Warm-Glow Giving, Hedonism, and Their Influence on Muslim User Engagement in a Loan-Based Crowdfunding Platform

Juliana Sutanto, Lancaster University, j.sutanto@lancaster.ac.uk

Helena Wenninger, Lancaster University, helena.wenninger@gmx.de

Handre Duriana, Waqqash Archery[1], handre.duriana@gmail.com

Abstract

This paper investigates how platform design features affect the funding motivation of Muslim users on a loan-based crowdfunding platform. Theoretically grounded in Andreoni's warm-glow giving theory and Sober and Wilson's model of evolutionary and psychological giving, this work has high practical relevance in light of the increasing demand for Islamic financial products. Loan-based crowdfunding platforms are important to the unique context of this research since Islamic religious constraints regulate monetary transactions concerning lending. We used a scenario-based survey developed on the basis of a pilot study and confirmed by our manipulation check. The results showed that 'hedonism' represented by monetary interest negatively affected Muslim users' willingness to engage in a loan-based crowdfunding platform. This finding challenges the commonly agreed-upon egoistic motivator for loan-based crowdfunding platforms (i.e., monetary interest) that is designed based on Western Christian and Chinese Confucian capitalist economic and financial paradigms. Remarkably, we also found that the Muslim funders' willingness to engage on the hedonistic platform had an exponentially positive effect on the amount of money that the funders are willing to lend. By contrast, 'warm-glow giving' manifested as belongingness to a community had no effect on users' engagement. Implications of these findings for theory and practice are discussed.

Key words: loan-based crowdfunding, platform design, Muslim users, willingness to engage, amount to lend, lender motivation

[1] Portions of this research were done while the author was a student at Lancaster University

Introduction

Crowdfunding, the idea of raising relatively small contributions of funding for a project or a venture from a large number of investors (e.g., Fleming and Sorenson 2016; Schwienbacher and Larralde 2010), is not new. The emergence of online crowdfunding platforms facilitates the reach of millions of potential investors (Burtch et al. 2013). Recent technological developments, such as video-hosting and web-based payments, unlock new opportunities for project owners to pitch ideas, persuade investors, engage in social networks, and collect funds (Gerber and Hui 2013; Ordanini et al. 2011).

In extant research on crowdfunding, most studies examine the funders or the project owners, such as how the funders decide which projects to fund and how the project owners present themselves and their projects to attract funding (e.g., Gerber and Hui 2013; Gleasure and Feller 2016a; Mollick 2014). Interestingly, while loan-based crowdfunding has by far the largest funding volume and is growing (Fleming and Sorenson 2016), research on loan-based crowdfunding is scarce and the loan lender's motivation is still underexplored (e.g., Jiang et al. 2018). Perhaps because the lenders receive interest on the amount lent, their motivation is assumed to be straightforward – but as our study shows, it is not. Further, the few studies on crowdfunding that examine the design of crowdfunding mostly focus on the design of the economic incentives for the funders such as the posted price vs auction and the pre-ordering vs profit sharing (e.g., Belleflamme et al. 2014, 2015; Tomczak and Brem 2013).

The culture and values that determine monetary transactions and lending behavior are often overlooked (Burtch et al. 2014). The design of incentives for loan-based crowdfunding platforms is predominantly rooted in the Western Christian and Chinese Confucian capitalist economy and financial paradigms. It stands in sharp contrast with Muslims, an overlooked population in crowdfunding research, and their Islamic religious constraints. During the 2008 financial crisis, the Islamic financial system with its different incentive structure was largely resilient to the crisis (Al-Zumai and Al-Wasmi 2016). Since then, more investors are paying significant attention to Islamic-based investment opportunities. Ironically, researchers are examining crowdfunding in capitalism-based economies and much remains unknown about effective crowdfunding in the Islamic economic context. Therefore, there is an important need for an investigation into the Islamic financial system (e.g., Aldohni 2014) and the influence of religion on customer behavior (e.g., Assadi 2003). In this study, we investigate how platform design features affect the funding motivation of Muslim users on a loan-based crowdfunding platform.

Islam regulates monetary transactions concerning lending and investing. Existing loan-based crowdfunding platforms use interest-based systems or interests charged on the amount lent. Interest-based systems are forbidden by the Islamic principle known as Sharia law. These constraints concerning monetary transactions rooted in the Muslim religion are likely to influence Muslim lenders' engagement in loan-based crowdfunding platforms. In brief, the Quran encourages Muslims' benevolent spending and disapproves of the concept of taking interest from the money lent. Accordingly, the Muslim perspective for lending money is not in alignment with the incentives designed for loan-based crowdfunding platforms.

The trend to implement a Sharia-friendly system has certainly grown in financial services. With nearly two billion Muslims, Islam is the second-largest and fastest-growing religion in the world (Hackett et al. 2015). By 2050, Muslims and Christians are expected to make up an equal share of approximately 30% each of the world population (Hackett et al. 2015). Thus, it comes as no surprise that the Islamic banking sector is growing (Aldohni 2014), and attention to this largely understudied lender group has increased. For example, a new interest-free loan offered by the Norwegian bank Storebrand is appealing to Muslims who cannot take up ordinary loans because of their faith (Mortimer 2017). Loan-based crowdfunding platforms can increase their reach significantly by taking the religious constraints of the Muslim community into account and by integrating them into the platform design.

This research builds on Andreoni's theory of warm-glow giving (1990) and Sober and Wilson's model of evolutionary and psychological egoism (1998) to understand how loan-based crowdfunding platform design influences Muslim users' engagement. These theories explain how egoism in the form of warm-glow giving and hedonism drives human giving behavior. In our study, we translate these egoistic drivers into sense of community and loan interest respectively. While "sense of community" is a basic human need that is in line with Islamic laws that encourage building relationships with others, we expect the latter to be contested by the Muslim community. We use a scenario-based survey where every participant receives one randomly selected design out of three designs of a loan-based crowdfunding platform (i.e., warm-glow giving, hedonism, or the base altruism design). Investigating how the crowdfunding platform design impacts the Muslim funders' motivation is important for several reasons. From a theoretical view, the Muslim financial constraints may challenge the commonly agreed-upon motivators such as receiving monetary interest. From a practical perspective, our study is relevant because micro-loans can potentially stimulate economic growth in developing countries (Khavul 2010) where Muslim communities make up a remarkable percentage of the population. This highlights the need for loan-based crowdfunding that is suitable for Muslim users.

This paper is structured as follows. We first review the extant literature on crowdfunding. Then, we introduce our core theoretical foundation, which is Andreoni's warm-glow giving theory and enrich it with a model proposed by Sober and Wilson (1998), which enables us to differentiate further the aspects of egoism. We elaborate on the Islamic rules regarding lending money and how these may affect Muslims' behavior. Further, we develop our research hypotheses by building on the theories and those parts of Sharia law relevant to money lending. In the methodology section, we explain our research design, including a pilot study to derive the appropriate design variations for the main study, and then we present the manipulation check, data analysis, and results. Finally, we conclude with a discussion highlighting our theoretical and practical contributions.

Conceptual Background

Crowdfunding involves "an open call, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes" (Belleflamme et al. 2014, p. 588). As the term suggests, crowdfunding enables people from different backgrounds with similar interests to fund or financially support certain projects, efforts, or initiatives from others in a collective manner (Ordanini et al. 2011). Generally, there are two types of participants in crowdfunding: creators and funders. The creators are entrepreneurs or innovators who propose ideas, projects, or campaigns that require a considerable amount of funding. They pitch, persuade, and sell their ideas to other people (i.e., the crowd) on the crowdfunding platform through stories, videos, pictures, offers, or social interaction. Depending on the types of the crowdfunding platform, they are also known as founders, borrowers, fundraisers, or ventures (Schwienbacher and Larralde 2010; Gerber and Hui 2013; Burtch et al. 2013; Mollick 2014; Belleflamme et al. 2014). On the other side, the funders financially support certain ideas, projects, or campaigns that meet their interest through the platform. They represent the crowd that collectively funds the project without having a formal financial intermediary. They are also known as backers, supporters, investors, lenders, sponsors, crowdfunders, or contributors (Ordanini et al. 2011; Gerber and Hui 2013; Burtch et al. 2013; Moritz et al. 2015; Xu et al. 2016; Burtch et al. 2016).

Crowdfunding platforms vary depending on what they offer to funders. Commonly, four different types of platforms are distinguished in the literature (e.g., Fleming and Sorenson 2016; Kromidha and Robson 2016), namely reward-, equity-, donation- and loan-based crowdfunding. Reward-based crowdfunding is widely known as pre-purchasing since it usually invites the crowd to purchase products or goods in advance of their production or at the start of the project. They usually offer certain tangible or intangible rewards or pre-purchasing benefits

based on the amount of funding, for example Kickstarter.com and Indiegogo.com. Equity-based crowdfunding is also known as investment-based crowdfunding since it allows entrepreneurs to offer "a specified amount of equity or bond-like shares in a company on the Internet, hoping to attract a large group of investors" (Ahlers et al. 2015, p.1). Platforms like Crowdcube.com, Crowdfunder.com, and Shadowfoundr.com specifically aim to address the needs of entrepreneurs, small ventures, start-ups, and small-to-medium business owners. On the donation-based or charity crowdfunding platforms, the fundraisers do not offer monetary incentives, but rather information and feedback such as medication fees, cultural projects, animal care, education, and social projects on e.g., Chuffed.org and Razoo.com. Loan-based crowdfunding or group-lending crowdfunding platforms such as Prosper.com, Kiva.org, and Zopa.com enable the funders to lend money to project creators. As the name suggests, these platforms allow project creators to ask for loans with or without financial interest.

What We Know So Far About Crowdfunding

A growing body of work exists related to crowdfunding research published in the last decade. To investigate what we know so far about crowdfunding and to point out the relevant research gap, we conducted a literature review. This section positions our study against prior research. We identified the relevant research about crowdfunding by conducting an initial search in the leading journals in management science, information systems, and business venturing dating back to 2010 and searching the references cited in the identified papers for relevant peer-reviewed journal papers. We discovered four themes based on the main research objectives: 1) the emergence of crowdfunding, 2) success factors of crowdfunding projects, 3) motivation to contribute to a crowdfunding project, and 4) crowdfunding design. Papers that do not belong to any of these themes are classified as "others." We structured the extant literature on crowdfunding around these themes and discovered that reward-based crowdfunding is the most researched, whereas loan-based crowdfunding is the least popular (see Table 1), despite its highest funding volume (Fleming and Sorenson 2016).

Table 1. Classification of Reviewed Literature by Crowdfunding Type and Theme						
Research Theme	**Reward-Based**	**Equity-Based**	**Donation-Based**	**Loan-Based**	**General**	**Total**
1) How and why the crowdfunding phenomenon emerged	Ordanini et al. (2011)	Agrawal et al. (2014)			Lehner (2013)	10
	Stevenson et al. (2019b)	Ley and Waven (2011)			Lehner et al. (2015)	
	Voelker and McGlashan (2013)	Mamonov and Malaga (2019)			Rossi (2014)	
		Schwienbacher (2019)				
2) Why certain crowdfunding projects are more successful than others	Agrawal et al. (2015)	Ahlers et al. (2015)	Burtch and Chan (2019)	Burtch et al. (2013)	Belleflamme et al. (2013)	27
	Burtch et al. (2016)	Kleinert and Volkmann (2019)	Li et al. 2020	Burtch et al. (2014)		
	Colombo et al. (2015)			Kgoroeadira et al. (2019)		
	Cornelius and Gokpinar (2020)	Mortiz et al. (2015)				
	Frydrych et al. (2014)	Wu et al. (2015)		Lin and Viswanathan (2015)		
	Geva et al. (2019)					
	Gleasure et al. (2019)					
	Guan et al. (2020)					
	Hong, Hu, and Burtch (2018)					
	Kim and Hann (2020)					
	Kromidha and Robson (2016)					
	Lee and Sohn (2019)					
	Liang et al. (2019)					
	Mollick (2014)					
	Younkin and Kuppuswamy (2018)					
	Zheng et al. (2014)					
3) Motivation to contribute to crowdfunding projects	Burtch et al. (2015)	Bapna (2019)	Choy and Schlagwein (2016)	Allison et al. (2015)		20
	Burtch et al. (2018)			Jiang et al. (2018)		
	Du et al. (2019a)	Cholakova and Clarysse (2015)				
	Du et al. (2019b)		Gleasure and Feller (2016a)	Hildebrand et al. (2017)		
	Gerber and Hui (2013)					
	Li and Wang (2019)	Mahmood et al. (2019)				
	Ryu et al. (2020)					
	Thies et al. (2016)	Nitani et al. (2019)				
	Wessel et al. (2019)					
	Zvilichovsky et al. (2018)	Wallmeroth (2019)				
4) Crowd-funding design				Wei and Lin (2017)	Bellflamme et al. (2014)	4
					Belleflamme et al. (2015)	
					Gleasure and Feller (2016b)	
5) Others	Gleasure and Feller (2016c)	Mochakabadi and Volkmann (2020)	Aitamurto (2011)		Hossain (2015)	11
	Siering et al. (2018)	Stemler (2013)			Lehner and Harrer (2019)	
	Thies et al. (2016)	Stevenson et al. (2019a)				
	Tuo et al. (2019)				Tomczak and Brem (2013)	
	Xu et al. (2015)					
Total	34	15	5	8	10	72

1) The emergence of crowdfunding. Early publications focused on the emergence of crowdfunding as an alternative to traditional venture funding with some authors (Lehner 2013; Ley and Weaven 2011) proposing a research agenda for crowdfunding research. As an emerging phenomenon, the general investigations of the potential and implications for stakeholders such as entrepreneurs (Voelker and McGlashan 2013) and service managers (Rossi 2014) seem useful first steps. Ordanini et al. (2011) explained that crowdfunding changes the understanding of the customer from a target to an active investor and challenges the intermediary role of marketers and financial institutions. Lehner at el. (2015) argued that the increasing demand for an alternative source of funding for small- and medium-sized enterprises (SMEs) is an important reason behind the success of crowdfunding. Stevenson et al. (2019b) demonstrated a shift from established entrepreneurial hot spots to a more diverse range of regions, while Mamonov and Malaga (2019) emphasized the supplementing role of equity crowdfunding to traditional venture funding. Agrawal et al. (2014) explored the impact of equity-based crowdfunding, while Schwienbacher (2019) assessed the challenges of equity-based crowdfunding.

