

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

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Abstract

This paper investigates how platform design features affect the funding motivation of Muslim users on loan-based crowdfunding platforms. 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, given 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 involving lending. We used a scenario-based survey developed on the basis of a pilot study and confirmed by our manipulation check. The results show that "hedonism" represented by monetary interest negatively affected Muslim users' willingness to engage in a loan-based crowdfunding project. This finding challenges the commonly agreed-upon egoistic motivator for loan-based crowdfunding platforms (i.e., monetary interest), which is based on Western Christian and Chinese Confucian capitalist economic and financial paradigms. Remarkably, we also found that Muslim funders' level of willingness to engage on the hedonistic platform had an exponentially positive effect on the amount of money that funders were willing to lend. By contrast, "warm-glow giving," manifested as belonging to a community, had no effect on users' engagement. Implications of these findings for theory and practice are discussed.

Keywords: Loan-Based Crowdfunding, Platform Design, Muslim Users, Willingness to Engage, Amount To Lend, Lender Motivation

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1 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 & Sorenson, 2016; Schwienbacher & Larralde, 2010), has been used to fund a wide range of projects from entrepreneurial ventures, to medical expenses, to travel and more (Gleasure & Feller, 2016b). Online crowdfunding platforms facilitate the reach of millions of potential investors (Burtch et al., 2013) and 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 & Hui, 2013; Ordanini et al., 2011). The crowdfunding market is expected to reach almost 40 billion USD by 2026, with North America and China being the largest markets (Statista, 2021).

In extant research on crowdfunding, most studies examine funders or project owners, studying, for example, how funders decide which projects to fund and how project owners present themselves and their projects to attract funding (e.g., Gerber & Hui, 2013;

Gleasure & Feller, 2016a; Mollick, 2014). Interestingly, while loan-based crowdfunding has the largest funding volume by far and is growing (Fleming & Sorenson, 2016), research on loan-based crowdfunding is scarce and loan lenders' motivation remains underexplored (e.g., Jiang et al., 2018). Perhaps because 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 funders, such as the posted price vs. auction and preordering vs. profit sharing (e.g., Belleflamme et al., 2014, 2015; Tomczak & Brem, 2013).

The culture and values that determine monetary transactions and lending behavior are often overlooked (Burtch et al., 2014). The incentive design for loan-based crowdfunding is predominantly rooted in the Western Christian and Chinese Confucian capitalist economic and financial paradigms, thus standing in sharp contrast to Muslims and their Islamic religious constraints, an overlooked population in crowdfunding research. During the 2008 financial crisis, the Islamic financial system, with its different incentive structure, was largely resilient to the crisis (Al-Zumai & Al-Wasmi, 2016). Since then, more investors have been paying significant attention to Islamic-based investment opportunities. However, researchers have primarily examined crowdfunding in capitalism-based economies, leaving much unknown about effective crowdfunding in the Islamic economic context. Therefore, there is an important need to investigate 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 interest 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 on loan-based crowdfunding platforms. In brief, the Quran encourages Muslims' benevolent spending and disapproves of the concept of taking interest from money lent. Accordingly, the Muslim perspective for lending money is not in alignment with the incentives designed for loan-based crowdfunding platforms.

There is a growing trend to implement Sharia-friendly systems into 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 each expected to

comprise approximately 30% 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 is increasing. For example, a new interest-free loan offered by the Norwegian bank Storebrand directly appeals to Muslims who cannot take out ordinary loans because of their faith (Mortimer, 2017). Loan-based crowdfunding platforms could likely increase their reach significantly by taking the religious constraints of the Muslim community into account and by integrating them into platform designs.

Our 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 having a sense of community is a basic human need that is in line with Islamic laws that encourage building relationships with others, loan interest would be expected to be incongruous with the Muslim community. We use a scenario-based survey in which every participant receives one randomly selected design out of three loan-based crowdfunding platform designs (i.e., warm-glow giving, hedonism, or the base altruism design). Investigating how crowdfunding platform design impacts the Muslim funders' motivation is important for several reasons. From a theoretical viewpoint, Muslim financial constraints may challenge commonly agreed-upon motivators such as receiving monetary interest. From a practical perspective, our study is relevant because microloans can potentially stimulate economic growth in developing countries (Khavul, 2010) where Muslim communities make up a very large 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, 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.

2 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 crowdfunding participants: creators and funders. 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 crowdfunding platforms through stories, videos, pictures, offers, or social interaction. Depending on the type of crowdfunding platform, they are also known as founders, borrowers, fundraisers, or ventures (Schwienbacher & Larralde, 2010; Gerber & Hui, 2013; Burtch et al., 2013; Mollick, 2014; Belleflamme et al., 2014). Funders, in contrast, financially support certain ideas, projects, or campaigns that meet their interest. 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 & 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 & Sorenson, 2016; Kromidha & Robson, 2016): reward-, equity-, donation-, and loan-based crowdfunding. Reward-based crowdfunding (e.g., Kickstarter.com and Indiegogo.com) is widely known as pre-purchasing since it typically invites the crowd to purchase products or goods in advance of 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. 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 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 (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 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.

2.1 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. We classified papers that do not belong to any of these themes as “others.” Structuring the extant literature on crowdfunding around these themes, we discovered that reward-based crowdfunding is the most researched and loan-based crowdfunding is the least popular (see Table 1), despite having the highest funding volume (Fleming & Sorenson, 2016).

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 & Weaven, 2011) proposing a research agenda for crowdfunding research. Given that it was an emerging phenomenon, general investigations of the potential and implications for stakeholders such as entrepreneurs (Voelker & McGlashan, 2013) and service managers (Rossi, 2014) seemed like 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 et al. (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, Kuratko et al. (2019) 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.

