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Motyvacija dalyvauti sutelktinio finansavimo projektuose savideterminacijos teorijos požiūriu	Motivation to participate in crowdfunding projects from a self-determination theory perspective
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TABLE OF CONTENTS

INTRODUCTION.....	
1.1 Self-determination theory.....	4
1.2 Definition of Crowdfunding.....	8
1.3. MOTIVATION.....	9
1.3.1 Motivations to participate in reward-based Crowdfunding.....	9
1.3.2 Reward motivation.....	12
1.3.3 Purchasing motivation.....	15
1.3.4 Community motivation.....	16
1.3.5 Helping others motivation.....	18
1.3.6 Herd behaviour.....	19
1.3.7 Risk.....	20
2. METHODOLOGY AND RESEARCH DESIGN TO PARTICIPATE IN CROWDFUNDING PROJECTS FROM A SELF-DETERMINATION THEORY PERSPECTIVE.....	22
2.1 The purpose of the empirical research.....	22
2.2 Research model and hypotheses of the study.....	23
2.3 Research design, instrument and scales, sampling method.....	29
3. DATA ANALYSIS.....	36
3.1. Sociodemographic respondents' characteristics.....	36
3.2. Descriptive statistics.....	38
3.3. Results.....	38
CONCLUSIONS.....	45
LIMITATIONS OF THE RESEARCH STUDY.....	47
FUTURE RESEACH SUGGESTIONS.....	47
LIST OF REFERENCES.....	49
SUMMARY IN LITHUANIAN.....	57
SUMMARY IN ENGLISH.....	58
Appendix A: Questionnaire.....	60
Appendix B: Results of questionnaire in SPSS.....	66

INTRODUCTION

Evolution of web technologies changes the relationship framework between organizations and individuals through virtual platforms (Borrero-Domínguez, 2020). Crowdfunding it appears as a financing mechanism (Jiang, 2020) or online payments system (Hossain & Oparaocha, 2017) that helps entrepreneurs or small and medium ventures to realize their dreams by collecting targeting amount of money and positively influence society (Jiang, 2020; Ryu, 2016). Typically, it is essential for a small business who does not have financial resources or is hard to get funded by traditional ways, such as bank loans, venture capitalist or angel investors (Zhang,H et al.,2018). In summary "*Crowdfunding operates by eliminating the intermediation of traditional financing institutions*"(Madrazo-Lemarrooy et al., 2019,1).

Over time, Crowdfunding has been divide into different models:rewards-based,donation-based,lending-based, and equity-based (Wang et al., 2018). If an entrepreneur is willing to sell the idea, it should be considered in different crowdfunding models because all have a different focus and requirements (Wang et al., 2018). Lending based model connecting investors and small ventures directly through the loan form as financial intermediary. The equity-based model allows investors to receive an ownership stake in the crowdfunding venture. Donation-based Crowdfunding built on charity, then people a supporting idea without hoping any financial return. Moreover, the last type of Crowdfunding is the reward-based model when invertors are receiving a non-monetary reward to support a specific cause or project. Indeed, donation and reward-based model is collecting money through web platforms of public interest. At the same time, lending with equity-based models is the real economic return for investors where banks are involved too.

Several recent studies were interested in understanding the main factors that help reach crowdfunding projects' success from various prospects (Bagheri, 2019). Crowdfunding provides best practice in exchange resources between entrepreneurs and investors, till now, there are more than 50 crowdfunding online websites, and every year the number increased (Hossain & Oparaocha, 2017). Among all crowdfunding models, reward-based has emerged as one of the most alternative sources to raise money through many people contributing small sums (Herrero, 2020; Gerber & Hui, 2016). In details, the reward model has many crowdfunding websites, such as Kickstarter and Indiegogo to help thousands of people. The most popular crowdfunding platform is the Kickstarter since it launched on April 28, 2008. It realized about 170,000 projects (Libbertz M; Jiang, 2020), and about 15 millions of people worldwide keep pledge the money (Li & Wang, 2019). In contrast, reward-based Crowdfunding is more convenient way to achieve the monetary goal by posting details about the project or using the extra features, such as videos or pictures (Bagheri, 2019).

However, primarily small businesses or entrepreneurs are not successful to finance their projects *"statistics show that the vast majority of crowdfunding campaigns dramatically fail with 81% of failed campaigns reaching less than 20% of their funding goal"* (Forbes & Schaefer, 2017,1). Previous studies showed that the success rate is 35 %, and failed projects rate is more than 84% (Wang et al., 2018). Many studies tried to understand backer's funding intention and used different theories to explain the consumer's behaviours which are particularly important in increasing the success rate of the fundraising project. Previous studies investigating the conduct of backers on reward-based Crowdfunding and found the main reason consumers choose to support a Crowdfunding project, namely, collect rewards, help others, be a part of the community, and support a cause (Cholakova & Clarysse,2015). Furthermore, the previous research shows that individuals' intention to participate in the funding itself is weak, and understanding all factors can increase the intention to contribute to the Crowdfunding platform is crucial (Gunawan, et al., 2019).

The research found that projects with more rewards and limited offerings are more successful (Lin, Lee, & Chang, 2016.). The following study identifies the meaning of rewards types and highlights that material rewards have more potent than intangible rewards (Shi, 2018). Furthermore, according to some research, investors participate only because of the idea of getting rewards, including discounts, meet-funders, or testing a new product (Borrero-Domínguez, Cordón-Lagares, & Hernández-Garrido, 2020). Studies argue that rewards are the most critical motivator in participation in Crowdfunding. Some studies suggest that rewards are an important but not the main factor that leads the individual to participate in crowdfunding activities or even highlights a negative impact or uselessness. It is perceived that the mixed finding came due to two reasons. First, the concept of rewards is very different in research. Some studies have examined rewards as linguistic cues, the factor of success, or backer motivation for funding behaviour (Zhang & Chen, 2019).

In self-determination theory the reward is known as extrinsic motivation to perceive behaviour control. Moreover, than people are linked in activity with an expectation to receive expected rewards. In crowdfunding, the creators offer various types of rewards, and only a little research tried to understand investors motivation on rewards by satisfying individuals human needs applied the theory of self-determination. This study will analyze which human needs are most important for backers to fulfil and how tangible rewards explain backers' motivation to contribute to Crowdfunding projects.

Self-determination theory allows broadly analyzing human motivation to act toward something. Ryan and Deci explained that critical human needs for autonomy, competence, and relatedness are necessary for humans' natural growth and well-being. Early studies found that external rewards, which indicated the need for autonomy, are weaker than internal motivation, such as building relationships, collaborating, helping others, and being curious (Zhang & Chen, 2019). Specifically, all these factors explained the need to receive basic human needs for competence and relatedness. Relatedness explains the desire to feel a sense of belonging in the group.

Furthermore, the need for competence explains individuals sense of being good enough at something and efficacy to perform in a particular activity. The research found that interaction with backers through community impacts the project's success rate (Bao & Huang, 2017). Next, research highlight that rewards harm community projects and increase distrust between investors and idea creators (Xiang & Wang, 2020). More research indicates that social value, including justice, freedom, respect, community, and responsibility, has a significant impact on helping entrepreneurs to reach their goals (Bagheri et al., 2019; Shneor & Munim, 2019). In sum, the previous studies show that the need to fulfil competence and relatedness can significantly affect the intention to participate in crowdfunding projects.

In the third research stage, we adapted risk factors as mediators impacting human needs, such as collecting tangible rewards. The factor of risk increase individuals uncertainly and ability to lose money or fail—the risk attitude is directly based on selecting rewards because most rewards are not even produced. Risk can have positive and negative effects; if risk seeker enjoys the risk, they are not worried about it and can select any rewards. People who are afraid to take the risk, even if they like crowdfunding projects, dues to risk will not support the project.

The need to understand backers motivation to participate in crowdfunding is crucial because every year, popularity to fund from the public dramatically increases. However, the funding itself is very low, and the number of unsuccessful projects a high. The theory of self-determination highlight that to be entirely motivated in the activity, the individual needs to feel autonomy, competence and relatedness has to be satisfied. If their three psychological need is not fulfilled, the motivation and performance tend to decrease. The problem is that only 4 articles out of 57 used self-determination to analyze individuals' motivation to participate in crowdfunding. Despite the previous research on reward-based crowdfunding, there is limited awareness regarding the approach to understanding human motivation that especially focused on basic psychological needs for autonomy, competence and relatedness.

The master thesis aims to apply the self-determination theory and propose a research model that includes the inborn psychological human needs for autonomy, competence and relatedness to predict individuals intention to participate in crowdfunding projects. Theoretically, this study will fill the gap left by some previous studies, and explain backers' intention to participate in crowdfunding using self-determination theory.

Research objectives:

- To analyze research articles and write the literature review about the factors influencing the backer's intention to participate in reward-based crowdfunding.
- To identify critical factors that positively or negatively affect backer intention to participate in reward-based crowdfunding from self-determination theory perspective.
- To choose a research method, conduct a survey, answer the research questions, and test the stated hypothesis.
- To evaluate the survey's answers and set the conclusion of this study.

1. LITERATURE REVIEW

1.1 Self-determination theory

Self-determination theory is macro theory assumes the role of human motivation and personality that concerns people growth tendencies and natural human psychological needs (Shneor & Vik, 2020). The psychologists Edward Deci and Richard Ryan believe that it is essential to focus on the types of motivation rather the amount of inspiration. (Deci & Ryan, 2008). With self-determination theory, Deci and Ryan explain that core motivation strongly influenced all human actions, such as entertainment, leisure, recreation or exercise and set on by an individual's basic needs and motives (Fischer, Malycha & Schafmann, 2019). According to self-determination theory, "*people can be motivated because they value activity or because there is strong external coercion.*" (Ryan & Deci, 2000). Based on this approach theory pays precise attention to autonomous motivation and controlled motivation.

Autonomous motivation based on intrinsic motivation, identified regulation and integrated regulation, representing human actions powered by an internal source. In other words, autonomous motivation reflects a person's determination to behave (Garn & Morin, 2021). Autonomous

motivation describes or names that if somebody is doing something with an interest rate, enjoyment and value are likely autonomously motivated. The engagement in activity with genuine interest, freedom will, personal endorsement or valuing means autonomous motivation (Deci & Ryan, 2008).

Controlled motivation comprises external regulation where individuals' performance is to get rewards, such as money, fame, grades, and to avoid punishment or receive approval from others (Ryan & Deci, 2000). It means doing something because of feeling the tension to do what an individual does not want to do. When people control others in action, typically outcome comes such as pressure to think, feel, or act in a particular way (Deci & Ryan, 2008), and all these outcomes harm the performance (Fischer et al., 2019). However, the researchers Deci and Ryan found that extrinsic motivation might increase intrinsic motivation. The reason is that an individual has found out the value of their activity or tasks. For instance, going to the gym could be challenging for many people. However, the consequences, such as staying healthy, having a perfect body, or finding new friends, would recognize the activity's value. Furthermore, these values lead to be autonomously motivated to get positive outcomes.

Self-determination theory made up of few sub-theories, including cognitive evaluation theory and organismic integration theory. The primary objective of cognitive evaluation theory is to identify causes that explain the volatility in intrinsic motivation. (Ryan & Deci, 2000). The theory design explains both internal and external consequences that affect people's instinct motivation (Legault, 2017).

Cognitive evaluation theory states that all humans are having a set of basic psychological need. The first vital need to perceive is competence (the need to feel good at something). It says that we need to feel confident and effective in performance (Ryan & Deci, 2000; Legault, 2017). Second, it states that we need to perceive autonomy (the need for choices and control in action). Autonomy based on two motivation: intrinsic motivation is one type of autonomous motivation, and another type of autonomy is extrinsic motivation. Intrinsic motivation refers to Human psychological needs. People must get satisfied in performing activity because it is naturally engaging, optimal challenging, or a hobby (Xiang & Wang, 2020; d'Ailly & Blokhuis, 2018). For example, when parents enforce the kid to study, autonomy is not satisfied because parents make the kid do something against this own volition (Xiang & Wang, 2020). The second type of autonomous based on extrinsic motivation positively moderates intrinsic motivation because individuals do something of specific desirable and separate outcomes (Xiang & Wang, 2020; d'Ailly & Blokhuis, 2018). For example, some athletes are intrinsically motivated in sports for intrinsic factors, such as hobby or enjoyment. In contrast, other athletes engage in activity with

external motivation, such as material rewards, praise and recognition. Moreover, third, the to feel relatedness (the need to be connected with others). It means to feel that somebody is taking care of you or caring for others. Also, to feel like you belong in the group or community, which is essential and matches personal values or beliefs. To summarize, the cognition evaluation theory framework suggests that social and environmental factors facilitate rather than undermine intrinsic motivation (Ryan & Deci, 2000). Furthermore, distinguishes three significant human psychological needs that must arise in order for individuals to promote self-motivation (Riley & English, 2016).

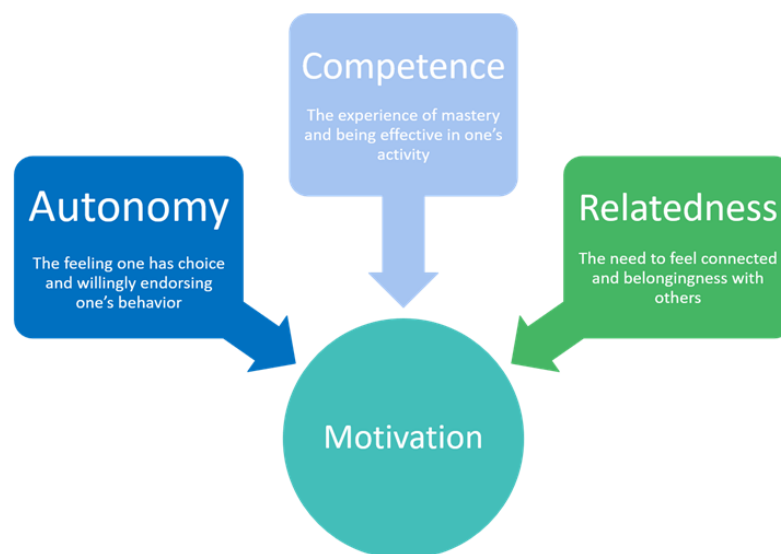


Figure 1. The explanation of Cognitive evaluation theory behind self-determination theory

Source: "Our Approach." *Self-Determination Theory of Motivation - Center for Community Health & Prevention - University of Rochester Medical Center*, www.urmc.rochester.edu/community-health/patient-care/self-determination-theory.aspx.