2) Success factors of crowdfunding projects. This theme has received by far the most attention from the scientific community (see Table 1). Researchers found that non-profit projects are more likely to get the desired funding (Belleflamme et al. 2013). Moreover, the funders and the project creators' geographical proximity and cultural similarity (e.g., Agrawal et al. 2015; Burtch et al. 2014; Lin and Viswanathan 2015), the project creators' social networks (e.g., Ahlers et al. 2015; Colombo et al. 2015; Hong et al. 2018; Li et al. 2020; Mollick 2014; Zheng et al. 2014), the project creators' personal characteristics (Burtch and Chan 2019; Kgoroeadira et al. 2018; Kim and Hann 2019), and the signals of project quality and founders' trustworthiness (e.g., Geva et al. 2019; Gleasure et al. 2019; Kromidha and Robson 2016; Lee and Sohn 2019; Liang et al. 2019; Moritz et al. 2015; Younkin and Kuppuswamy 2018) affect the success of the project getting the desired funding. Keeping funders updated with frequent announcements have a beneficial effect on the success of high-tech projects (Wu et al. 2015). By contrast, concealing information is a deterring factor (Burtch et al. 2016). In equity-based crowdfunding, effective signals in the form of detailed information about the project risks increase the likelihood of the project succeeding with its funding goal (Ahlers et al. 2015). Investor discussions also propel investments with the exception of some discussion topics such as market risk (Kleinert and Volkmann 2019). Moreover, nonfinancial investments, such as customer involvement in the form of product ideas for reward-based crowdfunding projects, have been shown to be beneficial (Cornelius and Gokpinar 2020). Finally, a project is perceived as having more legitimacy when the funding target is lower and the project duration is

shorter (Frydrych et al. 2014). Setting the right price for crowdfunding depends on the market size and subsequent advertising efforts (Guan et al. 2020).

3) Motivation to contribute to a crowdfunding project. This theme covers papers that investigate what motivates funders to contribute to a certain project. Previous research has investigated the phenomenon from an individual (funder), project, or platform perspective.

According to Gerber and Hui (2013), the funders' motivation to contribute to reward-based projects are to collect the reward, support people and causes, and be part of a community (Gerber and Hui 2013). Backers' prosocial motivation further increases with goal proximity and project prosociality (Li and Wang 2019). Also examining reward-based crowdfunding projects, Zvilichovsky et al. (2018) found that the funders' focus is on the product and less on the people. Additionally, backers prefer to have some options (Du et al 2019a), such as crowdfunding lottery (Du et al. 2019b) and early bird options (Wessel et al. 2019). Gleasure and Feller (2016a) showed that the funders' motivation to donate to individuals are predicated by personal interactions between the funders and the project creators, while donations to organizations are strongly influenced by the fundraising targets. Men and women show different preferences with women more likely than men to invest at the early funding stages (Ryu et al. 2020). For equity-based projects, the firm logos' complexity (Mahmood et al. 2019), firm attributes and owners' social media activities, financial statements (Nitani et al. 2019), and financial interest appear to be strong drivers for funders to invest in the projects (Cholakova and Chlarysse 2015). Interestingly, funders' willingness to contribute to a project may also depend on how much funding the project has already attracted. Burtch et al. (2013) provide evidence for a substitution model (partial crowding-out effect) in crowdfunding, indicating that funders will withhold or lower their funding instead of matching the earlier funding if they observe that other contributors have invested larger amounts than they would have. Similarly, Burtch et al. (2018) show the link between the existing capital accumulation and funders' decision to contribute. Additionally, the interest in investing in equity-based crowdfunding projects in the context of technology ventures increases with combined signals of product certification, prominent customers, and social proof (Bapna 2019). It is important to note that "the crowd" is not a homogenous group but a combination of investors with various profiles and motivations (Wallmeroth 2019).

In the context of prosocial lending, lenders respond positively to linguistic cues that present the venture as a chance to support others and not as a business opportunity (Allison et al. 2015). The impact of an opinion-based social interaction is more sustainable than the effect of action-based interactions (Thies et al. 2016). In the

presence of rewards, the bids of group leaders on loan-based crowdfunding platforms decrease the interest and increase the default rates (Hildebrand et al. 2017). Finally, data concealment is found to affect the conversion of potential funders in a reward-based crowdfunding platform (Burtch et al. 2015).

From the platform perspective, herding behavior on loan-based crowdfunding platform is influenced by the overall investment amount and the market share of the platform (Jiang et al. 2018). Choy and Schlagwein (2016) argued that IT affordances (i.e., the possibility of action enabled through the platform) affect funders' motivation on charity crowdfunding platforms. They distinguished IT affordances for charity crowdfunding into cognition and action affordances and concluded that these affordances motivate contributors by making donations more effective and more social.

4) Crowdfunding design. The last theme subsumes prior research that attempts to understand the design of crowdfunding and how it affects individuals' behaviors (Gleasure and Feller 2016b). For example, Belleflamme et al. (2014) compared two crowdfunding designs, i.e., pre-ordering and profit sharing, and discovered that entrepreneurs prefer the pre-ordering version if the required fund is smaller than the market size. Belleflamme et al. (2015) investigated the key features and economic forces (i.e., price structure, funders' behavior, social network structures and marketing aspects), which are at play to explain the design of crowdfunding platforms. A comparison between posted prices and auctions for loan-based crowdfunding shows the probability of funding for loans is higher for posted price loans (Wei and Lin 2017).

5) Others. This final miscellaneous theme contains a number of studies that do not fit in any of the above outlined themes, but cover a potpourri of topics. For example, a literature review that identifies crowdfunding as crowdsourcing (Hossain 2015), a neo-institutional perspective on crowdfunding (Lehner and Harrer 2019), fraudulent project detection (Siering et al. 2016), journalism as specific crowdfunding context (Aitamurto 2011), funders' satisfaction after funding a project (Xu et al. 2016), changes in the collective identity of a crowdfunding community (Gleasure and Feller 2016c), network effects (Thies et al. 2018), crowdfunding specific investment models (Tomczak and Brem 2013), the impact of the CrowdFund Act in the US (Stemler 2013), crowd biases in equity crowdfunding (Stevenson et al. 2019a) and a review of equity crowdfunding (Mochkabadi and Volkmann 2020).

What We Don't Know About Crowdfunding: Motivation for and Relevance of This Study

Table 1 shows the gaps in the existing knowledge of crowdfunding. While reward-based crowdfunding platforms and the success factors of crowdfunding campaigns have received significant attention, loan-based crowdfunding, contributors' motivation, and platform design are less researched (see Table 1). This comes as a surprise since the worldwide funding volume of loan-based crowdfunding triples the volume of reward-, donation- and equity-based crowdfunding combined (Fundly 2019). We refer to the related research to explain how our work adds new and relevant aspects that have not been investigated in previous studies, but that deserve attention.

Our research will address the following question: ***How do platform design features affect the funding motivation of Muslim users on a loan-based crowdfunding platform?***

Previous research on loan-based crowdfunding mostly focuses on market-driven mechanisms, such as herding behavior, which is affected by the overall investment amount and market share of the platform (Jiang et al. 2018), bids from group leaders (Hildebrand et al. 2017), and posted price loans (Wei and Lin 2017). Allison et al. (2015) used cognitive evaluation theory to investigate how the wording of the project narrative influences prosocial lenders. Choy and Schlagwein (2016) used affordance and motivation theory to investigate technical features of donation-based crowdfunding platform *as a whole* and how these features, which afford certain user interactions correlate with users' motivation to donate to charitable projects in comparison with offline settings. Previous research on loan-based crowdfunding as well as extant research on funders' motivation have not investigated how altering the design of a crowdfunding platform affects funders' motivation to participate in a project. We choose Muslim funders because they are an overlooked population in crowdfunding research. Islamic religious constraints regulate monetary transactions concerning lending and investing. This asks for a separate investigation as the research on Islamic banking (e.g., Aldohni 2014) and the influence of religion on customer behavior (e.g., Assadi 2003) shows. Focusing on the under-researched group of Muslim users makes our study on loan-based crowdfunding unique.

We build on Andreoni's warm-glow giving theory and Sober and Wilson's differentiated egoism aspects as a theoretical foundation to redesign a loan-based crowdfunding platform (see section "Theoretical Foundation"). Specifically, these theories help to explain what types of incentives may motivate Muslim users' contributions in loan-based crowdfunding (or not). Gleasure and Feller (2016a) also built their study on Andreoni's warm-glow theory, but focused on donation-based platforms and subsequently on the altruism aspect of this theory –

not on the egoism aspect. When people are donating money, they do not expect the recipient to return the money. However when people are lending money, they expect the recipient to return the money at some point of time in the future, often with interest. Hence in our study on loan-based crowdfunding for Muslim users, we focus on the other end of the continuum, i.e., egoistic instead of altruistic motivation. Our study offers a potential contribution by proposing that religious constraints may challenge the commonly agreed upon egoistic motivator, which is the interest rate in loan-based crowdfunding platforms.

Table 2 compares related work on loan- and donation-based crowdfunding investigating contributors' motivation with our research. In the next section, we elaborate on the theoretical foundation of this paper and develop research hypotheses.

Table 2. Comparison Between Related Research and This Work

Source	Context	Theoretical Foundation	Type	Focus on	Sample
Allison et al. (2015)	Compare intrinsic and extrinsic cues for Internet-based prosocial micro-lending	Cognitive Evaluation Theory	Quantitative	Project	Kiva.org (from 51 countries)
Choy and Schlagwein (2016)	Compare charitable crowdfunding – online and offline	Affordance theory; motivation theory	Qualitative	Project	Chuffed (Australia and US)
Gleasure and Feller (2016a)	Explain differences in motivation for charitable donations	Andreoni's warm-glow giving theory (focus on altruism)	Quantitative	Project	Razoo (New Zealand)
Hildebrand et al. (2017)	Investigate the effect of the bids of group leaders on the interest and default rates of loan-based crowdfunding	Literature on emerging financial intermediaries, incentive structures and technological innovation in banking	Quantitative	Platform	Prosper (US)
Jiang et al. (2018)	Investigate herding behavior in loan-based crowdfunding	Literature on herding behavior	Quantitative	Platform	Wdzj.com (China)
Wei and Lin (2017)	Compare posted price loan vs. auction on funders' motivation to make a loan	Game theoretical model	Quantitative	Platform	Prosper (US)
This work	Investigate how loan-based crowdfunding platform design features affect funders' motivation in communities with religious constraints	Andreoni's warm-glow giving theory and Sober and Wilson's evolutionary and psychological model (focus on egoism)	Quantitative	Funder	Own platform design (Indonesia's Muslim population)

Theoretical Foundation

Pure altruism implies that people contribute purely for idealistic reasons (Harbaugh et al. 2007; Andreoni 1990). From a normative perspective, pure altruism occurs when "individuals give solely because it improves the circumstances of the recipient and serves the public good" (Gleasure and Feller, 2016a, p.504). The focus is on the other person and the public good and not on the giver. Thus, neither the source nor the intent matters as long as the recipient/s are served (Harbaugh et al. 2007). On the other side of this spectrum is egoism, which is the direct opposite of pure altruism.

Egoism occurs when individuals give solely because of the expectation of profit (Altman 2015). In this case, altruistic aspects do not affect egoists' donations, as they are only motivated by their personal utility benefit. The theory distinguishes between different egoistic motivations. In the following section, we discuss warm-glow giving (Andreoni 1989) and hedonism (Sober and Wilson 1998), which are relevant for our context.

