## **RESEARCH PAPER**



# This is why we pay—Motivational factors for supporting subscription-based crowdfunding campaigns

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#### Abstract

Subscription-based crowdfunding platforms emerged as novel digital platforms that offer creators the possibility of financial independence. They differ significantly from traditional time-limited crowdfunding approaches by utilizing recurring payments and enabling a creator-centric rather than campaign-centric funding approach. We built upon previous research on individuals' motivation to support crowdfunding campaigns, and utilizing self-determination theory, our study explores which subscription-based crowdfunding campaign characteristics influence individuals' motivation to support them. We use a two-method approach by analyzing individual pledge data from a subscription-based crowdfunding platform and conducting a discrete choice experiment. Our results show that having a high number of previous supporters increases potential supporters' willingness to pay, while a campaign's current recurring income and the hiding of this piece of information decrease it. We could also identify a u-shaped effect of campaigns' goal proximity on willingness to pay. We discuss the theoretical and practical contributions of our research and provide an overview of potential future research directions.

Keywords Crowdfunding · Subscription · Motivation · Digital platforms and ecosystems · Quantitative research

JEL Classification  $D26 \cdot D9 \cdot D90 \cdot D91 \cdot G11 \cdot G23 \cdot G4 \cdot G40 \cdot G41$ 

# Introduction

In recent years, subscription-based crowdfunding (SBC) has emerged as a new type of crowdfunding and gained the attention of scholars and practitioners (e.g., Jöntgen, 2022; Lin et al., 2021; Lingnau & Eichner, 2023; Regner, 2021). The

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platforms facilitating this type of crowdfunding grow steadily and leverage considerable amounts of money. Patreon, a popular SBC platform, announced in 2022 that the platform has already raised and allocated 3.5 billion dollars since its launch in 2013 (Patreon, 2022). SBC platforms act as an intermediary (Mollick, 2014), which allows content creators to request recurring payments for their business or goal (Paschen, 2017) in exchange for rewards or on a donationbasis (Belleflamme et al., 2014). Individuals' motivations to support these crowdfunding campaigns are manifold and have been the focus of research over the last few years (e.g., Lin et al., 2021; Ryoba et al., 2021; Shneor et al., 2022). One perspective on individuals' motivation is self-determination theory (Deci & Ryan, 1985a, 1985b) which distinguishes between individuals' intrinsic and extrinsic motivation. SBC campaigns are characterized by recurring payments from the supporter to the creator, as well as being a creator-centric,

<sup>&</sup>lt;sup>1</sup> While there exist different naming schemes for crowdfunding stakeholders, we will refer to the funding-seeking party as "creator" and the funding-providing party as "supporter" throughout this article. Specifically, with the term supporters we denote users of an SBC platform that are currently sending recurring payments via a subscription to a campaign creator, thus supporting the creator's campaign.



rather than a campaign-centric funding approach—meaning that supporters support a particular creator instead of a one-time project (Lin et al., 2021) and thus differ from traditional time-limited crowdfunding campaigns.

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So far, these novel characteristics of SBC and how these characteristics cater to supporters' intrinsic and extrinsic motivation have not been considered in major parts of previous research. In this paper, we focus on examining SBC supporters' individual decisions to support an SBC campaign which is a crucial prerequisite to understand crowdfunding success. We thereby examine how observable campaign characteristics affect individuals' willingness to pay (WTP) to answer the following research question:

**RQ:** How do campaign characteristics affect supporters' willingness to pay in subscription-based crowdfunding and how do these effects differ from traditional crowdfunding?

To achieve this goal, we employ a two-method approach. Firstly, we analyze individual pledge level data from Patreon. Secondly, we use a discrete choice experiment in which we present 303 participants with fictional SBC campaigns. By manipulating the attributes and their levels of the campaigns, we were able to examine participants' preferences for SBC campaigns. This allows us to verify our findings from the analysis of the pledge data, and in addition, this triangulation enables us to derive conclusions on causal effects (Hong, 2015).

Our research contributes to previous research on crowdfunding in multiple ways: Notably, we are the first study to quantitively analyze how SBC campaign characteristics affect supporters' WTP on an individual level. Further, we highlight how the differences between SBC and traditional time-limited crowdfunding cater to supporters' intrinsic and extrinsic motivation and subsequently affect their WTP. Interestingly, we observe that having a high number of previous supporters increases potential supporters' willingness to pay, while a campaign's current recurring income and the hiding of this piece of information decrease it, which is in stark contrast to previous findings regarding the effects of campaign funding on individuals' motivation to support crowdfunding campaigns. In addition, we identified a

<sup>&</sup>lt;sup>2</sup> This data became public in October 2015 and includes information about all individual pledges from 2013 to 2015. While Patreon acknowledges our use of the data, it cannot guarantee the accuracy of the data. Our use of the data is strictly for scientific purposes and not subject to GDPR as they do not contain personalized information. Moreover, members of the ethical committee that we have contacted assessed the data as unproblematic as consent was given by the focal firm. In fact, the data are comparable to data that can be collected from websites via crawlers.



u-shaped effect of campaigns' goal proximity on WTP. For practitioners, knowledge about the factors affecting supporters' WTP enables educated design choices during the crowdfunding campaign creation process, which improves campaign success.

We structured our paper as follows: After this "Introduction," we present the literature related to our study. We explore research about crowdfunding, specifically SBC, as well as users' motivation to support campaigns using self-determination theory (Deci & Ryan, 1985a, 1985b). In addition, we offer an overview of related literature to highlight the position of this paper in it. We continue by presenting our research model. Then, we describe the data from Patreon and its analysis and present a discrete choice experiment and its results. Lastly, we discuss our findings in the context of existing literature and disclose our study's limitations and avenues for future research.

# **Related literature**

Our work builds on and informs multiple research streams: First, we use a literature review of previous research on crowdfunding to inform our study and highlight the novel position of our paper. Second, as we want to understand individuals' decisions and motivations to support crowdfunding campaigns, we build upon self-determination theory (Deci & Ryan, 1985a, 1985b). Finally, we use these research streams to build our research model.

# Crowdfunding

Crowdfunding platforms enable individuals or organizations to request a monetary contribution toward their social or commercial goal from a network of actors by issuing an open call (Paschen, 2017) in exchange for rewards or by donations (Belleflamme et al., 2014). However, the crowd offers additional benefits as it enables building a community for the product and engaging in an open dialogue with the creators; it democratizes content creation (Mollick & Robb, 2016) and brings together people in need of funds and those willing to fund them (Mollick, 2014). Based on the compensation a supporter receives, crowdfunding can be classified into four main types: reward-based, equity-based, lending-based, and donation-based (Behl & Dutta, 2020; Belleflamme et al., 2015; Chen, 2023; Fleming & Sorenson, 2016). Reward-based crowdfunding allows supporters to exchange their financial support for a tangible compensation, which may come in different forms, like being credited or being able to buy the funded product earlier, at a better price, or with additional perks (Hu et al., 2015; Mollick, 2014). Reward-based crowdfunding platforms typically operate either on an "all-or-nothing" (i.e., creators can only

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keep the accumulated funding if the target goal is reached) or a "keep-it-all" (i.e., creators can keep the accumulated funding, regardless if the target goal is reached) approach (Rykkja et al., 2020). Equity-based crowdfunding platforms offer supporters equity stakes in the campaigns they support financially (Belleflamme et al., 2015). In lending-based crowdfunding, creators can borrow money from the crowd in exchange for a predefined interest rate (Belleflamme et al., 2015; Butticè et al., 2018). Lastly, donation-based crowdfunding presents supporters with no tangible reward for their contribution; instead, supporters may donate mainly due to altruism or social motives (Burtch et al., 2013; Hong et al., 2018).