Within the self-determination theory, Deci and Ryan presented a second sub-theory named organismic integration theory to explain further distinction within different extrinsic motivation forms (Ryan & Deci, 2000). According to the theory, we have six different regulation types, including external regulation, introjections, identification and integration (Legault, 2017). To understand better see (see Fig. 2) "These subtypes of extrinsic motivation seen as falling along a continuum of internalization." (Legault, 2017, 4). Internalization means how much person has taken in a value or how much personal value the activity. If autonomous and motivation is fully completely internalized is called intrinsic regulation. For example, if the person is not autonomous, do not have a value for activities or do not expect any outcomes called an "amotivation".

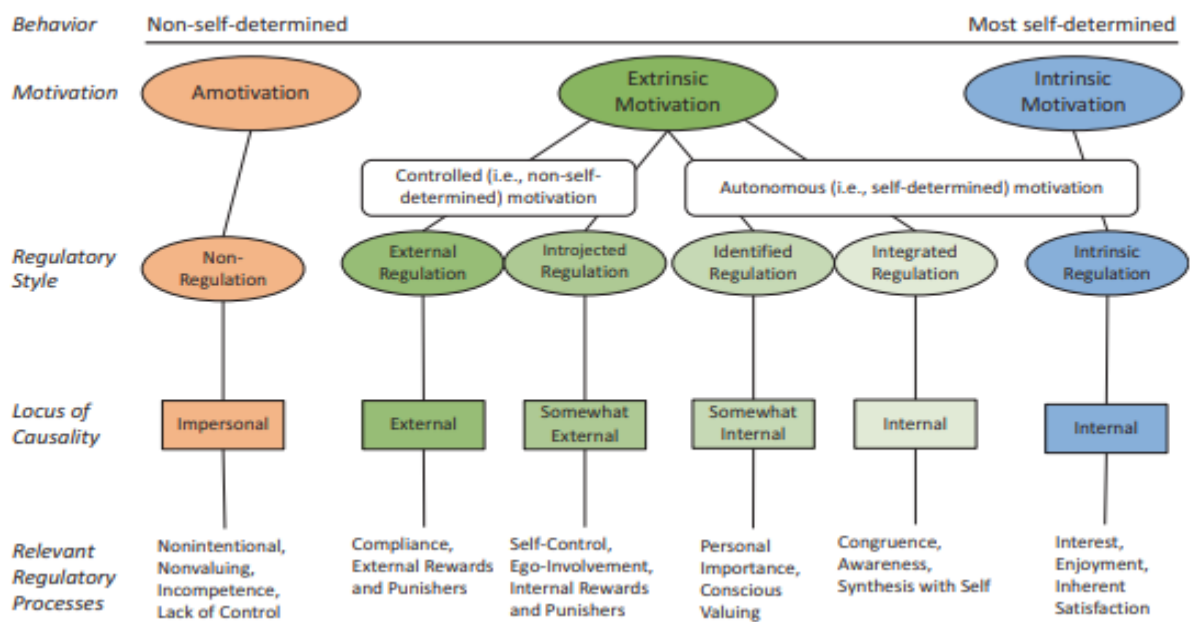


Figure 2. The internalization continuum: types of motivation according to self-determination theory.

Source: Self-Determination Theory. *Encyclopedia of Personality and Individual Differences*, 2017,4.

As in the picture shown four regulations based on extrinsic motivations. The first is external regulation which means to satisfy external demands of rewards or punishment. (Deci & Ryan, 2008). For example, a student takes additional law courses to get into University to study law and become a lawyer only to make much money. The second regulation is introjected regulation which means of "action has been partially internalized and energized by factors such as an approval motive, avoidance of shame, contingent self-esteem, and ego-involvements (Deci & Ryan, 2008). In other words, individuals are acting because of a sense of duty. For example, the student selects to be a doctor just because he wants to prove that he can do it. The third identified regulation when action is accepted, and the person identified this importance, such as personal values, goals, and identities. For example, the student enrolls into University because it believes it is crucial to have a career. The fourth integrated regulation, according to Deci, and Ryan is the primary form of extrinsic motivation. It appears when regulation entirely assimilated to the self, so they incorporate personal self-esteem and beliefs about personal needs (Ryan & Deci, 2000). Internalize regulation arises when people behave with personal needs, values, goals and benefits of the behaviour. For example, the person attends church because of beliefs that the act conforms

to this personal belief system even if he does not participate just by enjoying it. Self-determination theory explains that people are extrinsically motivated in various forms. Moreover, it can be autonomous through the organismic integration theory.

1.2. Definition of Crowdfunding

The first step for a new idea into a product is sharing it with the world. While large companies have stable R&D expenditures to invest in a new idea for small businesses or individuals to attract financial resources it is often difficult (Bagheri et al., 2019; Zhang & Chen, 2019.). However, Crowdfunding in recent years become a financial alternative for new ventures around the world. The crowdfunding platform is allowing transferring their invention into a marketable product (Wang U; Zhang & Chen, 2019). At the beginning crowdfunding used to fund artistic projects (Hossain et al., 2017; Yang et al., 2019; Roma et al., 2017), and subsequently become increasingly popular to other sectors, such as technology, science, food, games or services (Gerber & Hui, 2016). Besides, the crowdfunding model generally based on three types of players. First, developers with a new product idea; second, individuals (investors) who are willing to support funders, and the last is a platform offering crowdfunding services (Madrazo-Lemarroy et al., 2019).

Thanks to the Internet, entrepreneurs do not depend on traditional funding sources, such as bank loans, venture capitalist, family and friends, or business angels (Hossain et al., 2017; Zhang & Chen, 2019). Compared with the traditional way of raising finance, crowdfunding platforms attempt to solve a startup's financial problems by allowing them to donate and fund a new idea or product (Kuo et al.; 2019). Due to increased popularity, crowdfunding gain attention not only from media but also from academic researchers (Hossain et al., 2017). Despite the increasing number of scholarly interests in the crowdfunding platform, it is not easy to find and define Crowdfunding (Hossain et al., 2017). Most often, in all research papers, it will be used different definitions to describe the Crowdfunding. But "*Generally the basic definition of crowdfunding is collecting money from large groups of people to create projects, and each individual provides a very small amount*" (Bao & Huang, 2017, 1).

Crowdfunding effect has been felt far and wide, in the practice of helping small businesses and entrepreneurs to reach their goals, which has increasingly grow in recent years. As a result, in 2018 crowdfunding value increased 10,21 billion; it expected to reach 28,77 billion USD by the end of 2025, rising 16% between 2018 and 2025 (Shneor & Munim, 2019; Kuo et al., 2019) However, scholar studies represented modern Crowdfunding by four distinct models: reward-based, donation-based, lending based and equity-based (Kraus et al., 2016.; Wang et al., 2018.).

In consequence different types of crowdfunding platforms plays a different role (Kuo et al.,2019). The first, lending-based crowdfunding platform, also known as peer-to-peer or debt-based platform, allows individuals to raise fund in the form of loan: funders receive capital repayments, plus interest, but not profit share (Kuo et al.,2019). Second, donation-based crowdfunding platform in which people are asking to donate a small amount of money: funders have no expectation and the primary motivation to help others (Ferreira & Pereira, 2018., Kuo et al., 2019, Zhang & Chen, 2019). Third, equity-based Crowdfunding is raising capital from the crowd, however investors receiving ownership of a small piece of that business, such as voting rights, or dividends (Kuo et al., 2019; Forbes & Schaefer, 2017). Both lending-based and equity-based forms ground on money, and donation-based crowdfunding on charity and support a specific project.

The fourth, reward-based model is the most popular between entrepreneurs to fund their projects (Shneor & Munim, 2019.). This model is based on tangible rewards (Li & Wang, 2019), and is different from other platforms, such as equity or lending-based crowdfunding models. Because backers are not receiving monetary rewards, entrepreneurs compensate them with non-financial returns (Li & Wang, 2019; Zhao et al., 2017). Rewards can vary, such as custom clothing or accessories, discount or a copy of the new product, studio visit by allowing seeing creators of a project, or just a simple thank-you card from the requesters. Each reward-level have fixed price; entrepreneurs can start from the minimum US \$ 1 thank-you a letter, to a maximum of US \$ 10,000 on reward (Gerber & Hui, 2016).

Moreover, once the campaign completed, the requesters must ensure that rewards will be delivered on time to people who pledge their proposed project (Gerber & Hui, 2016). Previous studies mostly focus on the most popular reward-based platform – Kickstarter (Lin et al., 2016). One entrepreneur has an idea the next stage is to create account to crowdfunding platform (Kickstarter, IndieGoGo), and to use text describe the projects, set the goals, design the rewards that backers receive in return, and to make a short video to tell about your project (Zhao et al., 2017). Crowdfunding through the reward-based form giving opportunity for entrepreneurs to raise easier and faster via the Internet.

1.3. MOTIVATION

1.3.1 Motivations to participate in reward-based Crowdfunding

Targeting potential backers is not easy because it involves many efforts and planning (Zhang & Chen, 2019). According to the crowdfunding centre, the average of new projects is 333 posted each day. Consequently, attracting backer attention can be a headache to small companies or entrepreneurs who want to find a backer to fund their projects. By that time, understanding

which motivation attracts a crowd on contribution becomes very important (Bretschneider, Knaub & Wieck, 2014). Motivation strength differs, depending on which model is used: reward-based, donation-based, lending-based, or equity-based (Stéphane & Renault, 2016). For example, for lending and equity-based crowdfunding models, the emotional connection and social motivation are weaker than an intention to participate in the financial return (Stéphane & Renault, 2016). The researcher collected 104 articles based on factors impacting the success of Crowdfunding articles published from mid of 2013 and 52 articles between 2016 and 2017 (Shneor & Vik, 2020). The result found out that articles published between 2016 and 2017 were mainly based on the reward-based model (Cumming, Leboeuf, & Schwienbacher, 2019), second place is lending with 19 articles, and the third-place sharing equity and donation models. In sum, previous works primarily focus on the reward-based model (Hossain & Oparaocha, 2017; Jiang et al., 2020; Bi et al., 2017; Efrat et al., 2019; Frydrych et al., 2014; Herrero et al., 2020; Wang, & Yang, 2019; Roma et al., 2017; Lin et al., 2016; Zhao et al., 2017.). Because for investors is easy to raise the money through an open call method and

Support the project or new idea in return to provide any reward (Madrado-Lemarrooy et al., 2019). The self-determination theory addresses factors that individuals have demonstrated that apart from intrinsic motivations and extrinsic motivation, to improve their motivation, individuals need to fulfil their basic needs (Wang, Kang & Zheng, 2019; Gao, Liu & Li, 2018). Specifically, the three basic psychological needs are exceptionally fundamental: relatedness, autonomy, and competence. Deci and Ryan claim that all individuals have a natural tendency to grow, gain a new experience, control and manage their time, and interact with others. Furthermore, if all basic needs are satisfied, their motivation will arise in different activities. These statements allow us to analyze and explain some factors that trigger backers' intention to participate in Crowdfunding activities. Several studies have used a single approach to understand backers' behaviour intention towards Crowdfunding (Shneor & Vik, 2020). The most famous theories relate to economic physiology and social aspects, such as social capital, social network theories. Furthermore, only 4 articles out of 57 used self-determination to analyze individuals' motivation to participate in Crowdfunding.

Autonomy is one of the three psychological critical needs for human beings to make their own decisions in certain situations. Self-determination theory posits that people driven by autonomous motivation seek to be directors of their own life, be independent, and feel freedom (Legault, 2016). Current research studies across the globe found that "*when the need for autonomy is satisfied, people feel more interested, engaged, and happy*" (Legault, 2016,3). Researchers Deci and Ryan's focus on the interaction between the extrinsic forces and intrinsic motives and needs.

The studies highlight that *"external factors such as tangible rewards fail to commit people to do something, since they do not allow them to attribute their actions to internal causes."* (Fousiani, 2011,5). On the other hand, external factors help achieve particular behaviour outcomes and shift individuals to behave differently.

Most studies based on crowdfunding research characterized rewards as an essential component that encourage backers to make a funding decision (Libbertz; Bagheri et al.; 2019; Shi, 2018). Following the self-determination theory, it explains rewards as external motivation. People do something because it leads to specific outcomes, such as pre-order products, discounts, or planned rewards (Frydrych, Bock, Kinder & Koeck, 2014). The previous studies of Jiang (2020) identify three primary rewards values. First, utilitarian value (practical, beneficial rewards), second, socioemotional value (gratitude, social status, social-belonging), and last participatory value (meaningful and fulfilling experience). After collecting data from more than 170 thousand completed Kickstarted projects, it was found that socioemotional and participatory values have a weakened positive effect on the rewards. In contrast, utilitarian value (practical, beneficial rewards) is more helpful among backers. Following these studies, and thinking about motivation derived from general human needs, the present paper is an attempt to find out which specific needs plays an important role in the crowdfunding context.

Further, competence plays an essential role in supporting high motivation. The need to achieve desired outcomes and interact effectively within the environment is described as the state of competence. Self-determination theorist believes that the feeling of being capable or competent is a significant human need which should be fulfilled. In previous studies of Crowdfunding, the research highlighted that backers' *"helping others only to fulfil the need for competence, which is amongst the psychological demands of individuals."* (Yuan & Wang, 2020,7). The scholars who investigate backers' motivation for Crowdfunding found that helping others satisfy human needs for social affiliation (Hauwaert & Bruggeman, 2015). Next, the research found that attitude toward helping others indirectly affect the intention to participate in Crowdfunding through social identification and community. However, the definition of helping others has been used as donation behaviour. (Rodriguez et.al.,2018). In essence, we predict that people who feel effective in one's activity, even by helping others and feeling that they are capable of doing it, increase personal competence, which leads to the higher backers' intention to participate in Crowdfunding.