A feeling of warm-glow giving (Andreoni 1989, 1990) occurs from the act of giving itself, usually with reference to contributing to a project that increases the public good or is supposed to support a recipient (Altman 2015). In this case the motivation to give "is not purely to provide the public good per se," but rather to receive a personal reward, which may include gaining prestige and respect (Andreoni 1989, 1990; Altman 2015). The reward is associated with an emotional 'warm glow' when contributing (Ferguson et al. 2008) that is purely internal contentedness, usually a pleasant feeling or a boost in self-esteem (Anik et al. 2009, Harbaugh 1998). The strong motivational effect of warm-glow giving has been demonstrated in various experiments (e.g., Crumpler and Grossman 2008; Ferguson et al. 2008). The support for the motivational impact of warm-glow giving also comes from neuroscience. Harbaugh et al. (2007) demonstrated that the neural brain response in humans is similar when they transfer money to charity organizations and when they receive money. A second aspect of egoism in addition to warm-glow giving is hedonism (Sober and Wilson 1998). Hedonism incorporates psychological and evolutionary egoism. The ultimate desire of a hedonistic person is self- rather than other-directed; this represents the psychological component. The evolutionary component states that the contributor aims to increase his or her individual fitness in comparison to others. For example, obtaining a material benefit is self-directed and represents an individual advantage.

The phenomenon of pure altruism is useful in explaining the phenomenon of 'crowding-out' (Gleasure and Feller 2016a). If the funder is only interested in the overall welfare benefit or the overall benefit for the recipient of the loan, he or she may be discouraged from giving money in cases when the project has already attracted

some funding. Thus, 'crowding-out' helps to understand why the presence of some investment can end up discouraging prospective funders, instead of encouraging them. Pure altruism can harm a project because the potential funders think the needs of the individual or organization are already met or better met than those of others. These dynamics have been observed for reward-based crowdfunding projects where the potential funders did not contribute to a campaign that had already received a lot of support (Kuppuswamy and Bayus 2013). However, when the giver is not completely selfless in his or her giving as in the egoistic scenarios (i.e., warm-glow and hedonism), there is still a benefit for the giver in contributing – in the form of a warm glow or a material benefit. This explains why 'crowding-out' is not an absolute phenomenon (see Table 3 for details).

Table 3. Difference Between Pure Altruism, Warm-Glow Giving and Hedonism (based on Altman 2015; Andreoni 1989, 1990; Gleasure and Feller 2016a; Sober and Wilson 1998)

Characteristic	Pure Altruism	Egoism	
		Warm-Glow Giving	Hedonism
Reason to contribute	To improve the circumstances of the recipient and serve the public good	To gain a personal internal reward	To gain a private self-directed material utility benefit
With regard to the crowding-out phenomenon	Explains and generates the 'crowding-out' phenomenon	Does not create a 'crowding-out' effect and explains that it is not an absolute phenomenon	

Research Hypotheses

A variety of aspects influence the willingness to participate in a crowdfunding project. The previous section outlined how Andreoni's warm-glow giving theory and Sober and Wilson's model of evolutionary and psychological egoism provide a useful framework to study how persuasive technologies, such as online crowdfunding platforms, influence their users' giving behavior. However, further investigation is needed to determine to what degree warm-glow giving and hedonism are involved in persuading users to fund a project on a loan-based crowdfunding platform.

Many loan-based crowdfunding platforms advertise the potential to gain personal utility benefits. A key aspect of our research is to take religiously constrained Muslim users into account. Muslims have specific laws concerning monetary transactions that are widely known as Sharia law (Aldohni 2014). The Quran provides not only spiritual guidelines to Muslims but also a code of conduct that regulates peoples' material lives and businesses. With its foundation in the Quran, Islamic economic rules are much older than most Western economic paradigms (Presley and Sessions 1994). The most important aspects of Islamic economics that are relevant for this study are a sense of justice and equality, the duty to work, and the prohibition of interest for

loans. In the first aspect, the Quran encourages Islamic societies to guarantee basic services, including food and healthcare, for everybody. The second aspect aims at social justice and that every member of the society should use his or her abilities and skills in work. The application of the third aspect, the *riba* law, essentially prohibits conventional interest (Presley and Sessions 1994). While the first aspect demonstrates a deeply rooted need for charitable activities in Muslim societies, the second and third aspects condemn the concept of interest rates since all financial gains should be based on labor and money should not just increase the principal capital as a compensation for time, i.e., the duration of time the money is lent (Aldohni 2014). Thus, in particular, *riba* is in complete contrast with Western capitalist economic and financial paradigms and is, accordingly, in conflict with how most loan-based crowdfunding platforms are designed.

Generally, people take loans for two reasons - for personal consumption and for business investment. According to Noorzoy (1982), *riba* is unlawful for both types of loans. For personal consumption loans, the borrower must be considered to be in dire need of such a loan to maintain a minimum standard of living. Providing a loan without interest to someone who is in need is seen as a way to reduce income inequity, which is highly valued in Islamic law. For business investment loans, *riba* is prohibited to maintain the redistribution of purchasing power from the rich to the poor and to prevent the lender from making an income without labor. The law inhibits idle cash accumulation and encourages capital holders to invest directly through proprietorships, active partnerships, or purchases of shares; hence, it promotes a profit-sharing model in business investment (Noorzoy 1982). Islamic investors, consequently, should not be compensated by interest but should take other means into account (Presley and Sessions 1994).

Warm-glow giving or the emotional benefit for giving in support of an individual, an organization, or the society, has been shown as a strong driver of human behavior (e.g., Andreoni 1990). In the context of Islamic economics, warm-glow giving neither contradicts nor contests Sharia law, since the law regulates monetary transactions and not the psychological effect generated from the transaction. Therefore, the feeling of warm-glow generated as the result of funding or supporting a project should motivate crowdfunding users, including religious Muslim users, to support a project on a loan-based crowdfunding platform.

As social beings, one of humanity's basic needs is to be accepted by others and to be part of a community. When someone makes a loan, the return is not necessarily something material but it can be something intangible in the sense that s/he feels that s/he is offering something as part of a community which, in turn, increase his/her psychological comfort. "Sense of community is a feeling that members have of belonging, a

feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan and Chavis 1986, p.9). Ummah or the worldwide community of Muslims means that every Muslim is part of a supra-national community. Additionally, Islamic law encourages building relationships with others and fosters social interactions, which often exhibit a positive effect on people who feel a sense of inclusion in a community (Rosen 1984). Therefore, sense of community should have a positive link with Muslim users' motivation to participate in loan-based crowdfunding platforms. Accordingly, we hypothesize:

HYPOTHESIS 1 (H1): Sense of community positively affects Muslim funder's willingness to participate in loan-based crowdfunding.

Sober and Wilson (1998) highlighted that an individual focuses on increasing his/her individual fitness and the ultimate desire is directed to improving one's own situation. Concerning loan-based crowdfunding platforms, this expectation generally comes from anticipating the interest or monetary gains during the loan period. The funder sees a private utility benefit in receiving a monetary benefit for his/her participation in a project on a loan-based crowdfunding platform. While Sharia law does not regulate the psychological, i.e., the emotional sensation evoked by the feeling of belonging to a community, the law explicitly forbids expecting conventional interest for loans. Therefore, material hedonism, in the form of interest for a loan for a crowdfunding project, should be an inhibiting factor for Muslim users to engage in such project. The selfish increase in individual fitness at other people's costs violates Muslims' moral codes. Subsequently, we hypothesize the following:

HYPOTHESIS 2 (H2): Expectation of loan interest negatively affects Muslim funder's willingness to participate in loan-based crowdfunding.

Similar to previous studies, we expect a positive relationship between the level of participation in a crowdfunding platform and the amount an individual is willing to lend. Zvilichovksy et al. (2018) showed that when the funders are motivated to participate in a crowdfunding project, they are also willing to increase the pledged sum. According to cognitive dissonance theory (Festinger 1957), when people engage in behavior that is inconsistent with their beliefs, they will experience psychological discomfort (dissonance), which they are motivated to reduce. A typical example of the theory is smoking behavior. The dissonance is reduced by rationalizing the behavior, such as rationalizing that smoking reduces stress, or minimizing the undesirable consequences such as underestimating the health risks of smoking. In general, a common way to reduce

dissonance is to increase the attractiveness of the behavior. In this study, dissonance occurs when Muslims participate in a loan-based crowdfunding platform that is inconsistent with their belief (i.e., a platform offering loan interest). The way to reduce this dissonance is to increase the attractiveness of the lending behavior. Therefore, we expect a positive relationship between the level of participation in a crowdfunding platform and the amount an individual is willing to lend is greater when there is discrepancy between the Muslim belief and the platform design as a way to increase the attractiveness of the lending behavior (i.e., a higher amount of interest earned). Thus, we also hypothesize that:

HYPOTHESIS 3 (H3): The Muslim funder's willingness to participate in loan-based crowdfunding positively affects the amount to lend. This effect is greater when there is an expectation of loan interest.

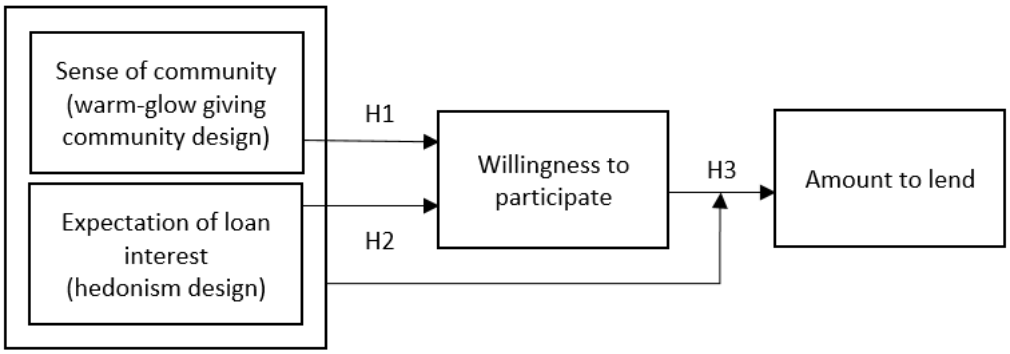
Research Methodology

To test these hypotheses, we developed two loan-based crowdfunding platform designs, which correspond to the two egoistic motivators of Andreoni's theory of warm-glow giving and Sober and Wilson's model of evolutionary and psychological giving. We also developed a control design that corresponds to the altruism motive. We used a scenario-based online survey as the instrument of data collection. The scenarios depict the crowdfunding platform designs. The survey assesses the participants' responses to the project page and their demographics. The target population of this study is Muslims in Indonesia. Muslims form the majority of Indonesia's population (88.1%); there are more than 205 million Muslims in Indonesia (PewResearchCenter 2015), which is the largest Muslim population in the world. The survey was distributed through Islamic communities.

Each subject is exposed to only one randomly selected design of the loan-based crowdfunding platform; thereby we avoid confounding effects that may arise when the participants encounter multiple designs (Charness et al. 2012). The scenario is based on three different crowdfunding designs (i.e., a hedonism-related design, a warm-glow giving-related design, and a control design representing altruism). The treatment designs represent the independent variables. The dependent variables are the willingness to participate in a crowdfunding project (WTP) and the decision on the amount of money to lend – known as the amount to lend (ATL). We include a number of control variables that may influence our dependent variables: age, gender, income level, knowledge of crowdfunding platforms, desire for information completeness before lending, and personal interest in agriculture (which is the crowdfunding project topic). Table 4 provides an overview of all variables. Figure 1 depicts the research model.

Table 4. Overview of the Variables		
Independent Variables	**Control Variables**	**Dependent Variables**
Warm-glow giving community, Hedonism	Age	Willingness to Participate (WTP) and Amount to Lend (ATL)
	Gender	
	Level of income (monthly income; MI)	
	Level of knowledge about crowdfunding (KCF)	
	Need for complete information before lending (NCI)	
	Level of personal interest in agriculture (PI)	

Figure 1. Research Model



There are two steps in the data collection process. First, one of the three designs of our loan-based crowdfunding platform is randomly sent to each respondent. The survey system does the randomization automatically. This double-blind method (i.e., a method to ensure that neither the subjects nor the researchers influence which design the participants are exposed to) is essential to prevent an observer-expectancy effect (i.e., a cognitive bias that causes the researcher to subconsciously influence the subjects, for example by distributing particular designs to specific participants). The scenario puts the respondent in the situation of being a potential lender on a loan-based crowdfunding platform. After being exposed to one platform design, the respondents have to respond to questions about their WTP and ATL as well as the control variables. Each respondent receives the same questions independent of the design received. WTP is measured using four items, e.g., "I am interested in lending my money for this project." The participants' ATL is assessed in Indonesian currency (rupiah or Rp). Additionally, the respondents have to answer a set of questions, which serve as control variables. Appendix A lists the survey items. All constructs are derived from the literature but adjusted for the fit of this study. We tested the scenarios and the survey in our pilot study to ensure that the scenarios with the design modifications are properly thought through. Additionally, we conducted a manipulation check before running the main study. The next section provides detailed information on the pilot study.