# **Subscription-based crowdfunding**

This study focuses on SBC platforms that have been popularized through Patreon and OnlyFans. SBC platforms provide a two-sided market by facilitating the exchange of two types of actors (Hinz et al., 2020). The first group of actors, which we refer to as creators, present themselves via a personalized webpage ("campaign") on the SBC platform. In their personalized webpages, the creators can display their user-generated content (Susarla et al., 2012) and offer subscriptions for access to that content or additional rewards (Atasoy & Morewedge, 2018; Fan-Osuala, 2019). Creators can specify the price and the benefits for multiple subscription levels (Lin et al., 2021). These different levels of subscriptions are commonly referred to as tiers (Hair, 2021). Akin to campaigns in donation-based crowdfunding, some creators decide to offer no tangible rewards in their subscription tiers but simply rely on donations (Belleflamme et al., 2014; Lingnau, 2022). The second group of actors, which we refer to as supporters, can seek out creators' personalized webpages on the SBC platform. After assessing the presented campaign and weighing off the cost and benefits in accordance with their individual motivation (Deci & Ryan, 1985a, 1985b; Konovsky & Pugh, 1994), supporters can decide to subscribe to a creator's campaign, i.e., engaging in a recurring payment to receive the promised rewards (or as a donation) and gaining access to additional content. While subscriptions have been addressed in previous research (e.g., Bolton & Lemon, 1999; Garbarino & Johnson, 1999; Gu et al., 2018; Iyengar et al., 2022), subscription-based crowdfunding platforms present a unique two-sided market scenario (Hinz et al., 2020) in which supporters and creators are matched to each other, enabling a creator-centric funding approach (Lin et al., 2021). Further, this enables supporters to be part of an exclusive community of likeminded supporters as well as entailing closer access to the creator they support (Lin et al., 2021). In exchange for providing the infrastructure to platform users, it is common that the SBC platform keeps a percentage of the recurring payment provided from the supporters to the creators (Lingnau, 2022).

SBC shares some similarities with traditional time-limited crowdfunding but also has some essential differences that need to be considered and that impact the decision to financially support these campaigns: First and foremost, as the name suggests, SBC campaigns utilize recurring payments, often on a per month or per work basis, instead of one-time payments like time-limited crowdfunding approaches (Kuppuswamy & Bayus, 2017; Lingnau, 2022). Previous research on crowdfunding acknowledges the effects of prior crowdfunding experiences of supporters, distinguishing between first-time and repeated supporters (e.g., Bagheri et al., 2019; Cordova et al., 2015; Efrat et al., 2020; Kim & Viswanathan, 2019; Lin & Boh, 2017). However, in the context of SBC campaigns, supporters start their first support with the intention of future, recurring support. Furthermore, subscriptionbased crowdfunding creators commonly utilize a freemium model, in which they offer potential supporters a certain part of their content for free and offering additional premium content and benefits after subscribing (Lin et al., 2021). Therefore, potential supporters are able to experience the content in some parts prior to subscribing.

Secondly, SBC campaigns have no fixed deadline by which potential supporters need to make their decision whether or not to financially support the campaign; contrary to this, time-limited crowdfunding employs fixed deadlines by which funding goals have to be reached (Burtch et al., 2018; Jöntgen, 2022; Kuppuswamy & Bayus, 2017; Li & Wang, 2019). Instead, subscription-based campaigns often run indefinitely or until the campaigns' founders decide to cancel them (Regner, 2021). Accompanying the lack of a fixed deadline is the possibility to cancel pledges at any time. While supporters of time-limited crowdfunding platforms can only cancel their pledges before their processing at the campaigns' deadline, supporters of SBC campaigns can cancel their future pledges at any time (Jöntgen, 2022; Lingnau, 2022; Regner, 2021). According to Regner (2021), this can act as a feedback mechanism for content creators, who question their actions when many supporters drop out of their campaign. Another distinction from time-limited crowdfunding is the absence of strict campaign goals. While pledges on most campaigns on time-limited crowdfunding platforms only get processed if the campaigns reach their goal (and then offer additional goals as so-called "stretch goals") by a given deadline, the goals on subscription-based platforms are not crucial for the processing of pledges (Jöntgen, 2022; Lingnau, 2022). In most cases, these goals state that by reaching a certain amount of monthly income, the content creator will be able to offer a higher content output or get themselves better equipment (Fan-Osuala, 2019). A fifth and final distinction of SBC campaigns is the greater focus on the campaign's creator instead of on the offered



product (Lin et al., 2021; Lingnau & Eichner, 2023; Swords, 2017). While supporters of time-limited crowdfunding campaigns get involved in order to receive a specific reward or support a single campaign of a creator, the creator detached from a specific campaign takes the focus of attention in SBC campaigns. This also comes with the additional benefit of letting content creators build a stronger community. Similar to SBC, content creation platforms like YouTube and Twitch may offer channel memberships (e.g., YouTube's channel membership or Twitch's subscription), where creators can be supported directly by their fans (Lingnau, 2022).

Research about SBC platforms has only recently gained traction in the IS community. Regner (2021) was able to show that the quality of the communication between the creators and the supporters on Patreon is a determinant of campaign success. Lin et al. (2021) and Crosby and McKenzie (2021) examined how information control strategies affect SBC success. Lin et al. (2021) demonstrate that private postings and earning concealment can both positively affect the number of supporters and fan engagement. Crosby and McKenzie (2021) also show that creators who hide their earnings have more subscribers as a result. Jöntgen (2022) examines which factors affect SBC campaign success and observes that long campaign description, multiple reward tiers with varying prices, community engagement, postings with a high level of media richness, and utilizing one's social capital increase campaign success. Lingnau (2022) presents a taxonomy of crowdfunding platforms that specifically considers SBC platforms' novel characteristics. Bonifacio et al. (2021) and Hair (2021) focus on examining the relational labor efforts of creators in SBC. Lastly, Lingnau and Eichner (2023) suggest four overarching techniques that creators in SBC use to achieve success in their campaigns: "information control strategies, supporter interaction strategies, supporter acquisition strategies, and supporter retention strategies" (p.

In summary, previous research on SBC mainly focused on the effects of SBC campaign characteristics on campaign success and how content creators can benefit from SBC campaigns. So far, the perspective of SBC supporters has received little attention. Our study explores supporters' intrinsic and extrinsic motivations to start supporting SBC campaigns and their WTP.

# Motivation to support crowdfunding campaigns

Motivation for human behavior is abstract, and countless researchers across various disciplines have tried to build theories to explain individuals' behavior in various contexts. In general, motivation refers to the psychological force behind individuals' actions (Gagné & Deci, 2005). In the context of crowdfunding campaigns, researchers commonly build their research regarding individuals' motivation to support



Self-determination theory distinguishes between extrinsic and intrinsic motivation and postulates that individuals strive for autonomy, competence, and relatedness (Allison et al., 2015; Deci & Ryan, 1985a, 1985b; Ryu et al., 2020). When an action is performed to achieve an outcome, it is extrinsically motivated, while if the action is performed for an inherent interest or satisfaction while performing that action, it is intrinsically motivated (Deci & Ryan, 1985a, 1985b).

Extrinsic motivation refers to motivation driven by the expectation of external rewards or the avoidance of an external threat. In the context of crowdfunding, individuals are extrinsically motivated by their desire to receive rewards, building a social network and relationships within the crowdfunding community, and receiving recognition for their contribution (Agrawal et al., 2014; Bretschneider & Leimeister, 2017; Cholakova & Clarysse, 2015; Gerber & Hui, 2013; Ryu & Kim, 2016; Ryu et al., 2020), thereby demonstrating that supporters are especially motivated by the utility and potential financial gain instead of non-financial reasons (Bretschneider & Leimeister, 2017; Cholakova & Clarysse, 2015; Gerber & Hui, 2013).

Intrinsic motivation is not driven by external rewards or benefits but by the action itself, which is perceived to be satisfying or fulfilling for its own sake (Agrawal et al., 2014; Allison et al., 2015; Deci & Ryan, 1985a, 1985b; Ryu et al., 2020). Altruism (which refers to interpersonal helping) can play an important role when it comes to an individual's behavior that benefits others (Konovsky & Pugh, 1994). This motivation to help others is a driver for individuals to support reward-based crowdfunding campaigns (Cholakova & Clarysse, 2015; Ryu et al., 2020). Further, supporters may simply be intrinsically interested in a certain campaign or expect to experience fun by supporting the campaign, motivating them to support the campaign (Ryu & Kim, 2016). Additionally, herding behavior seems to affect supporters' motivation to support a campaign (Bretschneider & Leimeister, 2017; Burtch et al., 2013).

Individuals' intrinsic and extrinsic motivation may coexist and may change over time (Deci & Ryan, 1985a, 1985b), for example, supporters may initially support a creator because they are extrinsically motivated to obtain a reward; however, after a certain time, the intrinsic motivation of helping the creator may become more important to the supporter as they build the relationship with the creator.