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) Stevenson, Kuratko et al. (2019) Voelker & McGlashan (2013)	Agrawal et al. (2014) Ley & Waven (2011) Mamonov & Malaga (2019) Schwienbacher (2019)			Lehner (2013) Lehner et al. (2015) Rossi (2014)	10
2. Why certain crowdfunding projects are more successful than others	Agrawal et al. (2015) Burtch et al. (2016) Colombo et al. (2015) Cornelius & Gokpinar (2020) Frydrych et al. (2014) Geva et al. (2019) Gleasure et al. (2019) Guan et al. (2020) Hong, Hu, & Burtch (2018) Kim and Hann (2020) Kromidha & Robson (2016) Lee & Sohn (2019) Liang et al. (2019) Mollick (2014) Younkin & Kuppuswamy (2018) Zheng et al. (2014)	Ahlers et al. (2015) Kleinert & Volkmann (2019) Mortiz et al. (2015) Wu et al. (2015)	Burtch and Chan (2019) Li et al. 2020	Burtch et al. (2013) Burtch et al. (2014) Kgoroadira et al. (2019) Lin & Viswanathan (2015)	Belleflamme et al. (2013)	27
3. Motivation to contribute to crowdfunding projects	Burtch et al. (2015) Burtch et al. (2018) Du et al. (2019a) Du et al. (2019b) Gerber & Hui (2013) Li & Wang (2019) Ryu et al. (2020) Thies et al. (2016) Wessel et al. (2019) Zvilichovsky et al. (2018)	Bapna (2019) Cholakova & Clarysse (2015) Mahmood et al. (2019) Nitani et al. (2019) Wallmeroth (2019)	Choy & Schlagwein (2016) Gleasure & Feller (2016a)	Allison et al. (2015) Jiang et al. (2018) Hildebrand et al. (2017)		20
4. Crowdfunding design				Wei & Lin (2017)	Bellflamme et al. (2014) Belleflamme et al. (2015) Gleasure & Feller (2016b)	4
5. Others	Gleasure & Feller (2016c) Siering et al. (2018) Thies et al. (2016) Tuo et al. (2019) Xu et al. (2015)	Mochakabadi & Volkmann (2020) Stemler (2013) Stevenson, Ciuchta et al. (2019)	Aitamurto (2011)		Hossain (2015) Lehner & Harrer (2019) Tomczak & Brem (2013)	11
Total	34	15	5	8	10	72

2. Success factors of crowdfunding projects. This theme has received the most attention from the scientific community by far (see Table 1). Researchers found that nonprofit projects are more likely to attract the desired funding (Belleflamme et al., 2013). Moreover, the geographical proximity and cultural similarity of funders and project creators (e.g., Agrawal et al., 2015; Burtch et al., 2014; Lin & Viswanathan, 2015), 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), project creators' personal characteristics (Burtch & Chan, 2019; Kgoroadira et al., 2018; Kim & Hann, 2019), and founders' trustworthiness and the signals of project quality (e.g., Geva et al., 2019; Gleasure et al., 2019; Kromidha & Robson, 2016; Lee & Sohn, 2019; Liang et al., 2019; Moritz et al., 2015; Younkin & Kuppuswamy, 2018) all affect the likelihood of project receiving the desired funding.

Research indicates that keeping funders updated with frequent announcements has a beneficial effect on the success of high-tech projects (Wu et al., 2015), whereas concealing information is a deterring factor (Burtch et al., 2016). For equity-based crowdfunding, it was found that effective signals in the form of detailed information about the project risks increase the likelihood of the project successfully attaining its funding goal (Ahlers et al., 2015). Investor discussions also propel investments, with the exception of certain discussion topics such as market risk (Kleinert & 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 & Gokpinar, 2020). Finally, researchers found that a project is perceived to have more legitimacy when the funding target is lower and the project duration is shorter (Frydrych et al., 2014). Setting the right price for a crowdfunding initiative 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 individual (funder), project, or platform perspectives. According to Gerber and Hui (2013), funders are motivated to contribute to reward-based projects in order to collect rewards, support people and causes, or to be part of a community (Gerber & Hui, 2013). Backers' prosocial motivation further increases with goal proximity and project prosociality (Li & Wang, 2019). Also examining reward-based crowdfunding projects, Zvilichovsky et al. (2018) found that funders tend to focus more on product than people. Additionally, backers prefer to have some options (Du et al., 2019a), such as a

crowdfunding lottery (Du et al., 2019b) and early-bird options (Wessel et al., 2019). Gleasure and Feller (2016a) showed that funders' motivations 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 complexity of firm logos (Mahmood et al., 2019), firm attributes, owners' social media activities, financial statements (Nitani et al., 2019), and financial interest appear to be strong drivers for funders to invest in projects (Cholakova & 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 earlier funding if they observe that other contributors have invested larger amounts than they would have. Similarly, Burtch et al. (2018) reveal a link between the existing capital accumulation and funder decisions to contribute. Additionally, interest in investing in equity-based crowdfunding projects in the context of technology ventures increases with the 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 rather than as a business opportunity (Allison et al., 2015). The impacts of opinion-based social interactions are more sustainable than those of action-based interactions (Thies et al., 2016). In the presence of rewards, group leader bids on loan-based crowdfunding platforms decrease interest and increase default rates (Hildebrand et al., 2017). Finally, data concealment was 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) argue 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 seeking to understand the design of crowdfunding and how it affects individuals' behaviors (Gleasure & Feller, 2016b). For example, Belleflamme et al. (2014) compared two crowdfunding designs, i.e., preordering and profit sharing, and discovered that entrepreneurs prefer the preordering version if the required funding amount 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) at play to explain the design of crowdfunding platforms. A comparison between posted prices and auctions for loan-based crowdfunding shows that the probability of loan funding is higher for posted-price loans (Wei & 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 & Harrer, 2019), fraudulent project detection (Siering et al., 2016), journalism as a 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 & Feller, 2016c), network effects (Thies et al., 2018), crowdfunding specific investment models (Tomczak & Brem, 2013), the impact of the CrowdFund Act in the US (Stemler, 2013), crowd biases in equity crowdfunding (Stevenson, Ciuchta et al., 2019) and a review of equity crowdfunding (Mochkabadi & Volkmann, 2020).

2.2 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 is triple that of reward-, donation- and equity-based crowdfunding combined (Statista, 2017). We refer to related research to explain how our work adds new and relevant aspects that have not been investigated in previous studies but that nevertheless deserve attention.