The human psychological need for relatedness plays an important role to achieve self-determination. Prior studies have also suggested, that the success factor not only based on practicality rewards but also strongly depends on community-based benefits, such as sharing the details about the project or making friends between supports and entrepreneurs (Hossain &

Oparaocha, 2017; Ferreira & Pereira, 2018; Zhao et al., 2017). Based on the self-determination theory, the need to be connected and join in the group with the same value or beliefs called; the need for relatedness. In other words, people are intrinsically motivated because of the desire to be connected. Community, as a result, is giving backers the possibility to be a family member. Backers are involved in the crowdfunding project much more closely, simultaneously learning more, sharing ideas about the business with other backers, or working more closely with entrepreneurs (Bao & Huang, 2017). According to the research results 57,6 % of people have the biggest motivation to invest (Ferreira & Pereira, 2018), because of familiarizing and become associate with the new entrepreneurial community. Some studies argue that is different on each project category; for example, the research found that investors are more concerned about return than building connections in art and food categories. In contrast, we extend work by examining the community-based benefits that lead to a higher perceived relatedness level.

Furthermore, few researchers have found that herd behaviour plays an essential role in backers motivation to be a funder (Bretschneider et al., 2017; Herrero et al., 2020). The research of Bretschneider (2014) introduces herding behaviour on the equity-based crowdfunding model through self-determination theory as the association between the motive "*curiosity*" and the motive "*return*". However, there is a gap in herb behaviour on the reward-based model through self-determination theory. Regarding the self-determination view, herb behaviour means that people are not conscious of their actions. Researchers have not used herb behaviours in many studies as the main predictor of human behaviour. In this study, herb behaviour is defined as a moderator in backers' intention to participate in Crowdfunding.

Furthermore, more research has shown that risk is essential to the element that affects backers' investment intention (Bagheri et al., 2019;17; Zhao et al., 2017; Kang et al., 2016). Risk plays an essential role in the online context. The risk is an essential part to consider in crowdfunding because individuals cannot fully evaluate promised rewards or services, reducing some trust-related concerns. The risk hinds the different effects of motivation. The person can accept the risk because of the individual interested in the problem, a new product experience, or just because not satisfied with the current product. On the other hand, the risk can negatively affect the backer's participation in a crowdfunding project

1.3.2 Reward motivation

Crowdfunding has several types of platforms which allow new ventures to fulfil their ideas, and each platform has a different way of raising money. As mentioned earlier, reward-based Crowdfunding is the most popular between new entrepreneurs and backers (Lin et al., 2016). From

the media and academic side, the most significant attention has Crowdfunding based on rewards and crowdfunding websites like Kickstarter, the representative one, and perhaps the most known platform (Lin et al., 2016). Kickstarter launched on April 28, 2009, and since then, around 170,000 projects have been realized in real life from an idea (Libbertz). The numbers show how much people are involved in crowdfunding projects and ready to support small businesses financially.

Researchers gathered information and identified that campaign success to reach the goal depends on the type of reward, a certain number of rewards, and limited rewards (Ferreira & Pereira, 2018; Shi, 2018; Lin, 2016; Bretschneider & Leimeister, 2017; Libbertz). Furthermore, rewards become a leading motivation for participating in Crowdfunding (Ferreira & Pereira, 2018; Lin, 2016; Jiang et al., 2020), fulfilling the backers' specific needs (Jiang et al., 2020). Projects can reach 5-10% more funds from the backers if the entrepreneurs offer more attractive rewards (Zhang & Chen, 2019). Also, well-designed and well-prepared Rewards have allowed entrepreneurs to maximize the amount of money and increase to reach fundraising goals (Gerber & Hui, 2016).

Previous studies have focused on why backers are willing to participate in crowdfunding projects? Bretschneider and Leimeister (2017) found that supporters of a new idea seek to increase satisfaction and benefit from investing in the project. Backers have the authority to demand a non-monetary reward, such as a new product copy or experience, as the return of funding the project (Hobbs et al., 2016). Previous crowdfunding researchers argued that reward is the foremost important factor for funders to participate in Crowdfunding (Bagheri et al., 2019; Bi, S., Liu et al., 2017). Meanwhile, some other authors explored those rewards are a powerful tool but not the central aspect of influencing success (Libbertz; Ryu et al., 2016). Some authors either highlight rewards as unimportant or even harm Crowdfunding (Jiang et al., 2020).

Traditionally, giving money in exchange for promised rewards is assumed as a universal psychological need which leads to examine the role of autonomous motivation in the link between the need to receive rewards and intention to participate in Crowdfunding. The theory of self-determination is broadly known for exploring the role of basic needs in health, learning and physical education, or workplace contexts. However, only a few researchers applied Self-determination theory to understand backers' motivation on rewards by satisfying their individual needs. Using the Self-determination theory, we can understand human behavior or activity more profoundly using intrinsic and extrinsic reward motivation. According to previous research, "*reward is an attractive stimulus for someone to act toward something*" (Gerber & Hui, 2017,3). Self-determination theory observes that extrinsic motivation can encourage individual behavior, externally controlling people using rewards (Gerber & Hui, 2017). Crowdfunding investors are

motivated by tangible rewards (products, discounts, symbolic gifts) and intangible (telephone calls, creative experience, recognition or collaboration). The previous studies investigated extrinsic reward intention on Self-determination theory and found that rewards are control regulation that impacts individual performance (Pinto & Santos, 2018; Frydrych et al., 2014) when people engage in an activity because somebody offers them something, like promised rewards.

Cognitive Evaluation Theory sub-theory of self-determination theory suggests that external factors such as tangible rewards reduce the feeling for autonomy and weaken intrinsic motivation (Gagné & Deci, 2005). In order to support the project, individuals frequently rely on extrinsic rewards and expectations rather than pure interest and enjoyment. However, present studies support that external factors such as choosing the reward, quality and high-value reward increase feeling for autonomy from external to internal and increase intrinsic motivation (Gagné & Deci, 2005). Previous experts of Crowdfunding argue that tangible rewards are more crucial than completely immaterial rewards (Borrero-Domínguez et al., 2020; Forbes & Schaefer, 2017). The researcher collected data from more than 2000 rewards and determined that the most engaging reward is a new product copy.

Moreover, the hope to replace a current product is an essential external motivation affecting investors behaviour (Yao, Wang & Zhou, 2016; Bretschneider et al., 2014). The least attractive reward is a collaboration to be involved in product design (Shi, 2018). Also, highlight those symbolic rewards are worthless. The backers are less interested in participating if entrepreneurs offer typical rewards, such as a T-shirt or thank-you notes (Forbes & Schaefer, 2017). The research of Verschoore and Araújo analyzed the effect of the reward on the success of the Crowdfunding campaign and reached the number of 2,614 rewards in the 338 selected campaigns and confirmed that tangible rewards have a positive effect on Crowdfunding campaigns and intangible rewards do not affect Crowdfunding campaigns (2020).

In research of the Self-determination theory approach represents that offering monetary rewards may contribute to the satisfaction of autonomy needs. It assumes that monetary rewards have a positive effect on autonomous motivation (Mustafa & Ali, 2019). However, the research-based on Brazil Crowdfunding platforms show exciting results. It found that acknowledgement, fun and satisfaction, or learning do not influence contribution. Either it rejected that monetary rewards positively influence the intention to participate. The following research agrees with previous studies and found that monetary reward negatively impacts; however, it identifies that non-monetary rewards, such as social causes, are motives in Crowdfunding (Cappa, Rosso & Hayes, 2019). Studies based on Crowdfunding in China has shown four extrinsic motivations: monetary reward, reputation-based reward, recognition-based reward and feedback-based reward.

The research used a survey questionnaire were those aged between 21-25. As a result, it supports previous studies that monetary rewards did not motivate participants in Crowdfunding. Meanwhile, Crowdfunding relies more on non-monetary rewards, such as recognition, feedback, and reputation (Wu & Gong, 2020). However, the following research highlights that investors seek a return, such as economic or physical rewards (Baber, 2020). In summary, we predict that monetary worth rewards positively affect individuals' behaviour and play an important role.

Promised rewards, often an example of a product being developed to satisfy backers psychological needs and perceived benefits. Recent studies point out that outcomes expectancy is a necessary construct that can be used to explain and predict an individual's intention to participate in Crowdfunding (Kuo, & Wu, 2014). The need to receive specific outcomes and expectations depends on human psychological needs. According to Crowdfunding researchers, in return, most funders are expected to receive rewards for funding a project. Therefore, we classify tangible rewards as human psychological needs, which people are looking by selecting rewards. The previous studies satisfaction in Reward-based Crowdfunding on value and satisfaction theory and identify two values: intrinsic values, intrinsic values (fun, excitement, entertainment), and found that receiving experience of fun is also crucial in Crowdfunding, and Backers evaluate both extrinsic and intrinsic values. It means that extrinsic motivation is essential. However, intrinsic motivation also plays an essential part in participating when backers are driven by enjoyment and interest. Therefore, we classify intrinsic motivation as human psychological needs.

1.3.3 Purchasing motivation

Self-determination theory has received growing attention to exploring the impact on consumer psychological needs satisfaction (Gao et al., 2018). The theory supports that customers' inner needs significantly impact emotions and behaviour in a given situation (Gao et al., 2018). As online shopping the Crowdfunding platforms also have become a new trend and have attracted many individuals worldwide. Primarily, entrepreneurs start a campaign with a new idea or product, and the people who are funding the project are described as consumers in the pre-order process. It means backers' tend to order the product before it is released to the public. The phrase "*getting and buying*" or "*buying and selling*" is used to describe backers' behaviours in crowdfunding intention to fund (Hobbs et al., 2016).

Crowdfunding has integrated two models: pre-order and pre-selling process (Bao & Huang, 2017). For entrepreneurs or small businesses, pre-selling is the opportunity to sell the product before it is made, and through the pre-order process, it can increase sales at an early stage (Zhao & Ryu, 2020). A successful example of the British rock group is called Anoraknophobia.

The group asked the fans to pre-order the album through the Crowdfunding website before recording. Pre-ordering reach unseen results in the music industry, and total pre-ordered albums reach more than 12 thousand copies with more than 12,500 fans (Gerber et al.,n.d). Consumers can provide all the positive and negative information about the product through communication with entrepreneurs. Further, information can help companies improve product suitability for mass production (Zhao & Ryu, 2020). All these processes lead to help develop product quality.

In the context of backers' behaviour, they described consumers seeking to purchase the original product, such as video games or technology items from the first hands (Li & Wang, 2019). The research found (Li & Wang, 2019) that backers or/and consumers using pledge motive to access the item early stage as pre-ordering the products in Crowdfunding instead of helping entrepreneurs (Li & Wang, 2019, Zhao & Ryu, 2020). Backers have also benefited because entrepreneurs mostly offered a discount or low than usual price to attract new consumers (Kraus et al.; 2016; Hossain & Oparaocha, 2017).

The backers' behaviour as a consumer to buy a product shows that backers browse through Crowdfunding websites for various benefits correspond to support basic psychological needs, such as lower price, more excellent product selection, more innovativeness, or more unique products. Either more monetary worth product witch backers' will sell at higher prices. Self-determination theory supports consumers' pre-order behaviour as a process of buying motive and willingness to pay for an item by combining the need to perceive outcomes, such as low price, uniqueness or individuality, utility or versatility, and pride or prestige. The self-determination theory is the only theory based on organisms integration sub-theory that explains the action through which a consumer's extrinsic motivation can be autonomous *"consumers extrinsically motivated behaviours may be internalized into full-fledged autonomous purchase intention"* (Gilal, Zhang, Paul, & Gilal, 2019,12). In previous research, it is less explanation of pre-order behaviour through self-determination theory. We believe that people were purchasing based on extrinsic motives seeking benefits. For example, pre-ordering the product just because he wants to show it to the friends. Alternatively, they are pledging with a personal need to get a new product because it is not satisfied with a current product (desire or need to receive product innovations). In summary, we think investors participate in Crowdfunding to fulfil their personal needs.

1.3.4 Community motivation

Self-determination theory states that human motivations come from two types: intrinsic motivation and extrinsic motivation. Intrinsic motivation stands for these three psychological human needs: autonomy, competence and relatedness (Yuan & Wang, 2020). This part focuses on

the need for relatedness: the feeling or perception that one is engaged in an activity that brings them closer to people who share their values. It means finding the people who share the same values and have the same problems and struggles. According to the self-determination theory, people continually seek to interact with others and be in the social group to meet new people and learn new skills or tips.

Previous studies have found that crowdfunding backers' decisions do not rely on meaningful rewards and are motivated mainly by affective communication between backers and fund seekers. Namely, being a part of the community has an indirect role in crowdfunding success (Jiang et al., 2020.). According to a self-determination framework, humans have a basic psychological need to be part of a group with the same values and beliefs. Both were building a social circle and becoming close to others satisfy the relatedness need of individuals (Legault,2017). The previous research shows that investors' behaviours depend on building relationships with fundraisers. The research highlighted that rewards harm community projects and cause a sense of distrust between investors and entrepreneurs (Legault,2017). It proves that intrinsic motives can adversely affect extrinsic motives and have conflicts with each other.

The next author of the research has already noted that the investors' decision is not based on products or services (Ferreira & Pereira, 2018). Moreover, Backers are influential in building relationships, helping others, or gaining a new experience. The author colled data from 33 people who already had experience in the funding process through a crowdfunding platform. The result showed that the main factor why people fund the project is because they have been following entrepreneurs since the starting of the idea, and the second factor which proves the importance of community, that backers wanted to gain more experience and to be a part of the existing adventure (Ferreira & Pereira, 2018). See the table below, which demonstrate the results.

If applicable which are the reasons why you invest in Crowdfunding?