Pilot Study

We conducted a pilot study to pretest the feasibility of the study setting. The pilot study consisted of two steps. In the first step, we randomly divided nine participants into three groups that correspond to the three loan-based crowdfunding platform designs. The nine participants were recruited from Islamic communities. We monitored each respondent to ensure s/he went through the platform and read all the survey questions carefully. At the end of the survey, every respondent provided feedback, comments, and suggestions related to the platform design, survey questions, and the procedure. We enhanced the hedonism design following the feedback from a respondent who remarked that she did not notice the interest rate. In the second step, we consulted an expert, a management science researcher, about the scenario-based survey. Based on the feedback, we changed the order of the survey items to begin with the dependent variables. In this order, the respondents answer the important questions related to the dependent variables first (i.e., willingness to participate and amount to lend) while their mental capacity is still high. The expert also suggested changing from a 5-point Likert scale to a 7-point Likert scale to ensure a sufficient range of variance in our variables.

Base and Treatment Designs

The base design is necessary to compare any of the treatment designs to test the hypotheses. The base design displays the tabs of the project page (i.e., project description, business progress, FAQ (see Figure 2)), loan report, and a loan option page (see Figure 3).

The first treatment design (Figure 4, Column 'Warm-glow Giving Community Modifications') is to test the effect of belongingness to a community as a personal benefit. Compared to the base design, this design has several modifications based on warm glow giving theory. First, there is an invitation paragraph on the project page between the borrower information and the project statistics that invites lenders to join a 'community of lenders' (called 'Sahabat Taawun') by providing loans. The text to join a 'community of lenders' by providing loans is also displayed in the loan option page (the last page). The feeling of belongingness to a community is a warm-glow feeling. This design does not display any interest rates.

The second treatment design (Figure 4, Column 'Hedonism Model Modification') aims to test the hedonism effect. Compare to the base design, this design has several modifications. First, there is an overview paragraph in the project page between the borrower information and the project statistics highlighting the expected interest rate for the lender. In the statistic part, there is additional information that mentions the minimum interest rate. Moreover, there is information of the interest rate in the FAQ page. Second, we include a description paragraph

in the loan option page (the last page) on top of the list of loan options, which describes what lenders can expect in return for their loan. All these modifications to describe the material private utility benefit aim to portray hedonism.

Manipulation Check

To ensure that the manipulation is perceived as intended, we conducted a manipulation check with respondents from the Muslim population in Indonesia. Appendix B shows the characteristics of the respondents for the manipulation check. Each respondent was randomly assigned to one design, i.e., the base (altruism) design, warm-glow design, or hedonism design. The survey system does the randomization automatically. Although we set the randomization to balance the number of respondents across the three designs, some respondents did not complete the survey and were removed. In the end, we had 52 respondents for the base (altruism) design, 46 respondents for the warm-glow design, and 51 respondents for the hedonism design. Regardless of the loan-based crowdfunding design that they received, all respondents had to answer the survey items on a 7-Likert scale measuring altruism ("When I make a loan, I will be doing something to help others"), warm-glow feeling ("When I make a loan, I will feel good that I am part of 'Sahabat Taawun'" [which is a community of lenders represented in the design]), and hedonism ("When I make a loan, I will receive interest on my money").

We found that the respondents who received the warm-glow treatment perceived that they had more feeling of warm glow (mean 6.41, std. deviation 0.69) than those who received the base (altruism) design (mean 4.60, std. deviation 1.40, $p < .00$) or the hedonism design (mean 4.50, std. deviation 1.56, $p < .00$). The respondents who received the hedonism design gave a higher score to the hedonism survey item (mean 6.27, std. deviation 1.58) than those who received the base (altruism) design (mean 2.52, std. deviation 1.84, $p < .00$) or the warm-glow design (mean 2.54, std. deviation 1.60, $p < .00$). Finally, the respondents who received the base design gave a higher score to the altruism survey item (mean 6.29, std. deviation 1.08, $p < .00$) than those who received the warm-glow design (mean 5.17, std. deviation 1.15, $p < .00$) or the hedonism design (mean 5.30, std. deviation 1.45, $p < .00$). We also conducted between-groups ANOVA and found that there were significant differences between the groups with respect to the feeling of warm glow ($F = 31.45$, $p = .00$), hedonism ($F = 82.80$, $p = .00$), and altruism ($F = 14.14$, $p = .00$). Our manipulations were deemed to be successful.

Figure 2. Base Design: Project Page

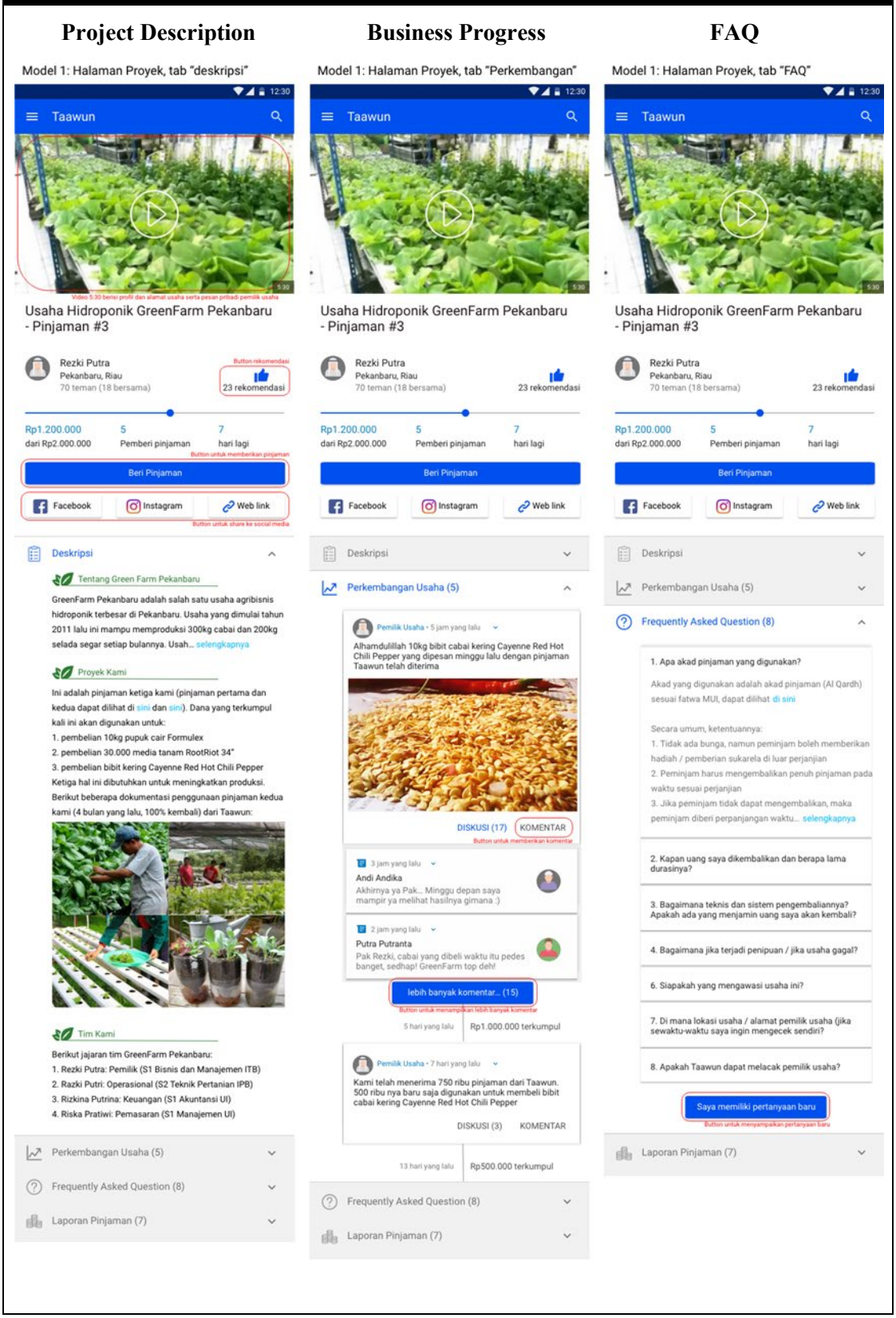


Figure 3. Base Design: Loan Report Tab and Loan Option Page

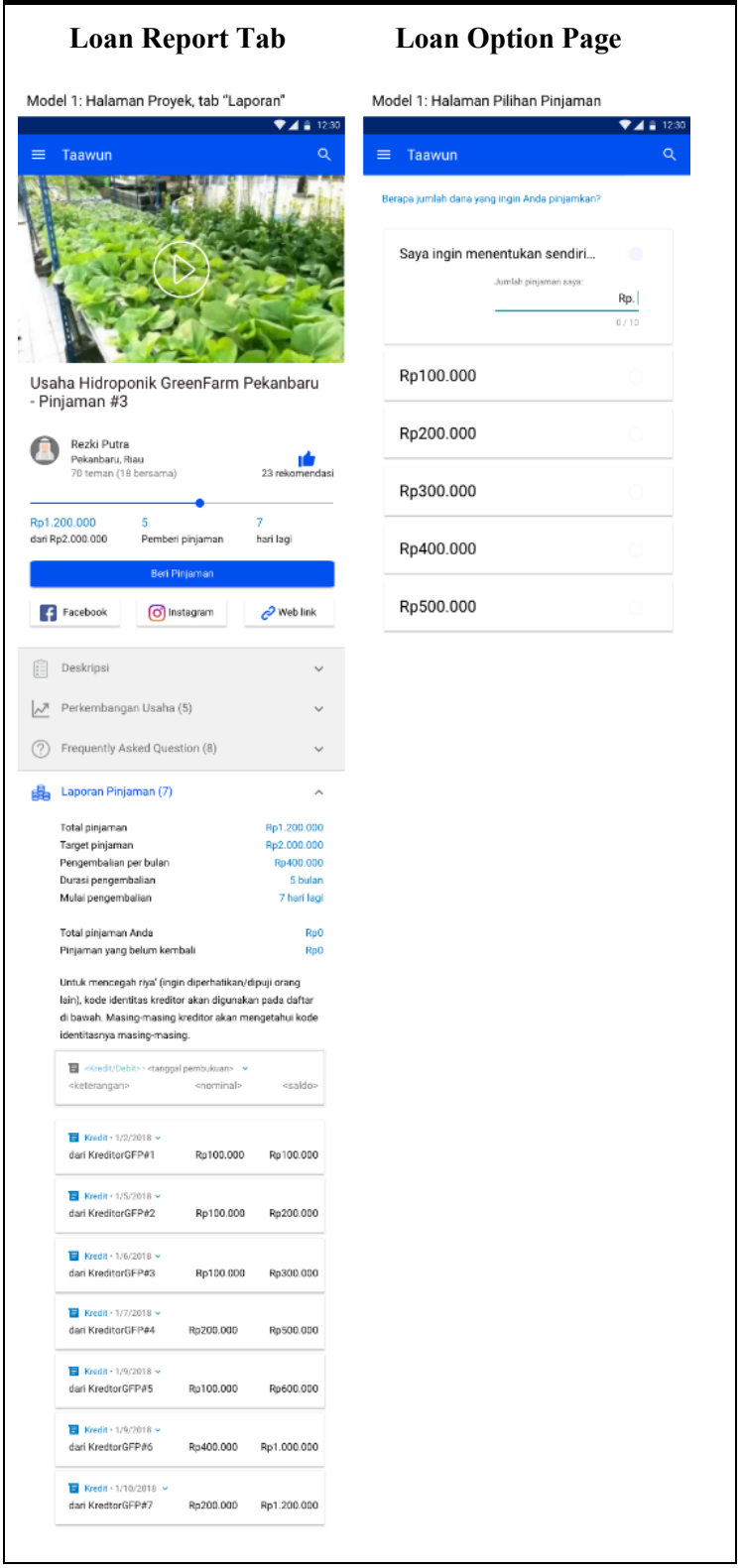
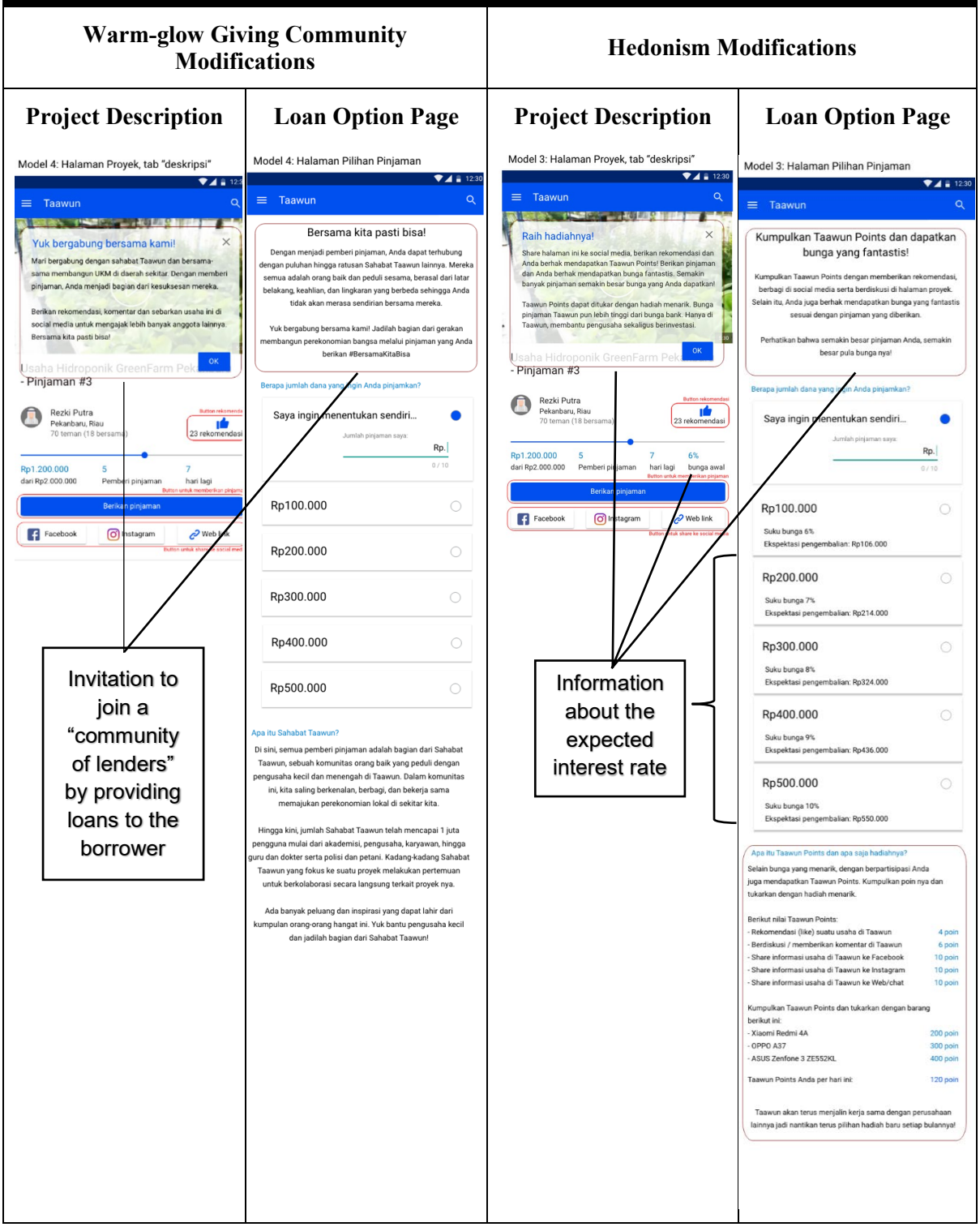


