

Making a Contribution to Entrepreneurship Research by Studying Crowd-Funded Entrepreneurial Opportunities

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Abstract

This editorial outlines our perspective on the state of literature as well as suggestions for new contributions to entrepreneurship research in the area of crowd-funded opportunities. Our aim is, first, to outline what we see as best practices for research on crowd-funded entrepreneurial opportunities. Second, we aim to solicit additional articles for the Virtual Special Issue (VSI) on “Crowd-Funded Entrepreneurial Opportunities” in *Entrepreneurship Theory and Practice*. In contrast to typical editorial articles associated with special issues, we take a prospective approach and outline what we hope (and expect) to see in the literature in the future. Put differently, we are not going to summarize a subset of articles that have been accepted for publication—rather, we are going to delineate the subset of articles to be written that we would, ideally, like to see submitted to top-tier entrepreneurship journals in order to advance the literature. Along the way, we will describe best practices that we anticipate can elevate research in this burgeoning area of inquiry.

Keywords

crowd, crowdfunding, crowd-funded, ventures, opportunities

It is our position, consistent with extant research (e.g., Drover, Busenitz, et al., 2017; McKenny, Allison, Ketchen, Short, & Ireland, 2017; Short, Ketchen, McKenny, Allison, & Ireland, 2017),

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that the topic of crowd-funded entrepreneurial opportunities represents a distinct form of venture finance worthy of specific scholarly attention. Crowd-funded entrepreneurial opportunities refer to perceived and/or enacted possibilities to introduce novel goods or services to the marketplace, where this introduction entails a process for seeking resources from individuals via an open call on the internet (Mollick, 2014) in exchange for a reward, debt, equity, or as a donation (e.g., McKenny et al., 2017). Our focus is on crowd-funded entrepreneurial opportunities, rather than crowdfunding itself, as not all crowdfunding involves entrepreneurial processes, and because we believe greater attention must be given to the intersection of entrepreneurial processes with the crowdfunding phenomenon. Research on crowd-funded entrepreneurial opportunities should not be limited to examining fundraising. Learning, opportunity discovery and development, product development, entrepreneurial cognition and emotions, and other areas of knowledge can be advanced by studying crowd-funded entrepreneurial opportunities.

There is much we already know. Empirically, for example, an exceptional number of possible determinants of crowdfunding campaign success have been identified, including resources (e.g., human, social, and psychological capital), rhetoric (e.g., language, nonverbal expressions, narratives), innovativeness, product attributes, prosocial and sustainability orientation, homophily, as well as both social and market-related cues (Ahlers, Cumming, Günther, & Schweizer, 2015; Allison, Davis, Short, & Webb, 2015; Allison, McKenny, & Short, 2013; Anglin et al., 2018; Anglin, Short, Ketchen, Allison, & McKenny, 2019; Anglin, Wolfe, Short, McKenny, & Pidduck, 2018; Block, Hornuf, & Moritz, 2018; Buttice, Colombo, & Wright, 2017; Calic & Mosakowski, 2016; Chan & Parhankangas, 2017; Greenberg & Mollick, 2017; Jiang, Yin, & Liu, 2019; Lukkarinen, Teich, Wallenius, & Wallenius, 2016; Parhankangas & Renko, 2017; Vismara, 2018).

From a theory-based standpoint, we have gained important insights, for instance, from signaling theory (Ahlers et al., 2015; Bapna, 2019; Courtney, Dutta, & Li, 2017), institutional theory (Fisher, Kuratko, Bloodgood, & Hornsby, 2017; Soublière & Gehman, 2019), the elaboration likelihood model of persuasion (Allison, Davis, Webb, & Short, 2015; Anderson, Wennberg, & McMullen, 2019; Bi, Liu, & Usman, 2017), and contract theory (Strausz, 2017). In addition to a growing number of primary studies on crowdfunding, literature reviews are also emerging at a rapid pace (e.g., Drover, Busenitz, et al., 2017; Mochkabadi & Volkmann, 2018; Short et al., 2017).

However, the rapid growth in the quantity of emerging research makes crafting impactful contributions in this domain increasingly challenging. As this area of research is developing so swiftly, our editorial introduction to the Virtual Special Issue (VSI) of *Entrepreneurship Theory and Practice* on “Crowd-Funded Entrepreneurial Opportunities” will outline our perspective on the most promising ongoing and future avenues for conducting research in this space. Overall, there are many questions—both conceptual and empirical—that remain unanswered. And, we acknowledge that this editorial will not be the final summary of extant work. Rather, in contrast to typical editorials for special issues, we take a forward-looking approach and introduce an ongoing VSI that will remain an open call for submission. Thus, our assessment of the current state of the literature and call for new research is the beginning, not the end, of a quest to address multiple questions, both conceptual and empirical.¹

We proceed as follows. First, we discuss the unique context of crowd-funded entrepreneurial opportunities and offer recommendations as to how to approach studies here. Second, we outline the topics that we feel can most advance the literature. Third, we describe the methods we advocate for studies focused on crowd-funded entrepreneurial opportunities.

Context: Studying Crowd-Funded Entrepreneurial Opportunities

There are multiple issues that we encourage authors to consider regarding the context of crowd-funded entrepreneurial opportunities. These issues are best addressed before a study is executed. Put simply, the platform-based context in which crowdfunding occurs differs from traditional entrepreneurial finance in many ways—and, multiple issues need to be considered. For example, there is a large volume of publicly available data that are rapidly accumulating, and the online crowdfunding platforms enable large volumes of accessible information to be shared among potential investors (about the ventures) without face-to-face interaction resulting in more participation and diversity among ventures and investors (e.g., Cummings, Rawhouser, Vismara, & Hamilton, 2019). The regulatory environment in which these platforms exist, and under which participants interact, can change quickly (both within an individual country and across countries). Thus, studies using different time periods, across various platforms, may yield systematically different results. And, these are just a few of the multiple ways in which the context of crowd-funded entrepreneurial opportunities is unique. Overall, our intention is to draw attention to the premise that crowdfunding does not duplicate the decision environments, networks, and structures seen in traditional funding contexts (e.g., Sorenson, Assenova, Li, Boada, & Fleming, 2016). We believe these differences mean that scholars seeking to make contributions to entrepreneurship research in this area need to consider the following three main topics outlined below.