Our research addresses the following question:

RQ: 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 & 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 examined how these features, which afford certain user interactions correlate with users' motivation to donate to charitable projects, in comparison to offline settings. Previous research on loan-based crowdfunding and 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 chose Muslim funders because they are an overlooked population in crowdfunding research. Islamic religious constraints regulate monetary transactions concerning lending and investing. This requires an investigation distinct from the research on Islamic banking (e.g., Aldohni, 2014) and the influence of religion on customer behavior (e.g., Assadi, 2003). Focusing on the underresearched 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 3). 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 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 of the interest rate for 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 our 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 microlending	Cognitive evaluation theory	Quantitative	Project	Kiva.org (from 51 countries)
Choy & Schlagwein (2016)	Compare charitable crowdfunding—online and offline	Affordance theory; motivation theory	Qualitative	Project	Chuffed (Australia and US)
Gleasure & 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 & 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)

3 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 & Feller, 2016a, p. 504). In such cases, the focus is on the other person and the public good rather than on the giver. Thus, neither the source nor the intent matters as long as the recipient is 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 & 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), characterized by internal contentedness, 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 & Grossman, 2008; Ferguson et al., 2008). Neuroscience also provides support for the motivational impact of warm-glow giving. Harbaugh et al. (2007) demonstrated that the neural brain response in humans is similar whether they transfer money to a charity organization or receive money. In addition to warm-glow giving, a second aspect of egoism is hedonism (Sober & Wilson, 1998). Hedonism incorporates psychological and evolutionary egoism. The ultimate desire of a hedonistic person is self-directed rather than other-directed, representing the psychological component. The evolutionary component of hedonism is based on the contributor aiming to increase personal individual fitness in comparison to others. For example, obtaining a material benefit is self-directed and represents an individual advantage.

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

The phenomenon of pure altruism is useful in explaining the phenomenon of “crowding-out” (Gleasure & Feller, 2016a). Funders who are only interested in the overall welfare benefit or the overall benefit for the recipient of the loan may be discouraged from giving money if the project has already attracted some funding. Thus, “crowding-out” helps to explain why the presence of some investment can end up discouraging rather than encouraging prospective funders. 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 potential funders did not contribute to a campaign that had already received a lot of support (Kuppuswamy & 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), the giver nevertheless stands to the benefits of a warm glow or a material asset. This explains why “crowding-out” is not an absolute phenomenon (see Table 3 for details).

4 Research Hypotheses

A variety of aspects influence 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 provides a useful framework for studying how persuasive technologies, such as online crowdfunding platforms, influence users’ giving behaviors. However, further investigation is needed to determine the degree to which 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, 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 & 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. The first aspect encourages Islamic societies to guarantee basic services, including food and healthcare, for everybody. The second aspect aims at social justice, prescribing that all members of society should use their abilities and skills for work. The application of the third aspect, the *riba* law, essentially prohibits conventional interest (Presley & Sessions, 1994). While the first aspect demonstrates a deeply rooted need for charitable activities in Muslim societies, the second and third aspects condemn the practice of drawing interest since all financial gains should be based on labor and money should not merely increase principal capital in compensation for time, i.e., the duration of time the money is lent (Aldohni, 2014). Thus, *riba*, in particular, 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 out loans for two reasons—personal consumption and business investment. According to Noorzoy (1982), *riba* makes both types of loans unlawful. For personal consumption loans to be acceptable, the borrower must 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* prohibits the redistribution of purchasing power from the rich to the poor and prohibits lenders from making money without labor. *Riba* inhibits idle cash accumulation and encourages capital holders to invest directly through proprietorships, active partnerships, or share purchases, promoting a profit-sharing model in business investment (Noorzoy, 1982). Islamic investors, consequently, should not be compensated via interest but should use other means to profit (Presley & Sessions, 1994).

Warm-glow giving, or giving in support of an individual, an organization, or society in exchange for emotional benefits has been shown to be a strong driver of human behavior (e.g., Andreoni, 1990). In the context of Islamic economics, warm-glow giving is neither contradicted nor explicitly supported by Sharia law, since the law regulates monetary transactions rather than the psychological effects generated from the transaction. Therefore, we would expect the warm-glow feeling generated as the result of funding or supporting a project to motivate crowdfunding users to support a project on a loan-based crowdfunding platform whether Muslim or not.

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 the person gains a sense of offering something as part of a community, which, in turn, increases 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 & Chavis, 1986, p. 9). Ummah or the worldwide community of Muslims means that every Muslim is part of a supranational 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, we anticipate that encouraging warm-glow giving through fostering a sense of community should have a positive link with Muslim users' motivation to participate on loan-based crowdfunding platforms. Accordingly, we hypothesize:

H1: Encouraging warm-glow giving through fostering a sense of community positively affects Muslim funders' willingness to participate in loan-based crowdfunding.

Sober and Wilson (1998) highlight that the individual focus on improving individual fitness and attaining one's ultimate desires is directed to improving one's own situation. Concerning loan-based crowdfunding platforms, this expectation is generally derived from anticipating the interest or monetary gains that will accrue during the loan period. The funder sees a private utility benefit in receiving a monetary benefit in exchange for participating in a project on a loan-based crowdfunding platform. However, Sharia law explicitly forbids expecting conventional interest for loans. Therefore, we would expect material hedonism, in the form of interest for a loan for a crowdfunding project, to be an inhibiting factor for Muslim users to engage in such projects. The selfish increase in individual fitness at other people's expense violates

Muslims' moral codes. Subsequently, we hypothesize the following:

H2: Expectation of loan interest negatively affects Muslim funders' willingness to participate in loan-based crowdfunding.

Like previous studies, we expect a positive relationship between the level of interest in participating in a crowdfunding initiative and the amount an individual is willing to lend. Zvilichovksy et al. (2018) showed that when 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 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, e.g., rationalizing that smoking reduces stress, or by minimizing the undesirable consequences, e.g., 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 project in a way that is inconsistent with their beliefs (i.e., on 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 motivation to participate in a crowdfunding project and the amount an individual is willing to lend, and suggest that the attractiveness of the lending behavior (i.e., a higher amount of interest earned via higher lending amounts) will ameliorate potential discrepancies between Muslim beliefs and the platform design. Thus, we hypothesize:

H3: Muslim funders' greater willingness to participate in loan-based crowdfunding positively affects the lending amount. This effect is greater when there is an expectation of loan interest.

5 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 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, which is home to the largest Muslim population in the world.

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)	

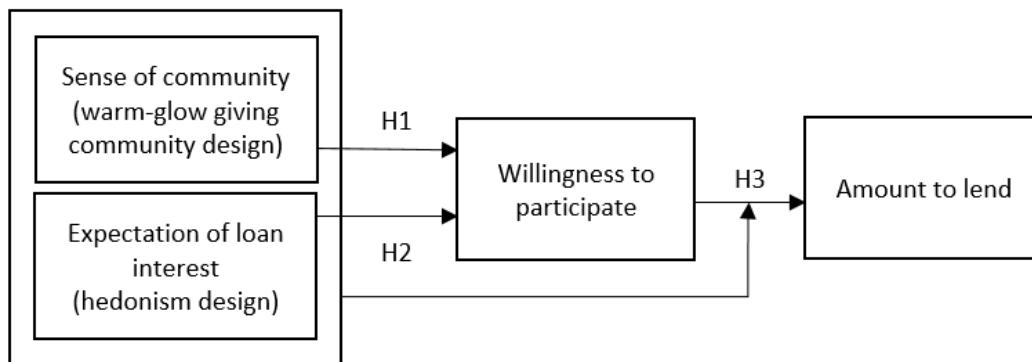


Figure 1. Research Model

There are over 205 million Muslims in Indonesia, constituting 88.1% of the population (Pew Research Center, 2015). The survey was distributed through Islamic communities in Indonesia. Each subject was exposed to only one randomly selected design of the loan-based crowdfunding platform to avoid confounding effects that may arise when 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 amount of money 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.