Figure 4. Warm-glow Giving Community and Hedonism Modifications



Data Analysis of the Main Study

We had 153 respondents for the main study (52 received the base design, 50 received the warm-glow community design, and 51 respondents received the hedonism design). The central limit theorem suggested that a sample size of at least 30 is sufficient to produce an approximately normal sampling distribution for the sample mean; in other words, the average of the sample mean will be approximately equal to the population mean (Hogg et al. 2015). Having a sufficient sample for each design, we proceeded with our analyses. Tables 5 and 6 show the demographic characteristics of the respondents. We checked the effectiveness of the randomization by comparing the mean values of the demographics across the three groups of respondents. Using ANOVA and pairwise tests, we found all comparisons are not significant (see Appendix C); hence, providing evidence of equivalence of the three groups of respondents.

Table 5. Demographic characteristics

Demographic Characteristic	Number of Subjects (N=153)	Percentage
Gender		
Male	66	43.1%
Female	87	56.9%
Monthly Income (MI)		
Rp5,000,000 or lower	51	33.3%
Rp5,000,001 – Rp7,500,000	39	25.5%
Rp7,500,001 – Rp10,000,000	18	11.8%
Rp10,000,001 – Rp12,500,000	5	3.3%
Rp12,500,001 – Rp15,000,000	8	5.2%
Rp15,000,001 – Rp17,500,000	2	1.3%
Rp17,500,001 – Rp20,000,000	11	7.2%
Rp20,000,001 – Rp22,500,000	6	3.9%
Rp22,500,001 – Rp25,000,000	4	2.6%
Rp25,000,001 – Rp27,500,000	2	1.3%
Rp27,500,001 – Rp30,000,000	0	0.0%
RP30,000,001 or above	7	4.6%
Knowledge of Crowdfunding Platforms (KCF)		
I do not know anything about them	28	18.3%
I only heard the names (the website) but I am not sure what it is	41	26.8%
I know at least how one of them works	33	21.6%
I have participated in one of them at least once	51	33.4%

	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
Age	26.56	6.542	18	57	1.381	2.882

It is important to note that Indonesia is a developing country where the average monthly income for Indonesians is Rp 4,666,667 (CNN Indonesia 2019). Taking this information into account, one-third of our respondents are average Indonesians who have an average income; two-thirds of respondents earn above the average income. Hence, our respondents should be financially able to fund a local project in a crowdfunding platform and are, therefore, valid respondents.

The construct validity of need for complete information (NCI), personal interest in agriculture (PI), and willingness to participate (WTP) was checked (see Appendix D for the factor analysis – rotated component matrix). The survey items loaded higher on their own construct than on the other constructs and the item loadings exceeded 0.7 on their own construct. We also assessed the reliability of the construct. The Cronbach's alpha of our dependent variable WTP was 0.835. The Cronbach's alpha of the control variable NCI was 0.741. Thus, all are above the recommended threshold of 0.7. PI was measured with a single item. Descriptive statistics of the continuous variables in Table 6 show that the skewness and kurtosis values are between the acceptable range of -2 to 2 and -3 to 3, respectively. We also checked for multicolinearity (see Appendix E) and found no multicolinearity issue.

Table 6. Descriptive Statistics

	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ATL	208,562.32	160,900.804	0	500,000	0.578	-0.780
NCI	6.016	0.934	3.00	7.00	-0.938	0.238
PI	5.68	1.033	1.00	7.00	-1.180	2.627
WTP	4.68	1.512	1.00	7.00	-1.062	0.394

Note: ATL=amount to lend, NCI=need for complete information, PI=personal interest in agriculture, WTP=willingness to participate.

Findings

We used generalized linear model (GLM) regression for the dependent variable willingness to participate (WTP) and Poisson regression for the dependent variable amount to lend (ATL). The result, presented in Table 7, supports H2 (*Expectation of loan interest negatively affects Muslim funders' willingness to participate in loan-based crowdfunding*), but not H1.

Table 7. Analysis for Willingness to Participate (WTP)						
	Model 1 (Control Variables Only)		**Model 2 (Independent Variable Only)**		**Model 3 (Independent and Control Variables**	
Independent Variables	Coef.	Std. Err	Coef.	Std. Err	Coef.	Std. Err
Warm-glow giving			-0.083	0.295	-0.217	0.305
Hedonism			-0.649*	0.294	-0.720*	0.301
Control Variables						
KCF1	0.445	0.379			0.490	0.376
KCF2	0.151	0.333			0.201	0.331
KCF3	0.510	0.349			0.569	0.348
PI	0.208	0.130			0.198	0.129
NCI	-0.065	0.133			-0.095	0.132
Gender	-0.148	0.254			-0.099	0.252
Age	0.013	0.025			0.007	0.024
MI2	-0.470	0.344			-0.446	0.340
MI3	-1.504**	0.460			-1.365**	0.462
MI4	-1.353	0.738			-1.440	0.738
MI5	-0.276	0.630			-0.313	0.621
MI6	-2.458*	1.162			-2.650*	1.155
MI7	-0.735	0.550			-0.653	0.541
MI8	-0.315	0.725			-0.379	0.716
MI9	-1.182	0.837			-1.016	0.828
MI12	-0.140	0.663			-0.103	0.655
Constant	4.013**	1.339	4.923***	0.207	4.604**	1.342
Log likelihood	-264.314		-276.951		-260.968	

Note: KCF = crowdfunding knowledge, MI = monthly income, NCI = need for complete information, PI = personal interest in agriculture, WTP = willingness to participate.

***: $p < .001$, **: $p < .010$, *: $p < .050$

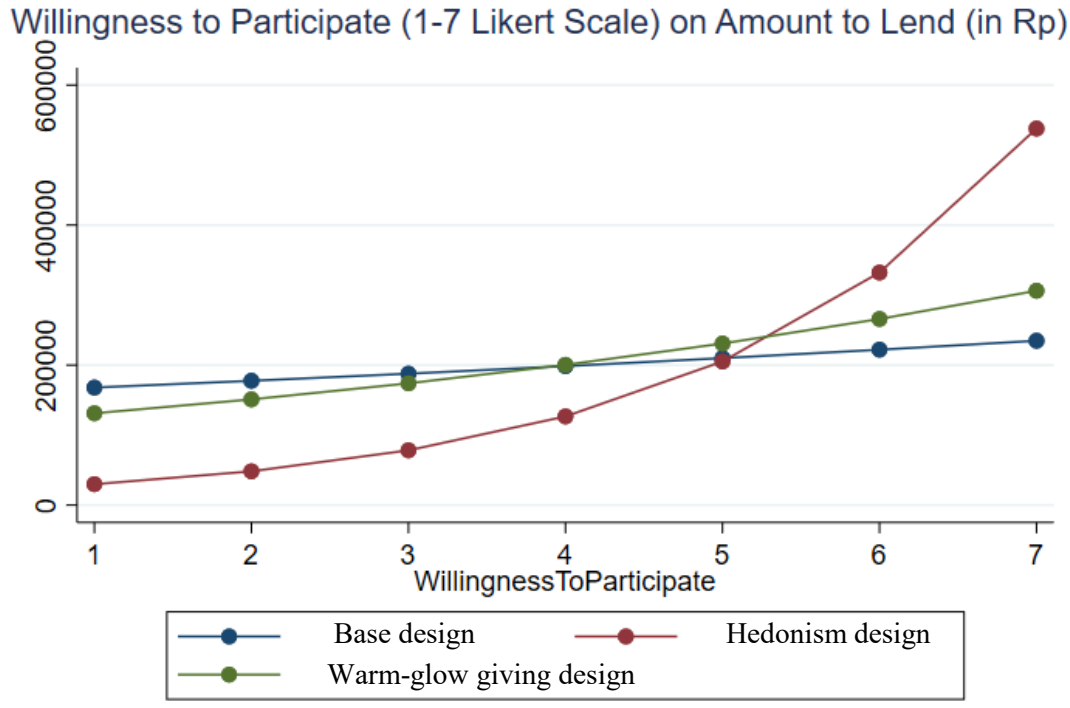
The results of the second analysis with ATL as a dependent variable, presented in Table 8, support H3 (*The Muslims' willingness to participate in loan-based crowdfunding positively affects the amount to lend. This effect is greater when there is an expectation of loan interest*). The results indicate that the incident rate for WTP x hedonism design is 1.531 times higher, holding the other variables constant. Figure 5 plots the willingness to participate (WTP) on the amount to lend (ATL) for each crowdfunding design (base, treatment 1 [warm-glow giving], treatment 2 [hedonism]), when controlling for the level of monthly income. Compared to the other designs, participants in the hedonism design's willingness to engage in crowdfunding had a positive exponential effect on the amount of money that they were willing to lend.

Table 8. Analysis for Amount to Lend (ATL)

	Model 1 (Control Variables Only)		Model 2 (Independent Variable Only)		Model 3 (Independent and Control Variables	
Independent Variables	IRR	Std. Err	IRR	Std. Err	IRR	Std. Err
WTP			1.072***	0.000	1.057***	0.000
Warm-glow giving			0.658***	0.001	0.717***	0.002
Hedonism			0.120***	0.000	0.116***	0.000
WTP x Warm-glow giving			1.107***	0.000	1.090***	0.000
WTP x Hedonism			1.511***	0.000	1.531***	0.000
Control Variables						
KCF1	1.524***	0.000			1.373***	0.000
KCF2	1.183***	0.000			1.063***	0.000
KCF3	1.240***	0.000			1.065***	0.000
PI	1.227***	0.000			1.182***	0.000
NCI	0.941***	0.000			0.948***	0.000
Gender	1.053***	0.000			1.098***	0.000
Age	1.029***	0.000			1.027***	0.000
MI2	1.142***	0.000			1.170***	0.000
MI3	0.781***	0.000			1.069***	0.000
MI4	0.734***	0.001			0.754***	0.001
MI5	1.023***	0.001			0.935***	0.001
MI6	0.922***	0.001			1.122***	0.001
MI7	0.832***	0.000			0.791***	0.000
MI8	0.607***	0.001			0.640***	0.001
MI9	0.765***	0.001			1.052***	0.001
MI12	0.830***	0.001			0.734***	0.001
Pseudo R^2	0.122		0.234		0.344	

Note: KCF = crowdfunding knowledge, MI = monthly income, NCI = need for complete information, PI = personal interest in agriculture, WTP = willingness to participate, ATL = amount to lend.
***: p < .001.