First, researchers need to carefully consider, and clearly specify, what year(s), and on which platform(s) data were collected. Alongside this information, we suggest researchers give thought—before executing a study—to potential constraints on generalizability (COG) (Simons, Shoda, & Lindsay, 2017). Here, early in the conceptualization of a study, thought should be given to mitigating potential constraints on generalizability. And, after the study is completed, a short section should be included in the manuscript that addresses this issue—this text would typically be in the methods section and/or in the discussion section. For example, if your data were collected in certain years on a platform that subsequently encountered a change in the platform's regulations (either internally initiated or externally inspired), there may be systematic differences in your data relative to other data from other years that need to be acknowledged. Many crowdfunding platforms have changed their designs over the years, directly impacting the nature and depth of information available to potential backers. Similarly, the institutions surrounding crowdfunding are still evolving—and, choices here should be considered before and after the study has been executed. For example, many countries have changed the regulations related to crowdfunding over the recent years. In fact, given the international growth of crowdfunding, and the impact of country-level institutions on the practice of crowdfunding, it is surprising that we have not yet seen much comparative international research on crowdfunding (cf. Tuomi & Harrison, 2017). Thus far, most research in this area uses data only from U.S.-based platforms, potentially limiting the international applicability of findings.

The broad generalizability of crowdfunding studies also merits thought and analysis. We surmise that extant research on crowd-funded entrepreneurial opportunities would most likely generalize towards small and medium sized ventures that are innovative and proactive. Accordingly, we feel that it is important for researchers to discuss how their particular sample generalizes. Put differently, we suggest that researchers in the domain of crowdfunding give thought to the type(s) of ventures to which their data extrapolate. Just as researchers who use extant datasets—such as the Panel Study of Entrepreneurial Dynamics (PSED), the Kauffman Firm Survey (KFS), and the Global Entrepreneurship Monitor (GEM)—would carefully describe their sample and generalizability, so too should crowdfunding scholars. For example, crowd-funded entrepreneurial opportunities may not be representative of the entire population of nascent entrepreneurs in any one country, at any one time, but a subset of those nascent entrepreneurs do engage in crowdfunding.

And, further, we note here that research on crowd-funded entrepreneurial opportunities may have advantages to highlight relative to extant datasets in that it can provide nuanced insights across firms as they develop and pivot in the process of crowdfunding that other datasets may not have captured.

Second, researchers should consider how the specific setting(s) of their study (or studies) is different (and/or similar) between a particular crowdfunding context as compared to the more traditional funding environments studied in the past. Also, a definition that provides the frame of reference through which the authors are viewing the projects they study should be provided. Our general approach is that in order to contribute to entrepreneurship scholarship, crowd-funded projects should contribute to the testing and/or development of entrepreneurial opportunities. This contribution has most often simply been framed as funding, although opportunity discovery, feasibility testing, product development, and other ends can also be important purposes advanced through crowdfunding.

Regarding the setting and context, it is useful to consider the underlying assumptions about the nature of the crowdfunding process in relation to other funding environments. Why would you expect different (or similar) findings relative to past work that has explored similar constructs, but in a different context? For example, theories such as emotional contagion have been applied to venture finance in the past. However, in crowdfunding, except for comments on the discussion boards of crowdfunding platforms, there is generally a very limited, one-way interaction between the entrepreneur and the audience. In the setting of crowd-funded entrepreneurial opportunities, can an audience “catch” emotions from a crowdfunding pitch video? Research that focuses on contextual differences and their implications for theory holds greater than average potential to make a contribution, and an impact (e.g., Davis, Hmieleski, Webb, & Coombs, 2017). Overall, regarding the setting and context, simply taking a well-known effect and studying it in the context of crowd-funded ventures may not provide enough of an appeal to warrant publication unless framed as a replication (and preregistered as such).

Another example can be drawn (and has been in the literature) from signaling theory. Signaling continues to be an important perspective on information asymmetry in crowdfunding (e.g., Scheaf et al., 2018). However, does the applicability of signaling theory change when studying computer-mediated interactions (or analyzing data via computer aided-text analysis) as opposed to the more traditional third-party signals studied in traditional entrepreneurial finance? Our view is that when researchers critically consider the differences and similarities between a specific study’s crowdfunding context and the environments where a theory has been predictive in the past, the result will be a stronger manuscript. Moreover, this will help in developing boundary conditions of existing theories and thereby advance our theoretical understanding of entrepreneurship. Again, considering these issues is best done before a study is executed.

Third, researchers should be explicit about what type of crowdfunding is being studied (e.g., reward, equity, debt, donation) as well as what perspective (or the referent) is being studied (e.g., entrepreneur-level, pitch-level, venture-level, investor-level). Contextual differences here are neither unitary nor static—for instance, while less than ten years ago crowdfunding was considered one monolithic phenomenon, it is now clearly recognized that there are distinct types of crowdfunding (e.g., Block, Colombo, Cumming, & Vismara, 2018). Also, whereas equity-crowdfunding shares some similarities with angel funding and VC funding, the same causal mechanisms may not apply equally well to reward-based crowdfunding. Furthermore, while our understanding of different types of crowdfunding has evolved over the years, the phenomenon itself has also evolved. People and organizations are increasingly turning to crowdfunding to cover the costs of their basic needs, many of which are more philanthropic than entrepreneurial in nature, such as covering the costs of one’s medical care or school supplies, for example. Thus, explanations of what type(s) of crowdfunding are being studied, and from what perspective, are

necessary components of top-tier research on crowd-funded entrepreneurial opportunities. And, we note that considering the type of crowdfunding, as well as the unique referent point of view, is best thought about before a study is executed.