Our data collection process involved two steps. First, one of the three designs of our loan-based crowdfunding platform was randomly sent to each respondent, based on the automatic randomization performed by the survey system. This double-blind

method (i.e., a method to ensure that neither subjects nor 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 responded to questions about their WTP and ATL as well as the control variables. Each respondent received the same questions independent of the design received. WTP was 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 had to answer a set of questions, which served as control variables. Appendix A lists the survey items. All constructs were 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 were properly thought through. Additionally, we conducted a manipulation check before running the main study. The next section provides detailed information on the pilot study.

5.1 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 corresponded to the three loan-based crowdfunding platform designs. The nine participants were recruited from Islamic communities. We made sure that each respondent had gone 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 answered important questions related to the dependent variables first (i.e., willingness to participate and amount to lend) while their mental capacity was 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.

5.2 Base and Treatment Designs

The base (altruism) 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”) tests 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 invited lenders to join a “community of lenders” (i.e., “Sahabat Taawun”) by providing loans. The text to join a “community of lenders” by providing loans was also displayed in the loan option page (the last page). The feeling of belongingness to a community is expected to invoke 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. Compared 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 on 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 correlate with hedonism.

5.3 Manipulation Check

To ensure that the manipulation was 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, which the survey system performed 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 answered survey items on a 7-point 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 stronger warm-glow feelings (mean 6.41, SD 0.69) than those who received the base (altruism) design (mean 4.60, SD 1.40, $p < 0.00$) or the hedonism design (mean 4.50, SD 1.56, $p < 0.00$). The respondents who received the hedonism design gave higher scores on the hedonism survey item (mean 6.27, SD 1.58) than those who received the base (altruism) design (mean 2.52, SD 1.84, $p < 0.00$) or the warm-glow design (mean 2.54, SD 1.60, $p < 0.00$). Finally, the respondents who received the base design gave higher scores on the altruism survey item (mean 6.29, SD 1.08, $p < 0.00$) than those who received the warm-glow design (mean 5.17, SD 1.15, $p < 0.00$) or the hedonism design (mean 5.30, SD 1.45, $p < 0.00$). We also conducted between-groups ANOVA and found that there were significant differences between the groups with respect to the feeling of warm glow ($F = 31.45$, $p = 0.00$), hedonism ($F = 82.80$, $p = 0.00$), and altruism ($F = 14.14$, $p = 0.00$). Our manipulations were thus deemed to be successful.