Figure 5. Treatment x WTP on ATL



Discussion

Our findings highlight the importance of platform design for religiously constrained users. Specifically, the results show a negative effect of the hedonism design on Muslim users' willingness to participate in loan-based crowdfunding. Egoism as a motivator, according to Andreoni's warm-glow giving theory and Sober and Wilson's differentiated egoism aspects, is supposed to have a positive effect in motivating users to fund a crowdfunding project. However, when this element is represented with monetary interest on a loan-based crowdfunding platform for Muslim users, the effect turns negative. Sharia law explicitly forbids *riba* in loans and, thus, effectively challenges the effect of this particular hedonistic aspect of egoism on loan-based crowdfunding platforms among Muslims. Our research demonstrates this effect.

The motivator warm-glow giving for community is represented with a design that invites people to be part of a community of lenders called 'Sahabat Taawun' (Companion of Taawun). According to Andreoni's warm-glow giving theory, this design should have a positive effect in motivating users. However, we found that warm-glow giving has no significant effect on the Muslim users' willingness to participate in crowdfunding. There is no significant difference between the base (altruism) design and the warm-glow giving design in terms of their willingness to participate in crowdfunding. A possible explanation for this finding is that the principle of Sharia law suggests Muslims should expect *nothing* except the acceptance of Allah for their sincere honest deed. Although the modified design representing warm-glow giving for community is in accordance with Sharia law, some participants may consider it simply an unintended side-value from participating in Sharia-based crowdfunding design. Hence, we found no significant difference in their willingness to participate in crowdfunding. In contrast, *riba* is a well-known concept, and Sharia law explicitly forbids it with severe consequences.

Further, our findings show a significant effect of users' willingness to participate in the crowdfunding platform on the amount of money that the participant is willing to lend. This is not surprising. What is surprising is the finding for the hedonism treatment group. For this group, when the willingness to participate in crowdfunding is low, the amount that they are willing to lend is generally lower than in the other groups. However, when there is high willingness to participate in crowdfunding, the amount to lend is substantially higher than in the other groups. Taken together, it means that although most Muslims avoid *riba*, those who are willing to make a loan for monetary interest will give a substantial loan (the higher the loan, the higher the

interest). This is in line with cognitive dissonance theory (Festinger 1957) – in the case of dissonance, people tend to reduce the discrepancy by increasing the attractiveness of their disassociating behavior.

Theoretical and Practical Contributions

This research has several interesting theoretical and practical contributions. First, this paper addresses a research gap on the design of crowdfunding platforms. Although the amount of research on crowdfunding is increasing and covers a broad range of themes as summarized in the conceptual background section, there is scant research on crowdfunding that considers the design of crowdfunding platforms in encouraging participation. Moreover, studies on crowdfunding design focus on the economic mechanisms of such platforms (e.g., Belleflamme et al. 2014, 2015), or compare online and offline crowdfunding (Choy and Schlagwein 2016). They do not investigate the design of specific features of a crowdfunding platform and its effect on funders' motivation to fund a project. This study is an initial step in this important yet neglected research direction that can serve as a stepping stone for other studies.

Moreover, while reward-based crowdfunding platforms have received significant research attention, there is relatively little attention on loan-based crowdfunding platforms. When considering the global market context, loan-based crowdfunding accounts for around 90% of global activity (Cambridge Centre for Alternative Finance 2017). This study contributes to the understanding of the design of loan-based crowdfunding platforms, specifically in motivating (or preventing) Muslim users to participate in such platforms. Loan-based crowdfunding platforms relate to the unique context of the Muslim community, because this community has religious constraints regarding monetary transactions in lending and investing money. So far, the existing loan-based crowdfunding platforms have implemented a generic design and do not consider the particularities of certain user groups. Considering that Muslim communities make up a remarkable percentage of the population of many developing countries and represent an increasing share of the world population, the need for financial platform designs to accommodate their unique religious constraints is rising. This study is the first to examine the effect of religious constraints on funders' decision making, which is a neglected topic in lending decision making in crowdfunding (see Hoegen, Steininger and Veit (2018) for an interdisciplinary review).

The findings in this study provide some guidelines to loan-based crowdfunding platform designers to design a more inclusive platform so as not to discourage these religiously constrained users. For example, next to the conventional investment opportunity, the loan-based crowdfunding platform could offer Sharia-compliant loans that work with incentives such as donating the interest to charities. In this way, the fundraisers will still pay

interest on the money borrowed either to the lenders or to the charities of the lenders' choice. Another possible inclusive design is an 'organized *tawarruq*' which has been used in the Islamic financial sector in some countries of the Gulf Cooperation Council (Ahmed and Aleshaikh 2014). In the context of loan-based crowdfunding, the platform owner as the organizer of *tawarruq* will need to organize several sales transactions with the borrowers and lenders separately. The platform owner first sells a commodity which could be a virtual commodity to a borrower at a price payable at a future date. Then the platform owner acts as an agent of the borrower to sell his/her commodity at a lower price to the lenders for cash. Hence, the borrower gets cash on the spot and owes the platform owner a higher amount of money. At a future date, once the amount owed has been repaid, the platform owner redistributes the money to the lenders through a variety of means such as membership bonuses, points, etc. Although this combination of sales transactions is permissible in Islam - "Allah has permitted trade and has forbidden interest" (verse 2:275 of the Quran) (Ahmed and Aleshaikh 2014, Alkhamees 2017) - since there is no physical exchange of a commodity between the parties involved, some countries declare that organized *tawarruq* is non-Sharia-compliant and the sales merely serve as means to create a debt resembling a loan with interest (Ahmed and Aleshaikh 2014, Alkhamees 2017). Hence, when designing an inclusive loan-based crowdfunding for religiously constrained funders, the designers should be aware of acceptable practices in the target countries.

This work investigates and challenges Andreoni's warm-glow giving theory and Sober and Wilson's model by showing its boundaries in the context of loan-based crowdfunding for Muslim funders. We show that religious constraints, such as *riba,* can reverse the commonly agreed-upon motivator, i.e., monetary return. Egoism states that individuals contribute purely because of the expectation of a private utility benefit and is seen as an important motivational factor toward a particular behavior. However, our study proves that not all benefits are generalizable in different contexts. The prospect of increasing financial returns through interest rates when investing in a loan-based crowdfunding project is not a motivator for Muslim lenders. On the contrary, this financial benefit is an inhibiting factor and decreases Muslim lenders' willingness to engage with the platform. Nevertheless, Muslim lenders who do not avoid the prospect of increasing financial returns through interest rates seem to be the most valuable creditors as they are willing to make substantial loans.

A broader theoretical implication of our study is for researchers to re-examine the well-known 'crowding-out' phenomenon in the context of loan-based crowdfunding for Muslim funders. It is widely accepted in the literature that if the funder is only interested in the benefit of the recipient of the loan (pure altruism), he or she may be discouraged from giving money in cases when the project has already collected some funding - hence,

the ‘crowding-out’ effect (Gleasure and Feller 2016a). Although not directly investigated, our findings imply that pure altruism may not necessarily harm a project when the potential funders are Muslim. More research needs to be undertaken to establish the theoretical boundary of the ‘crowding-out’ phenomenon with respect to pure altruism, warm-glow giving, and hedonism when the crowdfunding participants have religious constraints/needs.

Limitations and Future Research

While our study highlights the importance of designing crowdfunding platforms to accommodate specific user groups especially those with religious constraints, future studies should examine in more detail how many more loans a crowdfunding project can achieve if the loan-based crowdfunding platform is tailored to such religious constraints (c.f. the conventional interest rate design of a loan-based crowdfunding platform). How a loan-based crowdfunding platform for Muslim lenders can achieve the best possible results for project creators and platform sustainability is another interesting question for future research.

Due to the sensitivity of the matter and to avoid response bias, we did not ask the extent to which the survey participant is faithful to Islamic teaching, which might be an alternative explanation for our findings. Future research may suggest a way of assessing the survey participants’ faithfulness to their religion, while avoiding response bias on their behavioral responses and the potentially offending nature of the question.

Online crowdfunding platform design may ameliorate pervasive constraints due to religion or culture. For instance, the platform may provide access to female lenders who prefer to support women-led projects in areas where women are historically under-represented (Greenberg and Mollick 2015), the platform may implement third-party institutional trust mechanisms to mitigate individuals’ biased preference for recipients who are culturally similar (Burch et al. 2014) and, as proposed in this study, the platform may provide an option other than conventional loan interest to address Muslim lenders’ religious constraints. Hence, our study adds another substantial meaningful implication for crowdfunding platform designers to consider creating a more inclusive platform. Future studies could assess other important religious or cultural constraints that may prohibit certain groups of potential lenders from participating in loan-based crowdfunding platform.

References

Agrawal, A., Catalini, C. and Goldfarb, A., 2014. Some simple economics of crowdfunding. *Innovation Policy and the Economy*, 14, 1, 63–97.

Agrawal, A., Catalini, C. and Goldfarb, A., 2015. Crowdfunding: Geography, social networks, and the timing of investment decisions. *Journal of Economics & Management Strategy*, 24, 2, 253–274.

Ahlers, G.K., Cumming, D., Günther, C. and Schweizer, D., 2015. Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39, 4, 955–980.

Ahmed, H. and Aleshaikh, N.M., 2014. Debate on Tawarrug: Historical discourse and current rulings. *Arab Law Quarterly*, 28, 278-294.

Alkhamees, A., 2017. *A Critique of Creative Sharīʿah Compliance in the Islamic Finance Industry*. Brill Nijhoff, Leiden.

Aitamurto, T., 2011. The impact of crowdfunding on journalism: case study of Spot. Us, a platform for community-funded reporting. *Journalism Practice*, 5, 4, 29–445.

Alderman, J., Forsyth, J. and Walton, R., 2017. How Religious Beliefs Influence Financial Decision-Making. *Graziadio Business Review*, 20, 3.

Aldohni, A.K., 2014. Soft law, self-regulation and cultural sensitivity: The case of regulating Islamic banking in the UK. *Journal of Banking Regulation*, 15, 2, 164-179.

Allison, T.H., Davis, B.C., Short, J.C. and Webb, J.W., 2015. Crowdfunding in a prosocial microlending environment: Examining the role of intrinsic versus extrinsic cues. *Entrepreneurship Theory and Practice*, 39, 1, 53-73.

Altman, M., 2015. *Real-World Decision Making: An Encyclopedia of Behavioral Economics: An Encyclopedia of Behavioral Economics*. ABC-CLIO. Available at: https://books.google.co.uk/books?id=TP3WCQAAQBAJ

Al-Zumai, F., Al-Wasmi, M. 2016. 2008 Financial Crisis and Islamic Finance: An Unrealized Opportunity. International Journal for the Semiotic of Law 29, 455–472.

Andreoni, J., 1989. Giving with impure altruism: Applications to charity and Ricardian equivalence. *Journal of political Economy*, 97, 6, 1447–1458.

Andreoni, J., 1990. Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal*, 100, 401, 464–477.

Anik, L., Aknin, L.B., Norton, M.I. and Dunn, E.W., 2009. Feeling good about giving: The benefits (and costs) of self-interested charitable behavior. Harvard Business School Working Paper, 10-012.

Assadi, D. 2003. Do religions influence customer behavior? Confronting religious rules and marketing concepts. *Databases*, 22, 10, 2-13.

Bapna, S. 2019. Complementarity of signals in early-stage equity investment decisions: Evidence from a randomized field experiment. *Management Science*, 65, 2, 933-952.

Belleflamme, P., Lambert, T. and Schwienbacher, A., 2013. Individual crowdfunding practices. *Venture Capital*, 15, 4, 313–333.

Belleflamme, P., Lambert, T. and Schwienbacher, A. 2014. Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29, 5, 585-609.

Belleflamme, P., Omrani, N. and Peitz, M., 2015. The economics of crowdfunding platforms. *Information Economics and Policy*, 33, 11–28.

Burtch, G. and Chan, J. 2019. Investigating the relationship between medical crowdfunding and personal bankruptcy in the United States: Evidence of a digital divide. *MIS Qua*rterly, 43, 1, 237-262.

Burtch, G., Ghose, A. and Wattal, S., 2013. An empirical examination of the antecedents and consequences of contribution patterns in crowd-funded markets. *Information Systems Research*, 24, 3, 499–519.