In sum, scholars pursuing research related to crowdfunding need to carefully consider the evolving context of crowdfunding to be able to justify their theoretical assumptions and to produce sufficiently strong and precise theoretical arguments. An accurate understanding of the real-life context of crowdfunding is also important for the practical relevance of research. Unless researchers are well informed of the practicalities of how the processes and platforms for crowdfunding function, they risk posing research questions that are irrelevant for entrepreneurs in this field, and/or ignoring key variables in their models.

Choice of Topic(s) in the Study of Crowd-Funded Entrepreneurial Opportunities

The quantity of work being done in the area of crowd-funded opportunities is increasing rapidly. Although financial resource acquisition is a key entrepreneurial task, we surmise that the rapid growth of this particular research field may be due to the amount of publicly available data that can be scraped or downloaded online. However, simply running analyses and writing up results on openly available data is rarely seen as a contribution. *Entrepreneurship Theory and Practice* seeks manuscripts that clearly advance entrepreneurship research in this area—and, two articles that illustrate how to do this include Shepherd and Wiklund (2019) as well as Shepherd, Wennberg, Suddaby, and Wiklund (2019).

Although crowdfunding is a form of entrepreneurial finance, and therefore an interesting context for both entrepreneurship and finance scholars, the readership of finance and entrepreneurship journals vary in their interests. Although entrepreneurship scholars tend to be open-minded and read broadly (Cumming & Johan, 2017), for crowdfunding research targeted to *Entrepreneurship Theory and Practice*, it is important to demonstrate how the work contributes to existing entrepreneurship research. The same is true for marketing-, information systems-, and economics-rooted studies of entrepreneurial crowdfunding, of which there are many. The relevance of crowdfunding as a phenomenon for such a variety of fields presents plentiful opportunities for interdisciplinary insights. For example, an area where crowdfunding studies rooted in both entrepreneurship and marketing may overlap has to do with backers in reward-based crowdfunding. These early customers and their adoption of crowdfunded products or services are at the core of marketing-related research on crowdfunding (e.g., Hu, Li, & Shi, 2015), yet data on backers' behaviors can also contribute to entrepreneurship researchers' understanding of the role of crowdfunding in early market testing of entrepreneurs' ideas. Insights from marketing may help entrepreneurship scholars better understand the nuances of how crowdfunding can be used to test "minimum viable products," while entrepreneurship theory can help marketing researchers expand their scope as well. Thus, we strongly encourage authors to explicitly depict how their research complements the existing entrepreneurship literature, and demonstrate how the theoretical framing, rooted inside or outside of the discipline, helps advance the field.

Contributions that are seen as interesting for the target audience of *ETP* usually include a theoretical contribution (see, for example, Makadok, Burton, & Barney, 2018 on making a theoretical contribution in management research). However, contributions to this VSI in *ETP* could also be empirical, such as careful replications (see, for example, Bettis, Helfat, & Shaver, 2016), that clearly contribute to the cumulative entrepreneurship research on crowdfunding and that can bolster or update a theoretical perspective. Related here, regarding the choice of topic, Shepherd and Wiklund (2019) as well as Colquitt and George (2011) suggest that an effective topic can be one that may enable the examination of a grand challenge, initiates the pursuit of a novel approach

in an area that instills curiosity in readers, and/or facilitates the building of an ambitious project with actionable insights. We believe this is sound advice for further research on crowdfunding. In particular, while there are still many new insights to be created, the volume of research that has emerged leads many submitted studies that we see at *ETP* and elsewhere to be incremental in their contributions. Most research that we see focuses on the success of crowdfunding campaigns. Accordingly, there are fewer studies on what happens to ventures after the campaign is over, or what leads ventures to use crowdfunding in the first place. For example, we still know relatively little about entrepreneurs' motivations to engage in crowdfunding, or the impact of campaign success (or failure) on their subsequent entrepreneurial motivation. Does the availability of crowdfunding inspire some individuals to get involved in entrepreneurship in the first place, and if so, how? How does entrepreneurs' use of crowdfunding out of necessity contribute to what happens during the campaign, and afterwards? Moreover, a particularly interesting unexplored area of inquiry relates to the supply side of crowd-funded entrepreneurial opportunities—that is, what are the characteristics and motivations of the “crowd,” and how can researchers develop evidence-based practices that can drive the supply-side of crowdfunding? In our view, this major gap in our knowledge has two key causes. First, in early research, there was a notable lack of data about funders. As a result, there has often been minimal evidence of supply-side mechanisms. Experiments are now working to address this (e.g., Niemand, Angerer, Thies, Kraus, & Hebenstreit, 2018), however, acquiring data from the crowd that funds entrepreneurs remains relatively challenging. Second, crowdfunding research, as a form of entrepreneurial finance, has primarily focused on the financial success of campaigns as the main outcome of interest. Yet, crowdfunding is a crowd-engagement phenomenon, which represents much more than simply a funding channel. Crowdfunding should also be studied as a vehicle to involve the crowd in community creation, boundary spanning, opportunity discovery, feasibility analysis, as well as learning and unlearning.

To tackle such questions, and delve into the “before” and “after” in crowdfunding, researchers need to carefully contextualize the crowdfunding phenomenon in the setting of an entrepreneurial opportunity (both supply side and demand side). After all, crowdfunding is typically a way to fund a specific product or service idea, and how these projects relate to the totality of the stakeholders involved is something we still do not understand well. We call for research examining outcomes far afield from fundraising performance. For example, research could examine and classify what entrepreneurs learn from backer communication and comments. Exploring the relationship between crowdfunding projects and the venture behind them (and associated stakeholders) will most likely require researchers to move beyond the data that are available on campaign pages, and adopt methods that allow them to examine topics such as, for example, how entrepreneurs pursue crowdfunding as an avenue of financing. Furthermore, extant research has been largely limited to questions that can be answered within the context of a single platform, when in reality entrepreneurs and investors can choose among many different platforms that have very different designs and audiences. Consequently, there are many new directions for future entrepreneurship research on crowdfunding.