# Position in relation to previous literature

Different research streams regarding crowdfunding exist. As we stated previously, SBC is a rather novel concept, and therefore, the majority of previous crowdfunding research examined



traditional time-limited crowdfunding campaigns. Here, two prevailing research perspectives exist. While some articles examine the topic from the perspective of crowdfunding campaigns, other researchers consider the perspective of campaign supporters. Common analyses of time-limited crowdfunding campaigns include factors influencing or predicting campaign success (i.e., funding sum) (Cordova et al., 2015; Jin et al., 2020; Ryoba et al., 2021; Song et al., 2019; Wang et al., 2021; Zhao et al., 2018) or on whether or not a campaign reached its funding goal (Koch & Siering, 2015, 2019; Shneor et al., 2022; Wang et al., 2018). For this, researchers often use data about crowdfunding campaigns on a campaign level. Another research stream focuses on the supporters of crowdfunding campaigns. Here, researchers often use interviews or surveys in order to better understand individuals' motivation to support crowdfunding campaigns (Bretschneider & Leimeister, 2017; Gerber & Hui, 2013; Kim et al., 2019; Steigenberger, 2017). Recently, this research stream started to examine the factors that affect supporters' trust and how they affect crowdfunding outcomes (Lin & Huang, 2021; Perdana et al., 2023; Sundermeier & Kummer, 2022). They find that trust may act as a predictor of crowdfunding success and intention to invest (Lin & Huang, 2021; Sundermeier & Kummer, 2022).

Regarding SBC, similar to time-limited crowdfunding, researchers examined antecedents of campaign success (Jöntgen, 2022; Regner, 2021). Other researchers investigated the interplay between SBC campaigns and social media platforms (Fan-Osuala, 2019; Jöntgen, 2022), the effects of the information control strategies of crowdfunding creators (Crosby & McKenzie, 2021; Lin et al., 2021), the relational labor involved in SBC (e.g., Bonifacio et al., 2021; Hair, 2021), and managerial levers that creators utilize to achieve success in their SBC campaigns (Lingnau & Eichner, 2023).

However, how campaign characteristics cater to supporters' intrinsic and extrinsic motivation and thereby affect WTP on an individual level has not received any quantitative assessment. Additionally, the majority of research that focused on supporters used surveys or interviews to gain a better understanding of their motivation. With our usage of individual pledge data and a discrete choice experiment in the context of SBC, we thus make a first step into understanding supporters' decisions in this novel context but also enrich the general crowdfunding research by examining supporters' behavior with their behavioral data. We give an overview of the related crowdfunding literature, as well as the position of our paper in relation to it, in Table 1.

# **Research model**

A major motivation for crowdfunding supporters and a source of intrinsic motivation is the will to help others, especially those in need (Cholakova & Clarysse, 2015;

Ryu et al., 2020). When a crowdfunding campaign is successful and receives a large amount of funding, we assume that to potential supporters, the campaign's creator no longer appears to be in need of additional funding. They may feel less relevant to the campaign's success and may choose to financially support another campaign instead where their money is needed more urgently (Burtch et al., 2013; Herrero et al., 2020; Ryu & Kim, 2016). Although previous research on time-limited crowdfunding showed that campaign success is a driver of trust and positively affects the funding behavior of others (Koch, 2016; Li et al., 2020), we argue that the concept of funding from time-limited crowdfunding literature is only partially transferable since the payments in SBC are recurring and a fixed deadline does not exist. Thus, the current success of SBC campaigns is rather displaying the recurring income of the campaign creator. Previous research showed that SBC campaigns with a high income tend to choose to hide it (Crosby & McKenzie, 2021; Lin et al., 2021), implying that creators might decide to hide their earnings since they acknowledge the negative effect of their earnings on supporters' WTP. Following this, we argue that the negative effect of not catering to intrinsic altruistic motivation outweighs the benefits of campaign success and propose:

H1: Current campaign success has a negative impact on supporters' willingness to pay.

Supporters of SBC campaigns have the opportunity to write comments, take part in polls, and be part of an exclusive sub-community of the campaign's creator. Therefore, the support of a campaign offers the supporters the possibility of expressing themselves in order to receive recognition (Bretschneider & Leimeister, 2017). Recognition is the supporter's desire to get acknowledged by the campaign's creator and other supporters (Bretschneider & Leimeister, 2017; Ryu & Kim, 2016) and relates to extrinsic motives like prestige and respect within a given community (Merchant & Ford, 2008). Previous literature on time-limited crowdfunding campaigns described the existence of supporters' uncertainty when financially supporting campaigns. A solution for supporters to reduce this uncertainty is to follow the decisions of other supporters. This phenomenon is known as herding behavior and is commonly found in crowdfunding campaigns (Burtch et al., 2013, 2018; Herzenstein et al., 2011; Jiang et al., 2018; Liu et al., 2015; Wehnert et al., 2019). Thus, herding behavior occurs with respect to the number of supporters of a given campaign. When a high number of supporters are present, it signals a product's high quality (Burtch et al., 2013; Herzenstein et al., 2011; Liu et al., 2015; Wehnert et al., 2019) and it increases the extrinsic motivation regarding the desire for recognition from the community. Therefore, we propose:



 Table 1
 Literature review of previous literature on crowdfunding success and support motivation

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Study	Time-limited/subscription	Scope	Crowdfunding platform and type	Method
(Bretschneider & Leimeister, 2017)	Time-limited	Supporter	Innovestment → Equity-based	Survey ( $N$ =309) to examine the effects of crowdfunding supporters' motivations on funding behavior
(Bürger & Kleinert, 2021)	Time-limited	Supporter	Startnext → Reward- and donation-based	Analysis of crowdfunding campaigns ( <i>N</i> =225) to examine differences in supporters' motivation to support commercial or cultural crowdfunding campaigns
(Cordova et al., 2015)	Time-limited	Campaign	Kickstarter, Ulule, Eppela, Indiegogo → Reward-based	Analysis of crowdfunding campaigns $(N=1127)$ to understand the determinants of campaign success
(Crosby & McKenzie, 2021)	Subscription-based	Campaign	Patreon → Reward- and donation-based	Analysis of crowdfunding campaigns $(N=27,760)$ to examine the effects of information hiding on the number of supporters
(Fan-Osuala, 2019)	Subscription-based	Campaign	Patreon → Reward- and donation-based	Analysis of crowdfunding campaigns ( $N$ =115) and social network data exploring the effect of SBC adoption on YouTube channel performance
(Gerber & Hui, 2013)	Time-limited	Supporter	Kickstarter, RocketHub, IndieGoGo → Reward-based	Interviews ( $N$ = 83) to determine supporters' and creators' motivations to participate in crowdfunding campaigns
(Hong et al., 2018)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns $(N=1129)$ and associated social network data to analyze the effects of social media activity on daily funding
(Jin et al., 2020)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns ( $N=7289$ ) and social network data to examine the effect of social media activity on campaign success
(Jöntgen, 2022)	Subscription-based	Campaign	Patreon → Reward- and donation-based	Analysis of crowdfunding campaigns ( $N = 161,214$ ) examining the effects of campaign characteristics on campaign success
(Kim et al., 2019)	Time-limited	Supporter	Fictional platform or not specified → Reward-based	Survey ( $N$ =450) to examine the effects of supporters' motivations and perceived trust and risk on funding behavior
(Koch & Siering, 2015)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns $(N=762)$ to examine characteristics that lead to reaching the funding target
(Koch & Siering, 2019)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns and creators $(N=40,833)$ to examine characteristics that lead to reaching the funding target
(Lin et al., 2021)	Subscription-based	Campaign	Patreon → Reward- and donation-based	Analysis of crowdfunding campaigns $(N=92,850)$ to examine the effects of creators' information control strategies on the number of supporters and their participation
(Lin & Huang, 2021)	Time-limited	Campaign	Fictional platform or not specified → Lending-based	Survey ( $N$ =427) to empirically examine how source credibility and argument quality mediated by trust affect investment intention of supporters in crowdlending
(Perdana et al., 2023)	Time-limited	Supporter	Fictional platform or not specified → Lending-based	Survey ( $N$ =232) to empirically examine which factors affect trust building of supporters in crowdlending
(Regner, 2021)	Subscription-based	Campaign	Patreon → Reward-based	Analysis of crowdfunding campaigns $(N=139,366)$ to understand the determinants of subscription-based campaign success
(Ryoba et al., 2021)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns $(N=21,885)$ to determine which factors can predict campaign success
(Ryu & Kim, 2016)	Time-limited	Supporter	Fictional platform or not specified → Reward-, equity-, lending-, donation-based	Survey ( $N=544$ ) to propose four types of crowdfunding sponsors based on their motivation