Burtch, G., Ghose, A. and Wattal, S., 2014. Cultural differences and geography as determinants of online prosocial lending. *MIS Quarterly,* 38, 3, 773-794.

Burtch, G., Ghose, A. and Wattal, S., 2015. The hidden cost of accommodating crowdfunder privacy preferences: a randomized field experiment. *Management Science*, 61, 5, 949–962.

Burtch, G., Ghose, A. and Wattal, S., 2016. Secret Admirers: An Empirical Examination of Information Hiding and Contribution Dynamics in Online Crowdfunding. *Information Systems Research*, 27, 3, 478–496.

Burtch, G., Hong, J. and Liu, D. 2018. The Role of Provision Points in Online Crowdfunding. J*ournal of Information Systems Management*, 35, 1, 117-144.

Cambridge Centre for Alternative Finance, 2017. Crowdfunding in East Africa: Regulation and Policy for Market Development. University of Cambridge, Judge Business School. Available at: https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2017-05-eastafrica-crowdfunding-report.pdf

Charness, G., Gneezy, U. and Kuhn, M.A., 2012. Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization*, 81, 1, 1-8.
Cholakova, M. and Clarysse, B., 2015. Does the possibility to make equity investments in crowdfunding projects crowd out reward-based investments? E*ntrepreneurship Theory and Practice* 39, 1, 145-172.
Choy, K. and Schlagwein, D., 2016. Crowdsourcing for a better world: on the relation between IT affordances and donor motivations in charitable crowdfunding. *Information Technology & People*, 29, 1, 221–247.
Colombo, M.G., Franzoni, C. and Rossi-Lamastra, C., 2015. Internal social capital and the attraction of early contributions in crowdfunding. *Entrepreneurship Theory and Practice*, 39, 1, 75-100.
Cornelius, P. B. and Gokpinar, B. 2020. The role of customer investor involvement in crowdfunding success. *Management Scien*ce, 66, 1, 452-472.
Courtney, C., Dutta, S. and Li, Y., 2017. Resolving information asymmetry: Signaling, endorsement, and crowdfunding success. *Entrepreneurship Theory and Practice*, 41, 2, 265-290.
CNN Indonesia, 2019. *Rata-rata pendapatan Orang Indonesia Rp56 Juta per Tahun.* [online] CNN Indonesia. Accessed 14th January 2020. Available at: https://www.cnnindonesia.com/ekonomi/20190206161843-532-366859/rata-rata-pendapatan-orang-indonesia-rp56-juta-per-tahun
Crumpler, H. and Grossman, P. J. 2008. An experimental test of warm glow giving. *Journal of Public Economics*, 92, 5-6, 1011-1021.
Du, Z., Li, M. and Wang, K. 2019a. "The more options, the better?" Investigating the impact of the number of options on backers' decisions in reward-based crowdfunding projects. *Information & Management,* 56, 3, 429-444.
Du, Z., Wang, K. and Li, M. 2019b. Promoting crowdfunding with lottery: The impact on campaign performance. *Information & Management*, 56, 8, 103159.
Duhaime, E. P., 2015. Is the call to prayer a call to cooperate? A field experiment on the impact of religious salience on prosocial behavior. *Judgment and Decision Making*, 10, 6, 593-596.
Ferguson, E., Farrell, K. and Lawrence, C. 2008. Blood donation is an act of benevolence rather than altruism. *Health Psychology,* 27, 3, 327–336.
Festinger L. A. 1957. Theory of Cognitive Dissonance. Evanston, IL: Row, Peterson.
Fleming, L. and Sorenson, O. 2016. Financing by and for the Masses. *California Management Review* 58, 2, 5-19.
Frydrych, D., Bock, A.J., Kinder, T. and Koeck, B. 2014. Exploring entrepreneurial legitimacy in reward-based crowdfunding. *Venture Capital*, 16, 3, 247–269.
Fundly. n.d. Volume of funds raised through crowdfunding worldwide in 2017, by type (in billion U.S. dollars). Statista. Accessed 7th May 2019. Available from https://www.statista.com/statistics/946668/global-crowdfunding-volume-worldwide-by-type/
Gerber, E.M. and Hui, J., 2013. Crowdfunding: Motivations and deterrents for participation. *ACM Transaction*s on Computer-Human Interaction (TOCHI), 20, 6, Article 34 (December 2013), 32 pages.
Geva, H., Barzilay, O. and Oestreicher-Singer, G. 2019. A potato salad with a lemon twist: Using a supply-side shock to study the impact of opportunistic behavior on crowdfunding platforms. *MIS Quarterly* 43, 4, 1227-1248.
Gleasure, R. and Feller, J. 2016a. Does Heart or Head Rule Donor Behaviors in Charitable Crowdfunding Markets? *International Journal of Electronic Commerce*, 20, 4, 499-524.
Gleasure, R. and Feller, J. 2016b. Emerging technologies and the democratisation of financial services: A metatriangulation of crowdfunding research. *Information and Organization*, 26, 4, 101-115.
Gleasure, R. and Feller, J. 2016c. A rift in the ground: Theorizing the evolution of anchor values in crowdfunding communities through the oculus rift case study. *Journal of the Association for Information Systems*, 17, 10, 708-736.
Gleasure, R., Conboy, K. and Morgan, L. 2019. Talking Up a Storm: How Backers Use Public Discourse to Exert Control in Crowdfunded Systems Development Projects. *Information Systems Research*, 30, 2, 447-465.
Greenberg, J. and Mollick, E., 2015. Leaning in or leaning on? Gender, homophily, and activism in crowdfunding. In *Academy of Management Proceedings*.
Guan, X., Deng, W. J., Jiang, Z. Z. and Huang, M. 2020. Pricing and advertising for reward-based crowdfunding products in E-commerce. *Decision Support Systems*, 131, 113231.
Hackett, C., Cooperman, A. and Ritchey, K. 2015. *The Future of the World Religions: Population Growth Projections, 2010-2050*, Pew Research Center.
Harbaugh, W.T., Mayr, U. and Burghart, D.R. 2007. Neural responses to taxation and voluntary giving reveal motives for charitable donations. *Science,* 316, 5831, 1622-1625.
Harbaugh, W. T. 1998. What do donations buy?: A model of philanthropy based on prestige and warm glow. *Journal of Public Economics*, 67, 2, 269-284.

Hildebrand, T., Puri, M. and Rocholl, J. 2017. Adverse incentives in crowdfunding. *Management Science,* 63, 3, 587-608.
Hoegen, A., Steininger, D.M. and Veit, D., 2018. How do investors decide? An interdisciplinary review of decision-making in crowdfunding. *Electronic Markets*, 28, 3, 339-365.
Hogg, R.V., Tanis, E.A. and Zimmerman, D. 2015. Probability and Statistical Inference, Pearson Education Inc., Upper Saddle River, NJ.
Hong, Y., Hu, Y. and Burtch, G. 2018. Embeddedness, pro-sociality, and social influence: Evidence from online crowdfunding. *MIS Quarterly,* 42, 4, 1211-1224.
Hossain, M. 2015. Crowdsourcing in business and management disciplines: an integrative literature review. *Journal of Global Entrepreneurship Research*, 5, 1, 1-19.
Jiang, Y., Ho, Y.C., Yan, X. and Tan, Y. 2018. Investor platform choice: herding, platform attributes, and regulations. *Journal of Management Information Systems,* 35, 1, 86-116.
Kang, M., Gao, Y., Wang, T., and Zheng, H. 2016. Understanding the determinants of funders' investment intentions on crowdfunding platforms: A trust-based perspective. *Industrial Management and Data Systems*, 116, 8, 1800–1819.
Kgoroeadira, R., Burke, A. and van Stel, A. 2018. Small business online loan crowdfunding: who gets funded and what determines the rate of interest?. *Small Business Economics,* 52, 1, 67-87.
Khavul, S. 2010. Microfinance: Creating opportunities for the poor? *Academy of Management Perspective*, 24, 58-72.
Kickstarter.com, 2020. *Kickstarter Stats — Kickstarter*. Kickstarter. Accessed 14th January 2020. Available at: https://www.kickstarter.com/help/stats
Kim, K. and Hann, I. H. 2019. Crowdfunding and the democratization of access to capital—an illusion? Evidence from housing prices. *Information Systems Research*, 30, 1, 276-290.
Kleinert, S. and Volkmann, C. 2019. Equity crowdfunding and the role of investor discussion boards. *Venture Capital*, 21, 4, 327-352.
Krause, N. 2011. The perceived prayers of others, stress, and change in depressive symptoms over time. *Review of Religious Research*, 53, 3, 341-356
Kromidha, E. and Robson, P. 2016. Social identity and signalling success factors in online crowdfunding. *Entrepreneurship & Regional Development*, 28, 9-10, 605-629.
Kuppuswamy, V. and Bayus, B.L. 2015. Crowdfunding creative ideas: The dynamics of project backers. (SSRN Scholarly Paper No. ID 2234765). Social Science Research Network. In., Rochester, NY
Lacan, C. and Desmet, P. 2017. Does the crowdfunding platform matter? Risks of negative attitudes in two-sided markets. *Journal of Consumer Marketing*, 34, 6, 472-479.
Lee, W. S. and Sohn, S. Y. 2019. Discovering emerging business ideas based on crowdfunded software projects. *Decision Support Systems*, 116, 102-113.
Lehner, O.M. 2013. Crowdfunding social ventures: a model and research agenda. *Venture Capital*, 15, 4, 289–311.
Lehner, O.M., Grabmann, E. and Ennsgraber, C. 2015. Entrepreneurial implications of crowdfunding as alternative funding source for innovations. *Venture Capital*, 17, 1-2, 171-189.
Lehner, O. M. and Harrer, T. 2019. Crowdfunding revisited: a neo-institutional field-perspective. *Venture Capital*, 21, 1, 75-96.
Ley, A. and Weaven, S. 2011. Exploring agency dynamics of crowdfunding in start-up capital financing. *Academy of Entrepreneurship Journal*, 17, 1, 85-110.
Li, G. and Wang, J. 2019. Threshold Effects on Backer Motivations in Reward-Based Crowdfunding. *Journal of Management Information Systems*, 36, 2, 546-573.
Li, Y. M., Wu, J. D., Hsieh, C. Y. and Liou, J. H. 2020. A social fundraising mechanism for charity crowdfunding. *Decision Support Systems*, 129, 11317.
Liang, T.P., Wu, S.P.J. and Huang, C.C. 2019. Why funders invest in crowdfunding projects: Role of trust from the dual-process perspective. *Information & Management,* 56, 1, 70-84.
Lin, M. and Viswanathan, S. 2015. Home bias in online investments: An empirical study of an online crowdfunding market. *Management Science*, 62, 5, 1393-1414.
Mahmood, A., Luffarelli, J. and Mukesh, M. 2019. What's in a logo? The impact of complex visual cues in equity crowdfunding. *Journal of Business Venturing*, 34, 1, 41-62.
Mamonov, S. and Malaga, R., 2019. Success factors in Title II equity crowdfunding in the United States. *Venture Capital*, 21, 2-3, 223-241.
McMillan, D.W. and Chavis, D.M. 1986. Sense of Community: A Definition and Theory. *Journal of Community Psychology*, 14, 6-23.
Mochkabadi, K. and Volkmann, C. K. 2020. Equity crowdfunding: a systematic review of the literature. *Small Business Economics*, 54, 75-108.