In light of the many questions that remain unexplored, in Table 1, we present a list of potentially fruitful areas of research that can effectively advance the literature. Naturally, this is not an exhaustive list—and, new and important questions will emerge.

Questions of Method in the Study of Crowd-Funded Entrepreneurial Opportunities

Most crowdfunding research thus far uses data that have been downloaded from crowdfunding platform sites. Following the growth of the crowdfunding phenomenon over the last decade, this

Table 1. Potential Topics for Future Research on Crowd-Funded Entrepreneurial Opportunities

Area of Inquiry	Potential Topics
Between Crowdfunding and Other Forms of Resource Access	<ul style="list-style-type: none"> • What are the effects of crowdfunding on the early-stage funding of entrepreneurial ventures? • How is the context of crowdfunding different relative to traditional settings in which individuals seek resources for entrepreneurial opportunities (e.g., angel investors, banks, etc.)? For example, are the elements of the persuasive process similar, or different, in a crowdfunding context (relative to a traditional pitching context; e.g., Davis et al., 2017)? • Is crowdfunding a substitute or complement to other forms of entrepreneurial finance, and when is crowdfunding preferable to alternative sources of capital (e.g., Walthoff-Born, Schwiembacher, & Vanacker, 2018)? Does success in crowdfunding help secure other forms of financing? And does a failure to meet crowdfunding goals make it more difficult to convince other kinds of funders? • What recommendations can we, as researchers, offer to practitioners regarding the differences (and similarities) between the exploration process in crowd-based funding relative to other settings in which stakeholders conduct due diligence (e.g., Agrawal, Catalini, & Goldfarb, 2014)? What are the recommended best practices for exploring and evaluating crowd-based funding opportunities? • When and how do crowdfunding platforms help entrepreneurs raise capital across geographic and country barriers (e.g., Günther et al., 2018; Lin & Viswanathan, 2015)? What are the differences and similarities of cross-border crowdfunding with intra-country options (e.g., cross-border venture capital; Liu & Maula, 2016)? • Are biases (e.g., gender, race) that are present in traditional forms of entrepreneurial finance still present in crowd-based opportunities (Greenberg & Mollick, 2017; Johnson, Stevenson, & Letwin, 2018)? How can we reduce and mitigate the propensity for bias in crowd-based funding opportunities?
Between Different Forms of Crowdfunding	<ul style="list-style-type: none"> • In what ways are the various options for crowdfunding—rewards-based, equity-based, debt-based, donation-based—different, and similar? • How do institutional forces impact the functioning of crowdfunding across countries? • How does the prosocial nature of a campaign affect the propensity to achieve funding goals? What messages, styles, and solicitation examples are superior in this domain (Allison et al., 2015; Parthakangas & Renko, 2017)?
Before, During, and After Crowdfunding	<ul style="list-style-type: none"> • How does opportunity discovery or creation shape the crowdfunding campaign and its subsequent funding success? • How and when do entrepreneurs use crowdfunding strategically? How does crowdfunding fit the overall strategy of an entrepreneurial venture? • What are the factors that enable more open and honest communication with possible supporters? What affects the likelihood that individuals will lie (or not tell the whole truth) to potential backers (Pollack & Bosse, 2014)? Does fraud play a role in the crowdfunding market, and how can or should platforms inform and protect investors as well as entrepreneurs regarding this risk? • What insights can we offer to crowd-based ventures as to how they can scale and execute on their value proposition(s) to stakeholders in a timely fashion (Mollick, 2014)? Are there recommendations that we can generate regarding scalability and managing for stakeholders that can increase the propensity for on-time delivery (of promised products/services, rewards)? • What happens after successful crowdfunding (e.g., Drover, Wood, & Zacharakis, 2017; Roma, Messeni Petruzzelli, & Perrone, 2017)? How does the crowd shape the venture (e.g., Slianko & Henard, 2017)? What explains the long-term performance of crowd-funded ventures (e.g., Signori & Vismara, 2018)?

(Continued)

Table 1. Continued

Area of Inquiry	Potential Topics
Beyond Current Forms of Crowdfunding—Future Innovations	<ul style="list-style-type: none"> • Are there settings in which initial coin offerings (ICO) are optimal (e.g., Adhams et al., 2018)? • How can crowdfunding platforms use the data on their users to improve their performance? • How can crowdfunding truly democratize access to entrepreneurial funding? What innovations are needed for entrepreneurs to overcome the limitations of their own social networks on crowdfunding platforms? How can crowdfunding platforms aid in the building of local entrepreneurial ecosystems, and in elevating struggling neighborhoods through community engagement? • Crowdfunding allows entrepreneurs in narrow niche markets to take advantage of the “long tail” in the global marketplace. What implications does this have for the future of markets and local economies?
The “Crowd”	<ul style="list-style-type: none"> • What do we actually know about the backers? Who is the crowd? How can researchers develop evidence-based practices that can affect the “supply-side” of the crowdfunding equation? • Are different “crowds” attracted asymmetrically to various options (i.e., platforms)? Put differently, are specific backers more (or less) inclined to fund one opportunity versus another? As an example, do peer-to-peer avenues for crowd-based backing appeal to specific audiences? What additional insights can we provide for entrepreneurs seeking to identify the “right” crowd (Belleflamme, Lambert, & Schwienbacher, 2014)? • What are the different motivations to fund a project or join a specific platform? How do individual backers decide which project they want to support and how (intensively) do they (or should they) evaluate the projects? • What forms of technology are most effective in engaging backers and making them repeat donors, lenders, or investors?
Cross-Disciplinary Work	<ul style="list-style-type: none"> • In what ways can cross-disciplinary research advance the crowdfunding literature? • What novel theoretical frameworks from organizational behavior, entrepreneurship, finance, marketing, international business, and strategy literatures can we leverage to gain additional insights? What novel theoretical frameworks from other disciplines (e.g., psychology, sociology, economics, anthropology) can we draw on for illumination? • Is crowdfunding expanding the domain of what is considered entrepreneurship/entrepreneurial? If so, what conversations in disciplines traditionally outside of entrepreneurship are being impacted?