33 responses

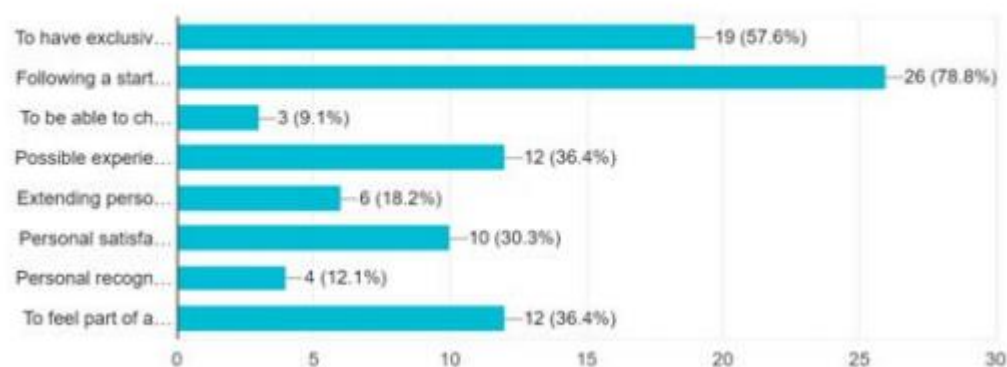


Figure 3. Reasons why respondents invested in equity crowdfunding

Source: Success Factors in a Reward and Equity-Based Crowdfunding Campaign. 2018 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC), 2018,5

The research of Bao and Huang (2017) highlights that building the right group of people with similar beliefs will increase backers' support for the project. The researcher who examines human behaviour on the Internet in Taiwan stated that commitment might be a significant factor for crowdfunding investors (Lin, Chen, & Yang, 2020). The following scholarly paper identifies that being a part of a community satisfies basic and universal human needs for social affiliation (Elizabeth, Gerber & Hui, 2013). It means people have a psychological need or desire to belong to the social group and interact with others. To set up, we can agree that "*people exchange not only ideas, money and products but also feelings, sympathy and encouragement*" (Rodriguez-Ricardo et al., 2018, 167). We can describe that community is essential for supporting the project by analysing the previous research. Also, it could lead to the need to be in the group that becomes a critical element of contributing to all projects.

1.3.5 Helping others motivation

Self-determination theory suggests that feeling of competence is significant for intrinsic motivation as well as the feeling of autonomy. The universal psychological need for competence is the feeling or perception that one is getting better at something they value and worth their time and energy. In other words, the ability to feel efficiently and effectively. If competence harms both intrinsic and extrinsic motivation, it will leads to be amotivation. Crowdfunding offers backers the opportunity to increase their competence by engaging people with a high moral obligation (to help others, support friends, and reduce world problems such as conserving water and air pollution) (Wang et al., 2019). The previous scholar has shown that prosocial behaviour significantly impacts the backer decision to participate in Crowdfunding (Li & Wang, 2019). Such behaviour is defined as helping individuals in need or creating positive change by cooperating with others to achieve the target. The next researcher (Bitterl & Schreier, 2018) found that backers are willing to participate in the crowdfunding project more efficiently if their financial support will positively affect and help achieve a project. More research (Bagheri et al., 2019; Shneor & Munim, 2019) indicates that social value in Crowdfunding has a significant impact on helping entrepreneurs to reach their goals.

The theory of Self-determination explains: "*that individuals engage in helping behavior to pursue a certain level of personal satisfaction and that they help due to their psychological needs*

of feeling the power of control " (Zhang & Chen, 2019,7). Using this definition, Crowdfunding investors are helping others, giving support or encouragement, providing friendship, and supporting to solve the problem because they want to satisfy the need for competence (Yuan & Wang, 2020). If supporters are not getting a significant gift or special reward in the campaign's return, it should not mean that the project will not reach the target.

The self-determination theory supports the idea that people are receiving a sense of achievement by helping others (Xiang & Wang, 2020). In terms of Crowdfunding, investors help creators from intrinsic motives fulfil the need for competence; when a person feels the need to be effective. The helping-seeking positively affects campaign success and found that help-seeking can fulfil competence. However, it does nothing to increase investors intention to fund the project (Xiang & Wang, 2020). The scholar used the worm-glow theory to examine that person by helping others have a worm-glow awareness, such as feeling positive, happy, or satisfied. This approach arises because individuals think about potential future rewards for themselves and others and the desire to help the surrounding environment (Bianchini, 2016). Investors have a strong willingness to help others, but at the same time, seek self-interest (Zhang & Chen, 2019; Gerber & Hui, 2017). We assume that helping others, the feeling that investors did good work, and it is worth it to invest time, energy, or money will increase feelings of competence (the sense of personal effectiveness) which link to stronger intention to participate in Crowdfunding.

1.3.6 Herd behaviour

The phrase "herd behaviour" used to understand human behaviour, causing many humans to behave similarly. This behaviour suggests that people are not making independent decisions; rather, actions driven by emotions. When a herd's behaviours open, the individual decision and opinion-forming process close. Moreover, the individual is automatically collaborating without thinking through a situation. Besides, it proved that herding behaviour reduces uncertainties and individuals become more positive into action (Lee & Chiravuri, 2019).

The herd behaviour is defined broadly to demonstrate that investors tend to follow and copy other investors' actions rather than their analysis (Kumari, Chandra, & Pattanayak, 2019). The previous research explores backers motivation for incentive-based Crowdfunding. The research found that herding behaviour has significant meaning on backer reward motivation using a recommendation system in an online environment such as internet advertising, social networks or the other tool to increase the personal transaction and communication (Ryan & Deci, 2019). Due to limited information published online, many investors assume herding behaviour because it believes that other people have more information and are better informed (Ryan & Deci, 2019).

Also, uncertainty has a significant role in explaining the herd behaviour. If the information provides, less or investors do not have enough particular knowledge when investment decision based on other people where to invest or not invest in a project. As outlined, the research (Garn & Morin, 2021) highlights that social connection helps create a herding effect. Moreover, individuals believe that a large group of people cannot be wrong. Investors behave in the same way as all groups, even if that behaviour is against individual decision and belief.

Furthermore, few studies suggest that understanding users' more profound herding behaviour in crowdfunding communities will increase project success (Posegga, Zylka, & Fischbach, 2015). However, the studies which explain the individual motivation on herding behaviour are minimal. The research-based on self-determination theory (Bretschneider et al., 2014) introduces herding behaviour on the equity-based crowdfunding model through self-determination theory as the association between the motive "*curiosity*" and the motive "*return*". The studies showed that investors who participate in Crowdfunding before would increase the motive of return and curiosity for individuals who never invested before. In terms of self-determination view, herd behaviour means that people are not conscious of their actions. These studies argue that herd behaviour comes from extrinsic motivation, such as the desire to get benefits, like rewards, reputation, social interaction, and privilege attainment. Also, we think that herding behaviour is related to avoid shame, potential embarrassment or other social consequences in a group.

1.3.7 Risk

Crowdfunding allows individuals to raise money using the digital space. However, investing through the Internet carries risk because investors are giving money into unknown projects (Petitjean, 2018). Also, entrepreneurs are going to crowdfunding platforms with a new idea that has never created before. It means that neither can be sure about the final result from both sides (fund seekers and idea supporters). The project or product can be successful or fail. Due to this, backers are taking the risk by supporting entrepreneurs on their projects. Even if the project is successful and reaches the target, the risk appears on promised delivery time or discrepancy in the product (incorporate the feature of a product that does not satisfy customer needs or wants). The research (Hossain & Oparaocha, 2017) highlights the worst scenario if backers do not receive any promised rewards due to some reason, such as manufacturing issues.

Reward-based Crowdfunding is different from others because as the return for a monetary contribution, entrepreneurs provide gifts and other non-financial rewards (Hossain & Oparaocha, 2017). The previous research (Jensen & Özkil, 2018) investigates two types of backer

promises: delivery and product quality. The research data based on the global crowdfunding platform Kickstarter.com. The author investigates 144 successful campaign with the all-or-nothing concept. Out of 114 projects, 36 successfully delivered on time, 33 projects ship late, and 45 was not delivered. The table below shows that projects which fail to send rewards had manufacturing issues, product design issues, and component sourcing issues. The author of the research found out that most campaigns are not in contact with potential manufacturing companies until the campaign has been completed and is one reason why the delivery of a product is failed or delayed. To understand the factors behind the delivery is essential because *"ability to deliver may be a potential factor of success, which may, in turn, to have a positive impact on the likelihood subsequent funding from professional investors"* (Roma et al., 2017,19)

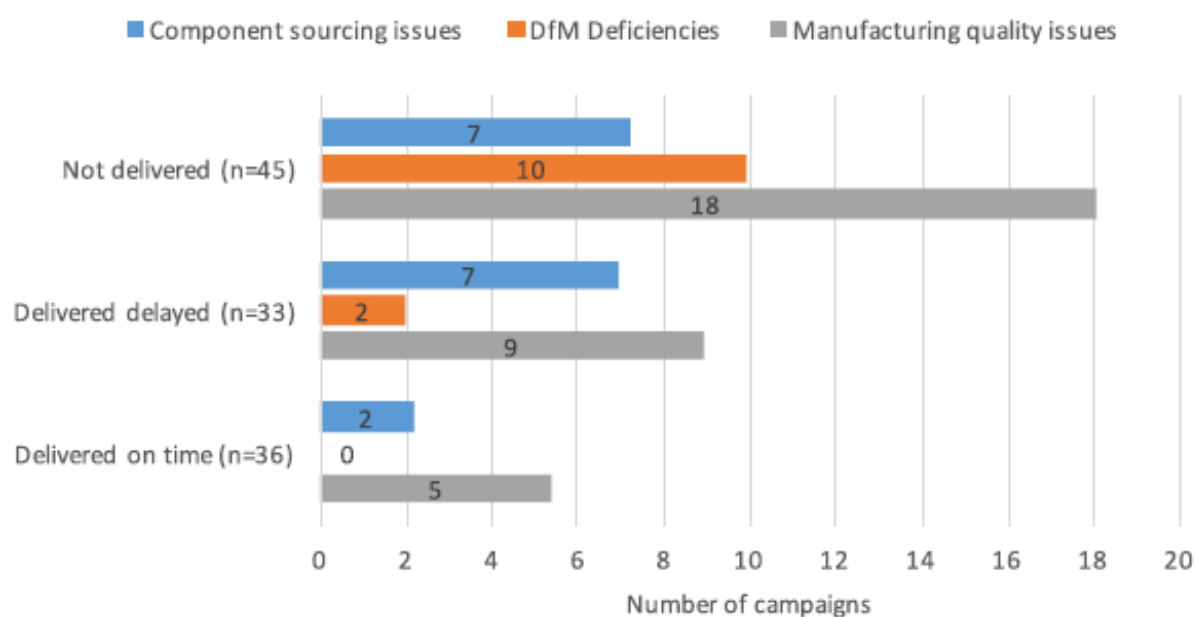


Figure 5. Campaigns three failure components to deliver on time, delayed or not deliver recorded under the design and manufacturing issues.

Source: *"Identifying challenges in crowd-funded product development: A review of Kickstarter projects."* Design Science, 4.,2018.

Previous researchers found that risk may be a critical factor in why small businesses or entrepreneurs fail to become successful financially supported. (Shneor & Munim, 2019, Bagheri et al.; 2019; Liu et al., 2017). The projects that require high goals or/and raise more money often fail to reach the funds because of the risk factor (Shneor & Munim, 2019). Entrepreneurs have problems delivering promised rewards because to attract supporters; they are reducing the prices on rewards and not being able to purchase the promised reward in exchange for financial support. However, another researcher colled data from China and did not prove that the trust level has a

personal or remarkable effect on crowdfunding investment decisions (Yang et al., 2019). And concluded, that in crowdfunding backers 'do not think about trusting as the main factor which can attract or be reason attracting sponsorship funding. It means the final decision not based on trust.

More researches divide the risk into six categories: financial risk, associated to uncertainly that return is not guaranteed; operational risk when product quality and functionality do not meet promises; the physical and psychological risk associated as the effect on health and security in choosing the wrong decision; the social risk is related to a community affects around you, and the last is timing risk when investors lose the time by making a wrong decision (Jensen & Özkil, 2018; Yang et al., 2019). To avoid Crowdfunding's risk, the previous scholars suggest that entrepreneurs provide more information regarding the risk or/and expected returns on backers' investment (Ferreira & Pereira, 2018) The research collected data from 105 technology projects and found out that being active in the community with bakers will reduce the risk of crowdfunding projects (Petruzzelli & Perrone 2017). It means by reducing the risk level; we can increase community engagement.

In the concept of self-determination theory, the risk has the different effects of motivation. Individuals accept the risk because they are interested in the problem, a new product experience, or are not satisfied with the current product. The different motives engage the person risk behaviour, they accepting the risk to pursue a positive value or goal, such as promised rewards. Thus far, we have predicted that risk has a negative impact on the need to receive tangible rewards because the product is not manufactured yet, and it was a high risk that the project would fail.

2. METHODOLOGY AND RESEARCH DESIGN TO PARTICIPATE IN CROWDFUNDING PROJECTS FROM A SELF-DETERMINATION THEORY PERSPECTIVE

2.1 The purpose of the empirical research

Firstly, the study is designed as deductive approach research to test the hypothesis that guides the current study. The literature review of previous studies allowed identification and formulated research problem, which was not considered earlier in more depth. Also, based on previous studies literature on crowdfunding, this study model represents human physiological needs for autonomy, competence and relatedness, which lead to explain motivation toward intention to participate in crowdfunding projects. Furthermore, this study explores the relationship between motivational factors of risk on the independent variable on the need to the need to receive tangible rewards and herding characteristics on a single dependent variable.

The research of current studies predicts that all three psychological human needs for autonomy, competence and relatedness should be fully fulfilled. The model is created to explain which inborn human needs are crucial for backers' to increase intention to participate in crowdfunding projects. After the previous studies, we predict that backers are looking for specific needs to be fulfilled to increase the sense of autonomy. If needs fulfil individuals likely become intensively attached to the project. We present in the research model five human needs (tangible rewards, monetary worth, innovativeness, feeling of control and knowledge) that increase the intention to participate in crowdfunding.

The second psychological need is competence, which includes receiving effectiveness and self-worth. The last fundamental human need is relatedness, which means receiving a sense of belonging. These psychological needs are expected to be motives that influence the intention of the participant's contribution. Also, these motives are expected to be influenced by moderating variable, is herding behaviour.