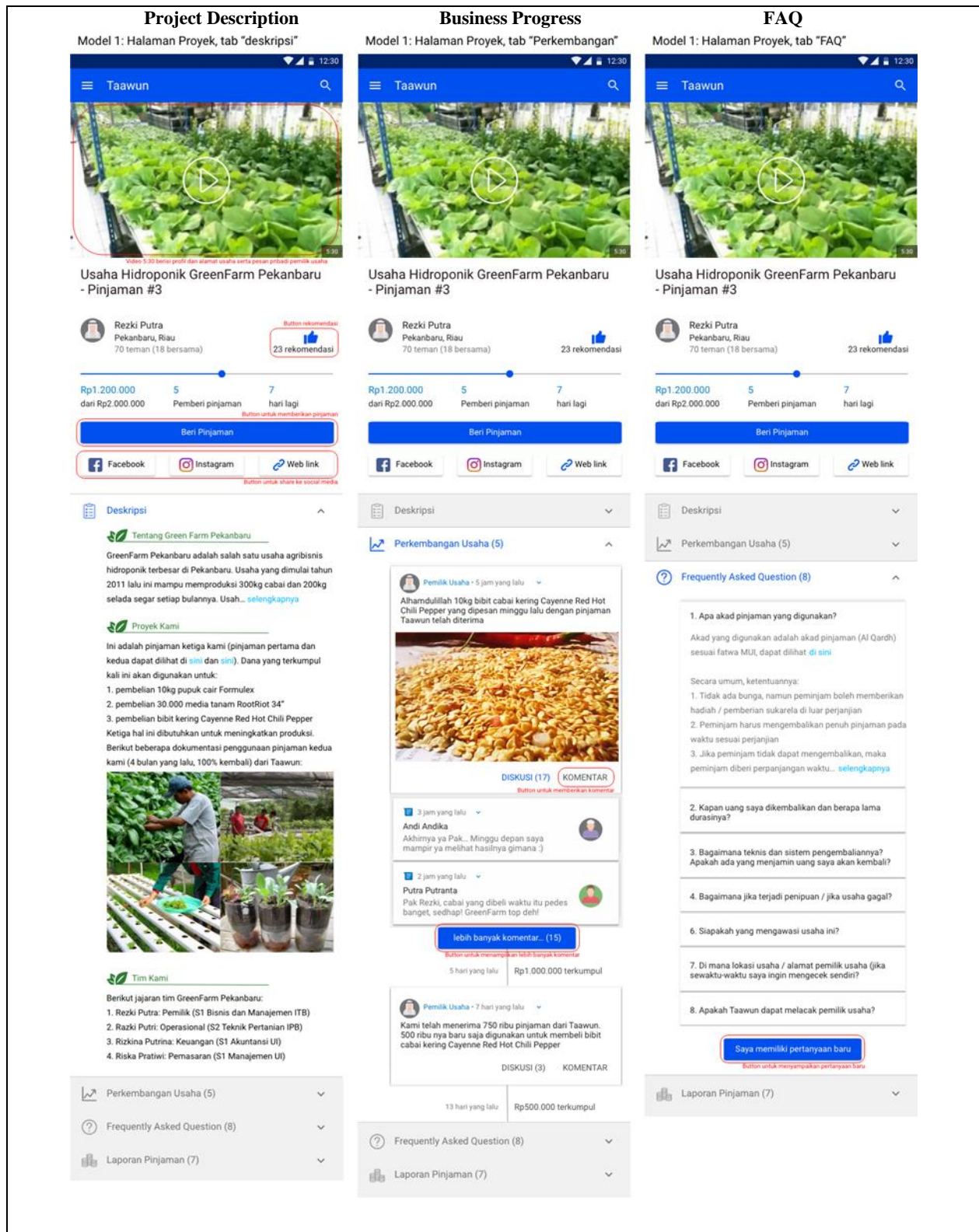


Figure 2. Base Design: Project Page

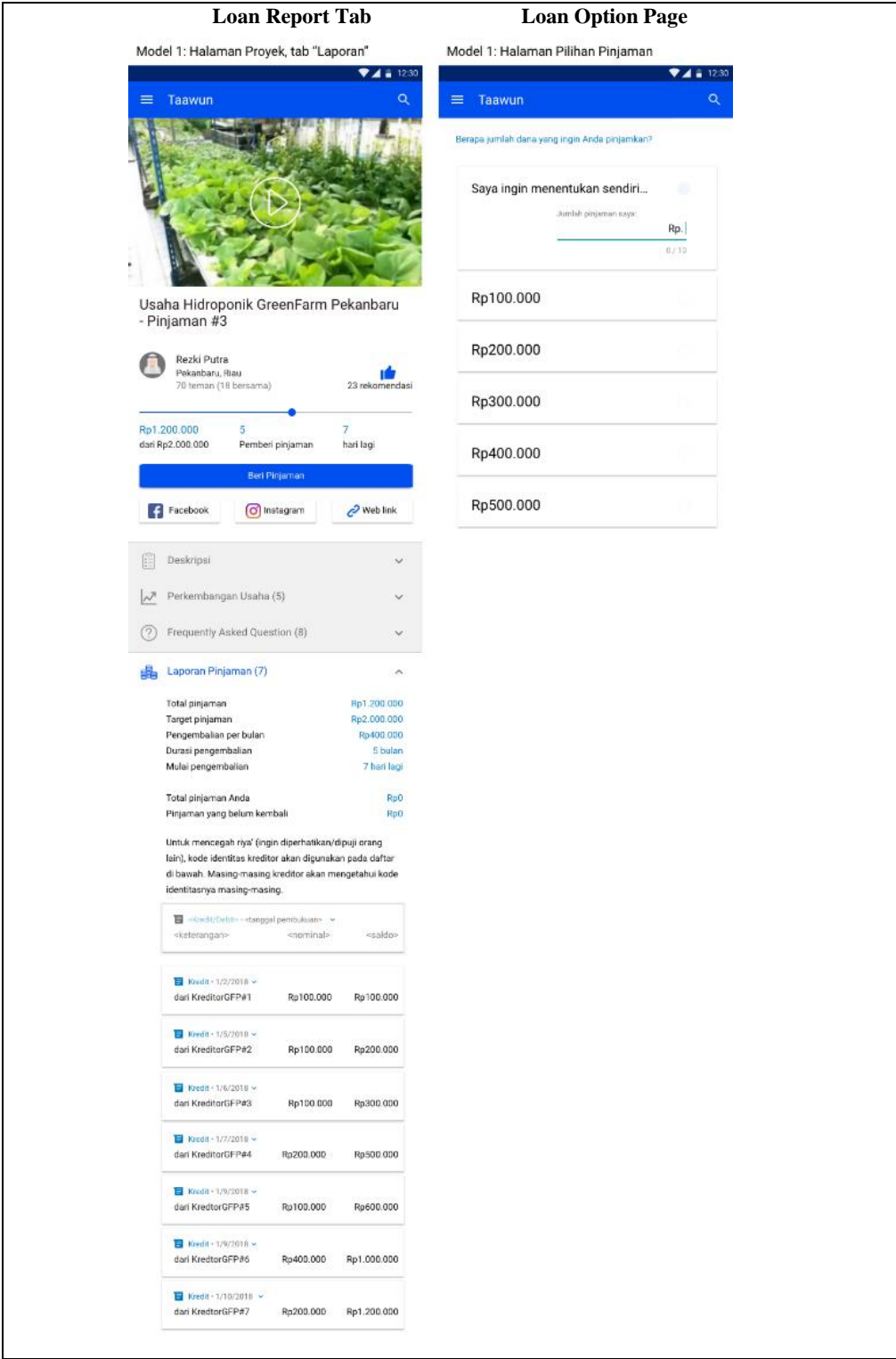


Figure 3. Base Design: Loan Report Tab and Loan Option Page

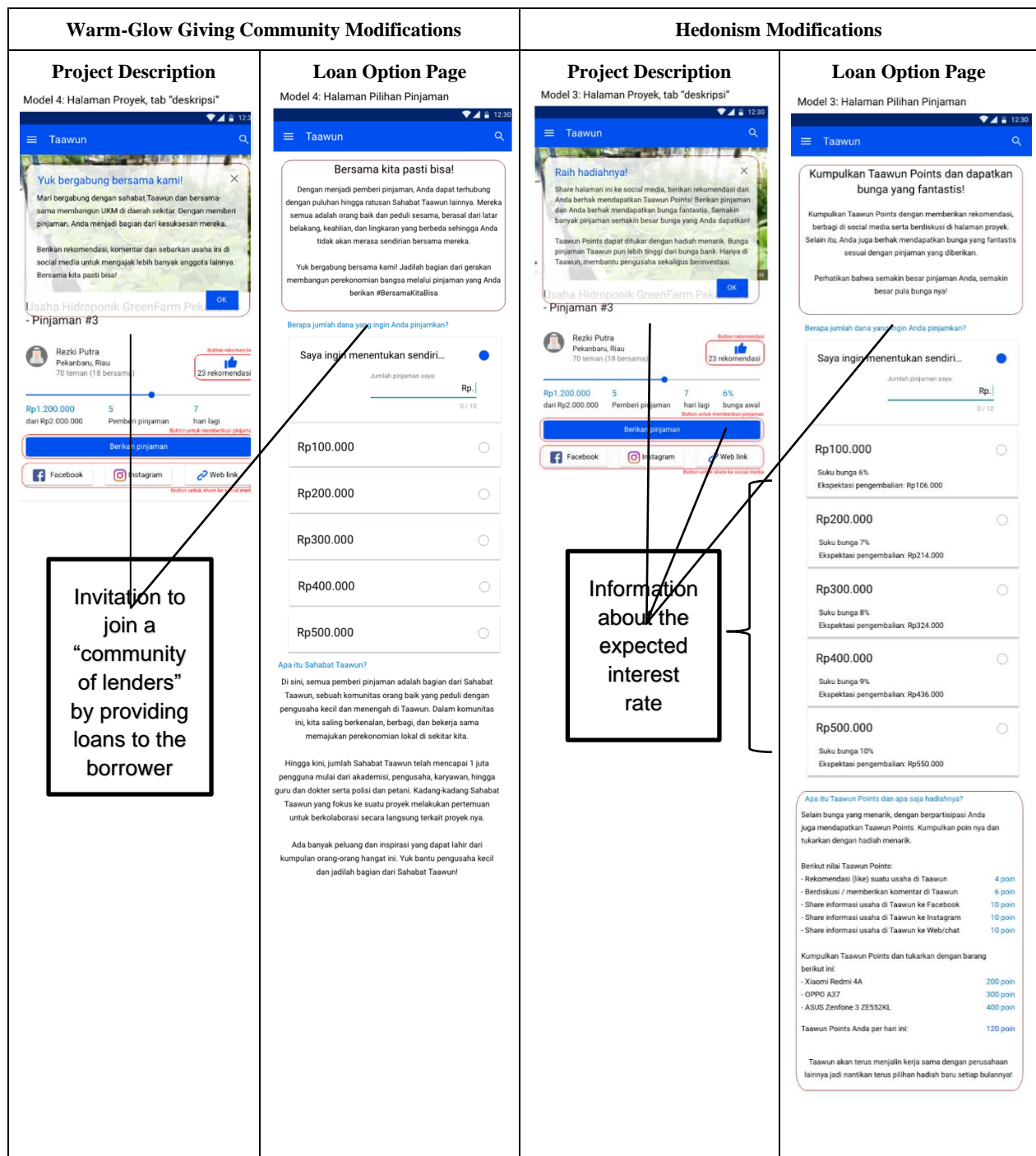


Figure 4. Warm-Glow Giving Community and Hedonism Modifications

5.4 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 suggests 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 would 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 that all comparisons were not significant (see Appendix C), providing evidence of equivalence of the three groups of respondents.

It is important to note that Indonesia is a developing country where the average monthly income is Rp 4,666,667 (CNN Indonesia, 2019). Among our study respondents, one-third reported average incomes, while two-thirds reported earnings above the average income. Hence, we would expect our respondents to be financially able to fund a local project on a crowdfunding platform, making them valid respondents in this regard.

We also checked the construct validity of the need for complete information (NCI), personal interest in agriculture (PI), and willingness to participate (WTP) (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. In assessing the reliability of the construct, the Cronbach’s alpha of our dependent variable WTP was 0.835, and that of the control variable NCI was 0.741, which 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 multicollinearity (see Appendix E) and found no multicollinearity issues.

Table 5. Demographic Characteristics

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

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.

Table 7. Analysis for Willingness to Participate (WTP)

