relating those elements to overall goals, and for evaluating alternative solutions (Superdecision, 2019).

ANP provides a comprehensive overview of decision-making problems. With this method, assumptions and constraints are largely eliminated so real-life problems can be modeled quite well. According to Saaty, the ANP is basically coupling of two parts. The first consist of a control hierarchy or network of criteria and sub criteria that control the interactions. The second is a network of influences among the elements and clusters (1999). In this study, ANP will be applied like Yıldırım and Önder suggested in their book (2018).

1) Definition of decision-making problem: In this step, the aim of the decision problem should be defined in detail, including the criteria, sub-criteria, decision makers, the objectives of these decision makers and the possible consequences of the decision to be made (Yıldırım and Önder 2018). The main purpose of this study is to determine motivations on funding intention in reward-based crowdfunding campaigns of initiatives. Therefore, there isn't a specific alternative, but a symbolic representation designated as "ventures to fund". The goal is to determine the effects of motivations on funding intention.

Of course, it is possible to find too many motivation factors which can affect backers' funding intention. In this study, researches were examined according to the actuality and the number of citations. After literature review ten sub-criteria were identified and collected under three criteria.

As can be seen from the table below, the first criterion affects the backers is platform based which has sub-criteria like being user friendly, platform reputation, reliability and pay-out models like all or nothing or keep it all. It should be stated that, in this research the effect of pay-out models is being investigated rather than individual effects of them.

The second criterion is backer's personal motivations. The sub-criteria of this criteria are determined as being part of community, help others and seek rewards which can also be seen under the table blow.

The last criterion which was examined in this study is perceived benefits and product/project quality. After literature review and expert opinions, it was decided that three sub-criteria: number of other backers, usefulness and perceived innovation were collected under this criterion.

Table 3. Motivation Criteria and Sub-Criteria

Backer's Personal Motivations (PBM)	Platform Based Motivations (PBM)	Perceived Benefits and Product/Project Quality (PB&PQ)
Being a part of community (SC1)	Being user friendly (SC4)	Number of other backers (SC8)
Help others (SC2)	Pay-out models (SC5)	Perceived innovation (SC9)
Seek rewards (SC3)	Platform reputation (SC6)	Usefulness (SC10)
	Reliability (SC7)	

2) Determination of influences between criteria: One of the most important features of ANP is cross-criteria influences. There are two kinds of influences: outer and inner. In the outer one compares the influence of elements in a cluster on elements in another cluster with respect to a control criterion. In inner influence one compares the influence of elements in a group on each one. It is also a process that requires expertise. In this study the influences between criteria which are presented in the following model created by taking an expert opinion.
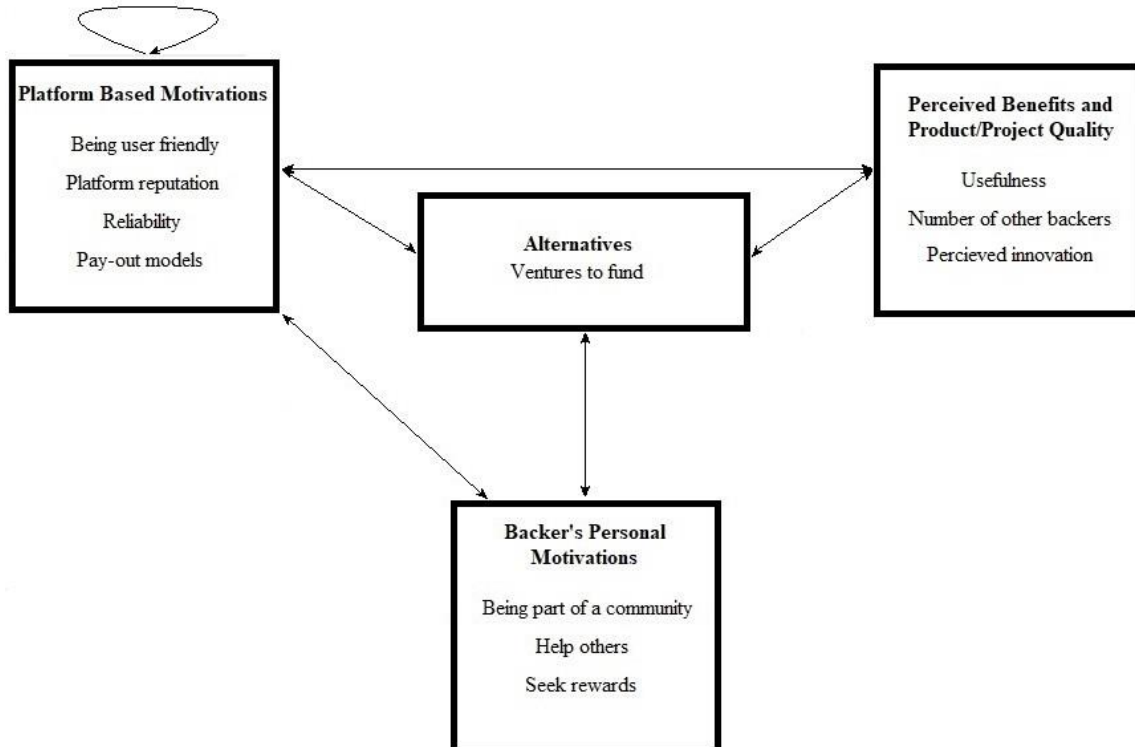
Figure 5. Dependence among criteria