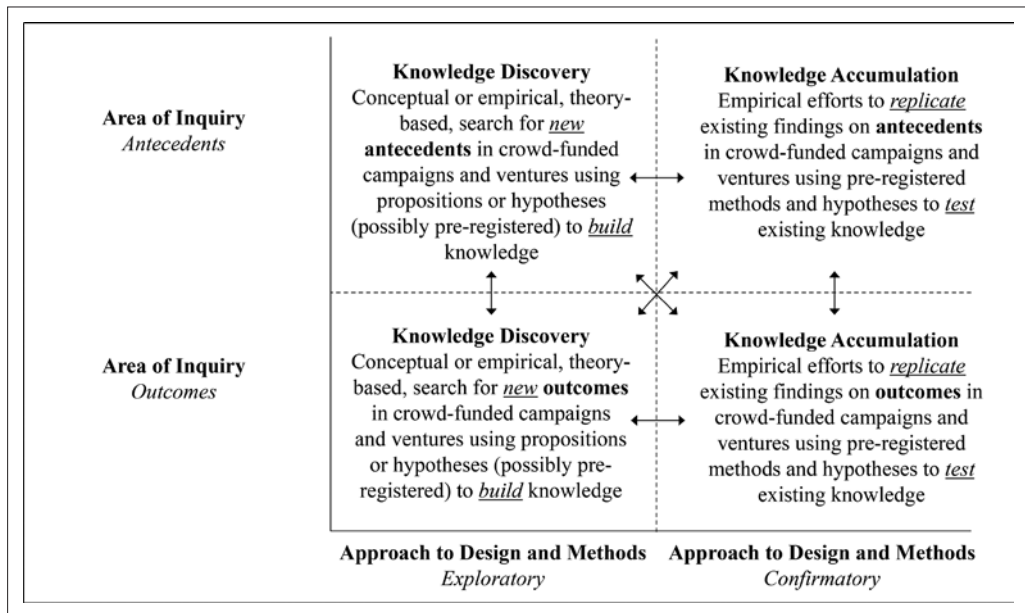


Figure 1. Considering the exploratory vs. confirmatory nature of research with regard to the antecedents and outcomes of crowd-funded entrepreneurial opportunities.

research on crowdfunding has experienced a rapid evolution from the first descriptive and exploratory studies (e.g., Mollick, 2014) toward an increasing volume of theory-developing and theory-testing studies (Short et al., 2017). For instance, studies on the antecedents of success in crowdfunding campaigns have produced a long list of factors that have been theorized, and tested, to increase the performance of crowdfunding campaigns. Yet, most of the factors have been so far studied only in a limited number of observational studies in a limited number of empirical settings. It is thus probable that not all current findings will replicate when examined using alternative empirical methods or in other empirical settings (e.g., different platforms or same platforms after changes in platform design). Therefore, an increasing emphasis is needed for research designs that enable strong causal inference (e.g., Anderson et al., 2019; Imbens & Rubin, 2015; Shaver, 2019). Replication studies are also greatly needed across platforms and geographical contexts that can eventually be included in meta-analyses to estimate effect sizes across studies. And, it is our experience that, while testing existing theories and replicating prior findings, new questions will emerge that require different kinds of approaches. As a goal for future research on crowdfunding, it is important to build a solid, cumulative body of literature on crowdfunding, covering the various phases of venture lifecycles and investments.

As guidance for future research on crowd-funded entrepreneurial opportunities, we offer in Figure 1 a framework that distinguishes the exploratory versus confirmatory nature of research with regard to the antecedents and outcomes of crowd-funded entrepreneurial opportunities. Our first recommendation here is that researchers be increasingly deliberate in their approach for designing and conducting data collection as well as analyses—and, further, that researchers specify whether a study was exploratory or confirmatory. Here, careful consideration of positioning contributions relative to the existing literature is needed (see Shepherd & Wiklund, 2019). One note of caution bears mention—there is a substantial accumulation of literature on platforms such as the Social Science Research Network (SSRN), and ResearchGate, as well as in

conference proceedings. Regarding the practice of situating a specific study in the literature, we encourage authors to be exhaustive, yet succinct, in their assessment of the extant literature while acknowledging that some research may not be peer-reviewed and needs to be viewed cautiously.

Our second recommendation is that researchers be careful to match study design and methods with their research question. For instance, in knowledge discovery research focused on novel questions, inductive case methods (e.g., Eisenhardt, Graebner, & Sonenshein, 2016), exploratory big data analysis (e.g., Jiang et al., 2019; Schwab & Zhang, 2019), or graphical data displays (e.g., Wennberg & Anderson, 2019) can be fruitful approaches. For theory-testing research, the crowdfunding context can also offer valuable opportunities for field experiments (e.g., Bapna, 2019; Burtch, Ghose, & Wattal, 2015), lab experiments (e.g., Greenberg & Mollick, 2017; Stevenson, Ciuchta, Letwin, Dinger, & Vancouver, 2019), conjoint approaches (Drover, Wood, et al., 2017; Niemand et al., 2018; Scheaf et al., 2018), and quasi-experimental methods (e.g., Hildebrand, Puri, & Rocholl, 2017; Lin & Viswanathan, 2015) that can facilitate stronger causal inference.