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Study	Time-limited/subscription	Scope	Crowdfunding platform and type	Method
(Ryu et al., 2016)	Time-limited	Supporter	Fictional platform or not specified → Reward-based	Survey ( $N=559$ ) and transaction data to examine the relationship between supporters' motivation and their actual funding behavior
(Shneor et al., 2022)	Time-limited	Campaign	Two reward-based platforms → Reward-based	Analysis of crowdfunding campaigns ( $N = 700$ ) and associated social network data to examine how campaign characteristics and social media activity affect reaching the funding goal and the ratio between raised amount and goal amount
(Song et al., 2019)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns $(N=9962)$ to determine which factors influence campaign success
(Steigenberger, 2017)	Time-limited	Supporter	Kickstarter → Reward-based	Survey ( $N$ =228) and campaign data to empirically explore the motivation of crowdfunding supporters
(Sundermeier & Kummer, 2022)	Time-limited	Supporter	Fictional platform or not specified → Reward-based	Survey ( <i>N</i> =108) to empirically examine how perceived hubris affects supporters' assessment of creators' trustworthiness in reward-based crowdfunding
(Wang et al., 2018)	Time-limited	Supporter and campaign	Dreamore → Reward-based	Analysis of crowdfunding campaigns ( $N=959$ ) to examine creator-supporter interaction and its effects on reaching the funding target
(Wang et al., 2021)	Time-limited	Campaign	Zhongchou → Reward-based	Analysis of crowdfunding campaigns (N=9884) to examine the influence of signaling and creator-supporter communication on campaign success
(Zhao et al., 2018)	Time-limited	Campaign	Kickstarter → Reward-based	Analysis of crowdfunding campaigns $(N=300)$ to examine the relationship between entrepreneurial motivation and campaign success
This study	Subscription-based	Supporter	Patreon → Reward- and donation-based	Analysis of individual pledge data ( $N$ =580,689) and conducting a discrete choice experiment ( $N$ =301) to examine individuals' WTP to support SBC campaigns



**H2:** Current campaign size has a positive impact on supporters' willingness to pay.

Generally speaking, individuals tend to increase their efforts toward reaching a goal the closer they are to reaching the goal (Kivetz et al., 2006). Kuppuswamy and Bayus (2017) and Li and Wang (2019) demonstrated that for timelimited crowdfunding campaigns, the support significantly increases as the campaign nears its target goal, and when a goal is met, the support decreases drastically. The closer a time-limited crowdfunding campaign is to its set goals, the bigger the support for the campaign will be. Furthermore, this effect is more prevalent if it has small target goals, the campaign has little support at the beginning of its run-time, or the closeness to its funding deadline (Kuppuswamy & Bayus, 2017). This can further be explained by supporters' extrinsic motivation to receive a reward, once a target goal is met (Ryu & Kim, 2016). Oh and Baek (2016) demonstrated that goal proximity (i.e., campaign goal completion) positively moderates the positive effects of the daily number of supporters and sharing of the crowdfunding campaign on the increase in daily completion rate. We, therefore, assume that supporters will also be extrinsically motivated to spend more money the closer an SBC campaign is to reaching its goals. Therefore, we propose the following hypothesis:

**H3:** Goal proximity has a positive impact on supporters' willingness to pay.

For every interaction, trust is essential in reducing perceived risk (Gefen, 2000; Gefen et al., 2008; Mittendorf et al., 2019). Information transparency is known to build trust in online contexts of all sorts, and trust is known to positively affect buying decisions on the internet (Urban et al., 2001; Zhu, 2004). Potential crowdfunding supporters oftentimes do not know whether the creators of a campaign are credible or trustworthy and tend to financially support the most viable campaigns to receive positive results from them (Cho & Kim, 2017; Mollick, 2014). The financial support of content creators entails risks since a creator may not deliver on the promises made in the campaign (Regner, 2021). Nevertheless, many SBC platforms offer campaign creators the option to hide their recurring income and goal proximity. Although Lin et al. (2021) argue that creators can appear more authentic by hiding their earnings and avoiding reminding their supporters of their financial motives, thereby positively affecting the number of supporters and fan engagement, they also acknowledge that hiding a campaign's earnings may be perceived as inauthentic by some supporters. Similarly,

Crosby and McKenzie (2021) note that showing a campaign's earnings may undermine supporters' intrinsic altruistic motivation. Lastly, Lingnau and Eichner (2023) found that creators show their earnings to offer their supporters transparency and create trust. Therefore, the specific information provided by a creator regarding a campaign, like its proximity to its goals and its current recurring income, will be an important means to increase supporters' trust in the creator and the campaign. Trust is a crucial intrinsic motivation to consider when assessing crowdfunding endeavors (Perdana et al., 2023; Shneor et al., 2022). It further acts as a predictor of crowdfunding success and intention to invest (Lin & Huang, 2021; Sundermeier & Kummer, 2022). Therefore, we assume that if the creator decides to hide campaign information from the supporters, it reduces supporters' trust, which in turn will lead to a reduced WTP. Thus, we propose:

**H4:** Hidden information has a negative impact on supporters' willingness to pay.

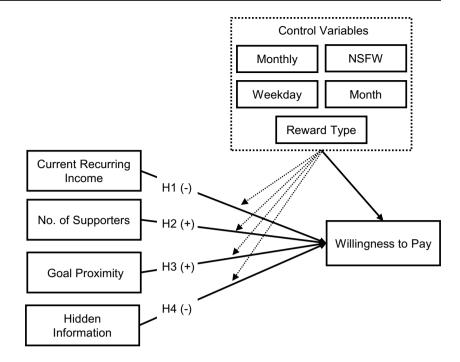
We included additional control variables: Since Patreon offers creators the option to be paid on a monthly basis or per-work and flag one's campaign as not safe for work (NSFW-i.e., meaning mostly explicit content), we included these parameters as a control variable to account for these platform characteristics. It is good practice to account for potential seasonal effects, as the WTP for certain goods may change throughout the year; therefore, we included the weekday and month of the pledge's start time (Hair Jr. et al., 2018). Finally, we included a campaign's offered rewards as a control variable, as the positive effect of rewards on crowdfunding success is well-established in the literature (Bretschneider & Leimeister, 2017; Gerber & Hui, 2013; Ryu & Kim, 2016). Figure 1 displays the resulting model. While our research only addresses direct effects of the independent and control variables on WTP, we decided to add potential indirect effects to Fig. 1 in order to be able to give a more holistic overview (denoted by the dotted lines).

The campaign characteristics that we decided to investigate in our research share some interrelations with each other. An SBC campaign with a large number of supporters may also possess a high amount of current recurring income due to the fact that many supporters are more likely to fund a large income than only a handful of supporters. However, a common occurrence in crowdfunding campaigns are so-called "whales"—few individuals who are responsible for the majority of funding (Close et al., 2021). Subsequently, we decided to decouple these two



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Fig. 1 Research model



characteristics from each other. Moreover, the goal proximity of SBC campaigns is independent of their current recurring income and their number of supporters as campaign creators are able to freely set their campaign goals.

# Context, data, and results

In order to answer our research question, we decided to use a two-method approach consisting of an analysis of pledges on the platform Patreon and the conducting of a discrete choice experiment featuring a fictional crowdfunding platform.

# **Analysis of Patreon pledge data**

# **Patreon**

The SBC platform Patreon acts as a two-sided market where content creators of all different kinds of content are brought together with individuals appreciative of this content. On Patreon, content creators can create their own campaigns with individual rewards and goals and receive funding for their content directly from their fans, the so-called patrons, on a recurring basis, most of the time monthly or per piece of work. The platform was founded in May 2013, and by February 2016, it already had over 25,000 active creators and over 800,000 patrons, which provided nearly \$5,000,000 of monthly funding to the creators. Since then, Patreon has continued to grow, and in 2020, the number of creators had risen to 180,000 with nearly 9 million patrons (Graphtreon, 2020). The platform attracts a wide variety of different creators and

their related supporters, ranging from musicians<sup>3</sup> to writers<sup>4</sup> over to communities<sup>5</sup> and non-profit organizations.<sup>6</sup>

Patreon itself chooses not to display detailed statistics about its platform and its crowdfunding campaigns to the extent that potential supporters do not have access to an overview of all current campaigns. Instead, they need to follow a direct link to a creator's campaign or search for a campaign on Patreon. However, an alternative overview of all Patreon campaigns exists on the third-party website Graphtreon. To gain a better overview of Patreon and its campaigns, we crawled all Graphtreon data in August 2020. Throughout this paper, we will use this data to obtain a better understanding of the status quo of Patreon.