3) Pairwise Comparisons: Pairwise comparisons perform as comparing pairwise of decision elements in each cluster. In this stage, pairwise comparisons are made depending on the effects of the elements in the clusters with the elements in the other clusters (external influences) and the elements in their own cluster (internal influences). The relative importance of the elements is measured according to the Saaty nine-point scale (where 1 is "equally important" and 9 is "extremely more important") (Saaty, 1999). It is stated that the consistency of pairwise comparisons is controlled according to the consistency ratio (CR), where the judgments are consistent if it is less than 0.1 CR.

In this study opinions were obtained from 3 different experts for pairwise comparisons. One of the experts is a product manager at Arıkovanı which is one of the leading crowdfunding platforms in Turkey. The other is an associate professor working in the field of finance at Anadolu University, especially behavioral finance. And the last one is a CEO of a private financial advisory & strategy consulting services firm. The effects of the clusters on funding decision were accepted as equal and the results of the pairwise comparisons are given below:

Table 4. Comparisons with respect to "Ventures to Fund" Node In "Backer's Personal Motivations" Cluster

	Being part of a community	Help others	Seek rewards
Being part of a community	1	0.5	1
Help others	2	1	1
Seek rewards	1	1	1

Inconsistency = 0.05156

Table 5. Comparisons with respect to "Ventures to Fund" node in "Platform Based Motivations" Cluster

	Being user friendly	Pay-out models	Platform reputation	Reliability
Being user friendly	1	1	0.3	0.14
Pay-out models	1	1	0.21	0.18
Platform reputation	3.33	4.66	1	1
Reliability	7.33	5.66	1	1

Inconsistency = 0.01986

Table 6. Comparisons with respect to "Ventures to Fund" Node In "Perceived Benefits and Product/Project Quality" Cluster

	Number of other backers	Perceived innovation	Usefulness
Number of other backers	1	0.60	0.75
Perceived innovation	1.66	1	3
Usefulness	1.33	0.33	1

Inconsistency = 0.08275

Table 7. Comparisons with respect to "Platform Reputation" Node In "Platform Based Motivations" Cluster

	Being user friendly	Reliability
Being user friendly	1	0.20
Reliability	5	1

Inconsistency = 0

Table 8. Comparisons with respect to "Number of Other Backers" Node in "Platform Based Motivations" Cluster

	Being user friendly	Platform reputation	Reliability
Being user friendly	1	0.27	0.20
Platform reputation	3.66	1	0.75
Reliability	5	1.33	1

Inconsistency = 0.00008

Table 9. Cluster Comparisons

	Backer's Personal Motivations	Platform Based Motivations	Perceived Benefits and Product/Project Quality
Backer's Personal Motivations	1	1	1
Platform Based Motivations	1	1	1
Perceived Benefits and Product/Project Quality	1	1	1

Inconsistency = 0

Results

4) *Creation of Supermatrixes:* After pairwise comparisons, super matrices are created showing the cluster elements and the priorities between them. The super matrixes show the priority effect of the left-hand elements on the upper-hand elements. Table 10-12 contains these three matrixes which are created by using Super Decision Package Program.