A key advantage of developing and testing theory in the crowdfunding context is the relative feasibility of experimental methods. Given the broad public familiarity with crowdfunding, the conduct of experiments can be less costly in time and money. While these are attractive advantages, they pose two risks. First, there is the risk of fast, but poorly-designed experiments. Efforts still must be made in study design and measurement in order to allow reasonable inferences about causality (e.g., Hsu, Simmons, & Wieland, 2017). Similarly, authors need to carefully consider how to provide evidence that relationships found in an experiment can generalize to field contexts. Here, often experiments are combined with field data to achieve both high internal validity and high external validity (e.g., Allison et al., 2017; Greenberg & Mollick, 2017; Oo, Allison, Sahaym, & Juasrikul, 2019). Second, there is the risk that experiments will become expected and taken-for-granted. While experiments are ideal for answering some questions, non-experimental research is better suited for others (Shaver, 2019). Authors, editors, and reviewers should carefully weigh whether the contribution of the research requires an experiment (e.g., establishing a causal mechanism). Where the contribution lies elsewhere, archival data-based methods may be a better choice given concerns about external validity. However, while crowdfunding platforms can be rich sources of structured and unstructured archival data, which can further be combined with other data sources, the construction and the limitations of these data sources need to be understood and great care is needed in the processing and matching the data to avoid issues such as sample attrition and survivorship bias or various challenges related to wrangling big data (Braun, Kuljanin, & DeShon, 2018). And, the reporting should be transparent enough to enable replication.

Our third recommendation, for theory-testing research, is that clear *ex ante* specification of the hypotheses (and/or preregistration) is important in avoiding hypothesizing after results are known as well as replication failure (Anderson et al., 2019; Nosek et al., 2015). More specifically, we encourage researchers in both quantitative and qualitative endeavors, to engage in transparent and open science principles to help improve the strength and reproducibility of research in the domain of crowd-funded entrepreneurial opportunities (e.g., Aguinis, Hill, & Bailey, 2019; Aguinis, Ramani, & Alabduljader, 2018; Aguinis & Solarino, 2019; Anderson et al., 2019; Burnette et al., 2019; Nosek et al., 2015). We suggest that the Open Science Framework (OSF; <https://osf.io/>) provides an excellent avenue of information and resources (for authors, reviewers, and editors) to consider regarding open science research practices.

Next Steps for This Virtual Special Issue

If you have an idea for a paper that is mindful of the specific context in which it is situated, asks an insightful question(s), can be transparent and reproducible in terms of methods, and has a clear discussion of the implications of the findings for existing entrepreneurship research on crowd-funded entrepreneurial opportunities, we encourage you to consider submitting it to this virtual special issue of *Entrepreneurship Theory and Practice*.

Manuscripts will be reviewed according to the *ETP* double-blind review process and should be prepared using the *ETP* Manuscript Preparation Guidelines.² Manuscripts should be submitted via: <https://mc.manuscriptcentral.com/etp>. In terms of process, there is ***not*** a specific deadline for submission—this is **an open call** for this virtual special issue. Accepted articles will be published in the first available regular issue of *ETP* and will simultaneously appear in a special section (online) dedicated to VSIs (i.e., already populated with previous articles in *ETP*). The content of the special issue can be seen at any time and will continuously expand.

Conclusions

With this editorial, we seek to inspire new research on crowd-funded entrepreneurial opportunities to be conducted and submitted to this virtual special issue of *ETP*. At the same time, we aimed to offer suggestions for how to be most successful in conducting such research, based on our views of the field and its prospects. We hope that our perspective as editors will help authors direct their research efforts towards the objective of developing, publishing, and promoting research that will form a solid, reproducible body of literature in the domain of crowd-funded entrepreneurial opportunities.

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Notes

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References

- Adhami, S., Giudici, G., & Martinazzi, S., Adhami, S., Giudici, G., & Martinazzi, S. (2018). Why do businesses go crypto? An empirical analysis of initial coin offerings. *Journal of Economics and Business, 100*, 64–75.
- Agrawal, A., Catalini, C., & Goldfarb, A. (2014). Some simple economics of crowdfunding. *Innovation Policy and the Economy, 14*(1), 63–97.
- Aguinis, H., Hill, N. S., & Bailey, J. R. (2019). Best practices in data collection and preparation: Recommendations for reviewers, editors, and authors. *Organizational Research Methods, 51*, 109442811983648.
- Aguinis, H., Ramani, R. S., & Alabduljader, N. (2018). What you see is what you get? Enhancing methodological transparency in management research. *Academy of Management Annals, 12*(1), 83–110.
- Aguinis, H., & Solarino, A. M. (2019). Transparency and replicability in qualitative research: The case of interviews with elite informants. *Strategic Management Journal, 6*(3), 1291–1315.
- Ahlers, G. K. C., Cumming, D., Günther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice, 39*(4), 955–980.
- 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.
- Allison, T. H., Davis, B. C., Webb, J. W., & Short, J. C. (2017). Persuasion in crowdfunding: An elaboration likelihood model of crowdfunding performance. *Journal of Business Venturing, 32*(6), 707–725.
- Allison, T. H., McKenny, A. F., & Short, J. C. (2013). The effect of entrepreneurial rhetoric on microlending investment: An examination of the warm-glow effect. *Journal of Business Venturing, 28*(6), 690–707.
- Anderson, B. S., Wennberg, K., & McMullen, J. S. (2019). Editorial: Enhancing quantitative theory-testing entrepreneurship research. *Journal of Business Venturing, 34*(5), 105928.
- Anglin, A. H., Short, J. C., Drover, W., Stevenson, R. M., McKenny, A. F., & Allison, T. H. (2018). The power of positivity? The influence of positive psychological capital language on crowdfunding performance. *Journal of Business Venturing, 33*(4), 470–492.
- Anglin, A. H., Short, J. C., Ketchen, D. J., Allison, T. H., & McKenny, A. F. (2019). Third-Party signals in crowdfunded microfinance: The role of microfinance institutions. *Entrepreneurship Theory and Practice, 2*(6), 104225871983970.
- Anglin, A. H., Wolfe, M. T., Short, J. C., McKenny, A. F., & Pidduck, R. J. (2018). Narcissistic rhetoric and crowdfunding performance: A social role theory perspective. *Journal of Business Venturing, 33*(6), 780–812.
- 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. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing, 29*(5), 585–609.
- Bettis, R. A., Helfat, C. E., & Shaver, J. M. (2016). The necessity, logic, and forms of replication. *Strategic Management Journal, 37*(11), 2193–2203.
- Bi, S., Liu, Z., & Usman, K. (2017). The influence of online information on investing decisions of reward-based crowdfunding. *Journal of Business Research, 71*, 10–18.
- Block, J. H., Colombo, M. G., Cumming, D. J., & Vismara, S. (2018). New players in entrepreneurial finance and why they are there. *Small Business Economics, 50*(2), 239–250.
- Block, J., Hornuf, L., & Moritz, A. (2018). Which updates during an equity crowdfunding campaign increase crowd participation? *Small Business Economics, 50*(1), 3–27.
- Braun, M. T., Kuljanin, G., & DeShon, R. P. (2018). Special considerations for the acquisition and Wrangling of big data. *Organizational Research Methods, 21*(3), 633–659.