2.2 Research model and hypotheses of the study

The research model shows that if all the basic human needs for competence, autonomy, and relatedness are fulfilled, it will increase the intention to participate in reward-based Crowdfunding projects. Considering the collected material of the literature review, the research model represents the visual image of the research purpose.

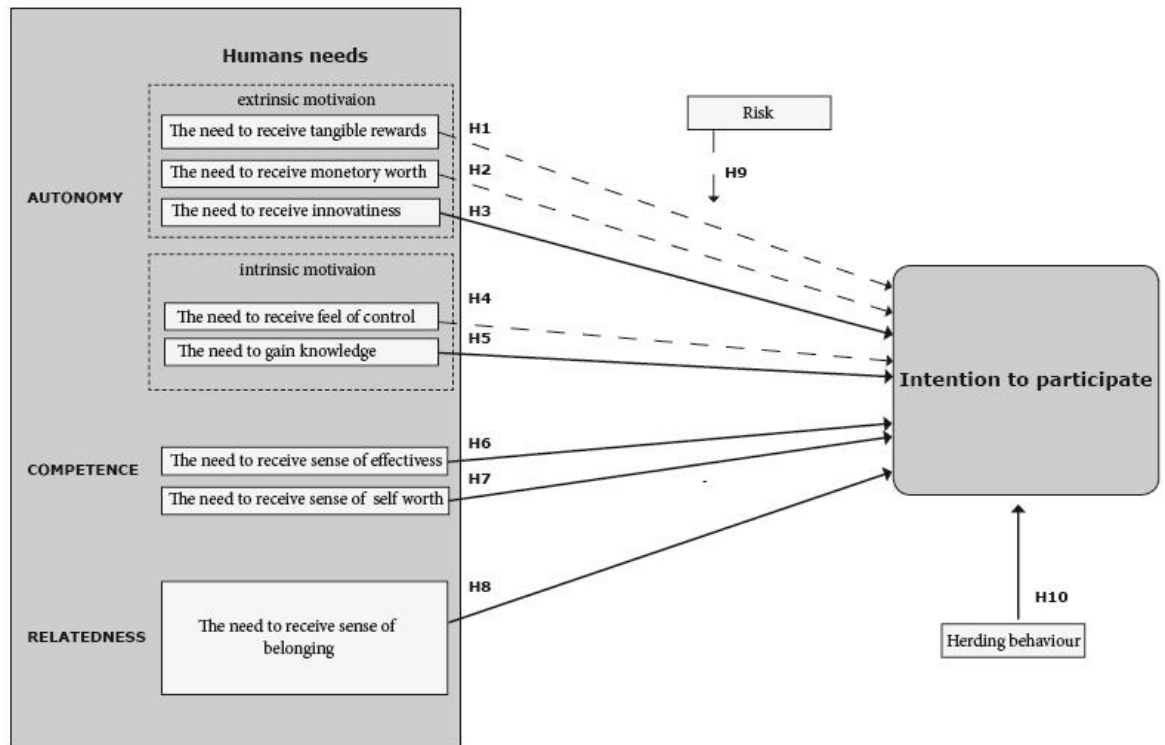


Figure 1. Research Model

Based on the literature data and predicted research model of the study, the research hypothesis is presented. Initially, self-determination theory emphasized autonomy as the basic human need to feel free and self-directed. Ryan and Deci (2000) suggest two types of autonomous regulation. The first type of autonomous regulation is based on intrinsic motivation, which refers to doing an activity with interest or pure enjoyment. The second type is extrinsic motivation, when you do something to gain rewards or avoid punishment (Jiang et al., 2020). The previous findings reveal that crowdfunding is usually motivated by external tangible (Gerber & Hui, 2016). Also, previous studies have found that external motivation positively affects citizenship behaviour and intention to participate or encourages potential bakers to make a move (Herrero et al., 2020; Chris Zhao & Zhu, 2014; Kraus et al., 2016). However, researchers disagree concerning tangibles and intangibles rewards as the factor that helps to increase backer's investment decisions. Researchers argue that tangible rewards are more crucial and better to receive than completely immaterial rewards on a crowdfunding platform (Borrero-Domínguez et al., 2020; Forbes & Schaefer, 2017; Kraus et al., 2016). Overall, previous works on the topic conclude that reward type matters and rewards are an incentive for someone to act toward something. However, only little researchers researched to understand backers motivation on rewards by satisfying their individual needs. We

predict that perceived tangible desire benefits will increase autonomy, positively influencing the intention to participate. Based on these arguments, we present the following hypotheses:

H1. The need to receive tangible rewards positively influence the intention to participate in Crowdfunding projects.

Based on the literature review and previous research studies, self-determination theory has investigated how monetary rewards can affect autonomous motivation. In research, it was suggested that monetary rewards harm autonomous motivation. Other scholars used self-determination theory and monetary rewards to analyze employees motivation in the workplace and suggest that *"rewards does not tackle the level of intrinsic motivation and enhance the level of extrinsic motivation."* (Hauwaert & Bruggeman,2015,4). However, it was found that monetary rewards positively affect autonomous motivation and improve the motivation and performance of managers if the financial rewards are provided to employees. It means *"when rewards enhance the basic psychological needs, a higher level of autonomous motivation can be reached."* (Hauwaert & Bruggeman,2015,4). The literature review highlights that Crowdfunding can offer various rewards, including monetary rewards, such as a discount for a new product. However, studies show that monetary rewards did not motivate participants in Crowdfunding (Cappa, Rosso & Hayes,2019). Furthermore, other studies found that investors seek a return, such as economic or financial rewards (Baber, 2020). In summary, we predict that backers are motivated due to monetary needs. They might highly consider the value of financial return before participation in crowdfunding projects. We hypothesize:

H2. The need to receive monetary worth positively influence the intention to participate in Crowdfunding projects.

Crowdfunding has been a trend in recent years, providing a new form of funding for innovative projects. As mentioned before in the literature review, the most important reward for backers is a new copy product. After analysis, it has been made clear that backers are least interested in receiving symbolic and intangible rewards, such as accessories, thank-you notes, collaborations, or experiences. Consequently, crowdfunding as a new form to support startups and innovation, the need to receive innovation should be not ignored. Furthermore, self-determination theory allows us to explore backers psychological needs. If individuals seek to purchase a new product, perceiving uniqueness and innovations must be very important. The innovative product could be an extrinsic motivator on intrinsic motivation. It means backers are willing to receive

tangible rewards and are interested in the activity itself. We suggest individuals willing to receive a new product, program, or service. However, if the product is not innovative, the intention to participate in a crowdfunding project decrease. Hence, we hypothesize the following:

H3. The need to receive the innovativeness positively influence the intention to participate in Crowdfunding projects.

Deci, and his colleague Richard Ryan, support autonomy by discovering that people psychology need is to receive control over the action. They must control what to do when to do it. Perceived autonomy is high when activities are done for interest or personal value. *"Conversely, events or conditions that diminish a sense of choice, control or freedom for either the means or ends of action interfere with perceived autonomy, and can undermine intrinsic motivation."* (Ryan, Rigby, & Przybylski,2006,3). To be autonomously motivated, the person should have a sense of control over the action. In crowdfunding, people perceived autonomy because most crowdfunding platforms' projects have approximately 6 to 14 rewards tiers with an average of 11,97 tiers (Wei, 2018). However, some studies argue that to have more rewards tiers are rare because it may confuse participants, and the selection of rewards become unnecessarily complex (Wei, 2018). The previous research highlight that for backer's *"autonomy matters, though in the supporters' case, it is the freedom to choose among creators' projects that is the source of some of the motivation to support crowdfunding."* (Elizabeth, Gerber & Hui, 2013,21). We predict that giving people a feeling of control and choice enhance intrinsic motivation, and their feeling of autonomy will increase. We hypothesize:

H4. The need to receive a feeling of control positively influence the intention to participate in Crowdfunding projects.

Following the literature analysis, individuals behaviour is not only based on extrinsic motivation. But surprisingly, it was found that acknowledgement, fun, satisfaction, or learning do not influence intention to participate in crowdfunding. We argue with the previous studies, because according to the self-determination theory, learning is a natural tendency of an individual to develop new skills and grow as a human being. Furthermore, different authors used an intrinsic factor of learning, gain knowledge to analyse student motivation to study. We predict that individuals are motivated to gain knowledge, leading to intrinsic motivation to participate in crowdfunding projects. We hypothesize:

H5. The need to gain knowledge positively influence the intention to participate in Crowdfunding projects.

Self-determination theory emphasized competence as the basic human need to be effective in interactions with the environment (Hossain & Oparaocha, 2017; Efrat et al., 2019). The majority of preceding studies agreed that backers are willing to participate in crowdfunding projects if their financial support helps the campaign reach success (Bitterl & Schreier, 2018). Some studies claimed that intrinsic motivation, such as helping others, providing friendship, giving support or encouragement, comes to fulfil the need for competence which is among human psychological needs (Yuan & Wang, 2020). Also, self-determination theory explains "*that individual engages in helping behaviour to pursue a certain level of personal satisfaction and that they help due to their psychological needs of feeling the power of control.*" (Zhang & Chen, 2019, 7). Overall, based on prior knowledge, the current study suggests that helping others comes from intrinsic motivation to perceived competence as the basic human need to receive sense of effectiveness. We hypothesize:

H6. The need to receive sense of effectiveness positively influence the intention to participate in Crowdfunding projects.

Self-worth is the sense that explains an individual's evaluation of himself or herself as being good or worthy to belong to others or be loved. In terms of self-determination theory, individuals naturally tend to receive the need for competence. Competence represents that he or she should be capable in a specific situation. It explains that not only do you need to feel effective, but you also need to have confidence in the activity (Uzman, 2014). For self-determination theorists, the feeling of capability plays a more significant role. The theory illustrates competence as an opportunity to gain new skills and abilities. In the context of buying intention and behavior "*individuals consider themselves sufficiently capable and knowledgeable to perform a certain behavior.*" (Shneor & Munim, 2019, 4). To be more precise, backers' need to believe in his or her capability to support a specific project on a crowdfunding platform. With the feeling, worthy individual's can enhance the intention to participate in crowdfunding. Thus, We hypothesize:

H7. The need to receive a sense of self-worth positively influence the intention to participate in Crowdfunding projects.

Self-determination theory identifies the psychological need for relatedness which focus on building relations with others. Several studies have explored that investors are participating because of their need to join in social circle (Efrat et al., 2019), to interact with a like-minded group of people, or to have social friends and receive benefits (Zhao et al., 2017). Also, previous literature has explored and shows that commitment is the main reason for participants to take part in Crowdfunding (Lin et al., 2020). The following research highlight that supporters are motivated to support people they trust rather than giving to unknown people. Overall, based on prior knowledge current study agree that community is essential for supporting the project. However, study suggest that receiving community benefits (knowledge sharing, connections, inspiration, resources, and support) is the primary motivation to be part of the group behind backers' interaction with a project. We hypothesize:

H8. The need to receive sense of belonging positively influence the intention to participate in Crowdfunding projects.

Moving forward, the last impact is the risk attitude toward the participants' contribution's intention. As discussed in the Literature review part, risk acceptance plays an essential role in Crowdfunding investors behaviour. Entrepreneurs use a crowdfunding platform to fund a new project that never has been created before. For this reason, investors are taking the risk not to receive promised rewards. Risk can have positive and negative effects; if risk seeker enjoys the risk, they are not worried about it and can select any rewards. However, people who are afraid to take the risk, even if they like projects, due to risk will not support the project. Overall, the current studies suggest that risk attitude directly affects the need to receive tangible rewards on intention to participate in crowdfunding projects. We hypothesize:

H9. Higher risk negatively moderates the effect of need to receive tangible rewards on intention to participate in Crowdfunding projects.

Finally, the phenomenon of herd behavior known in crowdfunding as a movement when emotions can influence final decision and investors are more likely to invest in campaigns based on the opinions of others. According to previous research, herding behavior has a significant moderating effect on bakers' reward motivation. More studies found that investors tend to follow other investors actions due to limited information published online (Kumari at al., 2019). Garn and Morin highlight that social connection helps create a herding effect, and understanding herding behaviour in communities will increase project success (2021). We believe that herding

behaviour is related to avoid shame, potential embarrassment or other social consequences in a group. The current study claims it is essential to understand individual motivation, which helps increase herding behaviour and intention to participate in the projects. We hypothesize:

H10. Herding behavior positively influence the intention to participate in Crowdfunding projects.

The crowdfunding model connects funding seeker backer's who is willing to support the project. Individuals who are willing to participate in crowdfunding receive rewards or interest by personal need. The current studies stated that were a gap in understanding investors motivation to participate in crowdfunding. The previous research explains crowdfunding success factors. However, it is necessary to know which human psychological needs are most important considering individual intention to participate in crowdfunding. By following these statements, we predict the dependent variable – **intention to participate**.

2.3 Research design, instrument and scales, sampling method

In order to answer the research questions and test stated hypotheses based on the selected studies employed the quantitative method. An online survey is recognized to be the most suitable primary data method to examine the research method. Also, the survey allows to determine the scope of the study, explore independent variables, and measure the outcome in the dependent variable. It is essential to advocate that chosen survey is a self-administered quantitative online survey, which authorized to collect a large amount of data of the population. Furthermore, an online survey has chosen the relatively low cost of creating and the simplicity of exporting the collected data.

In the survey, we represent the specific project from Kickstarter, "NINU SMART PERFUME | 100-in-1 fragrance bottle". The project is based in Ljubljana, Slovenia. In the survey, we predict the scenario that the project's final goal is \$16,860, and the individuals intend to invest \$200 in the project. According to this scenario, people have been asked to answer the following questions in the survey. The project has tangible rewards, such as a copy of the product. This study believes that by giving the specific project to the respondents, it will be clearer to analyze the human psychological needs.

Moving toward to survey design, the essential element to keep the survey short and precise. To avoid misinterpretation in questions for the questionnaire are obtained questions from the previous studies (Table 1). The previous studies questions were used as an example to create

research questions that are strongly constructed to receive answers for the chosen analysis variables. The tool to create an online survey has used online website questionpro. An online survey is created in the English language to avoid errors that can occur in language translation. English is known as the global language, which allows reaching a large audience. Also, it is important to note that ten international students tested the survey questionnaire before being published to the Internet platforms or forums. A pretest allows avoiding mistakes which can decrease data reliability. Also, it allows to understand that all questions were understood correctly.