The unweighted supermatrix in Table 10 was formed by writing the priority vectors identified in the second step into the relevant field.

Table 10. Unweighted Supermatrix

		Ventures to Fund	Backer's Personal Motivations			Platform Based Motivations				Perceived Benefits and Product/Project Quality		
		A	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	SC10
	A	0	1	1	1	1	1	1	1	1	1	1
BPM	SC1	0.25992	0	0	0	0	0	0	0	0	0	0
	SC2	0.4126	0	0	0	0	0	0	0	0	0	0
	SC3	0.32748	0	0	0	0	0	0	0	0	0	0
PBM	SC4	0.08337	0	0	0	0	0	0.16667	0	0.10364	0	0
	SC5	0.08027	0	0	0	0	0	0	0	0	0	0
	SC6	0.36714	0	0	0	0	0	0	0	0.38274	0	0
	SC7	0.46922	0	1	1	0	0	0.83333	0	0.51361	0	0
PB&PQ	SC8	0.23716	0	0	0	0	0	1	1	0	0	0
	SC9	0.52736	0	0	0	0	0	0	0	0	0	0
	SC10	0.23547	0	0	0	0	0	0	0	0	0	0

The weighted supermatrix seen in Table11 was formed by multiplying the cluster containing each factor by its own weight and normalizing the unweighted supermatrix in Table 10.

Table 11. Weighted Supermatrix

		Ventures to Fund	Backer's Personal Motivations			Platform Based Motivations			Perceived Benefits and Product/Project Quality		
		A	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	SC10
	A	0	1	0.5	0.5	1	1	0.33333	0.5	0.5	1	1
BPM	SC1	0.08664	0	0	0	0	0	0	0	0	0	0
	SC2	0.13753	0	0	0	0	0	0	0	0	0	0
	SC3	0.10916	0	0	0	0	0	0	0	0	0	0
PBM	SC4	0.02779	0	0	0	0	0	0.05556	0	0.05182	0	0
	SC5	0.02676	0	0	0	0	0	0	0	0	0	0
	SC6	0.12238	0	0	0	0	0	0	0	0.19137	0	0
	SC7	0.15641	0	0.5	0.5	0	0	0.27778	0	0.25681	0	0
PB&PQ	SC8	0.07905	0	0	0	0	0	0.33333	0.5	0	0	0
	SC9	0.17579	0	0	0	0	0	0	0	0	0	0
	SC10	0.07849	0	0	0	0	0	0	0	0	0	0

Table 12 shows the limit supermatrix. Limit supermatrix was calculated by multiplying the weighted supermatrix row values by itself until it becomes stable.

Table 12. Limit Supermatrix

	Ventures to Fund		Backer's Personal Motivations			Platform Based Motivations				Perceived Benefits and Product/Project Quality		
		A	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	SC10
	A	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93	0.378 93
BPM	SC1	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83	0.032 83
BPM	SC2	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12	0.052 12
BPM	SC3	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36	0.041 36
PBM	SC4	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49	0.021 49
PBM	SC5	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14	0.010 14
PBM	SC6	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06	0.072 06
PBM	SC7	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49	0.160 49
PB&PQ	SC8	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22	0.134 22
PB&PQ	SC9	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61	0.066 61
PB&PQ	SC10	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74	0.029 74

After the limit supermatrix was created, normalization procedures were performed by considering the values in each set of each factor. Priorities for each cluster after normalization were calculated as in Table 13.

According to Table 13 symbolic alternative "Ventures to fund" has a preference rate of 100%. This is normal for this study in which the criteria that influence selection rather than a choice of alternatives are investigated. When the effects of sub-criteria on criteria are examined, it

is understood that the most important sub-criteria among backer's personal motivations is help others with 41% rate. While reliability is the most important factor for crowdfunding platforms with approximately 61 percent, it is seen that number of other backers is the most important motivation factor for perceived benefits and product/project quality.