Mollick, E. 2014. The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29, 1, 1-16.
Moritz, A., Block, J. and Lutz, E. 2015. Investor communication in equity-based crowdfunding: a qualitative-empirical study. *Qualitative Research in Financial Markets*, 7, 3, 309-342.
Mortimer, C. 2017. *Norwegian bank trials 'halal loan' based on Islamic principles*. [online] The Independent. Accessed 13th May 2019. Available at: http://www.independent.co.uk/news/world/europe/norway-bank-halal-loan-islam-muslims-islamic-finance-a7537116.html
Nitani, M., Riding, A. and He, B. 2019. On equity crowdfunding: investor rationality and success factors. *Venture Capital,* 21, 2-3, 243-272.
Noorzoy, M.S. 1982. Islamic Laws on Riba (Interest) and Their Economoic Implications. *International Journal of Middle East Studies*, 14, 1, 3–17.
Ordanini, A., Miceli, L., Pizzetti, M. and Parasuraman, A., 2011. Crowd-funding: transforming customers into investors through innovative service platforms. *Journal of Service Management*, 22, 4, 443–470.
PewResearchCentre 2015. *10 Countries With The Largest Muslim Population In The World*. Accessed 13th May 2019. Available at: https://www.pewforum.org/2015/04/02/muslims/pf_15-04-02_projectionstables74/
Presley, J.R. and Sessions, J.G. 1994. Islamic economics: The emergence of a new paradigm. *The Economic Journal*, 104, 424, 584-596.
Rodriguez-Ricardo, Y., Sicilia, M. and López, M., 2018. What drives crowdfunding participation? The influence of personal and social traits. *Spanish Journal of Marketing-ESIC*.
Rogers, E.M. 2010. *Diffusion of innovations*. Simon and Schuster.
Rodgers, S. 2003. The effects of sponsor relevance on consumer reactions to internet sponsorships. Journal of Advertising, 32, 4, 67-76.
Rosen, L. 1984. *Bargaining for reality: The construction of social relations in a Muslim community*. University of Chicago Press.
Rossi, M. 2014. The new ways to raise capital: an exploratory study of crowdfunding. *International Journal of Financial Research*, 5, 2, 8-18.
Ryu, S., Park, J., Kim, K. and Kim, Y. G. 2020. Reward versus Altruistic Motivations in Reward-Based Crowdfunding. *International Journal of Electronic Commerce*, 24, 2, 159-183.
Schwienbacher, A. 2019. Equity crowdfunding: anything to celebrate?. *Venture Capital*, 21, 1, 65-74.
Schwienbacher, A. and Larralde, B. 2010. Crowdfunding of small entrepreneurial ventures, in *Handbook of Entrepreneurial Finance*. Oxford, UK, Oxford University Press.
Siering, M., Koch, J.A. and Deokar, A.V. 2016. Detecting fraudulent behavior on crowdfunding platforms: The role of linguistic and content-based cues in static and dynamic contexts. *Journal of Management Information Systems*, 33, 2, 421-455.
Sober, E. and Wilson, D. S. 1998. Unto others: The evolution and psychology of unselfish behavior. Harvard University Press.
Stemler, A.R. 2013. The JOBS Act and crowdfunding: Harnessing the power - and money - of the masses. *Business Horizons*, 56, 3, 271-275.
Stevenson, R. M., Ciuchta, M. P., Letwin, C., Dinger, J. M. and Vancouver, J. B. 2019a. Out of control or right on the money? Funder self-efficacy and crowd bias in equity crowdfunding. *Journal of Business Venturing*, 34, 2, 348-367.
Stevenson, R. M., Kuratko, D. F. and Eutsler, J. 2019b. Unleashing main street entrepreneurship: Crowdfunding, venture capital, and the democratization of new venture investments. *Small Business Economics*, 52, 2, 375-393.
Thies, F., Wessel, M. and Benlian, A. 2016. Effects of social interaction dynamics on platforms. Jour*nal of Management Information Systems*, 33, 3, 843-873.
Thies, F., Wessel, M. and Benlian, A. 2018. Network effects on crowdfunding platforms: Exploring the implications of relaxing input control. *Information Systems Journal*, 28, 6, 1239-1262.
Tomczak, A. and Brem, A. 2013. A conceptualized investment model of crowdfunding. *Venture Capital*, 15, 4, 335–359.
Voelker, T.A. and McGlashan, R. 2013. What is crowdfunding? Bringing the power of Kickstarter to your entrepreneurship research and teaching activities. *Small Business Institute Journal*, 9, 2, 11-22.
Wallmeroth, J. 2019. Investor behavior in equity crowdfunding. *Venture Capital*, 21, 2-3, 273-300.
Wehnert, P., Baccarella, C.V. and Beckmann, M., 2019. In crowdfunding we trust? Investigating crowdfunding success as a signal for enhancing trust in sustainable product features. *Technological Forecasting and Social Change*, 141, 128-137.
Wessel, M., Adam, M. and Benlian, A. 2019. The impact of sold-out early birds on option selection in reward-based crowdfunding. *Decision Support Systems*, 117, 48-61.
Wei, Z. and Lin, M. 2017. Market mechanisms in online peer-to-peer lending. *Management Science*, 63, 12, 4236-4257.

Wu, S., Wang, B. and Li, Y. 2015. How to attract the crowd in crowdfunding? *International Journal of Entrepreneurship and Small Business*, 24, 3, 322-334.
Xu, B., Zheng, H., Xu, Y. and Wang, T. 2016. Configurational paths to sponsor satisfaction in crowdfunding. *Journal of Business Research*, 69, 2, 915-927.
Younkin, P. and Kuppuswamy, V. 2018. The colorblind crowd? Founder race and performance in crowdfunding. *Management Science,* 64, 7, 3269-3287.
Zheng, H., Li, D., Wu, J. and Xu, Y. 2014. The role of multidimensional social capital in crowdfunding: A comparative study in China and US. *Information & Management*, 51, 4, 488-496.
Zvilichovsky, D., Danziger, S. and Steinhart, Y. 2018. Making-the-Product-Happen: A driver of crowdfunding participation. *Journal of Interactive Marketing,* 41, 81-93.

Appendix

Appendix A. List of Variables for the Main Study		
Variable	Survey Items	References
Willingness To Participate (WTP; Likert scale)	[WTP1] "I am interested in lending my money for this project" [WTP2] "I am interested in sharing the project in my social media" [WTP3] "I am interested in clicking the 'like' (recommend) button to recommend this project" [WTP4] "I am interested in visiting this page again"	based on Kang et al. (2016) and Lacan and Desmet (2017)
Amount to Lend (ATL; fixed sum)	"Please state the amount of loan you want to make from Rp0 to Rp500.000:"	[self-developed]
Need for Complete Information (NCI; Likert scale)	"Please indicate the extent to which you agree or disagree with the statements below. Please do not think too long before answering; usually, your first inclination is the most accurate one:" [NCI1] "Before lending, I need to know as much information as I can" [NCI2] "I need complete information before deciding whether to lend my money or not"	based on Courtney et al. (2017)
Knowledge of Crowdfunding Platform (KCF, Multiple choice)	"The platform that you saw previously is a crowdfunding platform. Some of the popular crowdfunding platforms are kickstarter.com, launchgood.com, kitabisa.com, investree.id, and modalku.co.id. Please state what you know about the existing crowdfunding platforms:" [KCF1] "I have participated in one of them at least once" [KCF2] "I know at least how one of them works" [KCF3] "I only heard the names (the website) but I am not sure what it is" [KCF4] "I do not know anything about them"	[self-developed]
Personal interest on Agricultural Project (PI, Likert scale)	"The project that you saw previously is an enterprise of modern urban farming using a hydroponic system. It is an example of modern agriculture (farming). Please indicate your level of personal interest in supporting enterprises like that:" [PI] "I am interested in supporting an agriculture / farming enterprise"	based on Lacan and Desmet (2017)
Monthly Income Level (MI, Multiple choice)	"Please state your monthly income level:" [MI1] "Rp5,000,000 or lower" [MI2] "Rp5,000,001 - Rp7,500,000" [MI3] "Rp7,500,001 - Rp10,000,000" [MI4] "Rp10,000,001 - Rp12,500,000" [MI5] "Rp12,500,001 - Rp15,000,000" [MI6] "Rp15,000,001 - Rp17,500,000" [MI7] "Rp17,500,001 - Rp20,000,000" [MI8] "Rp20,000,001 - Rp22,500,000" [MI9] "Rp22,500,001 - Rp25,000,000" [MI10] "Rp25,000,001 - Rp27,500,000" [MI11] "Rp27,500,001 - Rp30,000,000" [MI12] "Rp30,000,001 or above"	[self-developed]
Age	"Please state your age:"	
Gender	"Please state your gender:"	

Appendix B. Demographic Characteristics of Respondents for Manipulation Check

Demographic Characteristic	Number of Subjects (N=149)	Percentage
Gender		
Male	74	49.7%
Female	75	50.3%
Monthly Income		
Rp5,000,000 or lower	52	34.9%
Rp5,000,001 – Rp7,500,000	31	20.8%
Rp7,500,001 – Rp10,000,000	21	14.1%
Rp10,000,001 – Rp12,500,000	6	4.0%
Rp12,500,001 – Rp15,000,000	8	5.4%
Rp15,000,001 – Rp17,500,000	2	1.3%
Rp17,500,001 – Rp20,000,000	14	9.4%
Rp20,000,001 – Rp22,500,000	4	2.7%
Rp22,500,001 – Rp25,000,000	4	2.7%
Rp25,000,001 – Rp27,500,000	0	0.0%
Rp27,500,001 – Rp30,000,000	0	0.0%
RP30,000,001 or above	7	4.7%
Knowledge of Crowdfunding Platforms		
I do not know anything about them	31	20.8%
I only heard the names (the website) but I am not sure what it is	37	24.8%
I know at least how one of them works	36	24.2%
I have participated in one of them at least once	45	30.2%

	Mean	Minimum	Maximum	Skewness	Kurtosis
Age	27	18	57	1.151	1.748

Appendix C. Main Study's Comparison between Groups to Assess the Effectiveness of Randomization in Creating Equivalent Groups of Respondents

Variable	Pairwise Comparison	Difference [Diff]	Std. Error	Tukey HSD Sig.
Age	base vs warm-glow giving	0.167	1.308	0.885
	base vs hedonism	1.824	1.295	0.339
	warm-glow giving vs hedonism	1.206	1.308	0.627
Gender	base vs warm-glow giving	0.096	0.099	0.599
	base vs hedonism	0.118	0.098	0.457
	warm-glow giving vs hedonism	0.022	0.099	0.974
MI	base vs warm-glow giving	0.157	0.596	0.962
	base vs hedonism	0.275	0.590	0.888
	warm-glow giving vs hedonism	0.432	0.596	0.750
KCF	base vs warm-glow giving	0.164	0.223	0.744
	base vs hedonism	0.176	0.222	0.707
	warm-glow giving vs hedonism	0.013	0.223	0.998
PI	base vs warm-glow giving	0.093	0.207	0.894
	base vs hedonism	0.059	0.206	0.956
	warm-glow giving vs hedonism	0.152	0.207	0.742

Note: MI: monthly income, KCF: knowledge about crowdfunding, PI=personal interest in agriculture

Appendix D. Main Study's Factor Analysis Result

	Component		
	WTP	NCI	PI
I am interested in lending my money for this project.	**0.875**	-0.016	-0.027
I am interest in sharing the project in my social media.	**0.868**	-0.041	0.059
I am interested in clicking the 'like' (recommend) button to recommend this project.	**0.891**	0.069	-0.002
I am interested in visiting this page again.	**0.777**	0.010	0.328
Before lending, I need to know as much information as I can	-0.020	**0.900**	0.018
I need complete information before deciding whether to lend my money or not	0.030	**0.895**	0.051
I am interested in supporting an agriculture / farming enterprise.	0.096	0.059	**0.977**

Note: NCI=need for complete information, PI=personal interest in agriculture, WTP=willingness to participate.

Appendix E. Main Study's Correlation Table

	Age	Gender	MI	KCF	PI	NCI	WTP	ATL
Age	1	-.046	.511	-.122	-.177	-.044	-.169	.152
Gender	-.046	1	-.140	.076	.017	-.015	.006	.053
MI	.511	-.140	1	-.163	-.124	-.011	-.187	-.018
KCF	-.122	.076	-.163	1	.039	-.122	.016	-.129
PI	-.177	.017	-.124	.039	1	.095	.165	.191
NCI	-.044	-.015	-.011	-.122	.095	1	.026	-.017
WTP	-.169	.006	-.187	.016	.165	.026	1	.397
ATL	.152	.053	-.018	-.129	.191	-.017	.397	1

Note: MI: monthly income, KCF: knowledge about crowdfunding, PI=personal interest in agriculture, NCI=need for complete information, WTP=willingness to participate, ATL=amount to lend

Short author bios

Juliana Sutanto is a Professor in Information Systems at the Department of Management Science of Lancaster University Management School. Her research focuses on artefact design and behavioural analysis in digital communications and interactions; as such she subscribes herself to the design and behavioural sciences paradigms. She examines how user interactions with IS could lead to organizational, societal, and environmental benefits. Her research work has been published in leading information systems journals such as MIS Quarterly, Information Systems Research, and Journal of Management Information Systems, as well as in leading general management journal such as Management Science. She is currently an Associate Editor in MIS Quarterly.

Helena Wenninger (*corresponding author*) is a Lecturer (Assistant Professor) in Information Systems at the Department of Management Science at the Lancaster University Management School. Her research interests cover patterns of social media usage and online communication as well as their consequences for individuals, providers and society. Her work has been published in peer-reviewed outlets like Information Systems Research (ISR), European Journal of Information Systems (EJIS) and Computers in Human Behavior (CHB). She served several years as track chair for the track "Societal and Ethical Consequences of ICT Use" at the European Conference on Information Systems (ECIS).

Handre Duriana is a founder and owner of Waqqash Archery and a startup mentor at MeetUp Coworking Space Pekanbaru. He was formerly a Product Development Manager at Blibli.com, an Indonesian B2C company. He holds an MSc in Information Technology, Management and Organisational Change at Lancaster University. He has obtained numerous honors and awards in the national IT startup community as well as a number of study in information technology including Critical Analysis of The Impact of SE-OJK No. 18 to Fintech in Indonesia. His research focuses on platform design, user engagement and crowdfunding platform.