Table 1

Constructs of the questionnaire

Construct	Measurement Items	References
<i>H1. The need to receive tangible rewards positively influence the intention to participate in Crowdfunding projects.</i>		Frydrych et al., 2014; Madrazo-Lemarroy et al., 2019; Yang et al., 2019; Kuo et al., 2020; Gunawan, Susanto, Raci, & Gunadi, 2019.
The need to receive tangible rewards	I decided to support the project because of the reward I can get in return for my participation;	
	I decided to support the project because I calculated that the reward would compensate my effort;	
	I decided to support the project because of the reward of the project is important to me.	
<i>H2. The need to receive monetary worth positively influence the intention to participate in Crowdfunding projects.</i>		Moysidou & Spaeth, 2016
The need to receive monetary worth	I expect to gain a good monetary return if this project succeeds	
	I may win big money with small money if I support this project	
	I may make money easily if I support this project	
<i>H3. The need to receive product innovativeness positively influence the intention to participate in Crowdfunding projects</i>		Gunawan, Susanto, Raci, & Gunadi, 2019
The need to receive innovativeness	The innovation of the product can catch my attention	
	I value innovation factor in Crowdfunding projects	
	Before participating in Crowdfunding projects, I will pay attention to the innovation of projects	
<i>H4. The need to receive sense of control positively influence the intention to participate in Crowdfunding projects.</i>		Shneor & Munim, 2019
The need to receive the sense of control	My engagement in contributing to crowdfunding campaigns is within my control.	
	I would be able to contribute to crowdfunding campaigns (if I wanted to)	
	The decision to contribute to crowdfunding campaigns is entirely mine	
	Whether or not I contribute to crowdfunding campaigns is entirely up to me	

<i>H5. The need to gain knowledge positively influence the intention to participate in Crowdfunding projects</i>		Yang et al., 2019
The need to gain knowledge	I use CFP to acquire business knowledge	
	I improve the understanding of the development or technology of the product in the future	
	I regularly obtain information from CFP and apply it in life	
	CFP provides quality contents for me to learn to make my own business project	
<i>H6. The need to receive sense of effectiveness positively influence the intention to participate in Crowdfunding projects.</i>		Madrazo-Lemarroy et al., 2019; Yang et al., 2019
The need receive sense of effectiveness	I decided to support the project because I like the notion that others acknowledge my support	
	I feel satisfies while influencing the design and development on the project	
	I decided to support the project because I like the feeling when I receive acknowledgement for participating	
	Supporting this project would create a favourable perception of me among others	
<i>H7. The need to receive sense of self-worth positively influence the intention to participate in Crowdfunding projects.</i>		Shneor & Munim,2019
The need receive sense of self-worth	I have confidence in my ability to support crowdfunding campaigns	
	I have the expertise needed to contribute to crowdfunding campaigns.	
	I am confident in my ability to navigate and use crowdfunding platforms' websites	
	I am confident in my ability to contribute to campaigns through crowdfunding platforms' websites	
<i>H8. The need to receive sense of belonging positively influence the intention to participate in Crowdfunding projects.</i>		Yang et al., 2019; Gunawan, et al., 2019)
The need to receive sense of belonging	I enjoy being engaged in and interacting with the project's team	
	I enjoy contributing to innovation or being among the pioneers of new technology or business	
	I feel much attached to a crowdfunding community	
	I share the same objectives with other crowdfunding community members	
	I see myself as a part of the crowdfunding project community	
	I give a lot of time and efforts to participate in the online community	
<i>H9. Higher risk negatively moderates the effect of need to receive tangible rewards on intention to participate in Crowdfunding projects.</i>		Yang et al., 2019
Risk	Worried that the quality of the crowdfunding product cannot meet the expectations.	
	Worried there will be a financial loss, as they cannot receive the crowdfunding products.	

	Worried self-esteem will be wounded as they cannot achieve the goal of the crowdfunding product..	
	Worried the project sponsor may publish false project information	
<i>H10. Herding behavior positively influence the intention to participate in Crowdfunding projects.</i>		Bretschneider et al., 2017; Dewi et al., 2020
Herding behaviour	My family suggested me to participate in crowdfunding projects	
	I follow others in deciding whether or not to contribute to a project	
	I would invest in a project because many other backers have already contributed to it	
	I am participating in projects introduced by online friends.	
Intention to participate in crowdfunding	Given the chance, I intend to participate in crowdfunding projects	Gunawan, et al., 2019
	Given the chance, I predict that I would participate in a crowdfunding project in the future	
	It is very likely that I will participate in a crowdfunding project in the near future	

Moving forward, the survey questionnaire included an introduction where respondents informed that the survey would take no more than 10 minutes to complete. Further, the survey asked essential demographic characteristics, such as gender, occupation, education level, location, and income. The survey will be shared within the groups (facebook groups, forums, friends, family members) where people are from different countries, and connected due to Crowdfunding interested.

Table 2

Constructs of the Demographic Characteristics

Demographics	Characteristics
Age	Under 18, 18-24, 25-34, 35-44, 45-54, 55-64, Above 64
Occupation	Self Employed, Private Sector, Public Sector, Unemployed, Student
Gender	Male, Female
Location (Country)	
Income per person	Under 500 €, 501 - 1000 €, 1001 - 1500 €, 1501 - 2000 €, Above 2001 €

Highest education level	High school, Some college, Trade/vocational/technical, Associates, Bachelors, Masters, Professional, Doctorate
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Later, the respondents were asked statements by using a Likert scale from 1-7. The scale helps gather and measure information that explains what intention each individual has to invest in reward-based Crowdfunding. After the data collected from the questionnaire, all information will be exported to Microsoft excel to test hypotheses and answer the research questions. The complete survey statements are included in Appendix A.

Instrument and scales

Understanding and applying the correct response scale is usually one of the most crucial decision (DeCastellarnau, 2017). Different types of scales construct to observed human behaviour, feeling and action that cannot be captured in a single variable or item (Boateng et al., 2018). Also, how survey questions are used and designed can affect the responses and impact the overall survey data quality (DeCastellarnau, 2017). According to the research model, this study applied a 7-point Likert scale to measure the intention of the participant's contribution. A Likert scale was developed in 1932 by psychologist Rensis Likert to measure psychologists' attitudes and opinions scientifically (Sullivan & Artino 2013). The typical rating scale commonly used in education research that employs questionnaires. Mostly Likert scale is a 5-7 points scale. According to Lyberg and colleagues, a scale with more points is more effective, and people can express their opinion more precisely and comfortably (1997). To test the hypothesis, we select optimal scale length, a 7-point scale, to convey more helpful information.

The following essential criteria in the construction of scale are labouing scale points. According to researcher of Menold numeric rating scale are less natural and is more difficult for responders to use it, meanwhile, measuring quality is higher with the verbal form of scale (2017). Also, it has found that the verbal 7-points category has higher inter-rater reliability than the numeric 7- points category rating scale. Overall, we implemented a 7-point category verbal rating scale (strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree).

Sampling method

In order to answer formulated research questions is needed to select sampling techniques which are divided into two types: probability and non-probability sampling. A non-probability convenience sampling technique was chosen in this study because of time consumption, low cost, and convenience. The study aims to analyze which motives drive investors to participate in crowdfunding platforms, but the questionnaire does not restrict people participation, considering gender, location, income, or investor experience. However, the survey requires that people be older than 18 years old since Crowdfunding regulations allow using funding portals from this age. Also, the respondents should have previous experience in social networks environment and online transactions since backers can donate through the online platforms.

As we advance, mostly previous studies directly sent a questionnaire to investors who already had funded a project or had experience in the crowdfunding industry. However, in these studies to examine the research model, we used different Internet platforms and forums due to no access to databases or a list of people who participate in crowdfunding. Moving forward, considering the size of the sample, it was used comparative research technique presented in table 3. To measure the size of respondents, where the population is at least 50,000 people. The research applied following formula is used of Dikćius, 2005, to calculate the size of the required sample.

N - required sample size

z - standard error associated with the selected level of confidence

p - estimated share of the population

e - valid sampling error

$$n = (z)^2 p (1 - p) / e^2$$

This study calculates a 95% confidence level and a margin of error of 5%; furthermore, we obtain that z is 1.96. After the calculation, the sample size is equal to 385.

Table 3.

Comparable Researches sampling method

No.	Author	The aim of research	Type of questionnaire	Measurement	Sampling	Number of respondents
1.	Jiang et al. (2020)	Analyzing three values that satisfy crowdfunders different needs: utilitarian, socioemotional, and participatory values.	Online questionnaire	Krippendorff's alpha	Probability	195

2.	Rodriguez-Ricardo et al. (2018)	Determine which personal and social traits can increase individuals' intention to participate in crowdfunding	Online questionnaire	Cronbach's alpha coefficient	Non-probability	244
3.	Bretschneider & Leimeister (2017)	To empirically investigate the crowd's motivation to fund incentive-based crowdfunding initiatives.	Online questionnaire	Fornell-Larcker criterion; PLS approach	Probability	309
4.	Yang et al.(2019)	To understand the public's intention in investing in crowdfunded projects in China from social exchange theory and customer value perspective	Online questionnaire	Kaiser-Meyer-Olkin; varimax rotation	Non-probability	765
5.	Efrat et al.(2019)	To investigate the role of supporter engagement and its link to campaign success	Online questionnaire	-	Probability	116
6.	Herrero et al.(2020)	The intention to fund a crowdfunding project, and the intention to spread positive physical and electronic word-of-mouth about it.	Online questionnaire	structural equation modeling (PLS-PM, PLS-SEM)	Non-probability	311
7.	Wang & Yang (2019)	To explore two questions : „Which kinds of information will affect backers' funding intentions? Do individual characteristics affect backers' funding decisions?“	Online questionnaire	Cronbach's Alpha	Probability	212
8.	Shneor & Munim (2020)	To analyze contribution intentionality and behavior, as well as their	Online questionnaire	cochran's formula	Probability	560

		antecedents by the Theory of Planned Behavior (TPB)				
9.	Ferreira & Pereira (2018)	To understand the underlying motivations of those investing in equity and reward crowdfunding.	Paper-based questionnaire	-	Probability	53
10.	Kuo et al (2019)	To explore the influential antecedents of backing intention on crowdfunding platforms using social cognitive theory.	Online questionnaire	confirmatory factor analysis (CFA)	Non-probability	221
11.	Ryu et al.(2016)	„Examines the relationship between funder motivations and actual funding behavior on crowdfunding platforms.“	Online questionnaire	Cronbach's Alpha	Probability	559
					Average	322

3. DATA ANALYSIS

3.1. Sociodemographic respondents' characteristics

To analyze the questionnaire results, the studies applied IBM SPSS statistical software 26. At the survey, 354 respondents participated in the study and have been used as the final samples to explain data results. Sociodemographic characteristics regarding respondents are presented in Table 4.

The prevalence and percentage of gender were shown in the table below from the research. 354 respondents, 147 were male, and 207 were females, responded to the questionnaire. Furthermore, the gender of females took the majority rate, which was 58.5%, while male respondents took 41.5%. The following Sociodemographic variable is the age, included age range: under 18, 18-24 years old; 25-34 years old; 35-44 years old and 45-54 years old, 55-64 years old, and older than 64 years old. There showed that 150 respondents belonging to the age group 24 to 34 have the highest percentage of 42.4 %. Furthermore, the age group from 35 to 44 indicated 93 respondents, assuming 26.3%. Moreover, 42 of them involved in the age group of 18 to 24, consist 11.9%. Whereas there a few groups with the least respondents, 45-54 with 35 respondents,

assuming 9.9 %. The group under 18 with 7 respondents, assuming 2 %, 55-64 age group with the number of 24 respondents, assuming 6.8 %, and smallest group older than 64 with respondents of 64, indicated 0.8 %.

The table below shows 354 respondents' income levels per person. In income level of 1001-1500, € have 117 target respondents, assuming 33.1%. Furthermore, 86 respondents own the income 501-1000 €, assuming 24.4%. The following respondents' income level is 1501-2000 €, target respondents 81, assuming 22.9%. The rest of the respondents' income levels are under 500 €, with 30 of the target respondents assuming 8.5%. Moreover, the last income level above 2001 € was 40 respondents, assuming 11.3%.

From the table below, 141 respondents have a bachelor of degree and contain the highest percentage, 39.8%. Furthermore, 106 respondents hold master's degrees, representing 29.9%. Moreover, there are 28 respondents with some college degree (high school diploma), representing 7.8%. The 23 respondents response to be professional, representing 6.5%, and 16 respondents are in high school, representing 4.5%. However, only 13 responds have trade / vocational/technical school, assuming 3.7%. Furthermore, the last is doctorate degree with 7 respondents, representing 2.0%.

Table 4.

Sociodemographic respondents' characteristics

Sociodemographic variable	Characteristic	N (%)
Gender	Male	147 (41.5%)
	Female	207 (58.5%)
Age (years)	Under 18	7 (2.0%)
	18-24	42 (11.9%)
	25-34	150 (42.4%)
	35-44	93 (26.3%)
	45-54	35 (9.9%)
	55-64	24 (6.8%)
	Older than 64	3 (0.8%)
Income level per person	Under 500 €	30 (8.5%)
	501-1000 €	86 (24.3%)
	1001-1500 €	117 (33.1%)
	1501-2000 €	81 (22.9%)
	Above 2001 €	40 (11.3%)
Highest education	High school	16 (4.5%)
	Some college	28 (7.9%)
	Trade / vocational / technical school	13 (3.7%)
	Associates	20 (5.6%)
	Bachelors	141 (39.8%)
	Masters	106 (29.9%)

	Professional	23 (6.5%)
	Doctorate	7 (2.0%)

3.2.Descriptive statistics

Participants were asked to indicate how much they agree or disagree with 42 statements related to constructs presented in Table A (seven-point Likert scale, 1 represents strong disagreement and 7 represents strong agreement with the statement). Scales scores are represented by the sum of the item scores. Higher scores on each scale indicate greater agreement and more expressed particular construct (e.g. stronger need to receive tangible rewards or higher risk for worrying and loss when participating in Crowdfunding projects). Cronbach alphas coefficients are high and presented in Table 5.