Independent variables	Model 1 (control variables only)		Model 2 (independent variable only)		Model 3 (independent and control 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 < 0.001, **: p < 0.010, *: p < 0.050

Table 8. Analysis for Amount to Lend (ATL)

Independent variables	Model 1 (control variables only)		Model 2 (independent variable only)		Model 3 (independent and control 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.

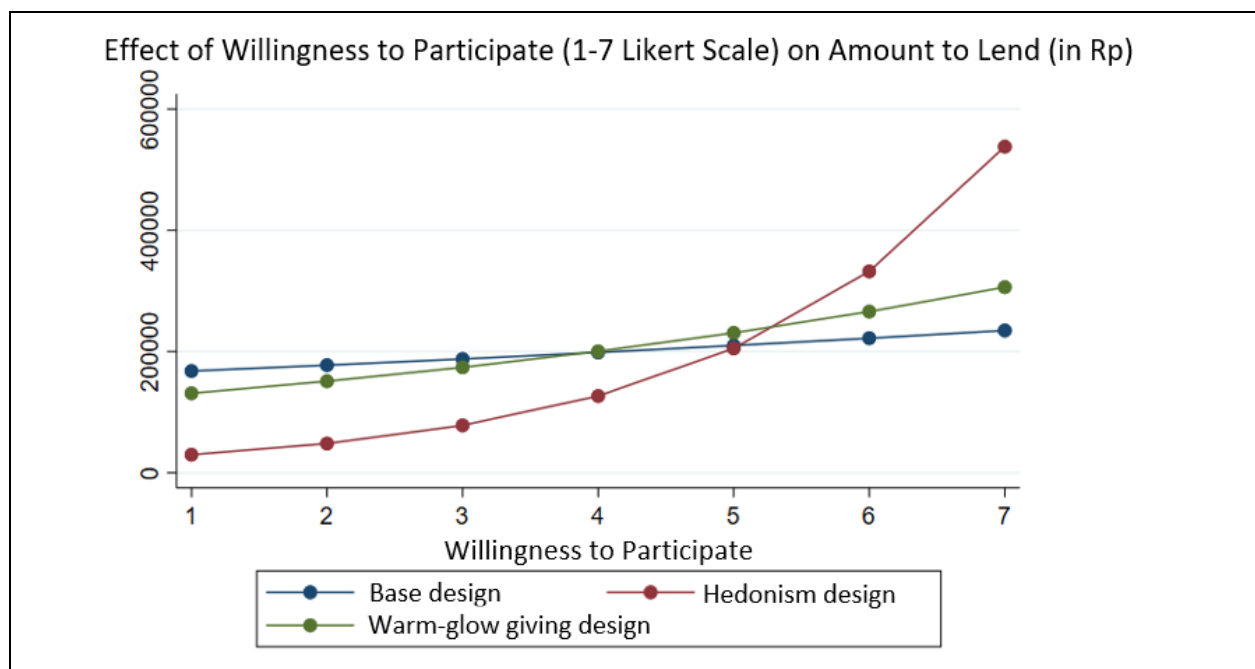


Figure 5. Treatment x WTP on ATL

5.5 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.

The results of the second analysis with ATL as a dependent variable, presented in Table 8, support H3 (Muslims' willingness to participate in loan-based crowdfunding positively affects the lending amount. 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 effect of willingness to participate (WTP) on the amount to lend (ATL) for each crowdfunding design (base [altruism], 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.

6 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, should 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 of warm-glow giving for community benefit is represented in our study 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 willingness of Muslim users to participate in crowdfunding. We found no significant difference between the base design and the warm-glow giving design in terms of Muslim users' 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 and honest deed. Although the modified design representing warm-glow giving for the community is in accordance with Sharia law, some participants may consider it simply an unintended side-value derived from participating in a Sharia-based crowdfunding design.