# Pledge data

For the first step of our approach, we used a data set from Patreon, which was made publicly available in October 2015 (see footnote 2 for information about the fair use of the data). We decided to use Patreon as our data source since Patreon is the most popular and a very universally used (in terms of the type of content advertised) SBC platform. This data includes information about users, and their pledges, as well as information about crowdfunding campaigns, including their goals and rewards starting from Patreon's launch in

<sup>&</sup>lt;sup>6</sup> https://www.patreon.com/c/nonprofits accessed 01.09.2023.



<sup>&</sup>lt;sup>3</sup> https://www.patreon.com/c/music accessed 01.09.2023.

<sup>&</sup>lt;sup>4</sup> https://www.patreon.com/c/writing accessed 01.09.2023.

<sup>&</sup>lt;sup>5</sup> https://www.patreon.com/c/communities accessed 01.09.2023.

Table 2 Overview of data operationalization

Construct	Description	Operationalization
Campaign success	Current recurring income that the campaign creator receives from their supporters	Cumulative monthly income up to the starting time of pledge (in \$)
Campaign size	Current number of users supporting the campaign	Cumulative number of supporters up to the starting time of pledge
Goal proximity	Percentage of recurring income the campaign has achieved to reach its next campaign goal	Percentage indicating how much the next campaign goal has been reached. 1, if no further campaign goal exists

May 2013 up to October 2015. As our dependent variable, we choose the individual pledge amount of the crowdfunding campaigns' supporters. Simply speaking, the amount of money an individual is giving to a crowdfunding campaign (on a recurring basis). By using this dependent variable, we focus on supporters' WTP regarding SBC campaigns rather than looking into the accumulated funding of a campaign.

In order to test our research model, we first need to operationalize the research model in the context of Patreon's pledge data. Therefore, we concretize the abstract constructs of our research model and assign variables from our dataset to them. The feature for hiding information was not implemented in 2015, and thus, we could not include it in our analysis of the pledge data. However, we addressed this functionality in the second part of our analysis. Table 2 gives an overview of the data operationalization we used in this research.

Following this data operationalization, we processed the data as follows: For each pledge on the platform, we acquired all information about the corresponding reward level and additional details of the crowdfunding campaign, including its goals. In a similar way, we calculated the campaign's current recurring income and the number of supporters at the time of the pledge and then determined the next funding goal to be reached and the percentage of its completion.

In the next step, some data filtering was necessary. We excluded six outliers in the pledges, which pledged more than 1,000,000 cents, as well as two campaigns that received an overall funding of more than 100,000,000 cents due to fraudulent pledges. Here, we excluded 27,587 pledges. In summary, we deleted 27,593 outliers from the data set. Finally, we also noticed that a large number of pledges were immediately canceled after a few days. Due to the nature of the platform, the campaign creators receive no payment in these cases because supporters canceled their pledges before their day of payment. Since most Patreon campaigns are collecting a recurring monthly payment, we decided to only include pledges with a duration longer than a month. Here, we filtered 201,438 pledges. We describe the resulting data in Table 3.

The average campaign in the data set we used has about 600 supporters that pledge about \$6.66 each. Since the

number of cents pledged can only be a positive integer, we worked with so-called count data. Naturally, only pledges with an amount greater than zero exist. This leads to the need to use a zero-truncated model. Moreover, since our data is over-dispersed (mean = 666.289, SD = 1759.429), applying a Poisson model is not recommended. This led to our decision to use a zero-truncated negative binomial regression model (Hilbe, 2011). We conducted a Hausman test to decide whether to include random or fixed effects (Clark & Linzer, 2015). Accordingly, we included the crowdfunding campaigns as fixed effects which led to the removal of 4261 campaigns that only had one pledge.

# Results from Patreon pledge data

We display the results of our zero-truncated negative binomial regression model in Table 4. The dependent variable is the pledge amount per month (i.e., their WTP) in \$ of an individual to a specific campaign.

All included variables seem to have significant effects on individuals' WTP. The current recurring income of a campaign has a significant negative effect on individuals' WTP. However, the number of previous supporters increased the individuals' WTP. The percentage fulfillment of a campaign's next goal has a significant positive effect on individuals' WTP. Regarding the included control variables, monthly and NSFW campaigns tend to achieve higher pledge amounts than campaigns that collect their pledges on a non-monthly basis and are safe for work. We could also find seasonal effects regarding the weekday and month of

**Table 3** Descriptive statistics of Patreon pledge data (N = 580,689)

Variable	Mean	Std. Dev	Min	Max
Pledge amount	666.289	1759.429	9 1	300,000
No. of supporters	601.839	1289.532	20	12,581
Current recurring income	321,994.4	683,487.5	0	6,402,266
Goal proximity	0.2306	0.4188	30	1
Is monthly	0.6881	0.4632	20	1
Is NSFW	0.2263	0.4185	50	1
Physical reward	0.0874	0.2825	50	1
Virtual reward	0.6038	0.4891	10	1



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**Table 4** Zero-truncated negative binomial regression of Patreon pledge data on individuals' pledge amount

Variable	Coef	p value
log(current recurring income) [H1]	-0.0372***	(0.000)
log(no. of supporters) [H2]	0.0291***	(0.000)
Goal proximity [H3]	0.0008***	(0.000)
Is monthly	-0.0342***	(0.002)
Is NSFW	0.0609***	(0.000)
Month	Yes	(.)
Weekday	Yes	(.)
Physical reward	0.0621***	(0.000)
Virtual reward	1.0422***	(0.000)
_cons	0.3910***	(0.000)
N	576,422	

<sup>\*</sup>p < 0.05

the analyzed pledges. Lastly, offering a physical or virtual reward increases the average pledge amount.

# Discrete choice experiment

With the results of the analysis of individual pledge data, we can examine correlations and cannot derive any causal relationships. Furthermore, as the identification of the directionality of the causal effect is only theoretically grounded and we cannot rule out potential reverse causality (Heckman & Vytlacil, 2007; Hong, 2015; Markus & Rowe, 2018), in order to do so and to validate our findings, we conducted an online discrete choice experiment with 303 participants. We selected this study design as it allows us to tackle the shortcomings of our first analysis. First and foremost, we can capture more recent data and thereby include features that have not yet been present on Patreon during the timeframe observed in the pledge data. Most importantly, though, this

methodology allows us to inspect the distinct features of an SBC campaign more granularly, and since we can manipulate the selection and the levels of features, we can infer causality (Hainmueller et al., 2013). Additionally, as the characteristics that we are assessing are not exclusive to one specific SBC platform but can be observed in multiple SBC platforms, this method enables a platform-independent assessment of SBC campaign characteristics, thereby adding an additional layer of generalizability to our findings.

For our choice experiment, we choose a choice-based conjoint (Louviere & Woodworth, 1983) with a dual response no-choice option (Brazell et al., 2006). The choice-based conjoint analysis can capture individual choice preferences and assess participants' WTP (Gensler et al., 2012; Louviere & Woodworth, 1983; Schlereth & Skiera, 2017) by presenting hypothetical choices between product alternatives. These choices are similar to realworld decisions, and therefore, discrete choice experiments are suited to explaining actual consumer behavior (Hauser, 2007). Further, by calculating the average importance weights of attributes, we can measure how important certain attributes are in comparison to others (Hainmueller et al., 2013).