Descriptive statistics for the scales

Construct / scale	Cronbach α	Number of items	Minimum / maximum scores	Mean (stand. deviation)	Kolmogorov-Smirnov test (p)
Intention to participate in crowdfunding	0,87	3	3 / 21	15,2 (3,7)	0,120 (p<0,001)
The need to receive tangible rewards	0,77	3	6 / 21	17,2 (3,5)	0,183 (p<0,001)
The need to receive monetary worth	0,85	3	3 / 21	13,1 (4,2)	0,095 (p<0,001)
The need to receive innovatiness	0,87	3	7 / 21	17,8 (3,1)	0,146 (p<0,001)
The need to receive the sense of control	0,80	4	8 / 28	23,7 (4,2)	0,192 (p<0,001)
The need to gain knowledge	0,86	4	5 / 28	19,0 (4,9)	0,089 (p<0,001)
The need receive sense of personal effectiveness	0,89	4	4 / 28	22,7 (4,4)	0,131 (p<0,001)
The need receive sense of self-worth	0,85	4	6 / 28	21,6 (4,9)	0,117 (p<0,001)
The need to receive sense of belonging	0,91	6	7 / 42	25,7 (8,7)	0,101 (p<0,001)
Risk	0,96	4	4 / 28	19,5 (7,5)	0,134 (p<0,001)
Herding behavior	0,77	4	4 / 28	17,9 (5,3)	0,097 (p<0,001)

Linear regressions were run to test the hypotheses. Scale data distributions are not normal (p<0,05 for Kolmogorov-Smirnov test, Table 5), however data does not has outliers and sample size is quite large (N=354), so linear regression or parametric correlations may be performed. Statistical significance level $\alpha=0,05$.

3.3.Results

It is evaluated whether some sociodemographic variables (respondent's gender, age, income level and education level) may have an association with participation in Crowdfunding projects. Multiple linear regression was run with these factors as independent variables. Results reveal that regression model with sociodemographic variables is statistically significant (Anova $F(4, 348)=5,388$, $p<0,001$ (Table 6), however these variables explain only 5,8 % of dependent variable's dispersion that means only about 5,8 % of change in intentions to participate in Crowdfunding projects depend on sociodemographic factors ($R^2=0,058$; R^2 represents the proportion of the variance for a dependent variable that's explained by an independent variable. The higher R^2 is, the more dependent variable is related to predictor). Only respondent's age is statistically significant related to respondent's intentions to participate in Crowdfunding projects ($\beta=0,190$, $p=0,002$). The older is the respondent, the more intended he/she is to participate in Crowdfunding projects.

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	12,263		12,499	<0,001
Respondent's gender (2=female)	0,584	0,078	1,486	0,138
Respondent's age	0,612	0,190	3,122	0,002
Respondent's income level	0,245	0,074	1,201	0,231
Respondent's education level	-0,173	-0,072	-1,318	0,188
Anova $F(4, 348)=5,388$, $p<0,001$, $R^2=0,058$				

Table 6. Regression model statistics for relationship between intention to participate in Crowdfunding projects and sociodemographic factors.

H1. The need to receive tangible rewards positively influence the intention to participate in Crowdfunding projects.

The hypothesis is rejected. Linear regression model is not statistically significant (Anova $F(1, 345)=0,358$, $p=0,550$) and the need to receive tangible rewards is not statistically significantly related to intention to participate in Crowdfunding projects ($p>0,05$; Table 7).

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	15,892		15,920	<0,001

The need to receive tangible rewards	-0,034	-0,032	-0,599	0,550
Anova F(1, 345)=0,358, p<0,001, R ² =0,001				

Table 7. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive tangible rewards

H2. The need to receive monetary worth positively influence the intention to participate in Crowdfunding projects.

Results presented in Table 8 reveal that the need to receive monetary worth does not positively influence the intention to participate in Crowdfunding projects and is not statistically significantly related to it ($\beta=0,072$, $p>0,05$; regression model is not statistically significant: $F(1, 348)=1,820$, $p=0,178$).

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	14,496		22,963	<0,001
The need to receive monetary worth	0,062	0,072	1,349	0,178
Anova F(1, 348)=1,820, p=0,178, R ² =0,005				

Table 8. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive monetary worth.

H3. The need to receive product innovativeness positively influence the intention to participate in Crowdfunding projects.

Results reveal that the need to receive product innovativeness is statistically significant related to intention to participate in Crowdfunding projects and this association is positive – the stronger is the need, the more intended the respondent is to participate in the projects (coefficient $\beta=0,264$, $p<0,001$; Table 9). However independent variables effect on dependent variable is quite minor ($R^2=0,070$; $F(1, 350)=26,229$, $p<0,001$).

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	9,723		8,829	<0,001
The need to receive product innovativeness	0,313	0,264	5,121	<0,001
Anova F(1, 350)=26,229, p<0,001, R ² =0,070				

Table 9. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive product innovativeness

H4. The need to receive sense of control positively influence the intention to participate in Crowdfunding projects.

The hypothesis that the need to receive sense of control may positively influence the intention to participate in Crowdfunding projects was rejected. Regression model is statistically insignificant ($F(1, 352)=1,683, p=0,195$) and the need to receive sense of control variable is not statistically significantly related to dependent variable ($\beta=0,069, p>0,05$; Table 10).

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	13,813		12,334	<0,001
The need to receive sense of control	0,060	0,069	1,297	0,195
Anova $F(1, 352)=1,683, p=0,195, R^2=0,005$				

Table 10. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive sense of control.

H5. The need to gain knowledge positively influence the intention to participate in Crowdfunding projects

The need to gain knowledge positively influence the intention to participate in Crowdfunding projects: regression coefficient $\beta=0,364$ ($p<0,001$; Table 11). The stronger is the need to gain knowledge, the more intended the respondent is to participate in the Crowdfunding projects. Independent variables effect on dependent variable is not strong (only 13,2% of dependent variable's dispersion may be explained by these independent variables but R^2 is higher compared to previous models).

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	10,014		13,549	<0,001
The need to gain knowledge	0,274	0,364	7,294	<0,001
Anova $F(1, 350)=53,501, p<0,001, R^2=0,132$				

Table 11. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to gain knowledge.

H6. The need to receive sense of personal effectiveness positively influence the intention to participate in Crowdfunding projects

Results presented in Table 12 reveal that the need to receive sense of personal effectiveness may positively influence the intention to participate in Crowdfunding projects (regression coefficient $\beta=0,151$, $p=0,005$). The more express the need to gain sense of personal effectiveness is, the more respondent prefer participation in Crowdfunding projects.

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	12,349		11,950	<0,001
The need to receive sense of personal effectiveness	0,128	0,151	2,852	0,005
Anova F(1, 352)=8,136, p=0,005, R ² =0,023				

Table 12. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive sense of personal effectiveness.

H7. The need to receive sense of self-worth positively influence the intention to participate in Crowdfunding projects

Hypothesis is rejected - the need to receive sense of self-worth is not statistically significant related to intention to participate in Crowdfunding projects (coefficient $\beta=0,033$, $p>0,05$; regression model is statistically insignificant, F(1, 349)=0,374, $p=0,541$; Table 13).

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	14,670		16,340	<0,001
The need to receive sense of self-worth	0,025	0,033	0,612	0,541
Anova F(1, 349)=0,374, p=0,541, R ² =0,001				

Table 13. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive sense of self-worth.

H8. The need to receive sense of belonging positively influence the intention to participate in Crowdfunding projects

The intention to participate in Crowdfunding projects and the need to receive sense of belonging are positively related (coefficient $\beta=0,441$, $p<0,001$; Table 14). Regression model with the need to receive sense of belonging variables explains 19,5% of intention's to participate in Crowdfunding projects dispersion.

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	10,434		18,891	<0,001
The need to receive sense of belonging	0,187	0,441	9,195	<0,001
Anova F(1, 351)=84,544, p<0,001, R ² =0,195				

Table 14. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive sense of belonging.

H9. Higher risk negatively moderates the effect of need to receive tangible rewards on intention to participate in Crowdfunding projects

At first it was evaluated if moderation has statistically significant effect on interaction between independent and dependent variables, regression model with standardized variables and its interaction (multiplication) was run. Results reveal that moderator (perceived risk) has a significantly statistical effect on dependent (intention to participate in Crowdfunding projects) and independent variables (the need to receive tangible rewards; interaction variable's correlation coefficient $\beta=0,254$ (>0 so positive effect); Table 15). The hypothesis is rejected as higher risk positively moderates the effect of need to receive tangible rewards on intention to participate in Crowdfunding projects.

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	14,618		62,617	<0,001
Perceived risk (standardized)	0,545	0,149	2,347	0,019
The need to receive tangible rewards (standardized)	-0,861	-0,237	-3,652	<0,001
Interaction variable (Perceived risk (standardized) x The need to receive tangible rewards (standardized))	1,140	0,254	4,851	<0,001
Anova F(3, 345)=15,472, p<0,001, R ² =0,119				

Table 15. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive sense of belonging, risk variable and its interaction.

Second, when evaluating the risk in participating in Crowdfunding projects perception as moderator on relationship between the need to receive tangible rewards and intention to participate in Crowdfunding projects, separate regression models were tested. Risk scale mean for this sample is 19,5 points (Table 5), so respondents were divided into 2 samples: lower risk perception

group (who gained Risk scale score below 20 points, N=145 (41%)) and higher risk perception group (who gained Risk scale score 20 points and above, N=209 (59%)).

The hypothesis is rejected. Higher risk positively moderates the effect of need to receive tangible rewards on intention to participate in Crowdfunding projects. For respondents who perceive lower risk the need to receive tangible rewards is not statistically significant associated to participation ($p > 0,05$ for regression coefficient β). And vice versa, for respondents who perceive higher risk higher need to receive tangible rewards is related to stronger intentions to participate in Crowdfunding projects ($\beta = 0,165$, $p = 0,019$; however $R^2 = 0,027$ and represents a very small effect).

Moderator (condition)	Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Perceived low risk	Constant	16,914		10,966	<0,001
	The need to receive tangible rewards	-0,071	-0,058	-0,693	0,489
	Anova F(1, 142)=0,480, p=0,489, R ² =0,097				
Perceived high risk	Constant	10,473		5,549	<0,001
	The need to receive tangible rewards	0,234	0,165	2,372	0,019
	Anova F(1, 202)=5,626, p=0,019, R ² =0,027				

Table 16. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the need to receive tangible rewards with different risk perception level.

H10. Herding behavior positively influence the intention to participate in Crowdfunding projects

Herding behavior may positively influence the intention to participate in Crowdfunding projects (coefficient $\beta = 0,251$, $p < 0,001$, Table 17). The more herding behavior is expressed, the stronger intension to participate in Crowdfunding projects the person has.

Dependent variable: Intention to participate in Crowdfunding projects.	Unstandardized coefficient B	Standardized coefficient β	t	p
Constant	12,102		17,982	<0,001
Herding behavior	0,176	0,251	4,867	<0,001
Anova F(1, 352)=23,684, p<0,001, R ² =0,063				

Table 17. Regression model statistics for relationship between intention to participate in Crowdfunding projects and the herding behavior.

The findings for the study were obtained with the use of various data analysis methods. The features of the sampled demographics are acquired from the descriptive analysis. The SPSS test of constructs used in the questionnaire is determined. Finally, the inferential analysis proceeds to study the determinants of intention to participate in reward-based crowdfunding. In the following chapter, the conclusion and proposals will be discussed from the results obtained in this study.

CONCLUSIONS

The master thesis used self-determination theory to analyze the relationship between inborn psychological need for autonomy, competence and relatedness to motivation to participate in crowdfunding projects. First, the studies used autonomous motivation, which allows selecting the most important factors, could increase participating motivation. As in the research model is represented were are used five independent variables, which are tangible rewards, monetary worth, innovativeness, feeling of control, and knowledge with the dependent variable of intention to participate in rewards-based crowdfunding. The result based on the ANOVA has shown that humans needs of the need to receive tangible rewards, the need for monetary worth and the feeling of control do not have a significant impact on intention to participate in crowdfunding. Therefore, the hypothesis is rejected.

The master thesis disagrees with the previous studies that rewards are a leading motivation for participating in a crowdfunding project. Also, the tangible rewards it is not a control regulation that impacts on an individuals behaviour. The current studies agree with the cognitive evaluation sub-theory that tangible rewards reduce the feeling for autonomy and do not have affects on the intention to participate. Either, it was rejected that monetary worth has a positive influence on intention to participate. After the result, we agree with the previous studies that monetary rewards are not the outcome that backer's motivated. Also, monetary worth does not make higher a level of autonomy. To increase autonomous motivation, we predict that the need to receive the feeling of control over the action should have a positive intention to participate in crowdfunding. However, the results show that autonomous motivation, a sense of control, or a feeling of freedom have no influence on motivation to participate. It confirms that the project's creators can offer a lower reward tier, and there is no need to offer a bigger number of rewards for the feeling of the freedom to choose.

However, there is a high positive association between the need to receive innovation and the need to gain knowledge. From the results, both independent variables show a positive influence on the intention to participate. The stronger is the needs, the stronger intention to participate in crowdfunding. As we mentioned, crowdfunding offers a unique fundraising opportunity for

startups by bringing new products into the market. By the time it allows thousands of innovating projects to raise the money. In the master thesis, we predict that people have purchasing intention not only because of the need to receive a new product but also is crucial to receive an innovative product. After the result, it shows that individuals are seeking innovation and the need to receive the innovativeness effect of autonomy on the intention to participate in crowdfunding. Furthermore, self-determination theory proposed that individuals are linked to natural growth and learning. The importance of gaining knowledge increases their interest and encourages them to be involved in certain activities. Since crowdfunding reaches hundreds of thousands of people with different needs, we predict that backers need to gain autonomous motivation by natural knowledge growth. The results show that individuals naturally tend to obtain knowledge and use it. The project's creators should consider that providing useful or interesting information to individuals will be increased autonomous motivation, directly affecting intention to participate.