Table 13. Priorities for Criteria

Criterion	Normalized by Alternative	Normalized by Cluster	Limiting
Ventures to fund	1.00000	1.00000	0.378931
Being a part of community	0.08664	0.25992	0.032831
Help others	0.13753	0.41260	0.052116
Seek rewards	0.10916	0.32748	0.041364
Being user friendly	0.02712	0.08135	0.021490
Pay-out models	0.01279	0.03838	0.010139
Platform reputation	0.09092	0.27277	0.072060
Reliability	0.20250	0.60751	0.160494
Number of other backers	0.19404	0.58212	0.134223
Perceived innovation	0.09630	0.28889	0.066611
Usefulness	0.04300	0.12899	0.029743

Conclusion

Although the conceptualization of crowdfunding has been done in the last ten years, it can be accepted that its applications in our country were based more recently. This study was for determining the motivation criteria of backers in reward-based crowdfunding campaigns. As a result of the literature review conducted during the research, 3 main criteria and 10 sub-criteria in these sets were determined and analyzed.

Instead of selecting one of the expected alternatives within the scope of the research, the main goal was to determine which motivation criterion is dominant in the funding decision of backers participating in reward-based crowdfunding. For this reason, a set of alternatives wasn't created, instead a symbolic representation of "ventures to fund" was adopted. Therefore, "ventures to fund" appeared to have a 100% ratio in selection. In addition, it was decided to accept equal importance levels between criteria as a result of the expert opinions and thus, the impact of the criteria on the purpose was 33.3%.

When the effects of sub-criteria were examined, it was seen that the most effective motivation factor in the decision process was the reliability of crowdfunding platform. In this context, the high impact of reliability ratio of the crowdfunding platforms shouldn't be evaluated as a surprise result affecting funding decision for a new concept in Turkey. The fact that the number of other backers had come to the fore as the second dominant sub-criterion could be explained by the fact that this criterion was the most affected by the other sub-criteria.

When the criteria-based examination, it was seen that the most important motivation factor on behalf of the backers for funding decision on crowdfunding campaigns was to help others (41% share in "backers personal motivations" cluster) and the second most important motivation factor of the backers was the reward expectation (33% share in "backers personal motivations" cluster). This shows that in Turkey, the supporters act with the idea of helping rather than the expectation of reward in the reward-based crowdfunding campaigns.

As previously mentioned, the most important factor for the crowdfunding platforms was reliability with 61% share in "platform-based motivations" cluster. While the reputation of the platform was in the second place with %27 share It was seen that the least important factor was the pay-out models of the crowdfunding platform with approximately 4% share.

When the project-and-product-based motivation factors that affect the funding decision of the backers during the campaign was examined, it was seen that the number of other backers was the most important factor with a rate of 58%. Also, the perceived innovation level of the product (approx. 29%) stands in front of the usefulness (approx. 13%) of the product.

When all findings of the sub-criteria were normalized independent of the criteria, it was understood that the most important motivation factor affecting the funding decision was the reliability of crowdfunding platform with its rate above 20%, followed by the number of other backers with more than 19%. In this context, it is thought that considering crowdfunding is a new concept in Turkey and with increasing awareness in time as a result of possible further increase of number of crowdfunding platforms or campaigns, the dominance of these two elements will decrease.

Limitations and Future Research

Within the scope of the study, there are no concrete alternatives, and the motivation elements that affect the crowdfunding campaigns carried out especially for the realization of new initiatives are examined through a general symbolic acceptance. As a result of the literature review, the dominant motivation factors in reward-based crowdfunding campaigns in general have been determined and prioritized. Again, these sub-criteria are grouped under three headings (criteria) which are thought to be related. In this context, it is possible to find different motivations and make different categorizations in crowdfunding decision.

In addition, the motivations that affects the decision of crowdfunding will differ in the campaign-specific too. Therefore, it is evident that while the study can give a general idea for all the crowdfunding campaigns, the dominant factors could be campaign specific. The research was based on the opinions of limited but a specialist audience. Therefore, although high experience levels, it can be said that individual opinions have a very high impact on the results.

In addition, the reward-based one which is only one of the four accepted crowdfunding models was examined during the study. Debt-based and equity-based crowdfunding models which aren't yet implemented in our country constitute an important field of study especially as a result of the entry into force of relevant laws in October 2019. In the crowdfunding process, which can be used as an alternative investment tool, identifying the motivation factors shaping the demand for these versions would help to spread the different investment channels and be an important element for the strengthening of the entrepreneurial ecosystem.

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