Using a dual response no-choice option is advantageous for our experiment design as it allows us to measure the preference for a given set of campaigns, independent of the actual buying decision and mitigate potential consequences of extreme response behavior (Brazell et al., 2006; Gensler et al., 2012; Schlereth & Skiera, 2017). We assume a utility-maximizing respondent and are basing our analysis on the random utility theory (Thurstone, 1927) and assume that each respondent h will choose the alternative i that maximizes their utility. We can express the probability of consumer h preferring campaign i in the choice set a over the other campaigns and the no-choice option with the following logit model, which we developed based on the models from Gensler et al. (2012) and Mihale-Wilson et al. (2017):

$$P_{h,i,a} = \frac{\exp(u_{h,i})}{\sum_{i' \in I_a} \exp(u_{h,i'})} * \frac{\exp(u_{h,i})}{\exp(u_{h,i}) + \exp(u_{h,NP}) * (1 - x_{h,NP,a})} \forall h \in H, i \in I, i' \in I_a$$
 (1)

In the probability function, we multiply the probability of choosing campaign i over the other alternatives in the choice set with the probability of choosing campaign i over the no-choice option if the no-choice option is selected. This allows us to capture the participants' actual choice for or against the no-choice option. The utility of

each campaign is calculated by summing up the partial utilities of each product's attributes as well as its price (Gensler et al., 2012; Mihale-Wilson et al., 2017).

$$u_{h,i} = \sum_{j \in J} \sum_{m \in M_j} \beta_{h,j,m} * x_{i,j,m} + \beta_{h,\text{tierprice}} * p_i$$
 (2)



<sup>\*\*</sup>p < 0.01

<sup>\*\*\*</sup>p < 0.001

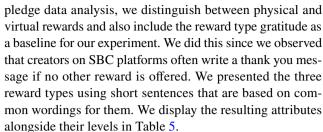
We display the variables used in the equations below:

$P_{h,i,a}$	Probability that consumer $h$ prefers campaign $i$ in
	choice set a
$u_{h,i}$	Utility level for consumer h for campaign i
$u_{h,NP}$	Utility level for consumer h for no-choice option
$\beta_{h,j,m}$	Parameter for consumer $h$ for campaign attribute $j$
•	and attribute-level m
$X_{i,j,m}$	Binary indicator whether campaign i features
•	attribute level $m$ of attribute $j$
$x_{h,NP,a}$	Binary indicator whether consumer h selected no-
	choice option in choice set a
$\beta_{h, \text{tierprice}}$	Tier price parameter for consumer h
$p_i$	Tier price of campaign i
H	Index set of consumers
I	Index set of campaigns
$I_a$	Index set of campaigns in choice set a
J	Index set of campaign attributes, excluding tier
	price
$M_{j}$	Index set of levels for campaign attribute <i>j</i>

## Choice design

For the selection of the attribute levels, we oriented ourselves on the Graphtreon data (see "Patreon"). Regarding the price of our reward levels, we included the 0.25, 0.50, 0.75, and 0.90 quantiles while maintaining even distances between the different prices to be able to estimate the effect of this variable linearly. Concerning the number of supporters and the campaigns' current recurring income, we included four different attribute levels representing a low, medium, high, and very high level of these attributes. For these levels, we used the 0.25, 0.75, 0.99, and 0.999 quantiles but rounded these values to whole numbers. We decided to include the "very high" level for these two attributes because "[...] relatively small numbers of people earn enormous amounts of money and dominate the activities in which they engage[...]" (Rosen, 1981, p. 845). SBC campaigns on Patreon follow such a Pareto distribution, where few campaigns earn a large income and the majority of campaigns generate little income (Regner, 2021).

Regarding the goal proximity, we use three different variable levels, one in which the goal is far from being reached (5%), one where the goal is halfway reached (50%), and one where the goal is almost reached (95%). Finally, we decided to add a "No information" level to the attributes current recurring income and goal proximity. This decision was based on our analysis of the Graphtreon data, where 34.18% of all campaigns (58,489 out of 171,132) decided not to disclose their funding to potential supporters. The feature for hiding this information was not implemented in 2015, and thus, we could not include it in our analysis of the pledge data. To present a realistic campaign, like in our



Based on these attributes and attribute levels, we designed our choice sets with JMP (Jones & Sall, 2011) to generate a d-efficient, orthogonal (3.5.4.4.3.4) design of 12 sets with three choice options each (Hauser, 2007; Street et al., 2005). We did not specify any prohibited pairings of attribute levels, as this may entail imprecise partworth estimates (Sawtooth, 2024). This decision also depicts the characteristics of current SBC platforms more realistically, since, for example, supporters on Patreon can specify a custom pledge amount, thus making current recurring income values possible that are not a simple multiplication of the presented tier price and the number of supporters. Furthermore, this enables us to fully analyze the separate effects of funding and number of supporters on individuals' WTP. In addition to that, we added three choice sets as holdout cases and dual response no-choice options, leaving us with a total of 15 choice sets. The inclusion of holdout cases enables a comparison of our model's prediction with the actual outcomes (Cattin & Wittink, 1982). We evenly spaced the holdout cases throughout the choice experiment, at positions 4, 8, and 12, to decrease potential biases (Orme, 2015).

## **Experiment design**

We presented a quasi-realistic scenario featuring a fictional SBC platform, which we closely modeled after real platforms. At the beginning of the experiment, we thank the participants for their participation and inform them that the experiment will take approximately 15 min and is anonymous. Following this, we instruct the participants to read the presented

 Table 5
 Attributes and attribute levels

Attributes	Range	Levels
Current recurring income	5	Not shown; \$6; \$89; \$2315; \$11,640
No. of supporters	4	2; 14; 462; 2414
Goal proximity	4	Not shown; 5%; 50%; 95%
Creator	3	"Creator A"; "Creator B"; "Creator C"
Tier price	4	\$1; \$4; \$7; \$10
Reward type	3	"Each month you will receive a mer- chandise item (e.g., stickers)."  "You receive access to additional digital content."  "You have my eternal gratitude for sup- porting what I do."



scenario about the hypothetical SBC platform "SupportMe" carefully and to put themselves in the hypothetical scenario before replying to the subsequent questions. In the scenario, we instruct the participants that they are watching an online video of their favorite three content creators. We chose this scenario since video content creators run a significant amount of SBC campaigns (Briggman, 2020; Fan-Osuala, 2019). At the end of the videos, the creators promote their SBC campaigns as a means of supporting them financially. We then describe the multiple functionalities of the presented SBC platform (e.g., "SupportMe" is a subscription-based crowdfunding platform that connects creators and people who are willing to support them financially with a recurring monthly payment.) and provide a descriptive mock-up of one campaign to increase the level of immersion (see Fig. 3 in the Appendix). We continue by testing users' understanding of key information about the scenario by using comprehension checks. We specifically developed the comprehension checks to fit our SBC scenario. All three comprehension checks relate to parts of our definition of subscription-based crowdfunding (see Table 8 in the Appendix). Participants were able to reread the scenario before answering the questions. Additionally, if participants failed to answer one of the comprehension checks correctly, we did not remove the participants from the sample but reminded them to re-read the scenario. Only after the successful completion of the comprehension checks did we present an overview of the possible attribute levels as well as an exemplary choice set (see Fig. 4 in the Appendix) to the participants. We then presented a total of 15 choice sets with three choice options and a separate no-choice option to each of the participants. For each choice set, we instruct the participants to select for which of the three shown "SupportMe" campaigns they have the greatest preference. After this selection, participants also have to specify whether they would actually support the chosen "SupportMe" campaign financially. After finishing the choice sets, we asked participants about their demographic information and their experience and familiarity with SBC platforms. We included attention check questions throughout our experiment to verify that our participants read the questions properly (Oppenheimer et al., 2009).

Our data consists of choices from 303 participants who we recruited from Prolific<sup>7</sup> and compensated financially. The experiment was conducted in October 2020, and additionally, we ran a pretest in September 2020 with 93 participants, which delivered similar results. We cleaned our data set by removing those participants from the sample who failed to answer the two included attention checks correctly (Oppenheimer et al., 2009), leaving us with 294 remaining individuals. Table 9 in the Appendix shows a detailed overview of the demographic data of our final sample.

Although the majority of the experiment participants (71.09%) have never used SBC platforms themselves, this is unavoidable, as these types of platforms are a relatively new phenomenon. Furthermore, the majority of the respondents (51.77%) claimed to be familiar with SBC platforms, and all respondents needed to answer three comprehension checks about the presented scenario correctly before participating in the discrete choice experiment. Our comprehension checks questioned participants about three key pieces of information presented in the SBC scenario. To answer these questions correctly, the participants had to attentively read the scenario. Thus, we infer a proper level of understanding of our scenario.

# Results from discrete choice experiment

Based on the choices of our discrete choice experiment's participants, we estimate the partworth utilities of our attributes and their levels (see Table 6). To do this, we effect-coded the variables.

The magnitudes and signs of our partworth utilities are all reasonable, providing a high face validity. In addition to this face validity, we also use our three holdout cases to check our model's validity. Using the utilities on an individual level, we can predict our participants' choices for the three holdout cases that are not included in the estimation of the parameters. Here, we achieve an accuracy of 52.49%, which is significantly higher than the 33% level of random choice decisions. In addition to these partworth utilities, the discrete choice experiment also allows us to estimate the attributes' effects on the respondent's WTP. For this, we simply need to divide the parameter values of the attributes by the parameter value for tier price. With this approach, our choice experiment results are more comparable to those of the pledge data analysis.