Further, our findings show a significant relationship between willingness to participate in a crowdfunding platform and the amount of money the participant was willing to lend. This is not surprising; however, the findings for the hedonism treatment group are surprising. For this group, when the willingness to participate in crowdfunding was low, the amount that users are willing to lend was generally lower than in the other groups. However, when users had high willingness to participate in crowdfunding, the amount they were willing to lend was substantially higher than in the other groups. Taken together, this means that Muslims willing to make a loan for monetary interest, despite prohibition by *riba*, will tend to offer 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 discrepancy by increasing the attractiveness of their disassociating behavior.

6.1 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 & 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 on 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. Thus 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 large 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 (for an interdisciplinary review, see Hoegen, Steininger, & Veit, 2018).

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, in addition to conventional investment opportunities, loan-based crowdfunding platforms 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 charities of the lenders' choice.

Another possible inclusive design would be an “organized *tawarruq*” which has been used in the Islamic financial sector in some countries of the Gulf Cooperation Council (Ahmed & Aleshaikh, 2014). In the context of loan-based crowdfunding, the platform owner as the organizer of *tawarruq* would need to organize several sales transactions with borrowers and lenders separately. The platform owner would first sell a commodity, which could be a virtual commodity, to a borrower at a price payable at a future date. Then the platform owner would act as an agent of the borrower to sell the commodity at a lower price to the lenders for cash. Hence, the borrower would get cash on the spot and would owe the platform owner a larger amount of money. At a future date, once the amount owed is repaid, the platform owner would redistribute 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 & Aleshaikh, 2014; Alkhamees, 2017)—since there is no physical exchange of a commodity between the parties involved, some countries have declared organized *tawarruq* to be non-Sharia-compliant, arguing that the sales merely serve as a means to create debt resembling a loan with interest (Ahmed & Aleshaikh, 2014; Alkhamees, 2017). Hence, when designing inclusive loan-based crowdfunding for religiously constrained funders, designers should be aware of acceptable practices in their 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 are nevertheless willing and motivated to engage with the prospect of increasing financial returns through interest rates via loan-based crowdfunding platforms appear to be highly valuable creditors, as they are willing to make substantial loans.

A broader theoretical implication of our study is that researchers should reexamine 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 funders are only interested in the benefit of the loan recipient (pure altruism), they may be discouraged from giving if the project has already collected some funding—hence, the "crowding-out" effect (Gleasure & Feller, 2016a). Although not directly investigated here, 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 or requirements.

6.2 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 whether crowdfunding projects can increase the number of loans made if the loan-based crowdfunding platform is tailored to religious constraints. How loan-based crowdfunding platforms for Muslim lenders can achieve the best possible results for project creators and platform sustainability would be another interesting question for future research.

Because of the sensitivity of the matter and to avoid response bias, we did not ask whether survey participants were faithful to Islamic teachings, which might offer an alternative explanation for our findings. Future research could suggest ways of assessing survey participants' faithfulness to their religion, while avoiding response bias on their behavioral responses and potentially offending participants.

Online crowdfunding platform design can ameliorate pervasive constraints based on religion or culture. For instance, platforms can provide access to female lenders who prefer to support women-led projects in areas where women are historically underrepresented (Greenberg & Mollick, 2015), platforms can 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, platforms can provide options beyond conventional loan interest to address Muslim lenders' religious constraints. Hence, our study adds another substantial meaningful implication for crowdfunding platform designers to consider toward creating more inclusive platforms. Future studies could also assess other important religious or cultural constraints that may prohibit certain groups of potential lenders from participating on loan-based crowdfunding platforms.

References

- Agrawal, A., Catalini, C., & Goldfarb, A. (2014). Some simple economics of crowdfunding. *Innovation Policy and the Economy*, 14(1), 63-97.
- Agrawal, A., Catalini, C., & 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., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), 955-980.
- Ahmed, H., & 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 Sharī'ah compliance in the Islamic finance industry*. Brill Nijhoff.
- 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.
- 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., & 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*. ABC-CLIO.
- Al-Zumai, F., Al-Wasmi, M. (2016). 2008 financial crisis and Islamic finance: An unrealized opportunity. *International Journal for the Semiotics 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., & 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., & Schwienbacher, A. (2013). Individual crowdfunding practices. *Venture Capital*, 15(4), 313-333.
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), 585-609.
- Belleflamme, P., Omrani, N., & Peitz, M. (2015). The economics of crowdfunding platforms. *Information Economics and Policy*, 33, 11-28.
- Burtch, G., & Chan, J. (2019). Investigating the relationship between medical crowdfunding and personal bankruptcy in the United States: Evidence of a digital divide. *MIS Quarterly*, 43(1), 237-262.
- Burtch, G., Ghose, A., & 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., & Wattal, S. (2014). Cultural differences and geography as determinants of online prosocial lending. *MIS Quarterly*, 38(3), 773-794.
- Burtch, G., Ghose, A., & 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., & 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., & Liu, D. (2018). The role of provision points in online crowdfunding. *Journal of Information Systems Management*, 35(1), 117-144.
- Cambridge Centre for Alternative Finance. (2017). Crowdfunding in East Africa: Regulation and policy for market development. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2017-05-eastafrika-crowdfunding-report.pdf

- Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization*, 81(1), 1-8.
- Cholakova, M., & Clarysse, B. (2015). Does the possibility to make equity investments in crowdfunding projects crowd out reward-based investments? *Entrepreneurship Theory and Practice*, 39(1), 145-172.
- Choy, K., & 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., & 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., & Gokpinar, B. (2020). The role of customer investor involvement in crowdfunding success. *Management Science*, 66(1), 452-472.
- Courtney, C., Dutta, S., & 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. <https://www.cnnindonesia.com/ekonomi/20190206161843-532-366859/rata-rata-pendapatan-orang-indonesia-rp56-juta-per-tahun>
- Crumpler, H., & Grossman, P. J. (2008). An experimental test of warm glow giving. *Journal of Public Economics*, 92, 5-6, 1011-1021.
- Du, Z., Li, M., & 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., & 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., & 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*. Row & Peterson.
- Fleming, L., & Sorenson, O. (2016). Financing by and for the masses. *California Management Review* 58(2), 5-19.
- Frydrych, D., Bock, A. J., Kinder, T., & Koeck, B. (2014). Exploring entrepreneurial legitimacy in reward-based crowdfunding. *Venture Capital*, 16(3), 247-269.
- Gerber, E. M., & Hui, J. (2013). Crowdfunding: Motivations and deterrents for participation. *ACM Transactions on Computer-Human Interaction*, 20(6), Article 34.
- Geva, H., Barzilay, O., & 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., & 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., & 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., & 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., & Morgan, L. (2019). Talking up a storm: How backers use public discourse to exert control in crowdfunding systems development projects. *Information Systems Research*, 30(2), 447-465.
- Greenberg, J., & Mollick, E. (2015). Leaning in or leaning on? Gender, homophily, and activism in crowdfunding. *Academy of Management Proceedings*.
- Guan, X., Deng, W. J., Jiang, Z. Z., & Huang, M. (2020). Pricing and advertising for reward-based crowdfunding products in E-commerce. *Decision Support Systems*, 131, 113231.
- Hackett, C., Cooperman, A., & Ritchey, K. (2015). The future of the world religions: Population growth projections, 2010-2050. Pew Research Center. <https://www.pewforum.org/2015/04/02/religious-projections-2010-2050/>