Secondly, the self-determination theory allows analyzing the people's need for competence (sense of efficacy and feeling good at something). Our primary hypothesis was that both needs were positively associated with crowdfunding participation. However, as a result, it shows that the need to feel a sense of self-worth is not significantly related to the intention to participate in crowdfunding. It represents that even if individuals are not confident, not capable, or cannot support the project, it does not matter. Even the low sense of being good on crowdfunding does not harm the intention to participate. However, the need for competence to feel effective is significantly essential. Individuals need to feel like we've done a good job positively influencing the intention to participate in the crowdfunding project. As long as crowdfunding increases effectiveness, the individuals feel intrinsically motivated to engage in an activity.

The last need critical in self-determination theory is the need for relatedness. The need to interact, be connected or have a meaningful relationship with others has been explained as a positive motivation to participate in crowdfunding. The studies results show that the need to receive a sense of belonging are positively related to intention to participate in Crowdfunding projects. We agree with the previous studies that the need to be part of a group with the same beliefs and values is critical. People exchange not only ideas to get rewards. However, they need to have the universal human need of relatedness to belong in the social group.

Equally, the studies analyze the risk behaviour, which could negatively moderate the need to receive tangible rewards. The studies show that the risk significantly affects the intention to participate in crowdfunding. Furthermore, the result shows that the risk positively moderates the effect of the need to receive tangible rewards on intention to participate in Crowdfunding projects. Herbing behaviour has been used to analyze the human behaviour to act collectively as a part of

the group or tendency to follow others. As a result, it shows that herding behaviour positively influences the intention to participate in Crowdfunding projects. Therefore, the individuals trust other people's actions, such as recommendations and opinions, in deciding to participate in crowdfunding.

In sum, coming back to the three psychological needs for autonomy, competence, and relatedness, studies found the most vital needs affecting individual motivation. When individuals are satisfied with the need to receive innovativeness, effectiveness, gaining knowledge, and belonging in the group, they will be positively motivated to participate in crowdfunding. The findings of the current study support the propositions of self-determination theory and explain the different effects of all three psychological needs. Out of the three psychological needs, the need for autonomy seems to be the most significant predictor of intention to participate in crowdfunding, compared to the need for competence and relatedness. However, all these psychological needs must be fulfilled to be entirely self-determined.

LIMITATIONS OF THE RESEARCH STUDY

As every research has certain limitations, current studies also predict some limitations that may affect the research. The age category of 25-34 is disproportionate. The age difference should be evenly distributed. Especially the research has the lack of the age category from 45-54 and 55-64, and older than 64 years old. Furthermore, not all respondents know the crowdfunding platform. Even the explanation was mentioned at the starting of the survey. However, the respondents may not understand the concept of crowdfunding, and it can affect the results. Moreover, the selected project from Kickstarter is "NINU SMART PERFUME | 100-in-1 fragrance bottle" it may not be attractive to respondents, it could affect the results either. Especially considering the need to receive tangible rewards. Respondents may select the answer just because they have no interest in the presented product. However, they may be interested in the other project, and the results would be different.

The majority of the collected samples consist of friends and relatives of the author. Even the survey was published in the global forums related to crowdfunding—the biggest part of respondents is from Lithuania. Future research should be more focused on receiving the biggest part of the global population, not including friends or relatives. The time to collect research results was too short, which affected the number of respondents. The number of respondents is 354, however, the needed samples required at least 385.

FUTURE RESEARCH SUGGESTIONS

The current studies offer future research suggestions. In the research, they select tangible rewards. However, it would be interesting to compare intangible and symbolic rewards either. The previous studies argue that tangible rewards are the most critical factor in crowdfunding participation; however, as the result shows, it does not significantly affect participation. Furthermore, they select the need to receive innovativeness for extrinsic autonomous motivation. However, this research could explain only some categories of crowdfunding, such as technology, games, and arts, where the project offers tangible rewards. However, if the project does not offer tangible rewards, extrinsic motivation should be considered, such as the need to receive recognition.

Either, these studies have not analyzed the geographic difference. It would be interesting to analyze a few countries and compare how their psychological needs differ. Furthermore, in the survey, they use only one project from Kickstarter. However, it would be interesting to analyze two different projects, related food category projects and games or films. The two categories will show if the psychological needs differ regarding the different crowdfunding projects.

In the studies research, we have not divided the people who have experience in crowdfunding and who do not have experience. The studies focus on basic human needs. However, it may be different if the individuals have bigger experience than a person without knowledge about crowdfunding. In future research, we suggest analyzing both experienced and non-experience individuals.

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SUMMARY IN LITHUANIAN

MOTYVACIJA DALYVAUTI SUTELKTIŅIO FINANSAVIMO PROJEKTUOSE SAVIDETERMINACIJOS TEORIJS POŽIŪRIU

JUSTINA BAZYTĖ

Magistrinis darbas

Rinkodaros ir integruotos komunikacijos programa

Ekonomikos ir verslo administravimo fakultetas, Vilniaus universitetas

Darbo vadovas prof. Mindaugas Degutis, Vilnius, 2022

SANTRAUKA

59 puslapiai, 17 lentelių, 2 paveikslai, 96 literatūros šaltiniai.

Pagrindinis šio magistro darbo tikslas – pritaikyti savideterminacijos teoriją ir pasiūlyti tyrimo modelį, apimančią įgimus psichologinius žmogaus autonomijos, kompetencijos ir sąryšingumo poreikius, siekiant nuspėti asmenų ketinimą dalyvauti sutelktinio finansavimo projektuose.

Magistro darbą sudaro trys pagrindinės dalys: literatūros analizė, metodika ir tyrimo analizė, klausimyno rezultatai ir išvados su rekomendacijomis. Literatūros analizėje atsižvelgiama į ankstesnius tyrimus – apžvelgiama rėmėjų finansavimo ketinimai ir paaiškinama savideterminacijos teorija.

Remiantis literatūros analize, ir išanalizavus ankstesnius tyrimus, nustatyta, kad asmenys ketina dalyvauti sutelktiniame finansavime dėl įgimtų psichologinių žmogaus poreikių gauti apčiuopiamą atlygį, piniginę vertę ir produkto novatoriškumą, taip pat, dėl vidinių poreikių gauti kontrolės jausmą, ir poreikį įgyti žinių. Siekdami padidinti kompetencijos ir sąryšingumo motyvaciją, prognozuojame, kad būsimų rėmėjų poreikiai yra įgyti efektyvumo, savivertės jausmą. Pagrindinis anketos tikslas – išsiaiškinti, kokie veiksniai labiausiai veikia ketinimą dalyvauti sutelktiniame finansavime. Rezultatas buvo renkamas atliekant statistines apklausas, o jų rezultatas buvo apdorotas SPSS analitine programine įranga. Likerto tipo atsako skalės suderinimui buvo naudojama Cronbacho alfa. Be to, hipotezėms patikrinti buvo atlikta tiesinė regresija.

Darbas atskleidė, kad asmenys yra savarankiškai motyvuoti gauti produkto inovatyvumą ir įgyti žinių. Kad būtų visiškai motyvuoti, asmenys turi jausti veiksmingumo ir priklausymo jausmą. Jei

patenkinami visi trys fiziologiniai poreikiai, rėmėjų motyvacija dalyvauti sutelktiniame finansavime didėja.

SUMMARY IN ENGLISH

MOTIVATION TO PARTICIPATE IN CROWDFUNDING PROJECTS FROM A SELF-DETERMINATION THEORY PERSPECTIVE

JUSTINA BAZYTĖ

Master thesis

Marketing and integrated communications programme

Faculty of Economics and Business Administration, Vilniaus University

Supervisor prof. Mindaugas Degutis, Vilnius, 2022

SUMMARY

59 pages, 17 tables, 2 figures, 96 references.

The primary purpose of this master thesis is to apply the self-determination theory and propose a research model that includes the inborn psychological human needs for autonomy, competence and relatedness to predict individuals intention to participate in crowdfunding projects.

The Master thesis consists of three main parts: literature analysis, methodology and research design, questionnaire results and conclusion with recommendations. Literature analysis observes previous research studies—presents backers' funding intention, and explains the self-determination theory.

Following the literature analysis, the studies carried out the individuals intend to participate in crowdfunding because of autonomous human needs to receive tangible rewards, monetary worth, and innovativeness of the product—furthermore, intrinsic needs to receive a feeling of control the need to gain knowledge. To increase the motivation of competence and relatedness, we predict backers' need to receive a sense of effectiveness, self-worth and a sense of belonging. The primary purpose of the questionnaire is to find out with factors have the strongest effect on the intention to participate in crowdfunding. The result was collected through statistical surveys, and their result was processed with analytical Software at SPSS. Cronbach's Alpha was used to

determine the alignment of the Likert-type response scale. Furthermore, linear regressions were run to test the hypotheses.

The thesis revealed that individuals are autonomously motivated to receive product innovativeness and gain knowledge. To be fully motivated, individuals need to receive a sense of effectiveness and belonging. If all three physiologic needs are fulfilled, backers' motivation to participate in crowdfunding increases.

Appendix A: Questionnaire

Logic Settings

Hello,

As part of my master thesis in marketing and integrated communication at Vilnius university, I am conducting this survey to understand the intention to participate in crowdfunding. It will take approximately 10 minutes to complete the questionnaire.

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Thank you very much for your time and support. Please start with the survey now by clicking on the Continue button below.

Note: In this survey, the term crowdfunding is defined as the practice of funding a project or venture by raising small amounts of money from a large number of people, typically via the Internet, which represents a form of crowdsourcing and alternative financing for donation, reward (products or services).



**Crowdfunding: Raising money from many people using an online platform.*

Suppose you are generally interested in the latest technology products and are willing to invest in producing a NINU SMART PERFUME | 100-in-1 fragrance bottle that creates 100 scents in one bottle by using its AI-enhanced app. [see photos of the product below]

The project's final goal is \$16,860, and you have the intention to invest \$200 in the project. According to this scenario, please choose the closest answers to you in the following questions in the survey.

If you have already experience in Crowdfunding projects, please choose the closest one to your crowdfunding experience.



What is your gender?

- Male
- Female

Add Question

Page Break

Separator

Age:

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- Above 64

Occupation:

- Self Employed
- Private Sector
- Public Sector
- Unemployed
- Student

Add Question

Page Break

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Validation Logic Settings

Income level:

- Under 500 €
- 501 - 1000 €
- 1001 - 1500 €
- 1501 - 2000 €
- Above 2001 €

Validation Logic Settings ⋮

Highest education level:

- High school
- Some college
- Trade/vocational/technical
- Associates
- Bachelors
- Masters
- Professional
- Doctorate

[Add Question](#) [Page Break](#) [Separator](#)

Location (Country)

Answer text

Appendix B: Results of questionnaire in SPSS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,242 ^a	,058	,047	3,605	,058	5,388	4	348	,000

a. Predictors: (Constant), education, gender, age, income_level

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,263	,981		12,499	,000
	gender	,584	,393	,078	1,486	,138
	age	,612	,196	,190	3,122	,002
	income_level	,245	,204	,074	1,201	,231
	education	-,173	,131	-,072	-1,318	,188

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,032 ^a	,001	-,002	3,663	,001	,358	1	344	,550

a. Predictors: (Constant), TANG_REWARDS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15,892	,998		15,920	,000
	TANG_REWARDS	-,034	,057	-,032	-,599	,550

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,072 ^a	,005	,002	3,611	,005	1,820	1	347	,178

a. Predictors: (Constant), MONETARY_WORTH

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14,496	,631		22,963	,000
	MONETARY_WORTH	,062	,046	,072	1,349	,178

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,264 ^a	,070	,067	3,542	,070	26,229	1	349	,000

a. Predictors: (Constant), INNOVATIVENESS

Coefficients^a

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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		B	Std. Error	Beta		
1	(Constant)	9,723	1,101		8,829	,000
	INNOVATIVENESS	,313	,061	,264	5,121	,000

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,069 ^a	,005	,002	3,690	,005	1,683	1	351	,195

a. Predictors: (Constant), SENSE_CONTROL

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13,813	1,120		12,334	,000
	SENSE_CONTROL	,060	,046	,069	1,297	,195

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,364 ^a	,132	,130	3,440	,132	53,201	1	349	,000

a. Predictors: (Constant), GAIN_KNOWLEDGE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,014	,739		13,549	,000
	GAIN_KNOWLEDGE	,274	,038	,364	7,294	,000

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,151 ^a	,023	,020	3,657	,023	8,136	1	351	,005

a. Predictors: (Constant), SENSE_PERSONAL_EFFECTIVENESS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,349	1,033		11,950	,000
	SENSE_PERSONAL_EFFECTIVENESS	,128	,045	,151	2,852	,005

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,033 ^a	,001	-,002	3,686	,001	,374	1	348	,541

a. Predictors: (Constant), SENSE_SELF_WORTH

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14,670	,898		16,340	,000
	SENSE_SELF_WORTH	,025	,041	,033	,612	,541

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,441 ^a	,195	,192	3,325	,195	84,544	1	350	,000

a. Predictors: (Constant), SENSE_BELONGING

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,434	,552		18,891	,000
	SENSE_BELONGING	,187	,020	,441	9,195	,000

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,251 ^a	,063	,061	3,580	,063	23,684	1	351	,000

a. Predictors: (Constant), HERDING_BEHAVIOR

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,102	,673		17,982	,000
	HERDING_BEHAVIOR	,176	,036	,251	4,867	,000

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,058 ^a	,003	-,004	3,747	,003	,480	1	141	,489

a. Predictors: (Constant), TANG_REWARDS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		

1	(Constant)	16,914	1,542		10,966					,000
	TANG_REWARDS	-,071	,103		-,058	-,693				,489

a. Dependent Variable: CROWDFUNDING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,165 ^a	,027	,022	3,517	,027	5,626	1	201	,019

a. Predictors: (Constant), TANG_REWARDS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,473	1,887		5,549	,000
	TANG_REWARDS	,234	,099	,165	2,372	,019

a. Dependent Variable: CROWDFUNDING