- Burnette, J. L., Pollack, J. M., Forsyth, R. B., Hoyt, C. L., Babij, A. D., Thomas, F. N., & Coy, A. E. (2019). A growth mindset intervention: Enhancing students' entrepreneurial self-efficacy and career development. *Entrepreneurship Theory and Practice, 25*(2), 104225871986429.
- 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.
- Butticè, V., Colombo, M. G., & Wright, M. (2017). Serial crowdfunding, social capital, and project success. *Entrepreneurship Theory and Practice, 41*(2), 183–207.
- Calic, G., & Mosakowski, E. (2016). Kicking off social entrepreneurship: How a sustainability orientation influences crowdfunding success. *Journal of Management Studies, 53*(5), 738–767.
- Chan, C. S. R., & Parhankangas, A. (2017). Crowdfunding innovative ideas: How incremental and radical innovativeness influence funding outcomes. *Entrepreneurship Theory and Practice, 41*(2), 237–263.
- Colquitt, J. A., & George, G. (2011). Publishing in AMJ: Part 1: Topic choice: From the editors. *Academy of Management Journal, 54*(3), 432–435.
- Courtney, C., Dutta, S., & Li, Y. (2017). Resolving information asymmetry: Signaling, endorsement, and crowdfunding success. *Entrepreneurship Theory and Practice, 41*(2), 265–290.
- Cumming, D., & Johan, S. (2017). The problems with and promise of entrepreneurial finance. *Strategic Entrepreneurship Journal, 11*(3), 357–370.
- Cummings, M. E., Rawhouser, H., Vismara, S., & Hamilton, E. L. (2019). An equity crowdfunding research agenda: Evidence from stakeholder participation in the rulemaking process. *Small Business Economics, 19*(3), 1–26.
- Davis, B. C., Hmieleski, K. M., Webb, J. W., & Coombs, J. E. (2017). Funders' positive affective reactions to entrepreneurs' crowdfunding pitches: The influence of perceived product creativity and entrepreneurial passion. *Journal of Business Venturing, 32*(1), 90–106.
- Drover, W., Busenitz, L., Matusik, S., Townsend, D., Anglin, A., & Dushnitsky, G. (2017). A review and road map of entrepreneurial equity financing research: Venture capital, corporate venture capital, angel investment, crowdfunding, and accelerators. *Journal of Management, 43*(6), 1820–1853.
- Drover, W., Wood, M. S., & Zacharakis, A. (2017). Attributes of angel and crowdfunded investments as determinants of VC screening decisions. *Entrepreneurship Theory and Practice, 41*(3), 323–347.
- Eisenhardt, K. M., Graebner, M. E., & Sonenshein, S. (2016). Grand challenges and inductive methods: Rigor without rigor mortis. *Academy of Management Journal, 59*(4), 1113–1123.
- Fisher, G., Kuratko, D. F., Bloodgood, J. M., & Hornsby, J. S. (2017). Legitimate to whom? The challenge of audience diversity and new venture legitimacy. *Journal of Business Venturing, 32*(1), 52–71.
- Greenberg, J., & Mollick, E. (2017). Activist choice homophily and the crowdfunding of female founders. *Administrative Science Quarterly, 62*(2), 341–374.
- Günther, C., Johan, S., & Schweizer, D. (2018). Is the crowd sensitive to distance?—how investment decisions differ by investor type. *Small Business Economics, 50*(2), 289–305.
- Hildebrand, T., Puri, M., & Rocholl, J. (2017). Adverse incentives in crowdfunding. *Management Science, 63*(3), 587–608.
- Hsu, D. K., Simmons, S. A., & Wieland, A. M. (2017). Designing entrepreneurship experiments: A review, typology, and research agenda. *Organizational Research Methods, 20*(3), 379–412.
- Hu, M., Li, X., & Shi, M. (2015). Product and pricing decisions in crowdfunding. *Marketing Science, 34*(3), 331–345.
- Imbens, G. W., & Rubin, D. B. (2015). *Causal inference for statistics, social, and biomedical sciences: An introduction*. New York, NY: Cambridge University Press.
- Jiang, L., Yin, D., & Liu, D. (2019). Can joy buy you money? The impact of the strength, duration, and phases of an entrepreneur's peak displayed joy on funding performance. *Academy of Management Journal*, Forthcoming.