Figure 2 shows the average importance weights of our participants. The weights indicate that the price of a reward level is by far the most important attribute (51.30%), followed by the reward of the pledge (22.36%), the campaigns' current recurring income (11.75%), the goal proximity (7.39%), and the number of supporters (4.22%). The lowest importance was the campaign creators (2.99%).

In line with the analysis of the Patreon pledge data, the choice-based conjoint indicates a negative effect of a campaign's current recurring income on the supporters' WTP, and thus, H1 is supported. The number of supporters has an overall positive linear influence on supporters' WTP; while we observed a slight dip at the very high attribute level, we assume these results to still hold since the difference between the high and very high parameter values is relatively small. Therefore, H2 is supported. While analyzing the pledge data, we only observed a linear effect of the goal proximity on the supporters' WTP. Our experiment shows



<sup>&</sup>lt;sup>7</sup> https://www.prolific.co/ accessed 01.09.2023.

Table 6 Partworth utilities

Attributes	Levels	Parameters	Effects on WTP (in \$)
Current recurring income [H1]	No information [H4]	-0.486	-1.07
	Low	0.45	0.991
	Medium	0.103	0.227
	High	0.06	0.132
	Very high	-0.127	-0.28
No. of supporters [H2]	Low	-0.19	-0.419
	Medium	-0.092	-0.203
	High	0.146	0.321
	Very high	0.137	0.301
Goal proximity [H3]	No information [H4]	-0.273	-0.601
	5%	0.026	0.057
	50%	-0.069	-0.152
	95%	0.316	0.696
Creator	A	0.085	0.187
	В	0.068	0.151
	C	-0.153	-0.337
Tier price	-	0.454	
Reward type	Gratitude	-1.124	-2.475
	Physical	0.658	1.448
	Virtual	0.467	1.027

Utilities written in italics were omitted from the model and subsequently calculated as the negative sum of the remaining partworth utilities

that both a very low and very high goal proximity increases the supporters' WTP. A medium goal proximity and missing information about the goal proximity have a negative influence on supporters' WTP. Therefore, our H3 is only partially supported because the effect of goal proximity seems to be non-linear (u-shaped) (see Fig. 5 in the Appendix). Additionally, we find that hiding the information about a campaign's current recurring income as well as hiding a campaign's goal proximity negatively affects individuals' WTP. Therefore, H4 is also supported.

Regarding the different reward types, in line with traditional crowdfunding research (Bretschneider & Leimeister, 2017; Gerber & Hui, 2013; Ryu & Kim, 2016) offering virtual and physical rewards positively impacts supporters' WTP compared to only offering gratitude. Considering all purchase decisions across our experiment, in only 47.45% of all decisions the product would be actually "purchased" while, in return, 52.55% of all decisions led to no actual "purchase." Additionally, 12.59% of our respondents "purchased" in every single decision, while 31.97% did not "purchase" in a single decision. These results affirm our decision to choose a dual response study design because otherwise we would not have been able to obtain any information about user preferences from 52.55% of all choice sets. The high number of non-purchasers in our experiment is most likely

due to the fact that SBC is still a rather new concept and potentially caters to a niche audience.

# Discussion

This study aims to explore the effects on supporters' WTP for SBC campaigns. SBC platforms offer a unique monetarization approach for content creators by allowing them to be directly supported by their fans and providing independence from ad revenue (Regner, 2021). So far, previous research mainly focused on time-limited crowdfunding and examined



Fig. 2 Average importance weights



Table 7 Results' overview

Attribute	Hypothesis	Pledge data	CBC	Supported?
Current recurring income	H1: the current recurring income of a campaign has a negative impact on the willingness to pay	_	_	Supported
No. of supporters	<b>H2</b> : the number of previous supporters has a positive impact on the willingness to pay	+	+	Supported
Goal proximity	<b>H3</b> : the proximity to the next campaign goal has a positive impact on the willingness to pay	+	+/-*	Partially supported
Hidden information	<b>H4</b> : the hiding of a campaign's current state regarding its recurring income as well as its goal proximity has a negative impact on the willingness to pay	Not applicable	-	Supported

Signs indicate the effect of attribute on WTP

the phenomenon of crowdfunding on a campaign basis. Through the analysis of pledge data from the SBC platform Patreon and the conducting of a discrete choice experiment, we focus directly on the supporters of these campaigns and their decision to start supporting. Thereby, this research provides a comprehensive understanding of how SBC campaign characteristics affect individual supporters' WTP. We display the results of both studies in Table 7.

In line with our hypotheses, the current recurring income of a campaign has a negative effect on supporters' WTP. This finding contradicts previous research on time-limited crowdfunding, which hypothesized a positive effect of current funding on supporters' WTP (Kuppuswamy & Bayus, 2017; Zvilichovsky et al., 2018). We argue that the current funding of time-limited crowdfunding campaigns is only partially comparable to the current recurring income that is offered by SBC campaigns. This finding may be because individuals who support these campaigns are supporting due to their intrinsically motivated will to help others, and when an SBC campaign already receives a large amount of recurring income, individuals assume that the campaign's creator no longer appears to be in need of additional payments from potential supporters. Additional supporters may feel less relevant to the campaign's success and choose to financially support another campaign instead where the creators need their money more urgently (Burtch et al., 2013; Herrero et al., 2020; Ryu & Kim, 2016).

We show that the number of previous supporters exerts a positive effect on supporters' WTP. The number of supporters leads to herding behavior similar to time-limited crowdfunding (Burtch et al., 2013; Liu et al., 2015; Wehnert et al., 2019). However, this behavior might not be because supporters choose to follow the "wisdom of the crowd" (Li et al., 2020) but rather be based on their extrinsic desire for recognition from others (Bretschneider & Leimeister, 2017; Ryu & Kim, 2016). Supporters of SBC campaigns seem to also seek extrinsically motivated recognition from others for their investment. Supporters thereby can cater to their need for relatedness as proposed by Deci and Ryan (1985a,

1985b). This effect may be even more predominant for SBC campaigns than for time-limited crowdfunding campaigns since they focus more on the campaigns' creators rather than on a single product and run indefinitely (Lin et al., 2021). We derive this conclusion since our results show a negative effect of campaigns' recurring income on supporters' WTP, whereas a positive effect would speak for individuals deriving trust from this campaign characteristic.

Additionally, we were able to show that goal proximity surprisingly does not have the hypothesized positive linear effect but a u-shaped effect on supporters' WTP. A medium goal proximity has a negative effect, and both a low and high goal proximity increase supporters' WTP compared to not providing information about the goal proximity. On the one hand, if a campaign is very close to reaching its goal, new supporters show a higher WTP, which is also true for time-limited crowdfunding (Li & Wang, 2019; Oh & Baek, 2016). On the other hand, campaigns with a low level of goal proximity appear to be more in need than other campaigns, and supporters therefore tend to favor them due to their intrinsic altruistic motives (Burtch et al., 2013; Herrero et al., 2020; Ryu & Kim, 2016).

Finally, our results also show that hiding a campaign's current recurring income as well as its goal proximity decreases supporters' WTP. This feature is unique to SBC campaigns and commonly used by campaign creators. We argue that the hiding of information leads to a decrease in trust toward the campaign creator, which results in a reduced WTP, as trust is a predictor for supporters' intention to invest (Lin & Huang, 2021; Sundermeier & Kummer, 2022). This finding appears to be in contrast to previous research on SBC (Crosby & McKenzie, 2021; Lin et al., 2021), which observed a positive effect of hidden information on campaign success and fan engagement. However, Lin et al. (2021) and Crosby and McKenzie (2021) acknowledge that hiding a campaign's earnings is perceived negatively by some supporters. Additionally, our procedure enables a more granular perspective on earnings and hidden information by scrutinizing individual-level supporters' WTP.



<sup>\*</sup>A u-shaped effect was observed

## Conclusion

The aim of this paper was the examination of how SBC campaign characteristics cater to supporters' intrinsic and extrinsic motivation thereby affecting their WTP. By analyzing pledge data from Patreon, validating and extending our findings with a discrete choice experiment, we examined the effects of SBC campaign features on supporters' WTP. We thereby provide a novel approach to understanding the drivers of SBC success by focusing on the individual supporters and the factors influencing their WTP.