- Harbaugh, W. T., Mayr, U., & 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., & Rocholl, J. (2017). Adverse incentives in crowdfunding. *Management Science*, 63(3), 587-608.
- Hoegen, A., Steininger, D. M., & 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., & Zimmerman, D. (2015). *Probability and Statistical Inference*, Pearson Education.
- Hong, Y., Hu, Y., & 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., & 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.
- Kgoroadira, R., Burke, A., & 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.
- Kim, K., & 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., & 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., & Robson, P. (2016). Social identity and signalling success factors in online crowdfunding. *Entrepreneurship & Regional Development*, 28(9-10), 605-629.
- Kuppuswamy, V., & Bayus, B. L. (2015). Crowdfunding creative ideas: The dynamics of project backers. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2234765
- Lacan, C., & 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., & 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., & Ennsgraber, C. (2015). Entrepreneurial implications of crowdfunding as alternative funding source for innovations. *Venture Capital*, 17(1-2), 171-189.
- Lehner, O. M., & Harrer, T. (2019). Crowdfunding revisited: a neo-institutional field-perspective. *Venture Capital*, 21(1), 75-96.
- Ley, A., & Weaven, S. (2011). Exploring agency dynamics of crowdfunding in start-up capital financing. *Academy of Entrepreneurship Journal*, 17(1), 85-110.
- Li, G., & 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., & Liou, J. H. (2020). A social fundraising mechanism for charity crowdfunding. *Decision Support Systems*, 129, 11317.
- Liang, T. P., Wu, S. P. J., & 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., & 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., & 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., & Malaga, R. (2019). Success factors in Title II equity crowdfunding in the United States. *Venture Capital*, 21, 2-3, 223-241.
- McMillan, D. W., & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14, 6-23.
- Mochkabadi, K., & 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., & 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. *The Independent*. <http://www.independent.co.uk/news/world/europe/norway-bank-halal-loan-islam-muslims-islamic-finance-a7537116.html>
- Nitani, M., Riding, A., & 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 economic implications. *International Journal of Middle East Studies*, 14(1), 3-17.
- Ordanini, A., Miceli, L., Pizzetti, M., & Parasuraman, A. (2011). Crowd-funding: Transforming customers into investors through innovative service platforms. *Journal of Service Management*, 22(4), 443-470.
- Pew Research Center. (2015). 10 countries with the largest Muslim population in the world. https://www.pewforum.org/2015/04/02/muslims/pf_15-04-02_projectionstables74/
- Presley, J. R., & Sessions, J. G. (1994). Islamic economics: The emergence of a new paradigm. *The Economic Journal*, 104, 424, 584-596.
- Rodriguez-Ricardo, Y., Sicilia, M., & 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 & 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., & 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., & Larralde, B. (2010). Crowdfunding of small entrepreneurial ventures. In D. Cummings (Ed.), *Oxford Handbook of Entrepreneurial Finance* (pp. 369-391). Oxford University Press.
- Siering, M., Koch, J. A., & 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., & Wilson, D. S. (1998). *Unto others: The evolution and psychology of unselfish behavior*. Harvard University Press.
- Statista (2021). Crowdfunding: Statistics & Facts. <https://www.statista.com/topics/1283/crowdfunding/>
- Statista (2017). Volume of funds raised through crowdfunding worldwide in 2017. <https://www.statista.com/statistics/946668/global-crowdfunding-volume-worldwide-by-type/>
- 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., & Vancouver, J. B. (2019). 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., & Eutsler, J. (2019). 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., & Benlian, A. (2016). Effects of social interaction dynamics on platforms. *Journal of Management Information Systems*, 33(3), 843-873.
- Thies, F., Wessel, M., & Benlian, A. (2018). Network effects on crowdfunding platforms: Exploring the implications of relaxing input control. *Information Systems Journal*, 28(6), 1239-1262.
- Tomczak, A., & Brem, A. (2013). A conceptualized investment model of crowdfunding. *Venture Capital*, 15(4), 335-359.
- Voelker, T. A., & 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., & 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., & 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., & Lin, M. (2017). Market mechanisms in online peer-to-peer lending. *Management Science*, 63(12), 4236-4257.
- Wu, S., Wang, B., & 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., & Wang, T. (2016). Configurational paths to sponsor satisfaction in crowdfunding. *Journal of Business Research*, 69(2), 915-927.
- Younkin, P., & Kuppuswamy, V. (2018). The colorblind crowd? Founder race and performance in crowdfunding. *Management Science*, 64(7), 3269-3287.
- Zheng, H., Li, D., Wu, J., & 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., & Steinhart, Y. (2018). Making-the-Product-Happen: A driver of crowdfunding participation. *Journal of Interactive Marketing*, 41, 81-93.

Appendix A:

Table A1. 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 & 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 in 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 & 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

Table B1. 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%
Age	Mean 27	Minimum 18
	Maximum 57	Skewness 1.151
		Kurtosis 1.748

Appendix C

Table C1. 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
<i>Note:</i> MI: monthly income, KCF: knowledge about crowdfunding, PI=personal interest in agriculture				

Appendix D

Table D1: 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 interested 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

Table E1. 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

About the Authors

Juliana Sutanto is a professor of information systems in the Department of Management Science of Lancaster University Management School. Her research focuses on artifact design and behavioral analysis in digital communications and interactions; as such, she subscribes herself to the design and behavioral 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 journals such as *Management Science*.

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