- Johnson, M. A., Stevenson, R. M., & Letwin, C. R. (2018). A woman's place is in the... startup! Crowdfunder judgments, implicit bias, and the stereotype content model. *Journal of Business Venturing*, 33(6), 813–831.
- Lin, M., & Viswanathan, S. (2015). Home bias in online investments: An empirical study of an online crowdfunding market. *Management Science*, 62(5), 1393–1414.
- Liu, Y., & Maula, M. (2016). Local partnering in foreign ventures: Uncertainty, experiential learning, and syndication in Cross-border venture capital investments. *Academy of Management Journal*, 59(4), 1407–1429.
- Lukkarinen, A., Teich, J. E., Wallenius, H., & Wallenius, J. (2016). Success drivers of online equity crowdfunding campaigns. *Decision Support Systems*, 87, 26–38.
- Makadok, R., Burton, R., & Barney, J. (2018). A practical guide for making theory contributions in strategic management. *Strategic Management Journal*, 39(6), 1530–1545.
- McKenny, A. F., Allison, T. H., Ketchen Jr, D. J., Short, J. C., & Ireland, R. D. (2017). How should crowdfunding research evolve? A Survey of the entrepreneurship theory and practice editorial board. *Entrepreneurship Theory and Practice*, 41(2), 291–304.
- Mochkabadi, K., & Volkmann, C. K. (2018). Equity crowdfunding: A systematic review of the literature. *Small Business Economics*, 18(S1), 1–44.
- Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1–16.
- Niemand, T., Angerer, M., Thies, F., Kraus, S., & Hebenstreit, R. (2018). Equity crowdfunding across borders: A conjoint experiment. *International Journal of Entrepreneurial Behavior & Research*, 24(4), 911–932.
- Nosek, B. A., Alter, G., Banks, G. C., Borsboom, D., Bowman, S. D., Breckler, S. J., . . . Yarkoni, T. (2015). Promoting an open research culture. *Science*, 348(6242), 1422–1425.
- Oo, P. P., Allison, T. H., Sahaym, A., & Juasrikul, S. (2019). User entrepreneurs' multiple identities and crowdfunding performance: Effects through product innovativeness, perceived passion, and need similarity. *Journal of Business Venturing*, 34(5), 105895.
- Parhankangas, A., & Renko, M. (2017). Linguistic style and crowdfunding success among social and commercial entrepreneurs. *Journal of Business Venturing*, 32(2), 215–236.
- Pollack, J. M., & Bosse, D. A. (2014). When do investors forgive entrepreneurs for lying? *Journal of Business Venturing*, 29(6), 741–754.
- Roma, P., Messeni Petruzzelli, A., & Perrone, G. (2017). From the crowd to the market: The role of reward-based crowdfunding performance in attracting professional investors. *Research Policy*, 46(9), 1606–1628.
- Scheaf, D. J., Davis, B. C., Webb, J. W., Coombs, J. E., Borns, J., & Holloway, G. (2018). Signals' flexibility and interaction with visual cues: Insights from crowdfunding. *Journal of Business Venturing*, 33(6), 720–741.
- Schwab, A., & Zhang, Z. (2019). A new methodological frontier in entrepreneurship research: Big data studies. *Entrepreneurship Theory and Practice*, 43(5), 843–854.
- Shaver, J. M. (2019). Causal identification through a cumulative body of research in the study of strategy and organizations. *Journal of Management*. Advance online publication. doi: 10.1177/0149206319846272
- Shepherd, D. A., & Wiklund, J. (2019). Simple rules, templates, and heuristics! an attempt to deconstruct the craft of writing an entrepreneurship paper. *Entrepreneurship Theory and Practice*, 60(1), 104225871984588.
- Shepherd, D. A., Wennberg, K., Suddaby, R., & Wiklund, J. (2019). What are we explaining? A review and agenda on initiating, engaging, performing, and contextualizing entrepreneurship. *Journal of Management*, 45(1), 159–196.

- Short, J. C., Ketchen, D. J., McKenny, A. F., Allison, T. H., & Ireland, R. D. (2017). Research on crowdfunding: Reviewing the (very recent) past and celebrating the present. *Entrepreneurship Theory and Practice*, *41*(2), 149–160.
- Signori, A., & Vismara, S. (2018). Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*, *50*, 575–591.
- Simons, D. J., Shoda, Y., & Lindsay, D. S. (2017). Constraints on generality (COG): A proposed addition to all empirical papers. *Perspectives on Psychological Science*, *12*(6), 1123–1128.
- Sorenson, O., Assenova, V., Li, G.-C., Boada, J., & Fleming, L. (2016). Expand innovation finance via crowdfunding. *Science*, *354*(6319), 1526–1528.
- Soublière, J.-F., & Gehman, J. (2019). The legitimacy threshold revisited: How prior successes and failures spill over to other Endeavors on Kickstarter. *Academy of Management Journal*, Forthcoming.
- Stanko, M. A., & Henard, D. H. (2017). Toward a better understanding of crowdfunding, openness and the consequences for innovation. *Research Policy*, *46*(4), 784–798.
- 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.
- Strausz, R. (2017). A theory of crowdfunding: A mechanism design approach with demand uncertainty and moral hazard. *American Economic Review*, *107*(6), 1430–1476.
- Tuomi, K., & Harrison, R. T. (2017). A comparison of equity crowdfunding in four countries: Implications for business angels. *Strategic Change*, *26*(6), 609–615.
- Vismara, S. (2018). Information cascades among investors in equity crowdfunding. *Entrepreneurship Theory and Practice*, *42*(3), 467–497.
- Walthoff-Borm, X., Schwienbacher, A., & Vanacker, T. (2018). Equity crowdfunding: First resort or last resort? *Journal of Business Venturing*, *33*(4), 513–533.
- Wennberg, K., & Anderson, B. S. (2019). Editorial: Enhancing the exploration and communication of quantitative entrepreneurship research. *Journal of Business Venturing*, Forthcoming.

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