Our analyses show that SBC campaigns that have a large number of pre-existing supporters are able to increase the WTP of their potential supporters by catering to their extrinsic motivation and herding behavior. On the other side, supporters are exhibiting a lower WTP for campaigns that already possess a high amount of recurring income potentially due to their intrinsically motivated altruism. We could also show that campaign creators should introduce multiple staggered goals since the effect of goal proximity on individuals' WTP is u-shaped. Therefore, being able to continuously offer low and high goal proximities is advisable. Finally, we could show that hiding information, like the current recurring income or the campaign's goal proximity, leads to lower intrinsically motivated trust toward the campaign's creator and thus to a lower WTP of potential supporters.

## Theoretical contribution

Our study offers multiple theoretical contributions. First and foremost, we examined the novel concept of SBC campaigns and the campaign characteristics that drive individuals' WTP to support via their extrinsic and intrinsic motivation. Secondly, we use a novel approach where we use individual pledge data to directly analyze individuals' decisions and strengthen our findings with a discrete choice experiment.

By building upon the self-determination theory (Deci & Ryan, 1985a, 1985b), we highlight which campaign characteristics cater to which motivation of supporters. Our findings highlight that supporters of SBC are both motivated extrinsically (seeking recognition in an exclusive community) and intrinsically (wishing to help others). We propose the negative effect of the current recurring income on supporters' WTP is primarily caused by the absence of supporters' intrinsic motivation to help others when a campaign already receives a large amount of recurring income. Our results indicate that supporters tend to support campaigns more that have a low current recurring income. This is in contrast to previous research on time-limited crowdfunding,

which could show the opposite effect for campaigns' earnings (Kuppuswamy & Bayus, 2017; Zvilichovsky et al., 2018). This could be an indicator that altruism (a form of intrinsic motivation) is a bigger driver in SBC than for timelimited crowdfunding. Since SBC campaigns oftentimes focus on the campaign creators themselves instead of on a single project (Lin et al., 2021; Lingnau & Eichner, 2023), supporters feel more inclined to help the campaign creators, and potential rewards are secondary.

Additionally, we showed that individuals exhibit herding behavior and are motivated by the supporting decisions of others. This positive effect of number of previous supporters on supporters' WTP seems to be primarily explained by supporters' extrinsically motivated desire for recognition which caters to their need for relatedness (Deci & Ryan, 1985a, 1985b). Previous research could show that a motivational driver of crowdfunding is the desire for extrinsic motivations of recognition and belonging to a community (Bretschneider & Leimeister, 2017; Ryu & Kim, 2016) which is amplified by the lack of a fixed deadline and the focus on campaign creators that SBC campaigns offer.

In time-limited crowdfunding literature, the proximity to a funding goal is considered to linearly positively affect supporters' WTP (Oh & Baek, 2016). Our findings show that the proximity to an SBC campaign's funding goal affects supporters' WTP in a non-linear u-shaped pattern and thus behaves differently than time-limited crowdfunding goals. A potential explanation for this observation is that initially with a low goal proximity, supporters are intrinsically motivated to help the creator due to altruism. However, once a certain level of goal proximity is reached, the creator no longer appears to be in need and the intrinsic motivation of potential new supporters drops. Once a higher level of goal proximity is reached, supporters' extrinsic motivation is predominant as supporters aim to reach the next funding goal.

In summary, our paper thereby validates Deci and Ryan's (1985a, 1985b) proposal that individuals' intrinsic and extrinsic motivation can coexist and change over time. Thus, researchers should try to have a holistic view of motivational factors when analyzing individual behavior.

Our results also indicate that hiding campaigns' current recurring income or goal proximity lowers potential supporters' WTP. These findings seem to be in contrast to Crosby and McKenzie (2021) and Lin et al. (2021), which found that hiding campaigns' current income seems to improve campaign success and fan engagement. However, both studies acknowledge that successful campaigns tend to hide their recurring income. Our results show that a high recurring income leads to a decrease in individuals' WTP and subsequently potential supporters may assume that a campaign with a hidden income is more likely to possess a high income which would result in a lower altruistic motivation, a lower



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WTP, and would explain our seemingly contradicting findings. Hiding information may also be perceived as deceitful, thus diminishing the perceived trustworthiness of the creator (Lingnau & Eichner, 2023). Trust is an important aspect that supporters consider when assessing crowdfunding endeavors (Perdana et al., 2023; Shneor et al., 2022). Since trust acts as a predictor of crowdfunding success and intention to invest (Lin & Huang, 2021; Sundermeier & Kummer, 2022), our observed negative effect of information hiding on supporters' WTP may be mediated by trust.

## **Practical contribution**

The findings of our study enable creators to better understand the intricacies of how individuals perceive SBC campaigns and how they are motivated to start supporting them. Based on our findings, SBC campaign creators can design the observable characteristics of their campaigns to cater to individuals' motivations.

Firstly, creators should try to amass a large number of crowdfunding supporters. While this sounds obvious at first, our study shows that individuals display herding behavior when supporting SBC campaigns. To leverage this motivational boost caused by herding behavior, campaign creators can offer a cheap entry reward level to lower supporters' barrier of entry, subsequently attract a large number of supporters, and finally, new supporters are then motivated by the resulting large number of supporters and will engage in further herding behavior. This is in line with findings by Lingnau and Eichner (2023) who showed that creators offer cheaper-priced tiers to lower the barrier of entry to potential supporters. Nevertheless, creators should also offer higher-priced reward levels to skim off the WTP of those supporters who are willing to spend more.

Secondly, we recommend creators introduce multiple goals in an SBC campaign as this will likely be advantageous since multiple instances of the beneficial low and high goal proximity will be present.

Thirdly, our results show that a high amount of current recurring income will lower the WTP of potential new supporters because supporters feel that their additional support is no longer needed for a given campaign. Campaign creators could try to still attract additional supporters by hiding the information about their current recurring income. However, this decision to hide information will also lead to a reduction in individuals' WTP. Campaign creators need to face this dilemma and should try both approaches for limited time periods to be able to make an informed decision about the best way to maximize their support. These findings are in line with Lingnau and Eichner's (2023) observation that creators consider hiding their earnings to not deter potential supporters.

For potential supporters, our research creates awareness of how certain campaign characteristics can affect their intrinsic and extrinsic motivation (Deci & Ryan, 1985a, 1985b). Generating this understanding is crucial for potential supporters to make an informed decision when deciding to support a campaign, instead of being lured in by creators playing on supporters' motivations in the way they present their campaign.

Finally, SBC platforms are benefitting from additional payments being made by supporters and should therefore offer teaching materials to creators on how to cater to potential supporters' motivations. Second, SBC platforms can further facilitate creators' campaigns by offering a set of design options and platform features that acknowledge supporters' motivation.

# Limitations and future research

Our study has some limitations: Naturally, the data set we used from Patreon only consists of existing pledges, which leads to a zero-truncated data set that might feature an inherent selection bias. However, in order to fully examine how SBC campaign characteristics affect potential supporters' WTP, we would also need to examine the absence of pledges since these would hold additional information about why certain individuals decided not to support a campaign. Therefore, we also conducted a discrete choice experiment, which allowed us to mitigate the shortcomings of the Patreon data set. In the experiment, we tracked participants' decisions to support a campaign via a dual response no-choice option to account for situations in which potential supporters do not pledge. Furthermore, the experiment enabled a clear distinction between number of supporters and earnings.

Our experiment design also comes with some limitations. Only a small majority (51.77%) of our participants claimed to be previously familiar with SBC platforms, which is likely due to the novelty of these platforms. To ensure that all participants had at least a base-level understanding of SBC, we explained the concept of SBC in our online experiment using an easy-to-understand scenario including visual representations of SBC campaigns. Further, all participants had to answer three comprehension checks about the presented scenario correctly before participating in the discrete choice experiment. Our comprehension checks focused on key information presented in the SBC scenario. In order to answer these comprehension checks correctly, the participants had to attentively read the scenario. Therefore, we assume that a reasonable level of understanding of the scenario can be inferred, even if the participants had no prior familiarity with SBC. However, we encourage future research to reevaluate these findings with a sample of participants who are already more familiar with SBC.



Another limitation that stems from our choice of SBC is the unavailability of the examination of the potential direct or mediation effects of our control variables. This is because a CBC is only feasible with a small set of variables and its analysis is not capable of analyzing mediation effects. Future research could address potential mediating effects by utilizing different analysis methodologies.

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**Data Availability** In our study, we utilize two data sets: The individual pledge data from Patreon cannot be made available, however the data we created through the discrete choice experiment is accessible upon reasonable request to the authors.

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